


# **HARTING** Industrial Connectors Han®

# Industrial Connectors – Overview of the series

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# Economic and Reliable Connections

Specifications

DIN EN 60 664-1 (VDE 0110-1)
Principles,
requirements and tests

DIN EN 61 984 (VDE 0627)
Connectors,
Safety requirements and tests

Note:

The connectors included in this catalogue should not be coupled or decoupled under electrical load unless otherwise stated.

The connector must not be powered-up in the un-mated condition. This is also true if the connector is closed with a protection cover, unless otherwise stated.

The provision of protection against electric shock is the responsibility of the user. Protection can be achieved by the use of HARTING hoods and housings coupled with/or alternatively appropriate installation methods provided by the user.

Connectors of the same or different series being mounted side by side may be protected against incorrect mating by the use of coding options.

Standard

DIN EN 175 301-801

Approvals

UL File No. E 23 50 76 (www.ul.com)

CSA File No. LR 18 753, SEV
for inserts

GL certificate No. 61754 - 14 HH

Certified according to EN ISO 9001
in design/development, production,
installation and servicing

Terminations

- Screw terminal
- Crimp terminal
- Cage-clamp terminal
- Wrap terminal
- Solder terminal
- Axial-screw terminal
- Rapid terminal
- IDC termination

Inserts

- Leading protective ground
- Polarised for correct mating
- Interchangeability of male and female inserts in hoods and housings
- Captive fixing screws
- Can be used with hoods and housings, or for rack and panel applications

Hoods/Housings

- Standard Hoods/Housings
- Hoods/Housings for harsh environmental requirements
- Hoods/Housings for intrinsically safe plant
- Degree of protection IP 65
- Electrical connection with protective ground
- High mechanical strength and vibration-resistance ensured by locking levers
- Spring-loaded covers in shockproof thermoplastic or metal covers, both lockable

Accessories

- Extensive range of cable protection and sealing accessories
- Protective covers available
- Coding options for incorrect mating protection

For "non standard applications" we can manufacture designs to match your
requirements.
Please discuss requirements with us.

HARTING components help you to construct top quality products – economically and in line with market requirements.

General information

It is the customer's responsibility to check whether the components illustrated in this catalogue also comply with different regulations from those stated in special fields of applications.

We reserve the right to modify designs or substance of content in order to improve quality, keep pace with technological advancement or meet particular requirements in production.

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# Transforming customer wishes into concrete solutions



The HARTING Technology Group is skilled in the fields of electrical, electronic and optical connection, transmission and networking technology, as well as in manufacturing, mechatronics and software creation. The Group uses these skills to develop customized solutions and products such as connectors for energy and data-transmission/data-networking applications, including, for example, mechanical engineering, rail technology, wind energy plants, factory automation and the telecommunications sector. In addition, HARTING also produces electro-magnetic components for the automobile industry and offers solutions in the field of housing technology and shop systems.

The HARTING Group currently comprises 58 sales companies and production plants worldwide employing a total of about 5,500 staff.

HARTING Subsidiary HARTING Representation



## We aspire to top performance.

Connectors ensure functionality. As core elements of electrical and optical termination, connection and infrastructure technologies, they are essential in enabling the modular construction of devices, machines and systems across an extremely wide range of industrial applications. Their reliability is a crucial factor guaranteeing smooth functioning in the manufacturing area, telecommunications, applications in medical technology – in short, connectors are at work in virtually every conceivable application area. Thanks to the ongoing development of our technologies, our customers enjoy investment security and benefit from durable, long-term functionality.

## Wherever our customers are, we're there.

Increasing industrialization is creating growing markets that are characterized by widely diverging demands and requirements. What these markets all share in common is the quest for perfection, increasingly efficient processes and reliable technologies. **HARTING** is providing these technologies – in Europe, the Americas and Asia. In order to implement customer requirements in the best possible manner, the **HARTING** professionals at our international subsidiaries engage in up-close, partnership-based interaction with our customers, right from the very early product development phase.

Our on-site staff form the interface to the centrally coordinated development and production departments. In this way, our customers can rely on consistently high, superior product quality – worldwide.

## Our claim: Pushing Performance.

**HARTING** provides more than optimally attuned components. In order to offer our customers the best possible solutions, on request **HARTING** contributes a great deal more and is tightly integrated into the value-creation process.

From ready-assembled cables through to control racks or ready-to-go control desks. Our aim is to generate maximum benefit for our customers – with no compromises!

## Quality creates reliability – and warrants trust.

The **HARTING** brand stands for superior quality and reliability – worldwide. The standards we set are the result of consistent, stringent quality management that is subject to regular certifications and audits.

EN ISO 9001, the EU Eco-Audit and ISO 14001:2004 are key elements here. We take a proactive stance towards new requirements, which is why **HARTING** is the first company worldwide to have obtained the new IRIS quality certificate for rail vehicles.



## HARTING technology creates added value for customers.

Technologies by **HARTING** are at work worldwide. **HARTING's** presence stands for smoothly functioning systems powered by intelligent connectors, smart infrastructure solutions and sophisticated network systems. Over the course of many years of close, trust-based cooperation with its customers, the **HARTING** Technology Group has become one of the leading specialists globally for connector technology. We offer individual customers specific and innovative solutions that go beyond the basic standard functionalities. These tailored solutions deliver sustained results, ensure investment security and enable customers to achieve significant added value.

## Opting for HARTING opens up an innovative, complex world of concepts and ideas.

In order to develop and produce connectivity and network solutions serving an exceptionally wide range of connector applications in a professional and cost-effective manner, **HARTING** not only commands the full array of conventional tools and basic technologies. Above and beyond these capabilities, **HARTING** is constantly harnessing and refining its broad base of knowledge and experience to create new solutions that also ensure continuity. To secure its lead in know-how, HARTING draws on a wealth of sources from its in-house research and applications.

Salient examples of these sources of innovative knowledge include microstructure technologies, 3D design and connection technology, high-temperature and ultrahigh-frequency applications that are finding use in telecommunications and automation networks, in the automotive industry, or in industrial sensor and actuator applications, RFID and wireless technologies, in addition to packaging and housing made of plastics, aluminum and stainless steel.

## HARTING overcomes technological limitations.

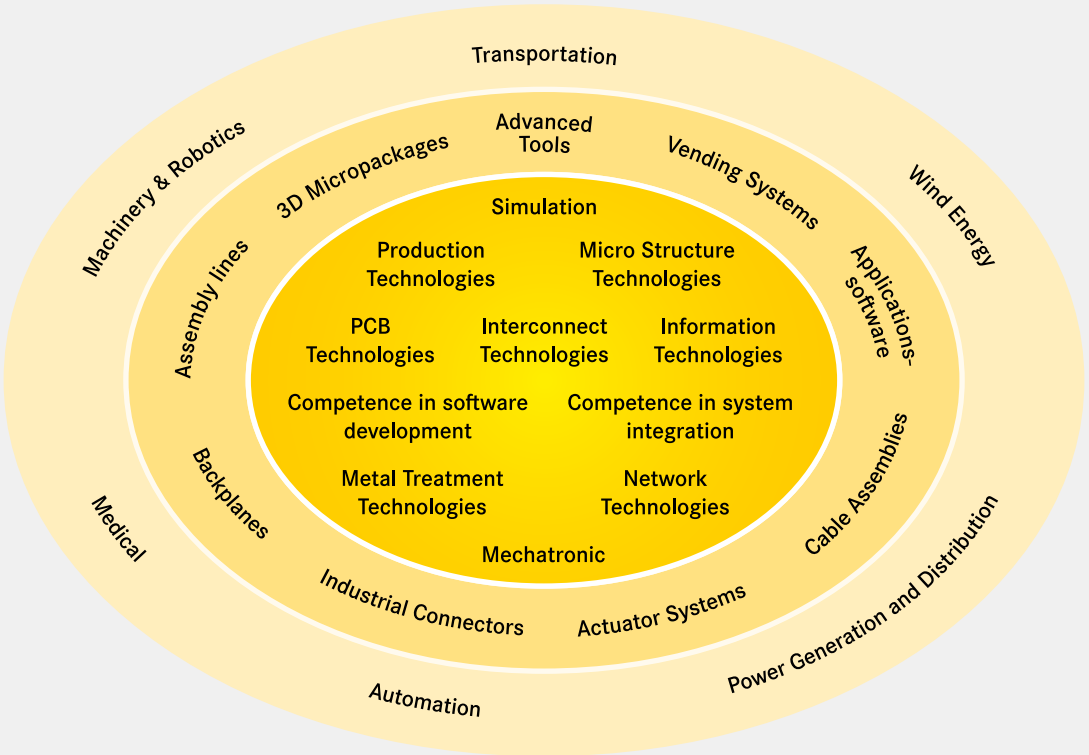
Drawing on the comprehensive resources of the group's technology pool, **HARTING** devises practical solutions for its customers. Whether this involves industrial networks for manufacturing automation, or hybrid interface solutions for wireless telecommunication infrastructures, 3D circuit carriers with microstructures, or cable assemblies for high-temperature applications in the automotive industry – **HARTING** technologies offer not only components, but comprehensive solutions attuned to individual customer requirements and preferences. The range of cost-effective solutions covers ready-to-use cable configurations, completely assembled backplanes and board system carriers, as well as fully wired and tested control panels.

In order to ensure the future-proof design of RF and EMC-compatible interface solutions, the central **HARTING** laboratory (certified to EN 45001) employs simulation tools, as well as experimental, testing and diagnostics facilities all the way to scanning electron microscopes. In addition to product and process suitability considerations, lifecycle and environmental aspects play a key role in the selection of materials and processes.



HARTING's knowledge is practical know-how that generates synergy effects.

**HARTING** commands decades of experience with regard to the applications conditions involved in connections in telecommunications, computer, network and medical technologies, as well as industrial automation technologies, e.g. in the mechanical engineering and plant engineering areas, in addition to the power generation industry and the transportation sector. **HARTING** is highly conversant with the specific application areas in all of these technology fields. In every solution approach, the key focus is on the application. In this context, uncompromising, superior quality is our hallmark. Every new solution found invariably flows back into the **HARTING** technology pool, thereby enriching our resources. And every new solution we go on to create will draw on this wealth of resources in order to optimize each and every individual solution. **HARTING** is synergy in action.



# HARTING eCatalogue



The **HARTING eCatalogue / eShop** can be found on our homepage at **www.HARTING.com** or at the direct link **www.eCatalogue.HARTING.com**.

The HARTING e-Catalogue is your platform for conveniently selecting individual products as well as configuring complete solutions. Our comprehensive product pages provide you with all necessary technical information and CAD files in various formats for downloading. You may also contact our technical sales department directly.

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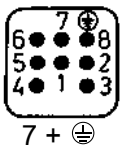
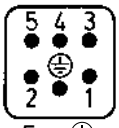
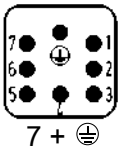
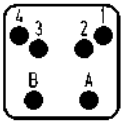
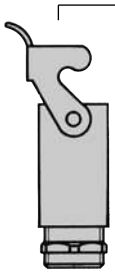
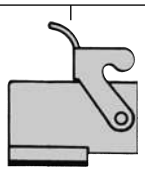
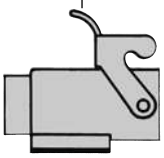
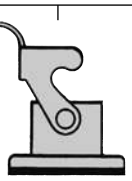
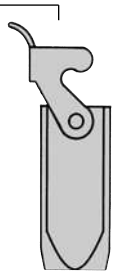
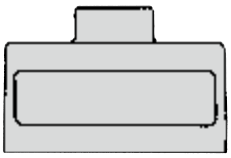
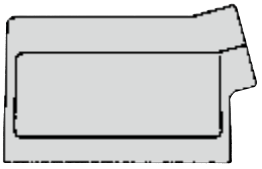
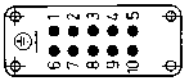
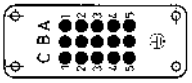
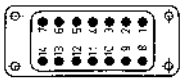
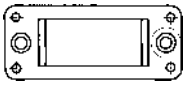
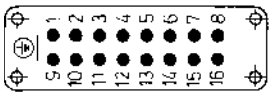
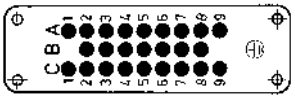
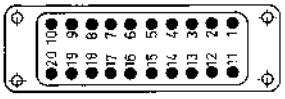
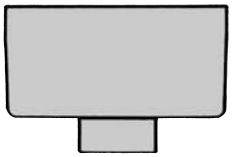
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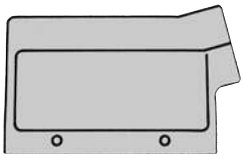
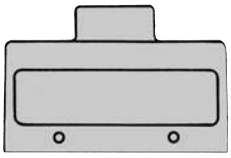
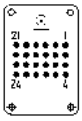
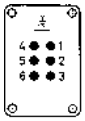
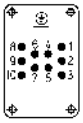
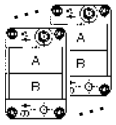
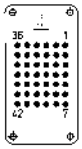
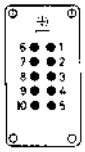
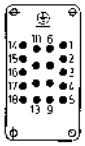
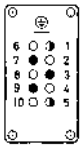
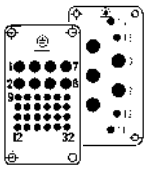
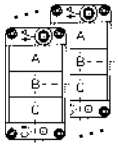
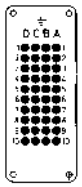
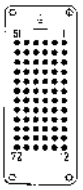
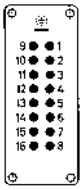
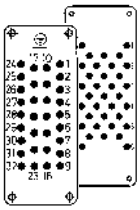
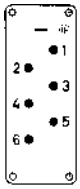
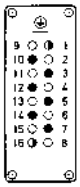
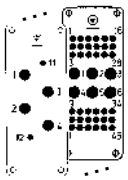
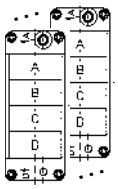
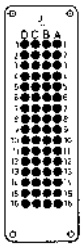
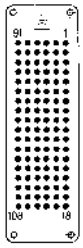
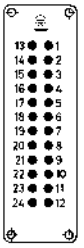
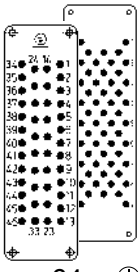
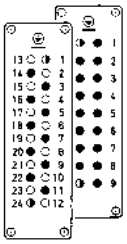
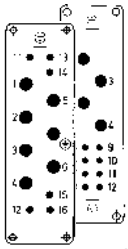
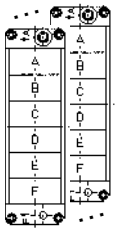
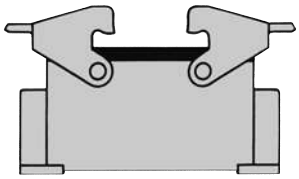
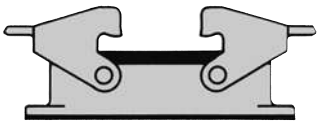
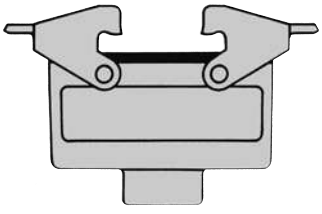
# Summary Han®-sizes

Info

| Size | Description |
|---|---|
| A | Hood side-entry<br><br>Hood top-entry<br> |
| 3 | 230/400 V<br>10 A<br>Han® 3 A / 4 A<br>chapter 01<br><br>3 / 4 + ⏚<br><br>50 V<br>10 A<br>Staf 6<br>chapter 09<br><br>6<br><br>250 V<br>10 A<br>Han® 7 D<br>chapter 02<br><br>7 + ⏚<br><br>50 V<br>10 A<br>Han® 8 D<br>chapter 02<br><br>8<br><br>230/400 V<br>16 A<br>Han® Q 5/0<br>chapter 13<br><br>5 + ⏚<br><br>400 V<br>10 A<br>Han® Q 7/0<br>chapter 13<br><br>7 + ⏚<br><br>50 V<br>10 A<br>Han-Brid®<br>chapter 19<br><br>4 + 2<br><br><br>Housing<br>screw mounting<br><br><br>Housing<br>bulkhead mounting<br><br><br>Housing<br>surface mounting<br><br><br>Housing<br>bulkhead mounting<br><br><br>Hood<br>cable to cable<br>coupling |
| 10 | Hood top-entry<br><br>Hood side-entry<br><br><br>250 V<br>16 A<br>Han A®<br>chapter 01<br><br>10 + ⏚<br><br>250 V<br>10 A<br>Han D®<br>chapter 02<br><br>15 + ⏚<br><br>50 V<br>10 A<br>Staf®<br>chapter 09<br><br>14<br><br>50 V – 1000 V<br>5 A – 70 A<br>Han-Modular®<br>chapter 06<br> |
| 16 | <br>16 + ⏚<br><br><br>25 + ⏚<br><br><br>20<br><br>1 module<br><br>Housing bulkhead mounting<br><br><br>Housing surface mounting<br><br><br>Hood cable to cable coupling<br> |
| 32 | suitable for 2 inserts of size 16 A |

# Summary Han®-sizes



| Size | Description |
|---|---|
| B |  Hood side-entry<br> Hood top-entry |
| | 250 V<br>10 A<br>Han D®<br>chapter 02 |
| | 250 V<br>10 A<br>Han DD®<br>chapter 02 |
| | 500 V<br>16 A<br>Han E®<br>Han® ES<br>chapter 03 |
| | 500 V<br>16 A<br>Han® EE<br>Han® EEE<br>chapter 03 |
| | 400/690 V<br>35 A<br>Han® HsB<br>chapter 07 |
| | 830 V<br>16 A<br>Han Hv E®<br>Han® Hv ES<br>chapter 04 |
| | 160 V – 690 V<br>10 A – 100 A<br>Han-Com®<br>chapter 05 |
| | 50 V – 5000 V<br>5 A – 200 A<br>Han-Modular®<br>chapter 06 |
| 6 |  24 + ⏚<br> 6 + ⏚<br> 10 + ⏚<br> 2 modules |
| 10 |  42 + ⏚<br> 10 + ⏚<br> 18 + ⏚<br> 3 + ⏚<br> 4/4 + ⏚<br>8/24 + ⏚<br> 3 modules |
| 16 |  40 + ⏚<br> 72 + ⏚<br> 16 + ⏚<br> 40 + ⏚<br>32 + ⏚<br> 6 + ⏚<br> 6 + ⏚<br> 6/36 + ⏚<br>4/2 + ⏚<br> 4 modules |
| 24 |  64 + ⏚<br> 108 + ⏚<br> 24 + ⏚<br> 64 + ⏚<br>46 + ⏚<br> 16 + ⏚<br>10 + ⏚<br> 4/8 + ⏚<br>6/6 + ⏚<br> 6 modules |
| 32 | Housing surface mounting<br><br>Housing bulkhead mounting<br><br>Hood cable to cable coupling<br><br>suitable for 2 inserts of size 16 B |
| 48 | suitable for 2 inserts of size 24 B |

# How to order connectors



For a complete connector components may be ordered from the following sub headings

## Cable entry protection

Universal cable glands

Special cable clamp with strain relief, bell mouthed cable fitting and anti-twist devices

Cable gland with normal or multiple seal

Extensive range of accessories

## Hoods

low or high construction
top or side cable entry
1 or 2 locking levers

## Male insert with

screw terminal or
crimp terminal (order contacts separately)
or cage-clamp terminal

## Female insert with

screw terminal or
crimp terminal (order contacts separately)
or cage-clamp terminal

## Housings

Housing (bulkhead mounting)
with or without thermoplastic
or metal covers
1 or 2 locking levers

Housing (surface mounting)
low or high construction
with or without thermoplastic
or metal covers
1 or 2 locking levers
1 or 2 cable entries

Hood (cable to cable)
low or high construction
for cable to cable connections

## Accessories

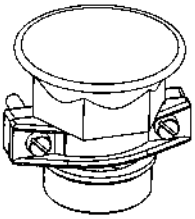
Protective covers available

Code and guide pins for coding

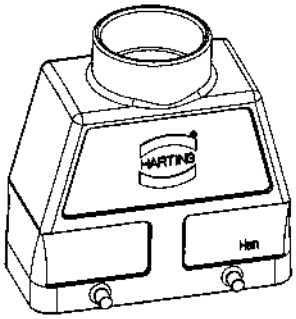
Special insert fixing screws for use without hoods and housings

Label according to CSA-approval

Suitable hoods and housings will be found on the same page.



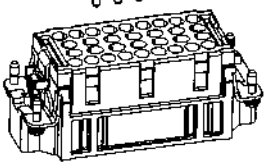
Cable clamp



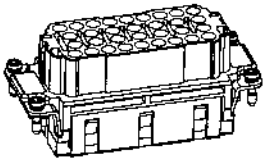

Hood



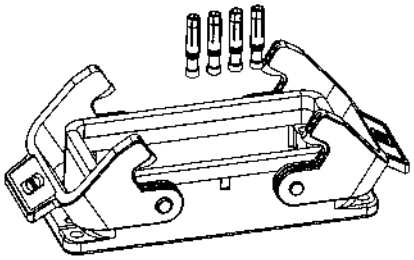
Male contacts



Male insert



Female insert

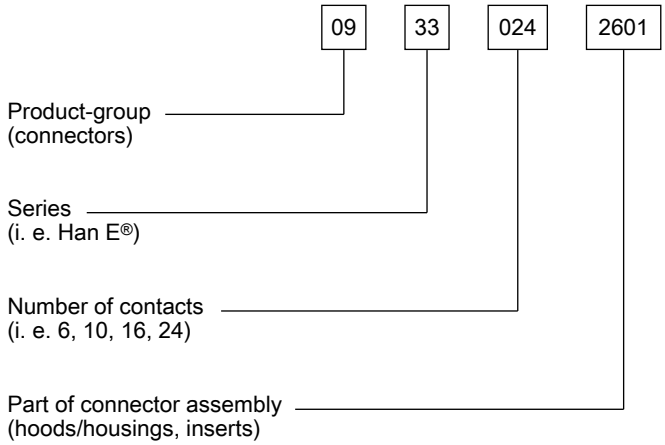


Female contacts

Housing

## Part number explanation

Our computerized ordering system uses the following code:



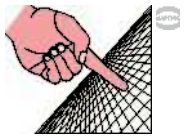
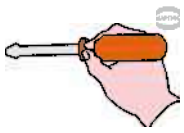
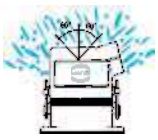
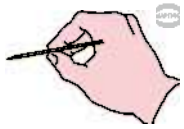
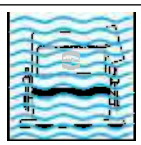
# Hoods/Housings connector insert protection



The connector's housing, sealing and locking mechanism protect the connection from external influences such as mechanical shocks, foreign bodies, humidity, dust, water or other fluids such as cleansing and cooling agents, oils, etc. The degree of protection the housing offers is explained in the IEC 60 529, DIN EN 60 529, standards that categorize enclosures according to foreign body and water protection.

The following table shows the different degrees of protection.

| Code letters (International Protection) | First Index Figure (Foreign bodies protection) | Second Index Figure (Water protection) |
|---|---|---|
| IP | 6 | 5 |

| Index figure | Degree of protection | | | Index figure | Degree of protection | | |
|---|---|---|---|---|---|---|---|
| 0 | No protection |  | No protection against accidental contact, no protection against solid foreign bodies | 0 | No protection against water | | No protection against water |
| 1 | Protection against large foreign bodies |  | Protection against contact with any large area by hand and against large solid foreign bodies with Ø > 50 mm | 1 | Drip-proof |  | Protection against vertical water drips |
| 2 | Protection against medium sized foreign bodies |  | Protection against contact with the fingers, protection against solid foreign bodies with Ø > 12 mm | 2 | Drip-proof |  | Protection against water drips (up to a 15° angle) |
| 3 | Protection against small solid foreign bodies |  | Protection against tools, wires or similar objects with Ø > 2.5 mm, protection against small foreign solid bodies with Ø > 2.5 mm | 3 | Spray-proof |  | Protection against diagonal water drips (up to a 60° angle) |
| 4 | Protection against grain-shaped foreign bodies |  | As 3 however Ø > 1 mm | 4 | Splash-proof |  | Protection against splashed water from all directions |
| 5 | Protection against injurious deposits of dust |  | Full protection against contact. Protection against interior injurious dust deposits | 5 | Hose-proof |  | Protection against water (out of a nozzle) from all directions |
| 6 | Protection against ingress of dust |  | Total protection against contact. Protection against penetration of dust | 6 | Strong hose-proof |  | Protection against strong water (out of a nozzle) from all directions |
| | | | | 7 | Protected against immersion |  | Protected against temporary immersion |
| | | | | 8 | Water-tight |  | Protected against water pressure |
| | | | | 9K * | Protected against high-pressure |  | Protected against water from high-pressure / steam jet cleaners |

Description according to IEC 60529
* ... IPX9K acc. to ISO 20653

# Types of hood/housing



## Standard hoods/housings for industrial connectors

| | |
|---|---|
| Field of application | For excellent mechanical and electrical protection in demanding environments, for example, in the automobile and mechanical engineering industries also for process and regulation control applications |
| Distinguishing feature | Hoods/housings colour-coded grey (RAL 7037) |
| Material of hoods/housings | Die-cast light alloy |
| Locking levers | Han-Easy Lock® |
| Cable entry protection | Optional special cable clamp for hoods with strain relief, bell mouthed cable fitting and anti-twist devices |



## Han® M hoods/housings for more demanding environmental requirements

| | |
|---|---|
| Field of application | For all applications where aggressive environmental conditions and extreme climatic atmospheres are encountered |
| Distinguishing feature | Hoods/housings colour-coded black (RAL 9005) |
| Material of hoods/housings | Die-cast light alloy, corrosion resistant |
| Locking levers | Corrosion resistant stainless steel |
| Cable entry protection | Special cable clamp for hoods with strain relief, bell mouthed cable fitting and anti-twist devices |



## Han® EMC hoods/housings for higher EMC requirements

| | |
|---|---|
| Field of application | For sensitive interconnections that have to be shielded against electrical, magnetic or electro-magnetic interferences |
| Distinguishing feature | Electrically conductive surface, internal seal |
| Material of hoods/housings | Die-cast light alloy |
| Locking levers | Han-Easy Lock® |
| Cable entry protection | EMC cable clamp in order to connect the cable shielding to the hood without interruption of the shielding |



## Han® HPR hoods/housings for harsh outdoor environments

| | |
|---|---|
| Field of application | For external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded |
| Distinguishing feature | Hoods/housings colour-coded black, internal seal (RAL 9005) |
| Locking parts | Stainless steel |
| Material of hoods/housings | Die-cast light alloy, corrosion resistant |
| Cable entry protection | Optional universal cable clamp for hoods with strain relief, or special cable clamp with bell mouthed cable fitting and anti-twist devices (use of adapter is necessary) |



## Han-INOX® hoods/housings for harsh environments

| | |
|---|---|
| Field of application | For excellent mechanical and electrical protection in demanding environments, for example, in the food, automobile and mechanical engineering industries also for process and regulation control applications |
| Distinguishing feature | Matt-finished metal surface |
| Material of hoods/housings | Stainless steel |
| Locking levers | Stainless steel |
| Cable entry protection | Standard cable gland (stainless steel) |



# Types of hood/housing



## Han-Eco® – Lightweight hood/housing made of high-performance plastic

| | |
|---|---|
| Field of application | Industrial environments, outdoor applications |
| Distinguishing feature | Black plastic hoods / housings |
| Material of hoods/housings | Polyamide (glass-fibre reinforced) |
| Locking levers | Double locking lever / single locking lever (10 A / 16 A) (polyamide, glass-fibre reinforced) |
| Cable entry protection | Integrated plastic cable gland (optional) for sizes 6 B, 10 B, 16 B, 24 B / 10 A, 16 A |



## Han-*Yellock*® – Compact hood/housing in a shapely design

| | |
|---|---|
| Field of application | Industrial environments (e.g. in robotics, machinery) |
| Distinguishing feature | Internal locking mechanism, push-buttons, two-part hood |
| Material of hoods/housings | Zinc die-cast, aluminum |
| Locking parts | Stainless steel and polyamide |
| Cable entry protection | Standard cable gland (with metric threads M20 / M25 / M32 / M40) for hoods with strain relief or special cable glands |



# Recommended tightening torque for housings, bulkhead mounting

| Series | Number of screws | Size of screws | Recommended Tightening torque (Nm) | Remarks |
|---|---|---|---|---|
| Han® 3 A | 2 | M 3 | 0.8 ... 1.0 | Gasket |
| Han® 10 A / 16 A | 4 | M 3 | 0.8 ... 1.0 | Gasket |
| Han® 10 EMV / 16 EMV | 4 | M 3 | min. 1.0 | O-ring |
| Han® 32 A | 4 | M 4 | 0.8 ... 1.0 | Gasket |
| Han® 6 B / 10 B / 16 B / 24 B | 4 | M 4 | 0.8 ... 1.0 | Gasket |
| Han® 32 B | 4 | M 5 | min. 2.5 | O-ring |
| Han® 48 B | 4 | M 6 | min. 3.0 | O-ring |
| Han® 3 HPR | 2 | M 4 | min. 1.0 | O-ring |
| Han® 6 / 10 / 16 / 24 HPR | 4 | M 6 | min. 3.0 | O-ring |
| Han® 48 HPR | 4 | M 8 | min. 5.0 | O-ring |

To offer safe protection the surface condition for mounting panel should be according to DIN 4766:

- Waviness ≤ 0.2 mm on 200 mm distance
- Roughness $R_a$ ≤ 16 µm

# General remark for assembling

During assembly and handling of the connector, any kind of damage to the surface of the housing must be avoided to guarantee the correct surface protection.

## Housing with 2 levers Han-Easy Lock®

- ❑ easy operation
- ❑ high degree of pressure tightness
- ❑ reliable locking guaranteed by 4 locking points
- ❑ space saving mounting
- ❑ ideal for mounting side by side
- ❑ cable to cable connection is possible
- ❑ high seal force

Details of Han-Easy Lock® see chapter 31



## Housing with 1 lever Han-Easy Lock®

- ❑ easily accessible, even with side entry
- ❑ possibility to lock protective covers on the housing
- ❑ cable to cable connection is possible
- ❑ 2 locking points on the longitudinal axis



## 1 lever in central position

- ❑ easily accessible, even with side entry
- ❑ 2 locking points on the lateral axis
- ❑ space saving mounting
- ❑ ideal for mounting side by side
- ❑ single hand operation



## Screw locking / toggle locking

- ❑ hexagon nuts tightened with spanner
- ❑ highest degree of pressure tightness
- ❑ easily accessible, also with side entry
- ❑ use of tools avoids access by unauthorized persons



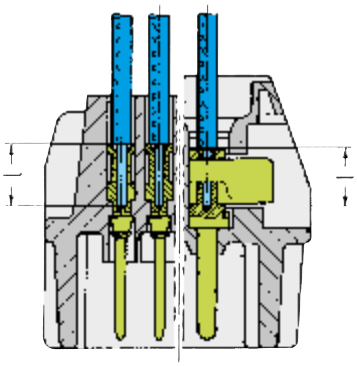
## Hood with 2 levers Han-Easy Lock®

- ❑ easy operation
- ❑ high degree of pressure tightness
- ❑ ideal for mating to housings with protection cover
- ❑ high seal force

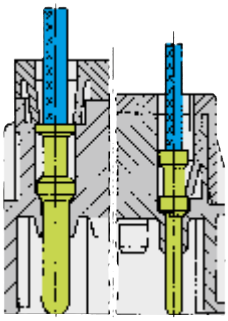
Details of Han-Easy Lock® see chapter 31



## Crimp connection



Han DD®
Han D®
R 15
Han-Modular® (10 A)
Han E®
Han A®
Han Hv E®



Han-Com® (40 A)
Han-Modular® ( 40 A)
Han E®
Han A®
Han Hv E®
Han® EE
Han® EEE
Han-Modular® (16 A)
Han® Q

A perfect crimp connection is gastight, therefore corrosion free and amounts to a cold weld of the parts being connected. For this reason, major features in achieving high quality crimp connections are the design of the contact crimping parts and of course the crimping tool itself. Wires to be connected must be carefully matched with the correct size of crimp contacts. If these basic requirements are met, users will be assured of highly reliable connections with low contact resistance and high resistance to corrosive attack.

The economic and technical advantages are:

- Constant contact resistance as a result of precisely repeated crimp connection quality
- Corrosion free connections as a result of cold weld action
- Pre-preparation of cable forms with crimp contacts fitted
- Optimum cost cable connection

Requirements for crimp connectors are laid down in DIN EN 60 352-2 as illustrated in the table.

### Pull out force of stranded wire

The main criterion by which to judge the quality of a crimp connection is the retention force achieved by the wire conductor in the terminal section of the contact. DIN EN 60 352-2 defines the extraction force in relation to the cross-section of the conductor. When fitted using HARTING crimping tools and subject to their utilization in an approved manner, our crimp connectors comply with the required extraction forces.

### Crimping tools

Crimping tools (hand operated or automatic) are carefully designed to produce with high pressure forming parts a symmetrical connection of the crimping part of the contact and the wire being connected with the minimum increase in size at the connection point. The positioner automatically locates the crimp and wire at the correct point in the tool.

A ratchet in the tool performs 2 functions:

- It prevents insertion of the crimp into the tool for crimping before the jaws are fully open
- It prevents the tool being opened before the crimping action is completed

Identical, perfectly formed, connections can be produced using this crimping system.

Crimp-cross section



HARTING-crimp profile



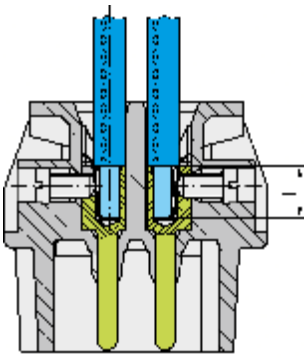
BUCHANAN crimp profile

Tensile strength of crimped connections
(Table 1 of the DIN EN 60 352-2)

| Conductor cross-section | | Tensile strength |
|---|---|---|
| mm² | AWG | N |
| 0.05 | 30 | 6 |
| 0.08 | 28 | 11 |
| 0.12 | 26 | 15 |
| 0.14 | | 18 |
| 0.22 | 24 | 28 |
| 0.25 | | 32 |
| 0.32 | 22 | 40 |
| 0.5 | 20 | 60 |
| 0.75 | | 85 |
| 0.82 | 18 | 90 |
| 1.0 | | 108 |
| 1.3 | 16 | 135 |
| 1.5 | | 150 |
| 2.1 | 14 | 200 |
| 2.5 | | 230 |
| 3.3 | 12 | 275 |
| 4.0 | | 310 |
| 5.3 | 10 | 355 |
| 6.0 | | 360 |
| 8.4 | 8 | 370 |
| 10.0 | | 380 |

| Wire gauge | | Internal diameter | Stripping length l (mm) | | |
|---|---|---|---|---|---|
| (mm²) | AWG | Ø (mm) | Han® DD<br>Han® D<br>R15<br>Han-Modular®<br>(10 A) | Han E®<br>Han A®<br>Han Hv E® | Han® C |
| 0.14 ... 0.37 | 26 ... 22 | 0.9 | 8 | - | - |
| 0.5 | 20 | 1.15 | 8 | 7.5 | - |
| 0.75 | 18 | 1.3 | 8 | 7.5 | - |
| 1 | 18 | 1.45 | 8 | 7.5 | - |
| 1.5 | 16 | 1.75 | 8 | 7.5 | 9.5 |
| 2.5 | 14 | 2.25 | 6 | 7.5 | 9.5 |
| 4 | 12 | 2.85 | - | 7.5 | 9.5 |
| 6 | 10 | 3.5 | - | - | 9.5 |
| 10 | 8 | 4.3 | - | - | 12-18 |

## Screw terminal



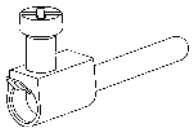
Screw terminals meet VDE 0609 /EN 60 999. Dimensions and tightening torques for testing are shown in following table.
Screw dimensions and tightening torque for screw terminals

| Wire gauge (mm²) | 1.5 | 2.5 | 4 | 6 | 10 | 16 |
|---|---|---|---|---|---|---|
| Screw thread | M3 | M3 | M3.5 | M4 | M4 | M6 |
| Test moment of torque (Nm) | 0.5 | 0.5 | 0.8 | 1.2 | 1.2 | 1.2* |
| min. pull-out for stranded wire (N) | 40 | 50 | 60 | 80 | 90 | 100 |

* for screws without heads

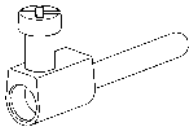
The relevant regulations state that in the case of

- Terminals with wire protection



the use of ferrules is not necessary. Series Han E®, Han® HsB, Han Hv E®, Han® K 6/12, Han® K 6/6

- Terminals without wire protection



The insulation is first stripped and then a wire ferrule must be used.
Series Han® K 4/x, Han A®, Staf®

## Screw terminal

| Inserts | Wire protection | | min. wire gauge | | max. wire gauge* | | Stripping length |
|---|---|---|---|---|---|---|---|
| | Yes | No | mm² | AWG | mm² | AWG | mm |
| Han® 3 A, Han® 4 A | | X | 0.75 | 18 | 1.5 | 16 | 4.5 |
| Han® 10 A, 16 A, 32 A | | X | 0.75 | 18 | 2.5 | 14 | 7.5 |
| Han E®, Hv E® | X | | 0.75 | 18 | 2.5 | 14 | 7.5 |
| Han® HsB | X | | 1.5 | 16 | 6 | 10 | 11.5 |
| Han® K 6/6, K 6/12 (signal contacts) | X | | 0.2 | 24 | 2.5 | 14 | 7.5 |
| Han® K 4/2, K 4/8 (signal contacts) | | X | 0.5 | 20 | 2.5 | 14 | 7.5 |
| Han® K 4/0, K 4/2, K 4/8 (power contacts) | | X | 1.5 | 16 | 16 | 6 | 14 |
| Han E® AV, Han D® AV | X | | 0.2 | 24 | 2.5 | 14 | 8 ... 11 |
| Staf® | | X | 0.5 | 18 | 1.5 | 16 | 4.5 |

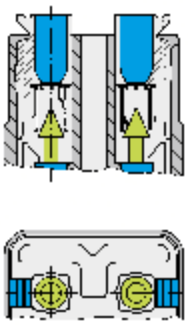
* Rated wire gauge according to DIN EN 60 999-1

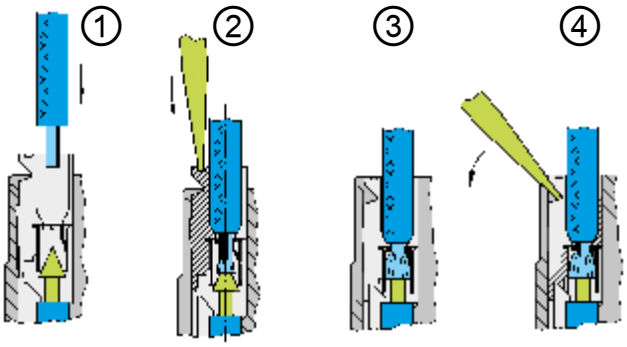
## Recommended screw drivers and tightening torques

| Screw size | Connector type | Tightening torque (Nm) | Tightening torque (lbft) | Recommended screw driver |
|---|---|---|---|---|
| M2.5 | Cover / cable clamp screws: Han® Megabit, Han® Gigabit, Han® Shielded Module | 0.40 | 0.30 | PH 1 |
| M3 | Screw terminals: Han® 3 A, Han® 4 A, Han® Q 5/0 (PE), Han® Q 7/0 (PE), Staf® | 0.25 | 0.20 | slotted 0.4 x 2.5 |
| M3 | Screw terminals: Han D® AV, Han E® AV, Han® K 6/6, Han® K 6/12 (signal) | 0.50 | 0.40 | slotted 0.5 x 3.0 |
| M3 | Screw terminals: Han® 10A ... 32A, Han® E, Han Hv E®, Han® HsB | 0.50 | 0.40 | slotted 0.6 x 3.5 or PH 1 |
| M3 | Screw terminals: Han® E High Temp, Han® Thermocouple | 0.50 | 0.40 | slotted 0.6 x 3.5 |
| M3 | Cable clamp screws: Han-Quintax®, Han-Quintax® High Density, Han® D Coax, Han® E Coax | 0.70 | 0.50 | slotted 0.6 x 3.5 |
| M3 | Cable clamp screws: Han® D-Sub, USB Module | 0.50 | 0.40 | slotted 0.6 x 3.5 or PH 1 |
| M3 | Fixing screws: Connectors sizes 10 A, 16 A | 0.50 | 0.40 | slotted 0.6 x 3.5 or PH 1 |
| M3 | Fixing screws: Connectors sizes 6 B ... 24 B | 0.50 | 0.40 | slotted 0.6 x 3.5 or PH 2 |
| M3 | Ground terminals: Han-Modular® Hinged frames 1 ... 2.5 $mm^2$ | 0.80 | 0.60 | slotted 0.6 x 3.5 or PH 2 |
| M3 | Han® guiding pins and bushes | 0.50 | 0.40 | slotted 1 x 6.0 |
| M3.5 | Ground terminals: Han® 10 A, Han® 16 A, Han 15 D®, Han 25 D® | 0.80 | 0.60 | slotted 0.6 x 3.5 or PH 1 |
| M4 | Screw terminals: Han® HsB | 1.20 | 0.90 | slotted 0.6 x 3.5 or PH 1 |
| M4 | Fixing screws: Han-*Yellock*® | 1.20 | 0.90 | slotted 0.8 x 4.5 or PH 2 |
| M4 | Ground terminals: Han-Modular® Hinged frames 4 ... 10 $mm^2$ | 1.20 | 0.90 | slotted 0.6 x 3.5 or PH 2 |
| M4 | Ground terminals: Han E®, Han® ES, Han® ESS, Han® ES Press, Han Hv E®, Han® Hv ES, Han E® High Temp, Han 40 D®, Han 64 D®, Han DD®, Han® K 8/24, Han® K 4/X, Han® K 6/12, Han® K 6/36 | 1.20 | 0.90 | slotted 0.8 x 4.5 or PH 2 |
| M5 | Ground terminals: Han® HsB, Han® K12/2, Han® K4/X, Han® K6/12, Han® K6/36 | 2.00 | 1.40 | slotted 0.8 x 4.5 or PH 2 |
| M6 | Screw terminals: Han® K power contacts, Han-Eco® PE module | for Han® K see chapter 05, Han-Eco® PE module (1.2-3 Nm) | | slotted 0.8 x 4.5 |

Increasing the tightening torque does not improve considerably the contact resistances.The torque moments were determined when optimum mechanical, thermal and electrical circumstances were given. If the recommended figures are considerably exceeded the wire or the termination can be damaged.

## Han-Quick Lock® termination technique






This new termination technique from HARTING combines the reliability and the simple operation of the cage clamp termination with the low space requirements of crimp technology.

Han-Quick Lock® is ideally suited to high contact densities and is considerably superior over other termination techniques. No other technology is so simple, space saving and fast. For this vibration safe termination, no special tools are necessary.

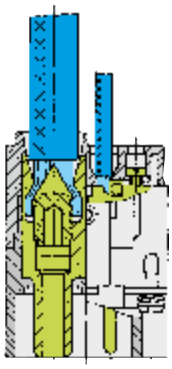
- Fast, simple and robust termination technique
- Field assembly without a special tool
- Compatible also to inserts with other termination technologies
- Combines high contact density similar to crimp termination with the simple connection like a cage clamp terminal
- For stranded wire according to IEC 60228 Class 5

| | |
|---|---|
| Insert connectors: | Han® 3 A<br>Han® 4 A<br>Han® 7 D<br>Han® 8 D<br>Han® Q 4/2<br>Han® Q 5/0<br>Han® Q 8/0<br>Han® Q 12/0<br>Han® EE modules<br>Han® DD modules<br>Han® PushPull Power 4/0 |

Technical characteristics:

| | |
|---|---|
| Material | |
| Isolation body | Polycarbonate |
| Active termination element | Polycarbonate |
| Quick-Lock spring | Stainless steel |
| Contact | Copper alloy |
| Blue slide | Terminal cross-section<br>0.5 ... 2.5 mm² / AWG 20 ... 14 |
| Black slide | Terminal cross-section<br>0.25 ... 1.5 mm² / AWG 23 ... 16 |
| Stripping length | 10 mm |
| Insulating resistance | > $10^{10}$ Ohm |
| Flammability | according to UL 94 V 0 |
| Termination tool | Screwdriver<br>0.4 x 2.5 mm resp.<br>0.5 x 3.0 mm (recommended for wire gauges > 1.5 mm²) |

## Axial screw terminal



This termination combines the benefits of screw and crimp terminations:

- Less space required
- Easy handling
- No special tools

### Remarks on the axial screw technique

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Background:

According to DIN EN 60 228 for cables and insulated wires the wire gauge will be determined by conductance (Ω/km) and maximum wire diameter. A minimum cable diameter is not specified! (Example: nominal wire gauge = 95 mm² → real, geometric wire gauge = 89 mm²)

Recommendation:

If you want to apply the axial screw technique in combination with cables that have cross sections extremely deviating from the nominal value, this must be checked seperately.

Strain relief:

In order to ensure that the contact is protected against radial stress, you must fix the cable at an adequate distance from the terminal.

Details for professional strain relief design can be found in the standard DIN VDE 0100-520: 2003-06 (see enclosed table).

| Outer cable diameter (mm) | Maximum fixing distance (mm) | |
|---|---|---|
| | horizontal | vertical |
| D ≤ 9 | 250 | 400 |
| 9 < D < 15 | 300 | 400 |
| 15 < D < 20 | 350 | 450 |
| 20 < D < 40 | 400 | 550 |

Cables:

The axial screw technology is developed for wires according to DIN EN 60 228 class 5 (see table: Wire assembly according to DIN EN 60 228). Deviating cable assemblies have to be tested separately.

Assembly remarks:

Before starting the assembly the user must ensure that the axial cone is screwed fully downward to completely open the contact chamber.

After stripping the cable insulation the strands must not be twisted and the maximum cable insulation must not exceed the recommended dimension.

Insert the wire completely into the contact chamber until the copper strands reach the bottom. Keep the cable in position while applying the recommended tightening torque.

Maintenance of the axial screw termination:

In order to avoid damage to individual cable strands you must re-apply the tightening torque only once after the initial assembly of the application.

| Wire gauge (mm²) | Stranded wires DIN EN 60228 class 2 | Fine stranded wires DIN EN 60228 class 5 | Super fine stranded wires DIN EN 60228 class 6 | | | |
|---|---|---|---|---|---|---|
| 0.5 | 7 x 0.30 | 16 x 0.20 | 28 x 0.15 | 64 x 0.10 | 131 x 0.07 | 256 x 0.05 |
| 0.75 | 7 x 0.37 | 24 x 0.20 | 42 x 0.15 | 96 x 0.10 | 195 x 0.07 | 384 x 0.05 |
| 1 | 7 x 0.43 | 32 x 0.20 | 56 x 0.15 | 128 x 0.10 | 260 x 0.07 | 512 x 0.05 |
| 1.5 | 7 x 0.52 | 30 x 0.25 | 84 x 0.15 | 192 x 0.10 | 392 x 0.07 | 768 x 0.05 |
| 2.5 | 7 x 0.67 | 50 x 0.25 | 140 x 0.15 | 320 x 0.10 | 651 x 0.07 | 1280 x 0.05 |
| 4 | 7 x 0.85 | 56 x 0.30 | 224 x 0.15 | 512 x 0.10 | 1040 x 0.07 | |
| 6 | 7 x 1.05 | 84 x 0.30 | 192 x 0.20 | 768 x 0.10 | 1560 x 0.07 | |
| 10 | 7 x 1.35 | 80 x 0.40 | 320 x 0.20 | 1280 x 0.10 | 2600 x 0.07 | |
| 16 | 7 x 1.70 | 128 x 0.40 | 512 x 0.20 | 2048 x 0.10 | | |
| 25 | 7 x 2.13 | 200 x 0.40 | 800 x 0.20 | 3200 x 0.10 | | |
| 35 | 7 x 2.52 | 280 x 0.40 | 1120 x 0.20 | | | |
| 50 | 19 x 1.83 | 400 x 0.40 | 705 x 0.30 | | | |
| 70 | 19 x 2.17 | 356 x 0.50 | 990 x 0.30 | | | |
| 95 | 19 x 2.52 | 485 x 0.50 | 1340 x 0.30 | | | |
| 120 | 37 x 2.03 | 614 x 0.50 | 1690 x 0.30 | | | |
| 150 | 37 x 2.27 | 765 x 0.50 | 2123 x 0.30 | | | |
| 185 | 37 x 2.52 | 944 x 0.50 | 1470 x 0.40 | | | |
| 240 | 61 x 2.24 | 1225 x 0.50 | 1905 x 0.40 | | | |

Wire assembly according to DIN EN 60 228

| Insert | Wire gauge | Stripping length | | Tightening torque | | Max. cable insulation diameter | Size hexagon recess | Insert dimension for cable indication (ISK) |
|---|---|---|---|---|---|---|---|---|
| | (mm²) | (mm) | | (Nm) | | (mm) | (SW) | (mm) |
| Han® K 4/4 finger safe | 6 ... 16 | 6 mm²:<br>10 mm²:<br>16 mm²: | 11+1<br>11+1<br>11+1 | 6 mm²:<br>10 mm²:<br>16 mm²: | 2<br>3<br>4 | 8.9 | 2.5 | 7.4<br>PE: 8.9 |
| | 10 ... 22 | 10 mm²:<br>16 mm²:<br>22 mm²: | 11+1<br>11+1<br>11+1 | 10 mm²:<br>16 mm²:<br>22 mm²: | 3<br>4<br>4 | 8.9<br>8.9<br>11 | 2.5 | 7.4<br>7.4<br>5.4<br>PE: 8.9 |
| Han® K 4/4 | 6 ... 16 | 6 mm²:<br>10 mm²:<br>16 mm²: | 11+1<br>11+1<br>11+1 | 6 mm²:<br>10 mm²:<br>16 mm²: | 2<br>3<br>4 | 8.9 | 2.5 | 7.4<br>PE: 8.9 |
| | 10 ... 22 | 10 mm²:<br>16 mm²:<br>22 mm²: | 11+1<br>11+1<br>13+1 | 10 mm²:<br>16 mm²:<br>22 mm²: | 3<br>4<br>4 | 8.9<br>8.9<br>11 | 2.5 | 7.4<br>7.4<br>5.4<br>PE: 8.9 |
| Han® K 6/12 | 2.5 ... 8 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>8 mm²: | 5+1<br>5+1<br>8+1<br>8+1 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>8 mm²: | 1.5<br>1.5<br>2<br>2 | 6.2 | 2 | 7.4 |
| | 6 ... 10 | 6 mm²:<br>8 mm²:<br>10 mm²: | 8+1<br>8+1<br>8+1 | 6 mm²:<br>8 mm²:<br>10 mm²: | 2<br>2<br>2 | 6.2 | 2 | 4.7 |
| Han® K 6/6 | 10 ... 25 | 10 mm²:<br>16 mm²:<br>25 mm²: | 13+/-1<br>13+/-1<br>13+/-1 | 10 mm²:<br>16 mm²:<br>25 mm²: | 6<br>6<br>7 | 11.4 | 4 | 4.9 |
| | 16 ... 35 | 16 mm²:<br>25 mm²:<br>35 mm²: | 13+/-1<br>13+/-1<br>13+/-1 | 16 mm²:<br>25 mm²:<br>35 mm²: | 6<br>7<br>8 | 11.4 | 4 | 4.9 |
| Han® K 8/0 | 10 ... 25 | 10 mm²:<br>16 mm²:<br>25 mm²: | 13+/-1<br>13+/-1<br>13+/-1 | 10 mm²:<br>16 mm²:<br>25 mm²: | 6<br>6<br>7 | 11.4 | 4 | 4.75 |
| Han® Q 2/0<br>Han® Q 2/0 High Voltage | 2.5 ... 10 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>10 mm²: | 8+1<br>8+1<br>8+1<br>8+1 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>10 mm²: | 1.8<br>1.8<br>1.8<br>1.8 | 7.3 | 2 | 5.6 |
| Han® Q 4/2<br>Han® Q 4/2 with Han-Quick Lock® | 4 ... 10 | 4 mm²:<br>6 mm²:<br>10 mm²: | 8+1<br>8+1<br>8+1 | 4 mm²:<br>6 mm²:<br>10 mm²: | 1.8<br>1.8<br>1.8 | 7.3 | 2 | 5.6 |
| Han® 200 A module without PE<br>Han® 200 A module with PE | 25 ... 40 | 25 mm²:<br>40 mm²: | 16<br>16 | 25 mm²:<br>40 mm²: | 8<br>8 | 12<br>16 | 5 | 0 |
| | 40 ...70 | 40 mm²:<br>70 mm²: | 16<br>16 | 40 mm²:<br>70 mm²: | 9<br>10 | 12<br>16 | 5 | 0 |
| Han® 100 A module | 6 ... 10 | 6 mm²:<br>8 mm²:<br>10 mm²: | 13+/-1<br>13+/-1<br>13+/-1 | 6 mm²:<br>8 mm²:<br>10 mm²: | 4<br>4<br>4 | 11.4 | 2.5 | 4.9 |
| | 10 ... 25 | 10 mm²:<br>16 mm²:<br>25 mm²: | 13+/-1<br>13+/-1<br>13+/-1 | 10 mm²:<br>16 mm²:<br>25 mm²: | 6<br>6<br>7 | 11.4 | 4 | 4.9 |
| | 16 ... 35 | 16 mm²:<br>25 mm²:<br>35 mm²: | 13+/-1<br>13+/-1<br>13+/-1 | 16 mm²:<br>25 mm²:<br>35 mm²: | 6<br>7<br>8 | 11.4 | 4 | 4.9 |
| | 38 | 38 mm²: | 13+/-1 | 38 mm²: | 8 | 11.4 | 4 | 4.9 |
| Han® 70 A module | 6 ... 16 | 6 mm²:<br>10 mm²:<br>16 mm²: | 11+1<br>11+1<br>11+1 | 6 mm²:<br>10 mm²:<br>16 mm²: | 2<br>3<br>4 | 8.9 | 2.5 | 7.4 |
| | 14 ... 22 | 14 mm²:<br>16 mm²:<br>22 mm²: | 12.5+1<br>12.5+1<br>12.5+1 | 14 mm²:<br>16 mm²:<br>22 mm²: | 4<br>4<br>4 | 10 | 2.5 | 5.9 |
| Han® 40 A module | 2.5 ... 8 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>8 mm²: | 5+1<br>5+1<br>8+1<br>11+1 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>10 mm²: | 1.5<br>1.5<br>2<br>2 | 4<br>4<br>6<br>10.5 | 2 | 4.7 |
| | 6 ... 10 | 6 mm²:<br>10 mm²: | 8+1<br>11+1 | 6 mm²:<br>10 mm²: | 2<br>2 | 6<br>10.5 | 2 | 4.7 |

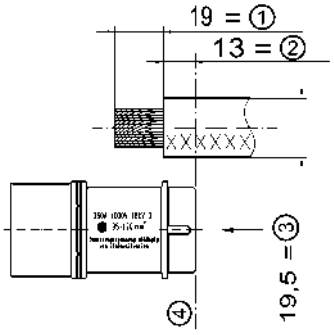
| Insert | Wire gauge | Stripping length | | Tightening torque | | Max. cable insulation diameter | Size hexagon recess | Insert dimension for cable indication (ISK) |
|---|---|---|---|---|---|---|---|---|
| | (mm²) | (mm) | | (Nm) | | (mm) | (SW) | (mm) |
| Han® C module with axial screw terminal | 2.5 ... 8 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>8 mm²: | 5+1<br>5+1<br>8+1<br>8+1 | 2.5 mm²:<br>4 mm²:<br>6 mm²:<br>8 mm²: | 1.5<br>1.5<br>2<br>2 | 4<br>4<br>6<br>8.2 | 2 | 5.2 |
| | 6 ... 10 | 6 mm²:<br>10 mm²: | 8+1<br>11+1 | 6 mm²:<br>10 mm²: | 2<br>2 | 6<br>8.2 | 2 | 5.2 |
| Han® K3/0 straight | 25 ... 40 | 25 mm²:<br>40 mm²: | 22<br>22 | 25 mm²:<br>40 mm²: | 8<br>8 | 15 | 5 | 8.2 |
| | 35 ... 70 | 35 mm²:<br>50 mm²:<br>70 mm²: | 22<br>22<br>22 | 35 mm²:<br>50 mm²:<br>70 mm²: | 8<br>9<br>10 | 15 | 5 | 8.2 |
| Han® K3/0 angled | 25 ... 40 | 25 mm²:<br>40 mm²: | 22<br>22 | 25 mm²:<br>40 mm²: | 8<br>8 | 15 | 5 | 9 |
| | 35 ... 70 | 35 mm²:<br>50 mm²:<br>70 mm²: | 22<br>22<br>22 | 35 mm²:<br>50 mm²:<br>70 mm²: | 8<br>9<br>10 | 15 | 5 | 9 |
| Han® K3/2 straight | 35 ... 70<br>PE: 25 ... 40 | 35 mm²:<br>50 mm²:<br>70 mm²:<br>PE: | 22<br>22<br>22<br>14 | 35 mm²:<br>50 mm²:<br>70 mm²: | 8<br>9<br>10 | power: 15<br><br><br>PE: 10 | 5 | power: 8.2<br><br><br>PE: 7.2 |
| Han® K3/2 angled | 25 ... 40 | 25 mm²:<br>40 mm²:<br>PE: | 22<br>22<br>14 | 25 mm²:<br>40 mm²: | 8<br>8 | power: 15<br><br>PE: 10 | 5 | power: 9.0<br><br>PE: 7.2 |
| | 35 ... 70<br>PE: 25 ... 40 | 35 mm²:<br>50 mm²:<br>70 mm²: | 22<br>22<br>22 | 35 mm²:<br>50 mm²:<br>70 mm²: | 8<br>9<br>10 | power: 15<br>PE: 10 | 5 | power: 9.0<br>PE: 7.2 |
| Han® HC Modular 350 | 20 ... 35 | 20 mm²:<br>35 mm²: | 19+1<br>19+1 | 20 mm²:<br>35 mm²: | 8<br>8 | 19.5 | 5 | 13 |
| | 35 ... 70 | 35 mm²:<br>50 mm²:<br>70 mm²: | 19+1<br>19+1<br>19+1 | 35 mm²:<br>50 mm²:<br>70 mm²: | 8<br>10<br>12 | 19.5 | 5 | 13 |
| | 95 ... 120 | 95 mm²:<br>120 mm²: | 19+1<br>19+1 | 95 mm²:<br>120 mm²: | 14<br>16 | 19.5 | 5 | 13 |
| Ground contact for Han® HC Modular | 35 ... 70 | 35 mm²:<br>50 mm²:<br>70 mm²: | 19+1<br>19+1<br>19+1 | 35 mm²:<br>50 mm²:<br>70 mm²: | 8<br>10<br>12 | - | 5 | - |
| Han® HC Modular 650 | 60 ... 70 | 60 mm²:<br>70 mm²: | 23+2<br>23+2 | 60 mm²:<br>70 mm²: | 12<br>12 | 27 | 8 | 28 |
| | 70 ... 120 | 70 mm²:<br>95 mm²:<br>120 mm²: | 23+2<br>23+2<br>23+2 | 70 mm²:<br>95 mm²:<br>120 mm²: | 12<br>14<br>16 | 26.5 | 8 | 28 |
| | 150 ... 185 | 150 mm²:<br>185 mm²: | 23+2<br>23+2 | 150 mm²:<br>185 mm²: | 17<br>18 | 26.5 | 8 | 28 |

Overview inserts with axial screw terminal

## Insulating base dimension for the cable marking (ISK)

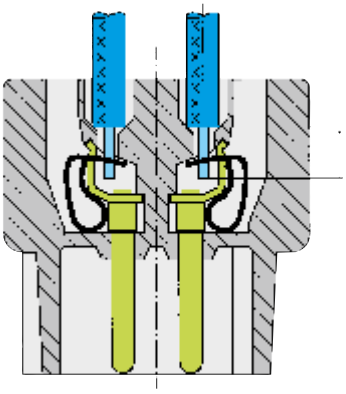
Marking the proper cable position for the axial screw connection contact point:

By markering the cable sheathing you can specify the proper point for tightening the axial screw on the connecting cable. If the cable is pushed into the insulating base up to the marker (where the marker is flush with the upper edge of the insulating base), then the cable is in the correct position for being connected. The following figure (on the next page) illustrates this process when using the Han® HC Modular 350 contact. The marker and the upper edge of the insulating base are at the same level (as indicated by the dashed line).




① stripping length
② insulator dimension (ISK dimension)
③ max. cable insulation diameter
④ sink line

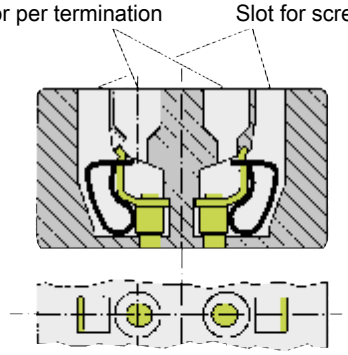
## Cage-clamp terminal

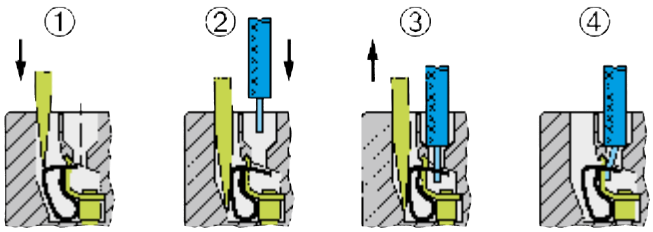


This termination method requires very little preparation of the wire and no special tools, leading to a low installed cost and a high degree of mechanical security.

- For all stranded and solid wires with a cross section 0.14 to 2.5 mm².
- Ease of termination. Conductor and screwdriver are in same plane.
- No special preparation of stripped conductor.
- The larger the conductor the higher the clamping force.
- The termination is vibration-proof.
- Guaranteed constant low resistance connection of the cage-clamp terminal.
- The cage-clamp system is internationally approved.
  VDE, CSA, UL, ÖVE, SEMKO, LCIE (France), Germanischer Lloyd, DET Norske Veritas

One conductor per termination  Slot for screwdriver






Screwdriver width: 0.6 x 3.5 mm

| Kontakteinsätze | max. Leiterquerschnitt | | Abisolierlänge |
|---|---|---|---|
| | (mm²) | AWG | l (mm) |
| Han® ES, Han® Hv ES | 0.14 ... 2.5 | 26 ... 14 | 7 ... 9 |
| Han® ESS | 0.14 ... 2.5 | 26 ... 14 | 9 ... 11 |
| Han® ES Press | 0.14 ... 2.5 | 26 ... 14 | 9 ... 11 |
| Han® K 4/4 | 0.14 ... 2.5 | 26 ... 14 | 7 ... 9 |
| Han® ES Modul | 0.14 ... 2.5 | 26 ... 14 | 7 ... 9 |

## Han® ES Press

The circular openings in the insert are used to hold the wire that is being connected. Note that there are two rows of rectangular holes (intended for plug-in jumpers) located between the contact openings of the Han® ES Press insert.

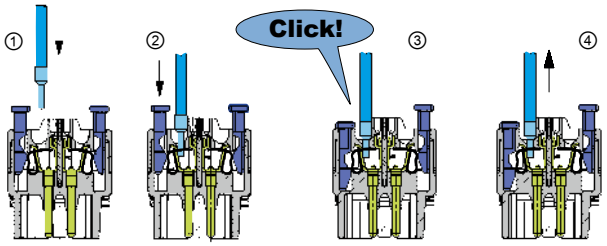
**Note: Only one wire per termination point!**

Each termination point is, in principle, only suited to hold a single wire. When required, two or more wires may be contacted per termination point; contact HARTING Technical Support first for more information.

**Note!**

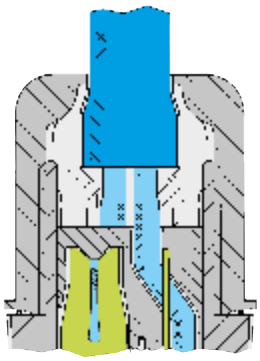
An effective and durable spring clamp connection requires that the wire is properly stripped. The correct stripping lengths for the Han® ES Press contacts are specified in the table below, left side.

### Assembly




④ = Gentle test pull!

## IDC (Insulation displacement terminal)



| Inserts | max. wire gauge | |
|---|---|---|
| | (mm²) | AWG |
| M8-S/M12-S | 0.14 ... 0.34 | 26 ... 22 |
| Circular connectors M12 angled | 0.25 ... 0.50 | 24 (7/32) ... 22 |
| Circular connectors M12-L | 0.34 ... 0.75 | 22 ... 18 |
| M12-L PROFIBUS | 0.25 ... 0.34 | 24 ... 22 |
| M12-L Ethernet | 0.25 ... 0.34 | 24 ... 22 |
| | 0.34 ... 0.5 | 22 ... 18 |
| Panel feed through Pg 13.5 /M20 | 0.75 ... 1.50 | 18 ... 16 |
| Panel feed through Pg 9 | 0.25 ... 0.50 | 24 (7/32) ... 22 |
| HARAX® 3 A | 0.75 ... 1.5 | 18 ... 16 |

## General

The choice of connectors entails more than just considering factors such as functionality, the number of contacts, current and voltage ratings. It is equally important to take account of where the connectors are to be used and the prevailing ambient conditions. This in turn means that, dependent on the conditions under which they are to be installed and pursuant to the relevant standards, different voltage and current ratings may apply for the same connectors.

The most important influencing factors and the corresponding electrical characteristics of the associated connectors are illustrated here in greater detail.

## Overvoltage category

The overvoltage category is dependent on the mains voltage and the location at which the equipment is installed. It describes the maximum overvoltage resistance of a device in the event of a power supply system fault, e. g. in the event of a lightening strike.

The overvoltage category affects the dimensioning of components in that it determines the clearance air gap. Pursuant to the relevant standards, there are 4 overvoltage categories.

Equipment for industrial use, such as fall HARTING heavy duty Han connector, fall into Overvoltage Category III.

## Extract from DIN VDE 0110-1 and IEC 60 664-1, Para. 2.2.2.1.1

Equipment of overvoltage category IV is for use at the origin of the installation.

Note 1: Examples of such equipment are electricity meters and primary overcurrent protection equipment.

Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements.

Note 2: Examples of such equipment are switches in the fixed installation and equipment for industrial use with permanent connection to the fixed installation.

Equipment of overvoltage category II is energy-consuming equipment to be supplied from the fixed installation.

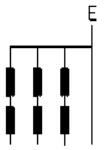
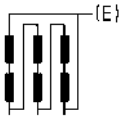
Note 3: Examples of such equipment are appliances, portable tools and other household equipment with similar loads.

If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies.

Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriately low level.

Note: Examples are protected electronic circuits.

## Rated impulse voltages (Table B2 of DIN EN 60 664-1)

| Voltage line-to-neutral derived from nominal voltages A.C. or D.C. up to and including | Nominal voltages presently used in the world (= Rated insulation voltage of equipment) | | | | Rated impulse voltage for equipment | | | |
|---|---|---|---|---|---|---|---|---|
| | Three-phase 4-wire systems with earthed neutral | Three-phase 3-wire systems earthed or unearthed | Single-phase 2-wire systems A.C. or D.C. | Single-phase 3-wire systems A.C. or D.C. | Overvoltage category | | | |
| |   |   |  |  | I | II | III | IV |
| | | | | | Special protected levels | Level for electrical equipment (household and others) | Level for distribution supply systems | Input level |
| V | V | V | V | V | V | V | V | V |
| 50 | | | 12.5 24<br>25 30<br>42 48 | 30 ... 60 | 330 | 500 | 800 | 1500 |
| 100 | 66/115 | 66 | 60 | | 500 | 800 | 1500 | 2500 |
| 150 | 120/208*<br>127/220 | 115, 120<br>127 | 100**<br>110, 220 | 100 ... 200**<br>110 ... 220<br>120 .. 240 | 800 | 1500 | 2500 | 4000 |
| 300 | 220/380, 230/400<br>240/415, 260/440<br>277/480 | 200**, 220<br>230, 240<br>260, 277 | 220 | 220 ... 440 | 1500 | 2500 | 4000 | 6000 |
| 600 | 347/600, 380/660<br>400/690, 417/720<br>480/830 | 347, 380, 400<br>415, 440, 480<br>500, 577, 600 | 480 | 480 ... 960 | 2500 | 4000 | 6000 | 8000 |
| 1000 | | 660<br>690, 720<br>830, 1000 | 1000 | | 4000 | 6000 | 8000 | 12 000 |

* ... Practice in the U.S.A and in Canada
** ... Practice in Japan

## Pollution degree

The dimensioning of operating equipment is dependent on environmental conditions. Any pollution or contamination may give rise to conductivity that, in combination with moisture, may affect the insulating properties of the surface on which it is deposited. The pollution degree influences the design of components in terms of the creepage distance.

The pollution degree is defined for exposed, unprotected insulation on the basis of environmental conditions.

HARTING heavy duty Han connectors are designed as standard for Pollution Degree 3.

Pollution degree 1
in air-conditioned or clean, dry rooms, such as computer and measuring instrument rooms, for example.

Pollution degree 2
in residential, sales and other business premises, precision engineering workshops, laboratories, testing bays, rooms used for medical purposes. As a result of occasional moisture condensation, it is to be anticipated that pollution/contamination may be temporarily conductive.

Pollution degree 3
in industrial, commercial and agricultural premises, unheated storage premises, workshops or boiler rooms, also for the electrical components of assembly or mounting equipment and machine tools.

Pollution degree 4
in outdoor or exterior areas such as equipment mounted on the roofs of locomotives or tramcars.

## Extract from DIN EN 60 664-1 (VDE 0110-1), Para. 4.6.2

Pollution degree 1: No pollution or only dry, non-conductive pollution occurs. The pollution has no influence.

Pollution degree 2: Only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be excepted.

Pollution degree 3: Conductive pollution occurs or dry non-conductive pollution occurs which becomes conductive due to condensation which is to be expected.

Pollution degree 4: Continuous conductivity occurs due to conductive dust, rain or other wet conditions.

## Special ruling for connectors

Subject to compliance with certain preconditions, the standard for connectors permits a lower pollution degree than that which applies to the installation as a whole. This means that in a pollution degree 3 environment, connectors may be used which are electrically rated for pollution degree 2.
The basis for this is contained in DIN EN 61 984, Para. 6.19.2.3.

## Extract form DIN EN 61 984, Para. 6.19.2.3

For a connector with a degree of protection IP 54 or higher according to IEC 60 529 the insulating parts inside the enclosure may be dimensioned for a lower pollution degree.

This also applies to mated connectors where enclosure is ensured by the connector housing and which may only be disengaged for test and maintenance purposes.

## The conditions fulfills,

- a connector which is protected to at least IP 54 as per IEC 60 529,
- a connector which is installed in a housing and which as described in the standard is disconnected for testing and maintenance purposes only,
- a connector which is installed in a housing and which when disconnected is protected by a cap or cover to at least IP 54,
- a connector located inside a switching cabinet to at least IP 54.

These conditions do not extend to connectors which when disconnected remain exposed to the industrial atmosphere for an indefinite period.

It should be noted that pollution can affect a connector from the inside of an installation outwards.

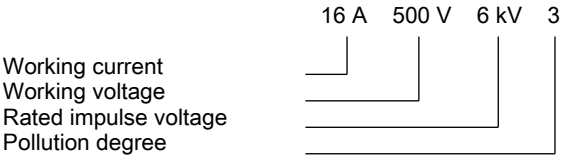
## Typical applications in which to choose pollution degree 2 connectors:

- A connector serving a drive motor which is disconnected only for the purpose of replacing a defective motor, even when the plant or system otherwise calls for pollution degree 3.
- Connectors serving a machine of modular design which are disconnected for transport purposes only and enable rapid erection and reliable commissioning. In transit, protective covers or adequate packing must be provided to ensure that the connectors are not affected by pollution/contamination.
- Connectors located inside a switching cabinet to IP 54. In such cases, it is even possible to dispense with the IP 54 housings of the connectors themselves.

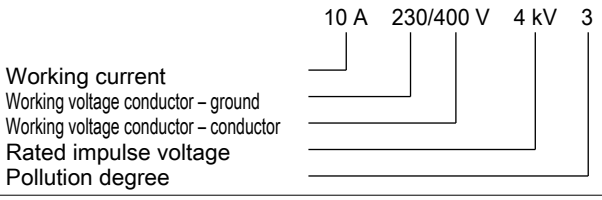
## Specifying electrical data

Electrical data for connectors are specified as per DIN EN 61 984.

This example identifies a connector suitable for use in an unearthed power system or earthed delta circuit (see page 00.22, Table B2 of DIN EN 60 664-1):



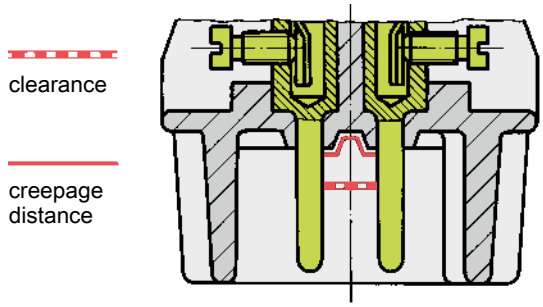

This example identifies a connector suitable exclusively for use in earthed power systems (see page 00.22, Table B2 of DIN EN 60 664-1):



## Other terms explained

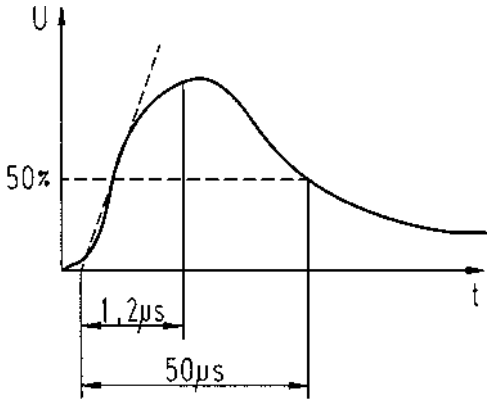
Clearance air gap
The shortest distance through the air between two conductive elements (see DIN EN 60 664-1 (VDE 0110-1), Para. 3.2). The air gaps are determined by the surge voltage withstand level.

Creepage distance
Shortest distance on the surface of an solid insulating material between two conductive elements (see DIN EN 60 664-1 (VDE 0110-1), Para. 3.3). The creepage distances are dependent on the rated voltage, the pollution degree and the characteristics of the insulating material.




Working voltage
Fixed voltage value on which operating and performance data are based. More than one value for rated voltage or rated voltage range may be specified for the same connector.

Rated impulse voltage
The rated impulse voltage is determined on the basis of the overvoltage category and the nominal power supply voltage. This level in turn directly determines the test voltage for testing the overvoltage resistance of the connector (Waveform voltage in 1.2/50 µs as per IEC 60 060-1).




Working current
Fixed current, preferably at an ambient temperature of 40 °C, which the connector can carry on a permanent basis (without interruption), passing simultaneously through all contacts which are in turn connected to the largest possible conductors, without exceeding the upper temperature limit.
The dependence of the rated current on ambient temperature is illustrated in the respective derating diagrams.

Transient overvoltages
Short-term overvoltage lasting a few milliseconds or less, oscillatory or non-oscillatory, generally heavily damped (see DIN EN 60 664-1 (VDE 0110-1, Para. 3.7.2). An overvoltage may occur as a result of switching activities, a defect or lightening surge, or may be intentionally created as a necessary function of the equipment or component.

Power-frequency withstand voltage
A power-frequency overvoltage (50/60 Hz).
Applied for a duration of one minute when testing dielectric strength.
For test voltages in association with surge voltage withstand levels, see extract from Table 8, DIN EN 61 984.

Test voltages (Extract from Table 8, DIN EN 61 984)

| Impulse withstand voltage kV (1.2/50 µs) at an altitude of 2 000 m | RMS withstand voltage kV (50/60 Hz) |
|---|---|
| 0.5 | 0.37 |
| 0.8 | 0.50 |
| 1.5 | 0.84 |
| 2.5 | 1.39 |
| 4 | 2.21 |
| 6 | 3.31 |
| 8 | 4.26 |
| 12 | 6.6 |

CTI (Comparative Tracking Index)
This figure gives an indication of the conductivity of insulating materials and affects the specified creepage distances. The influence of the CTI value on the creepage distance is as follows: the higher the index value, the shorter the creepage distance. The CTI is used to divide plastics into insulation groups.
Breakdown of insulation groups:

| | |
|---|---|
| I | 600 ≤ CTI |
| II | 400 ≤ CTI < 600 |
| IIIa | 175 ≤ CTI < 400 |
| IIIb | 100 ≤ CTI < 175 |

Protection levels as per IEC 60 529
The protection level describes the leak-proof character of housing, e. g. for electrical equipment. It ranges from IP 00 to IP 68. HARTING heavy duty Han connectors feature a standard protection level of IP 65 (see page 00.5, table based on DIN EN 60 529, IEC 60 529).

Derating diagram as per DIN EN 60 512-5-2
These diagrams are used to illustrate the maximum current carrying capacity of components. The illustration follows a curve which shows the current in relation to ambient temperature. Current carrying capacity is limited by the thermal characteristics of contacts and insulating elements which have an upper temperature limit which should not be exceeded.

## Current carrying capacity

The current carrying capacity is determined in tests which are conducted on the basis of the DIN EN 60 512-5-2. The current carrying capacity is limited by the thermal properties of materials which are used for inserts as well as by the insulating materials. These components have a limiting temperature which should not be exceeded.

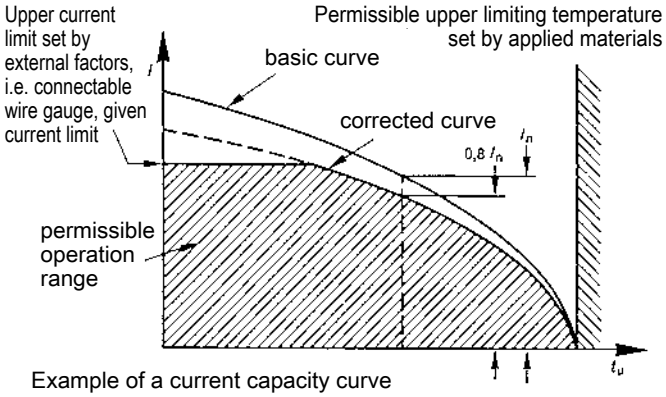
The relationship between the current, the temperature rise (loss at the contact resistance) and the ambient temperature of the connector is represented by a curve. On a linear coordinate system the current lies on the vertical line (ordinate) and the ambient temperature on the horizontal line (abscissa) which ends at the upper limiting temperature.

In another measurement the self-heating ($\Delta t$) at different currents is determined.

At least 3 points are determined which are connected to a parabolic curve, the basic curve.

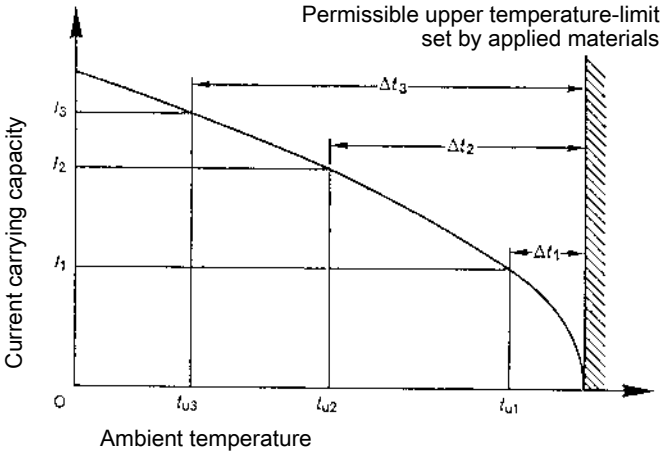
The corrected current carrying capacity curve is derived from this basic curve. The reasons for the correction are external factors that bring an additional limitation to the current carrying capacity, i.e. connectable wire gauge or an unequal dispersion of current.

The derating diagrams pictured as curve have been primarily determined with tin-plated cables as well as with physical cross sections close to the respective ISO-cable cross section.




Example of a current capacity curve

Definition: The rated current is the continuous, not interrupted current a connector can take when simultaneous power on all contacts is given, without exceeding the maximum temperature.




Example of a current carrying curve

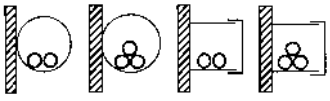
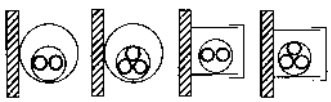
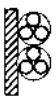
Acc. to DIN EN 61 984 the sum of ambient temperature and the temperature rise of a connector shall not exceed the upper limiting temperature. The limiting temperature is valid for a complete connector, that means insert plus housing.

As a result the insert gives the limit for the temperature of a complete connector and thus housings as well.

In practice it is not usual to load all terminals simultaneously with the maximum current. In such a case single contacts can be loaded with a higher current as permitted by the current capacity curve, if less than 20 % of the whole is loaded.

However, for these cases there are no universal rules. The limits have to be determined individually from case to case. It is recommended to proceed in accordance with the relevant rules of the DIN EN 60 512-5-2.

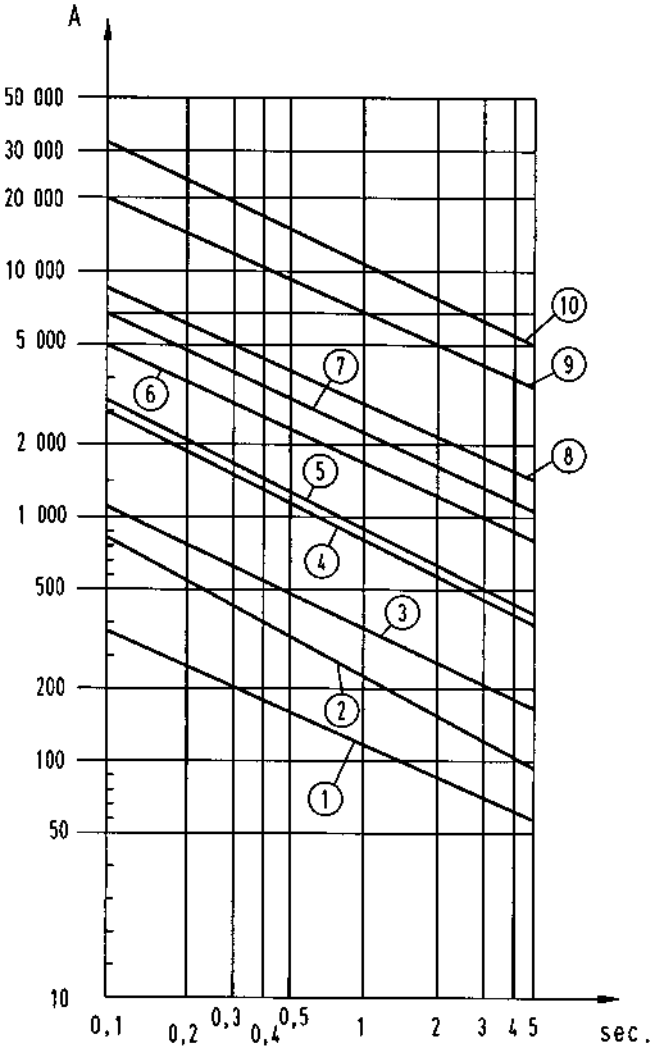
## Current carrying capacity of copper wires

| | Diameter [mm²] of single wires in a three-phase system | 0.75 | 1 | 1.5 | 2.5 | 4 | 6 | 10 | 16 | 25 | 35 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Type of installation | | | | | | | | | | |
| B1 |  Conductors/single core cables in conduit and cable trunking systems | 8.6 | 10.3 | 13.5 | 18.3 | 24 | 31 | 44 | 59 | 77 | 96 |
| B2 |  Cables in conduit and cable trunking systems | 8.5 | 10.1 | 13.1 | 17.4 | 23 | 30 | 40 | 54 | 70 | 86 |
| C |  Cables on walls | 9.8 | 11.7 | 15.2 | 21 | 28 | 36 | 50 | 66 | 84 | 104 |
| E |  Cables on open cable trays | 10.4 | 12.4 | 16.1 | 22 | 30 | 37 | 52 | 70 | 88 | 110 |
| | Depiction in accordance with DIN EN 60 204-1 for PVC-insulated copper wires in an ambient temperature of + 40 °C under permanent operating conditions. | | | | | | | | | | |
| | For different conditions and temperatures, installations, insulation materials or conductors the relevant corrections have to be carried out. | | | | | | | | | | |

# Current carrying capacity

## Short-time current carrying capacity

A short-time overload in circuits can be generated by switching operations such as the starting of a motor or a short circuit in a faulty installation. This can cause thermal stress at the contact. These short and very high increases cannot be dissipated quickly and therefore a local heating effect at the contact is the result. Contact design is an important feature when transient currents are encountered. HARTING contacts are machined from solid material and are therefore relatively unaffected by short overloads when compared to stamped and formed designs. For guidance please see the table below.

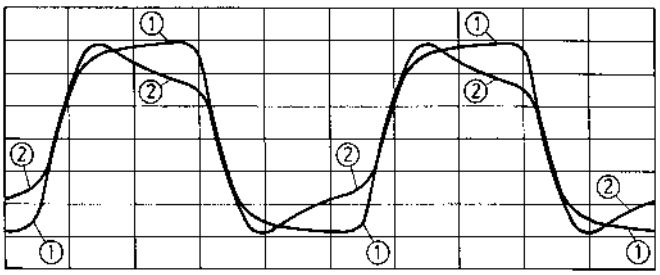



| | | |
|---|---|---|
| ① | Han D® | $I_N$ = 10 A |
| ② | Han® 3 A / 4 A | $I_N$ = 10 A |
| ③ | Han A® / Han E®, Han® ES, EE, Q 5/0 | $I_N$ = 16 A |
| ④ | Han® 6 HsB | $I_N$ = 35 A |
| ⑤ | Han® C/K axial | $I_N$ = 40 A |
| ⑥ | Han® K 4/8, Han® 70 A Modul | $I_N$ = 80 A |
| ⑦ | Han® K 6/6 | $I_N$ = 100 A |
| ⑧ | Han® K 3/0 | $I_N$ = 200 A |
| ⑨ | Han® HC-Modular 350 | $I_N$ = 350 A |
| ⑩ | Han® HC-Modular 650 | $I_N$ = 650 A |

## Low currents and voltages

HARTING's standard contacts have a silver plated surface. This precious metal has excellent conductive properties. In the course of a contact's lifetime, the silver surface generates a black oxide layer due to its affinity to sulphur. This layer is smooth and very thin and is partly interrupted when the contacts are mated and unmated, thus guaranteeing very low contact resistances. In the case of very low currents or voltages small changes to the transmitted signal may be encountered. This is illustrated below where an artifically aged contact representing a twenty year life is compared with a new contact.

In systems where such a change to the transmitted signal could lead to faulty functions and also in extremely aggressive environments, HARTING recommend the use of gold plated contacts.

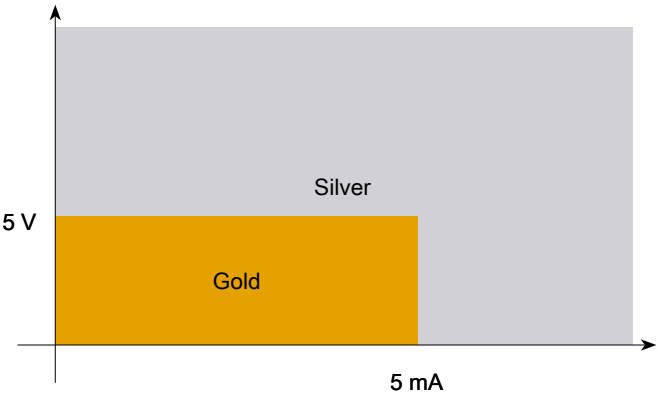



Changes to the transmitted signal after artifical ageing

① new contact

② after ageing

Below is a table derived from actual experiences.




Recommendation

# Metric cable thread

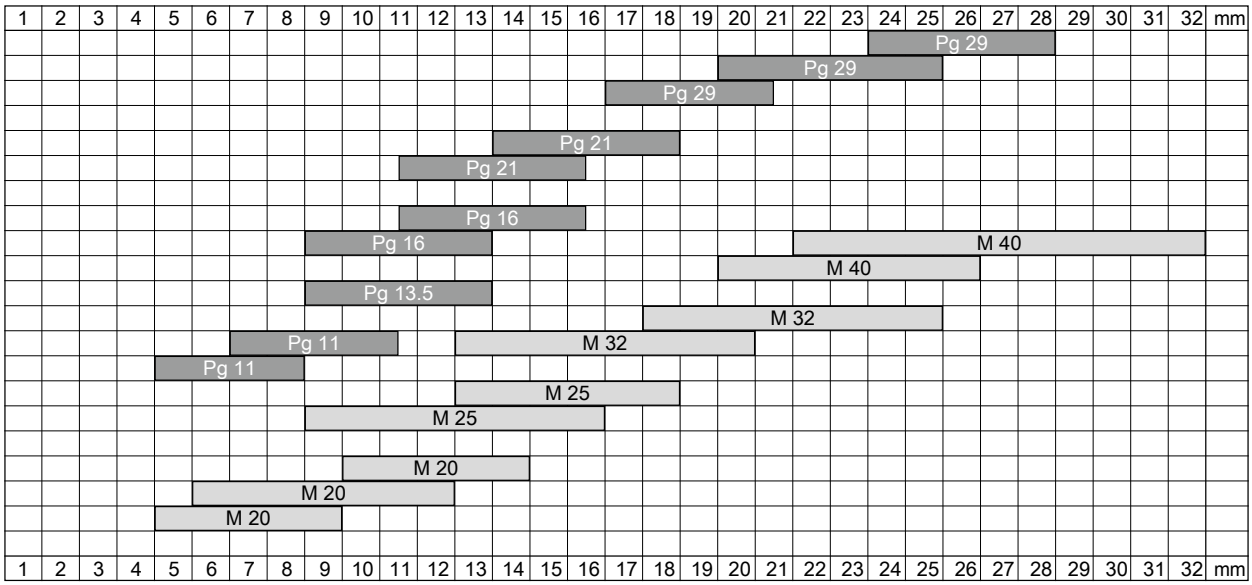


The metric thread is specified in the international DIN EN 50262 standard. The standard describes the metric series M 12 to M 63.

The thread dimension in mm is given by the product type description. E.g. M 20 refers to 20 mm thread diameter.

For easy identification, metric threaded hoods and housings are marked with an Ⓜ.

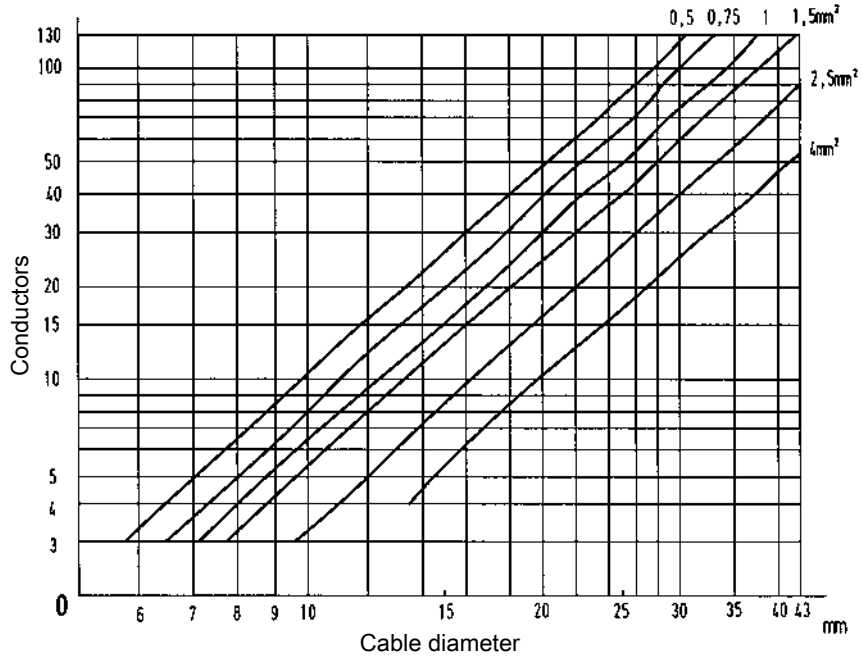
Cable range of metric glands:




Cable

The diagram shows different cable-diameters, being dependent on wire gauges and number of conductors.

All data are averages for commercial cables.



## Supplier's Declaration of Conformity
## (in accordance with ISO/IEC 17050-1)
*Konformitätserklärung eines Anbieters*
*(nach ISO/IEC 17050-1)*

**Issuer's name:**
*Name des Ausstellers*
**HARTING Electric GmbH & Co. KG**

**Issuer's address:**
*Anschrift des Ausstellers*
**Wilhelm-Harting-Str. 1**
**32339 Espelkamp**
**Germany**

**Product(s):**
*Produkt(e):*

| | | |
|---|---|---|
| Han A® | Han E® | Han® HsB |
| Han® B | Han E® AV | Han® K 3/0 |
| Han-Brid® | Han® EE | Han® K 3/2 |
| Han-Com® | Han® EEE | Han® M |
| Han D® | Han® ES | Han-Modular® |
| Han D® AV | Han® ESS | Han-Power® |
| Han DD® | Han® HC Modular 350 | Han® Q |
| Han-Eco® | Han® HPR | Han-Yellock® |
| | | Han Staf® |

**The product(s) as described above are in conformity with the requirements of:**
*Die oben beschriebenen Produkte sind konform mit den folgenden Anforderungen:*

**IEC 61984 (2008-10)**

**Connectors - Safety requirements and tests**
*Steckverbinder - Sicherheitsanforderungen und Prüfungen*

Espelkamp,
2016-05-18

**Uwe Gräff**
**Managing Director**

Espelkamp,
2016-05-18

i.V.
**Andre Beneke**
**Director Product & Industry**
**Segment Management**

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| Han® 3 A with *HARAX*® connection technology | **Han 01.4** |
| Han® 4 A | **Han 01.6** |
| Han® 10 A / Han® 16 A / Han® 32 A | **Han 01.8** |
| Contacts | **Han 01.14** |

## Features

- Innovative Han-Quick Lock® termination with reduced wiring times
- No special tools required
- Suitable for all metal and plastic hoods and housings of the series Han® 3 A
- for currents up to 10 A

## Technical characteristics

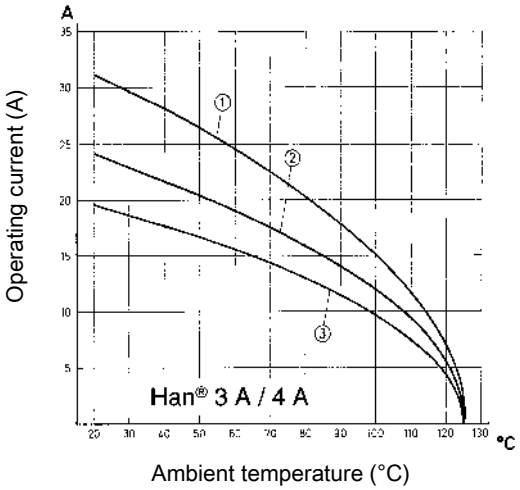
| | |
|---|---|
| Number of contacts | 3 |
| Rated current | 10 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 2.5 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 1 mm²

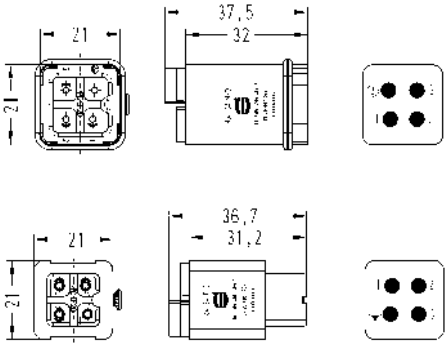
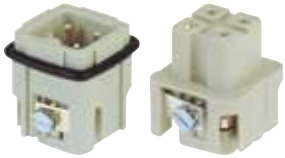
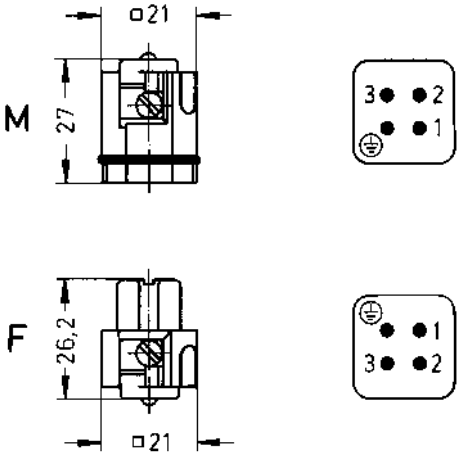
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Number of contacts

3+ ⏚

10 A 230/400 V 4 kV 3
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide | 0.5 ... 2.5 | 09 20 003 2633 | 09 20 003 2733 |  |
| Han A®,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Black slide | 0.25 ... 1.5 | 09 20 003 2634 | 09 20 003 2734 | |
| Han A®,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 1.5 | 09 20 003 2611 | 09 20 003 2711 | <br>Contact arrangement (view from termination side)<br>Stripping length 4.5 mm<br>Tightening torque 0.25 Nm |

## Technical characteristics

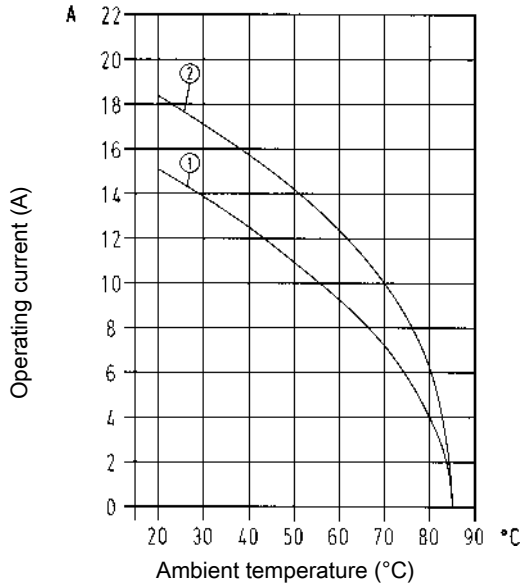
| | |
|---|---|
| Number of contacts | 3 |
| Rated current | 10 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 1 mm²
② Conductor cross-section 1.5 mm²

## Specifications and approvals

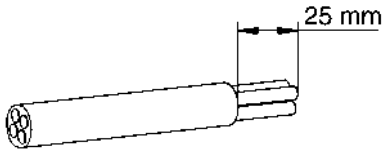
EN 60664-1
IEC 61984
DNV GL

CE

## Details

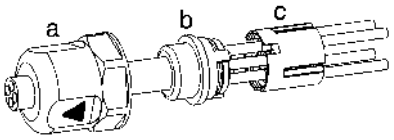
**Assembly instructions**

①



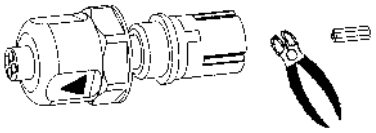

Strip off cable mantle

②



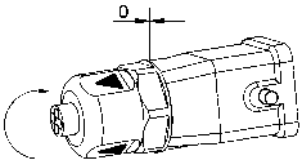

Assemble HARAX® elements
Screw cap, splice ring, seal

③



Cut off cable ends

④

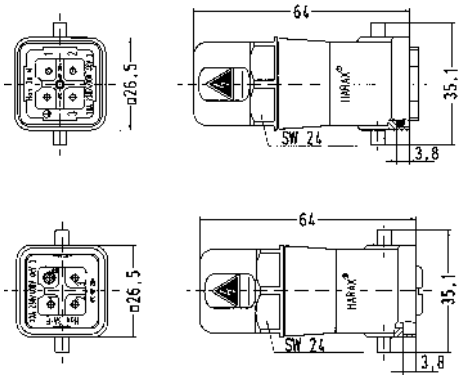
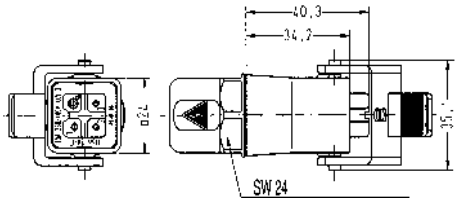



The nut must be screwed completely down untilthe notches engage on the contact carrier nutlatch

Number of contacts

3+ ⏚

10 A 230/400 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>*HARAX*® connection technology,<br>Top entry,<br>IP65,<br>IP67<br>Contact surface:<br>Silver plated<br> | 0.75 ... 1.5 | 09 20 003 0440 | 09 20 003 0445 |  |
| Han A®,<br>Cable to cable housing,<br>*HARAX*® connection technology,<br>Top entry,<br>IP65,<br>IP67<br>Contact surface:<br>Silver plated<br> | 1 ... 1.5 | | 09 20 003 0745 |  |

## Features

- Innovative Han-Quick Lock® termination with reduced wiring times
- No special tools required
- Suitable for all metal and plastic hoods and housings of the series Han® 3 A
- for currents up to 10 A

## Technical characteristics

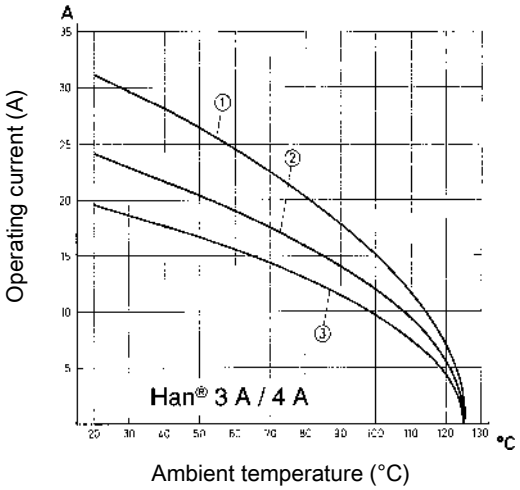
| | |
|---|---|
| Number of contacts | 4 |
| Rated current | 10 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 2.5 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 1 mm²

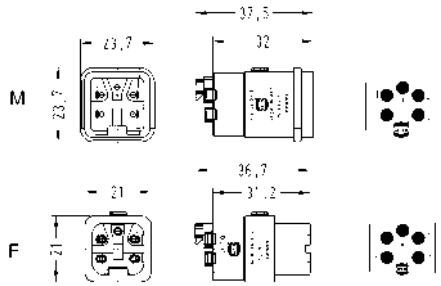
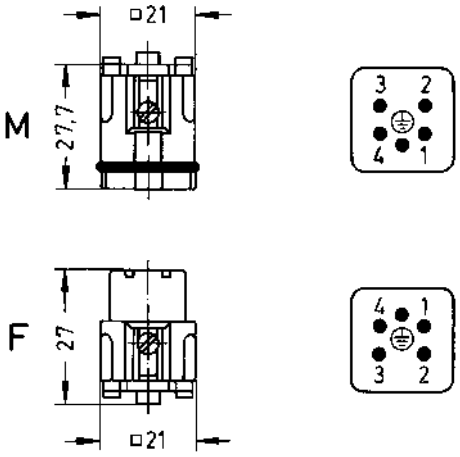
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Number of contacts

4+ ⏚

10 A 230/400 V 4 kV 3
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide | 0.5 ... 2.5 | 09 20 004 2633 | 09 20 004 2733 | <br>Contact arrangement (view from termination side) |
| Han A®,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Black slide | 0.25 ... 1.5 | 09 20 004 2634 | 09 20 004 2734 | |
| Han A®,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 1.5 | 09 20 004 2611 | 09 20 004 2711 | <br>Contact arrangement (view from termination side)<br>Stripping length 4.5 mm<br>Tightening torque 0.25 Nm |

## Features

- Small size
- Available with crimp and screw termination
- Screw termination also available with wire protection

## Technical characteristics

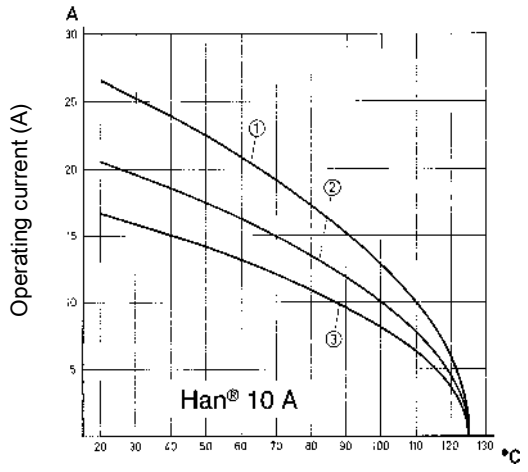
| | |
|---|---|
| Number of contacts | 10, 16, 32 |
| Rated current | 16 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

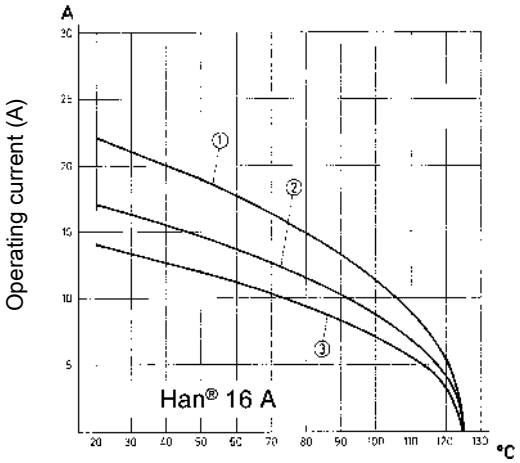
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 2.5 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 1 mm²

## Derating




① Conductor cross-section 2.5 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 1 mm²

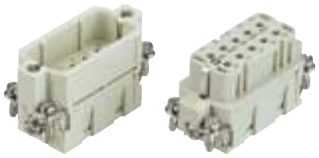
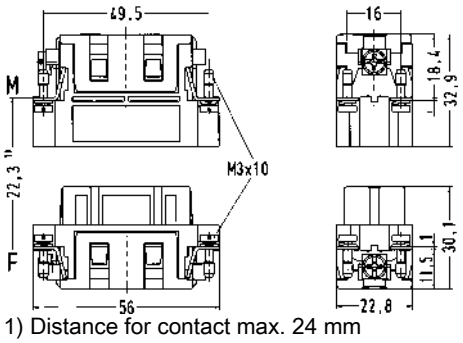
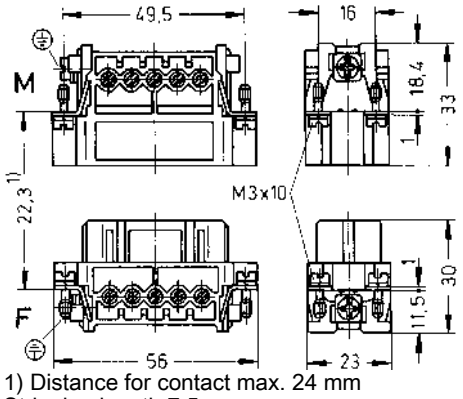
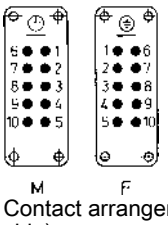
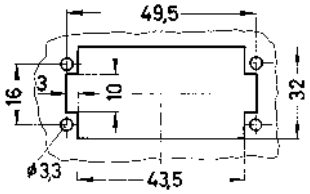
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

Number of contacts

10+ ⏚

16 A 250 V 4 kV 3

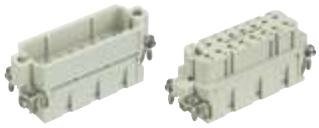
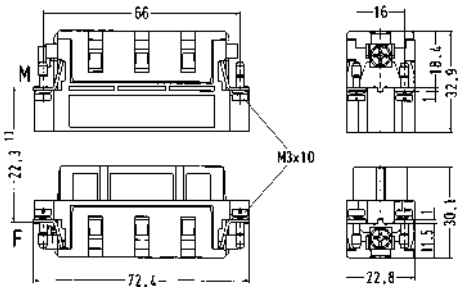
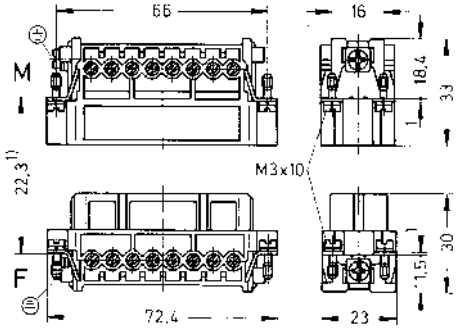
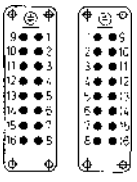
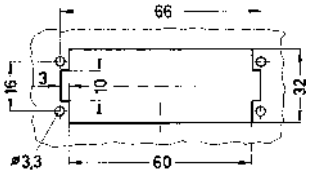
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 20 010 3001 | 09 20 010 3101 | <br>1) Distance for contact max. 24 mm |
| Han A®,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 20 010 2612 | 09 20 010 2812 | <br>1) Distance for contact max. 24 mm<br>Stripping length 7.5 mm<br>Tightening torque 0.5 Nm |
| Han A®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 20 010 2614 | 09 20 010 2814 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Han A

Number of contacts

16+ ⏚

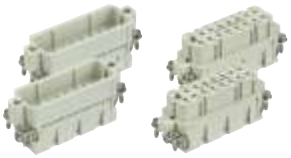
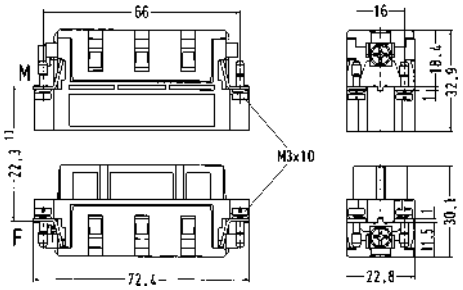
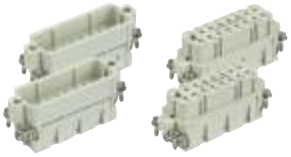
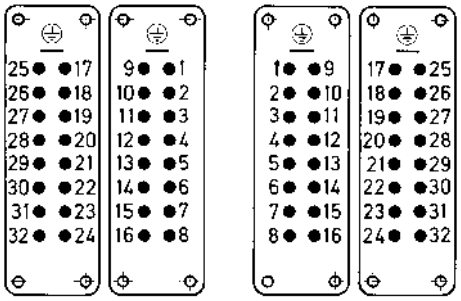
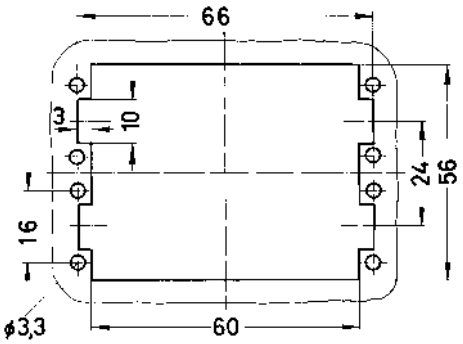
16 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 20 016 3001 | 09 20 016 3101 | <br>1) Distance for contact max. 24 mm |
| Han A®,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 20 016 2612 | 09 20 016 2812 | <br>1) Distance for contact max. 24 mm<br>Stripping length 7.5 mm<br>Tightening torque 0.5 Nm |
| Han A®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 20 016 2614 | 09 20 016 2814 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

32+ ⏚

16 A 250 V 4 kV 3

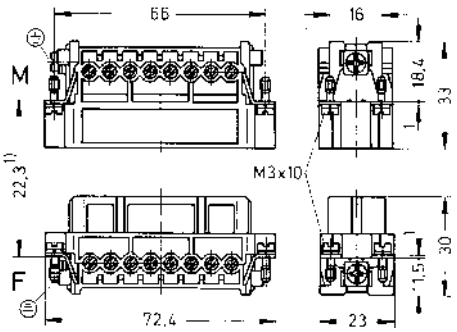
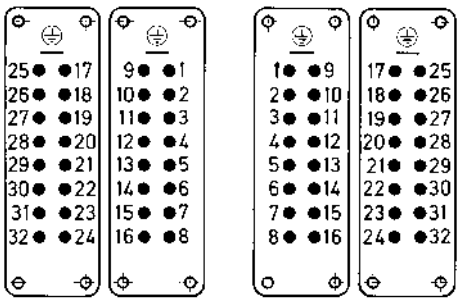
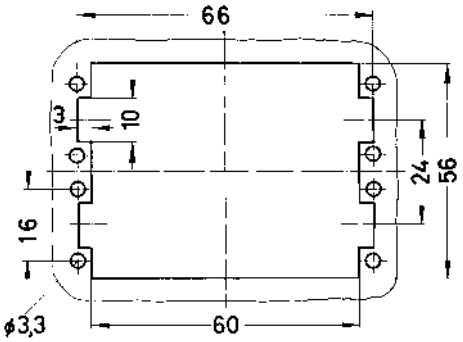
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Crimp termination,<br>1 ... 16<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 20 016 3001 | 09 20 016 3101 | <br>1) Distance for contact max. 24 mm |
| Han A®,<br>Continuing marking,<br>Crimp termination,<br>17 ... 32<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 20 016 3011 | 09 20 016 3111 | <br>M F<br>Contact arrangement (view from termination side)<br><br><br>Panel cut out<br>for use without Hoods/Housings |

Han A

Number of contacts

32+ ⏚

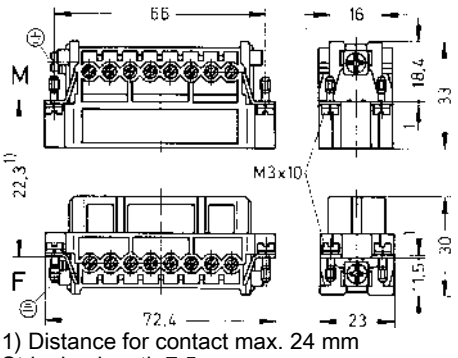
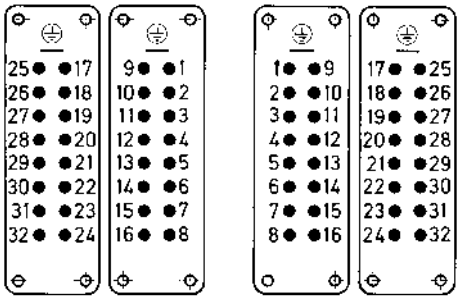
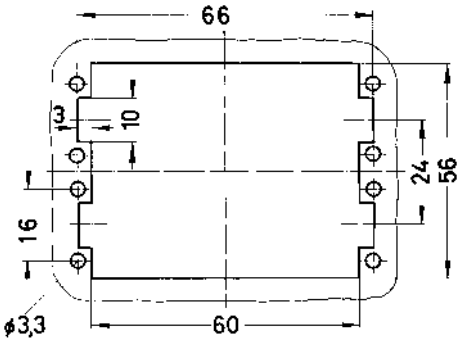
16 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Screw termination,<br>1 ... 16<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 20 016 2612 | 09 20 016 2812 | <br>1) Distance for contact max. 24 mm<br>Stripping length 7.5 mm<br>Tightening torque 0.5 Nm |
| Han A®,<br>Continuing marking,<br>Screw termination,<br>17 ... 32<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 20 016 2613 | 09 20 016 2813 | <br>Contact arrangement (view from termination side)<br><br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

32+ ⏚

16 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Screw termination,<br>With wire protection,<br>1 ... 16<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 20 016 2614 | 09 20 016 2814 | <br>1) Distance for contact max. 24 mm<br>Stripping length 7.5 mm<br>Tightening torque 0.5 Nm |
| Han A®,<br>Continuing marking,<br>Screw termination,<br>With wire protection,<br>17 ... 32<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 20 016 2615 | 09 20 016 2815 | <br>Contact arrangement (view from termination side)<br><br><br>Panel cut out<br>for use without Hoods/Housings | | | | |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

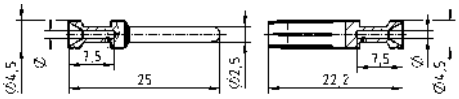
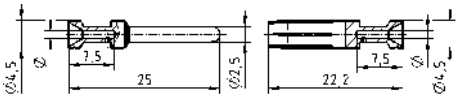
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br><br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br><br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |

# Han D® / DD® / Han® DDD



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# Modified contact arrangement



## Modified contact arrangement

The connector series Han DDD®, Han DD® and Han D® equipped with all contacts may be used for voltages up to 250 V, pollution degree 3. A modified contact loading arrangement permits use up to 500 V also in the same pollution degree.

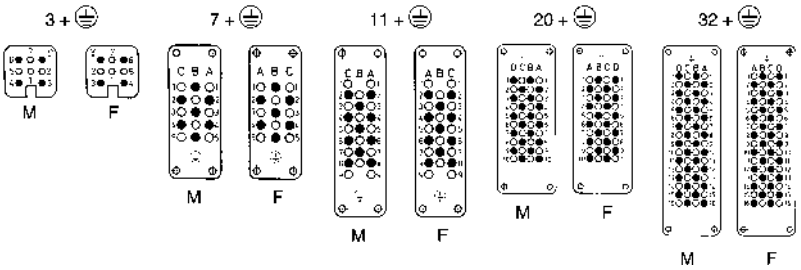
According to DIN EN 61 984 connectors should not be coupled or decoupled under electrical load.

## Series Han D®

10 A 500 V 6 kV 3

| | |
|---|---|
| Rated current | 10 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |

Contact arrangement view from termination side



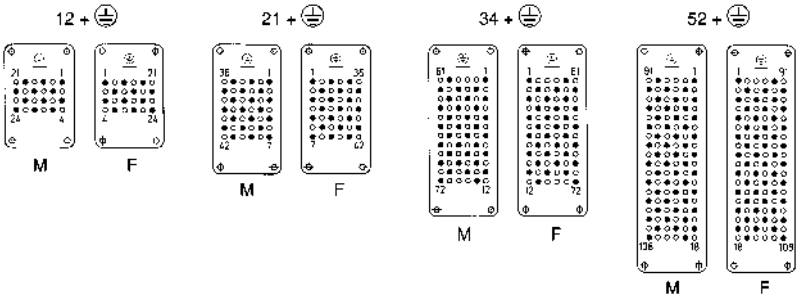

● Working contact ○ Without contact M - Male insert F - Female insert

## Series Han DD®

10 A 400 V 6 kV 3

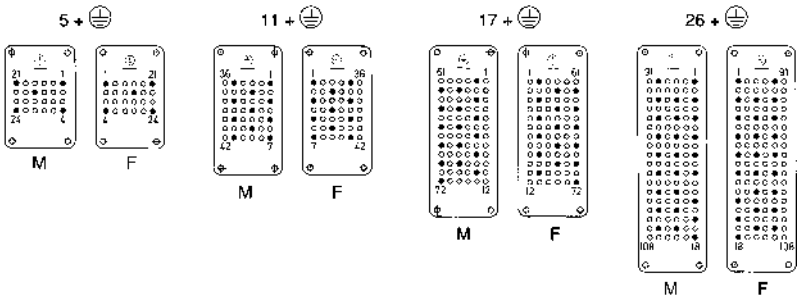
| | |
|---|---|
| Rated current | 10 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |

Contact arrangement view from termination side




10 A 500 V 6 kV 3

| | |
|---|---|
| Rated current | 10 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |




● Working contact ○ Without contact M - Male insert F - Female insert

# Modified contact arrangement

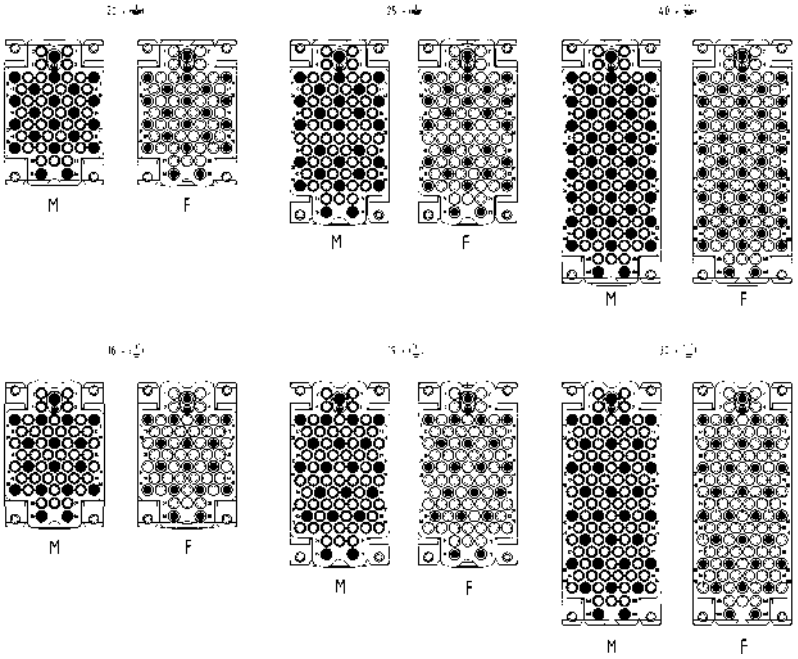


## Series Han DDD®

| | | | | |
|---|---|---|---|---|
| | 10 A | 400 V | 6 kV | 3 |
| Rated current | 10 A | | | |
| Rated voltage | 400 V | | | |
| Rated impulse voltage | 6 kV | | | |
| Pollution degree | 3 | | | |

| | | | | |
|---|---|---|---|---|
| | 10 A | 500 V | 6 kV | 3 |
| Rated current | 10 A | | | |
| Rated voltage | 500 V | | | |
| Rated impulse voltage | 6 kV | | | |
| Pollution degree | 3 | | | |

Contact arrangement view from termination side




● Working contact ○ Without contact M - Male insert F - Female insert

## Features

- Innovative Han-Quick Lock® termination with reduced wiring times
- Time saving rapid termination by use of crimping contacts
- for requirements up to 250 V / 10 A
- Gold and silver contacts available
- Suitable for thermo- and 1 mm FO contacts

## Technical characteristics

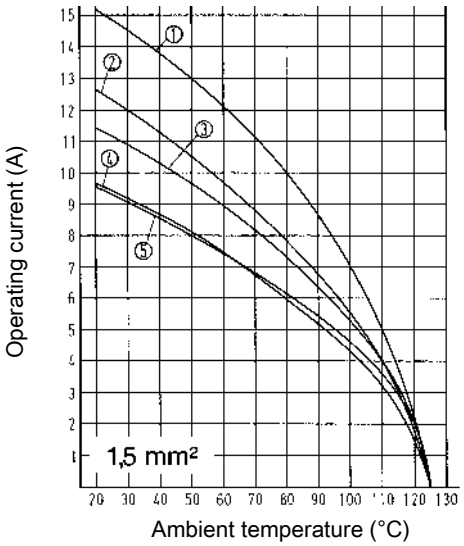
| | |
|---|---|
| Number of contacts | 7 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC), Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (seal) | NBR |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0, HB |
| RoHS | compliant with exemption |

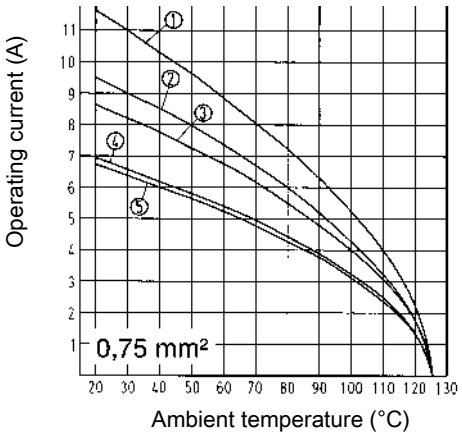
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 7 D
② Han® 15 D
③ Han® 25 D
④ Han® 40 D
⑤ Han® 64 D

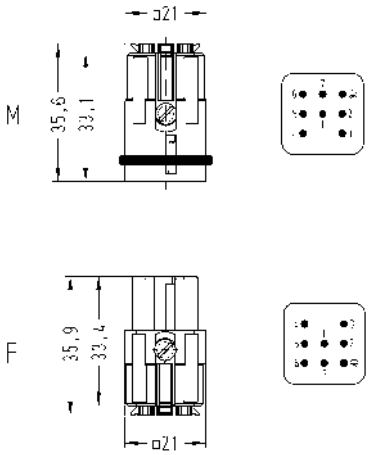
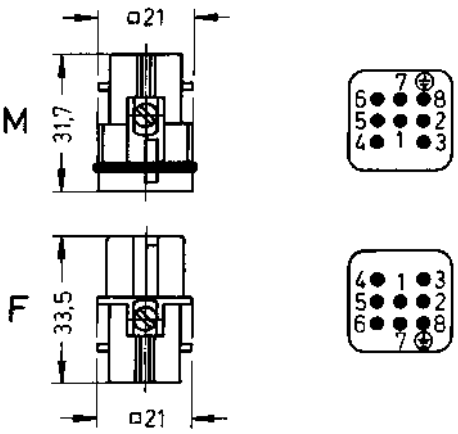
## Specifications and approvals

EN 60664-1
IEC 61984
EN 175301-801
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Number of contacts

7+ ⏚

10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Only for thermoplastic hoods / housings | 0.25 ... 1.5 | 09 21 007 2632 | 09 21 007 2732 | <br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Only for thermoplastic hoods / housings | 0.14 ... 2.5 | 09 21 007 3031 | 09 21 007 3131 | <br>Contact arrangement (view from termination side) |

# Han® 8 D



## Features

- Innovative Han-Quick Lock® termination with reduced wiring times
- Time saving rapid termination by use of crimping contacts
- Gold and silver contacts available
- Suitable for metal hoods and housings size Han® 3 A
- High density of contacts

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage | 50 V AC, 120 V DC |
| Rated voltage acc. to UL | 50 V |
| Rated voltage acc. to CSA | 50 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC), Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (seal) | NBR |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0, HB |
| RoHS | compliant with exemption |

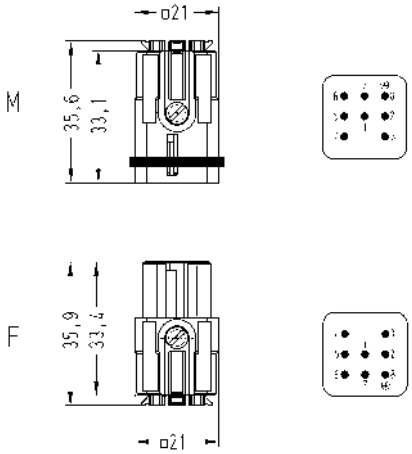
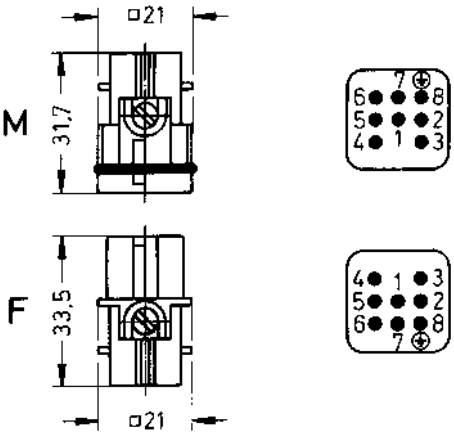
## Specifications and approvals

EN 60664-1
IEC 61984
EN 175301-801
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Number of contacts

# 8

10 A 50 V 0.8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>for thermoplastics and metal hoods/housings | 0.25 ... 1.5 | 09 36 008 2632 | 09 36 008 2732 | <br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>for thermoplastics and metal hoods/housings | 0.14 ... 2.5 | 09 36 008 3001 | 09 36 008 3101 | <br>Contact arrangement (view from termination side) |

## Features

- High density of contacts
- for requirements up to 250 V / 10 A
- Time saving rapid termination by use of crimping contacts
- Gold and silver contacts available
- Suitable for thermo- and 1 mm FO contacts

## Technical characteristics

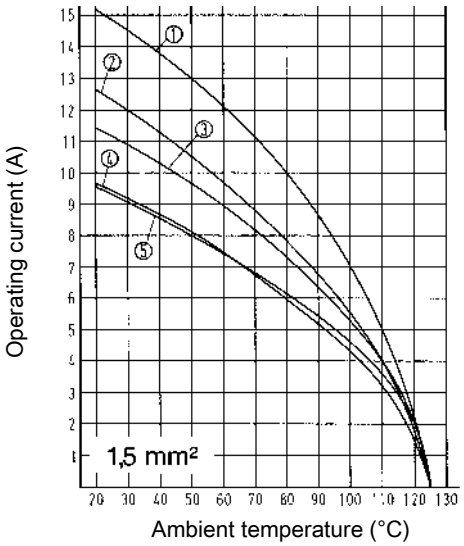
| | |
|---|---|
| Number of contacts | 15, 25, 40, 50, 64, 80, 128 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Dimensions wire wrap post | 1 x 1 mm |
| Termination length | 22 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

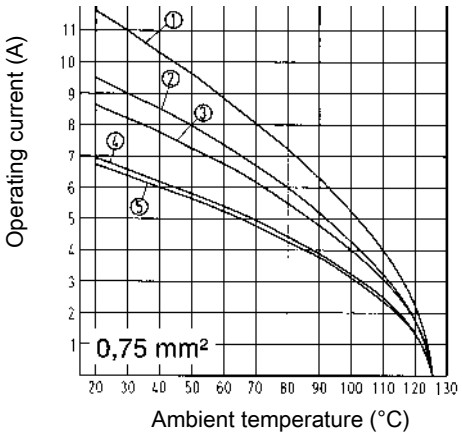
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 7 D ④ Han® 40 D
② Han® 15 D ⑤ Han® 64 D
③ Han® 25 D

## Specifications and approvals

EN 60664-1
IEC 61984
EN 175301-801
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

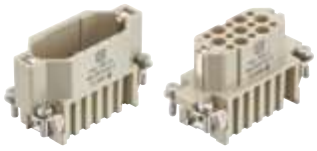
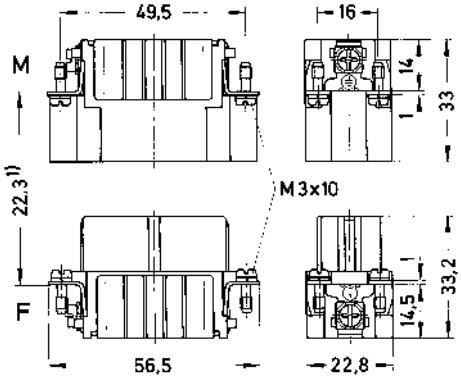
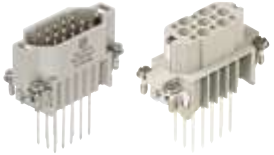
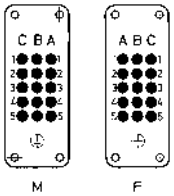
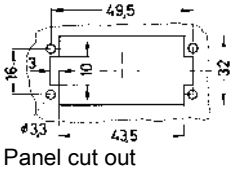
## Details

ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

Number of contacts

15+ ⏚

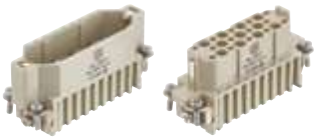
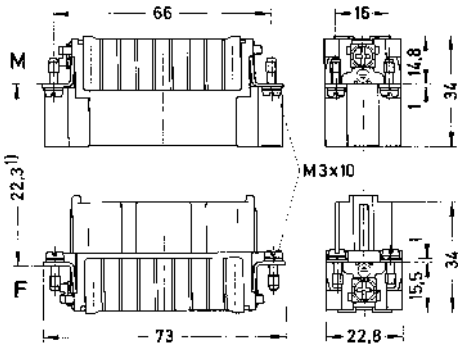
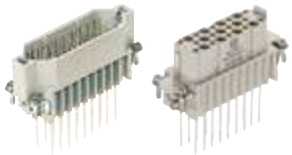
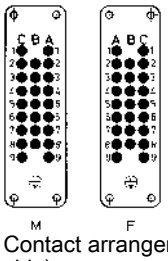
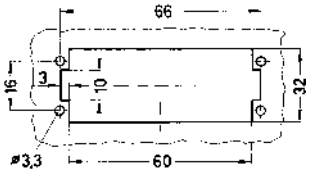
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 21 015 3001 | 09 21 015 3101 | <br>1) distance for contact max. 24 mm |
| Han D®,<br>Wrap termination,<br>Contact surface:<br>Silver plated<br> | | 09 21 015 2601 | 09 21 015 2701 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

25+ ⏚

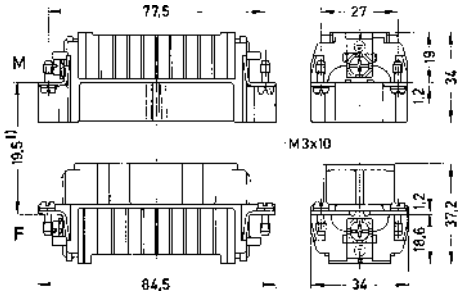
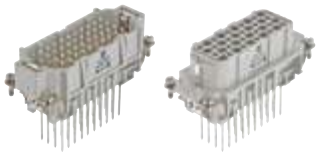
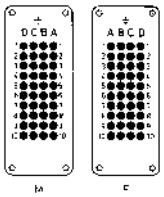
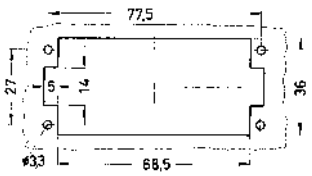
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 21 025 3001 | 09 21 025 3101 | <br>1) distance for contact max. 24 mm |
| Han D®,<br>Wrap termination,<br>Contact surface:<br>Silver plated<br> | | 09 21 025 2601 | 09 21 025 2701 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

# 40+ ⏚

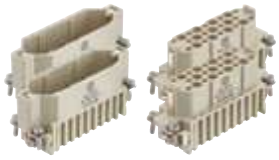
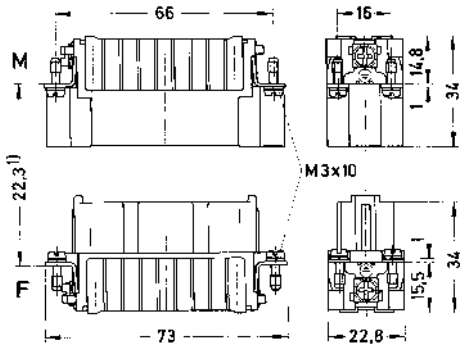
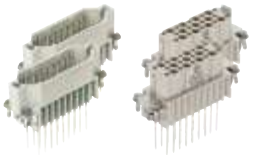
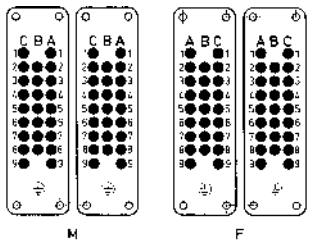
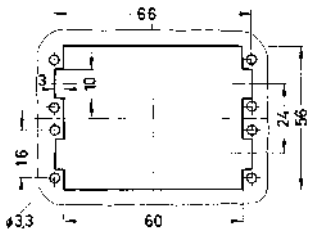
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 21 040 3001 | 09 21 040 3101 |   1) distance for contact max. 21 mm |
| Han D®, Wrap termination, Contact surface: Silver plated  | | 09 21 040 2601 | 09 21 040 2701 |   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

# 50+ ⏚

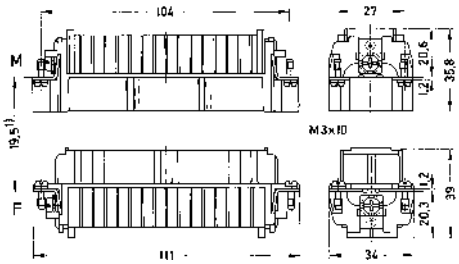
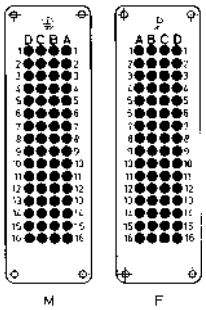
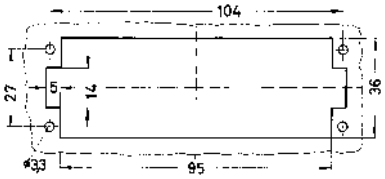
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 21 025 3001 | 09 21 025 3101 | <br><br>1) distance for contact max. 24 mm |
| Han D®,<br>Wrap termination,<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | | 09 21 025 2601 | 09 21 025 2701 | <br><br>Contact arrangement (view from termination side)<br><br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

# 64+ ⏚

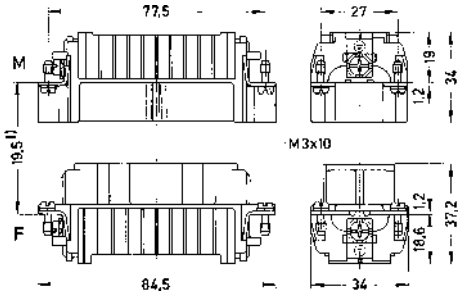
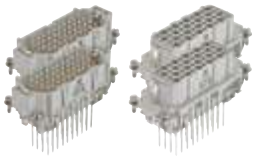
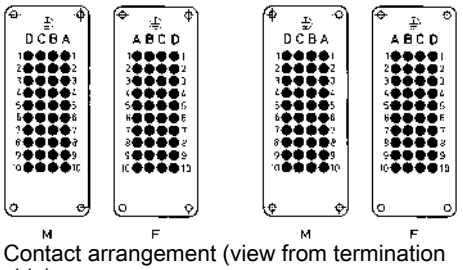
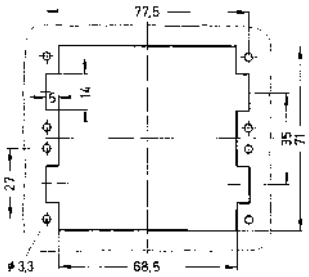
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 21 064 3001 | 09 21 064 3101 | <br>1) distance for contact max. 21 mm |
| Han D®,<br>Wrap termination,<br>Contact surface:<br>Silver plated<br> | | 09 21 064 2601 | 09 21 064 2701 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

# 80+ ⏚

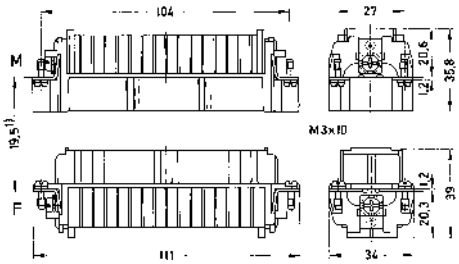
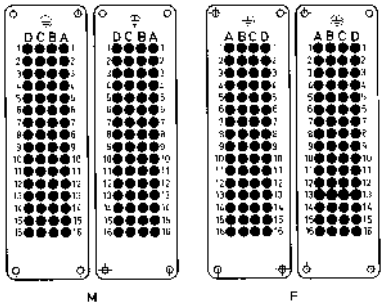
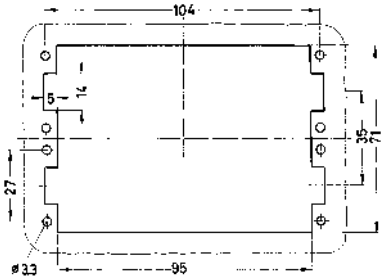
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 21 040 3001 | 09 21 040 3101 | <br>1) distance for contact max. 21 mm |
| Han D®,<br>Wrap termination,<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | | 09 21 040 2601 | 09 21 040 2701 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

# 128+ ⏚

10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 21 064 3001 | 09 21 064 3101 | <br>1) distance for contact max. 21 mm |
| Han D®,<br>Wrap termination,<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | | 09 21 064 2601 | 09 21 064 2701 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤3 mΩ |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

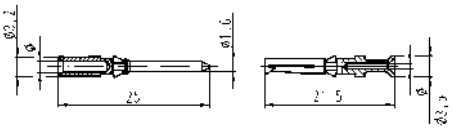
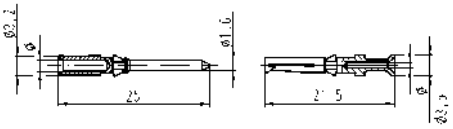
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

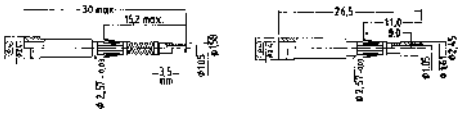
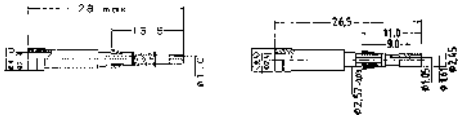
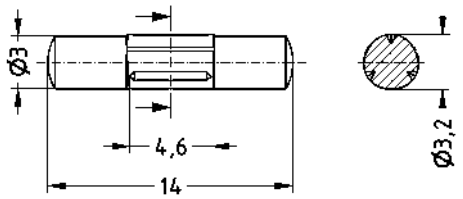
Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®, Crimp contact, Contact surface: Silver plated  | 0.14 ... 0.37 | 09 15 000 6104 | 09 15 000 6204 |  |
| | 0.5 | 09 15 000 6103 | 09 15 000 6203 | |
| | 0.75 | 09 15 000 6105 | 09 15 000 6205 | |
| | 1 | 09 15 000 6102 | 09 15 000 6202 | |
| | 1.5 | 09 15 000 6101 | 09 15 000 6201 | |
| | 2.5 | 09 15 000 6106 | 09 15 000 6206 | |
| Han D®, Crimp contact, Contact surface: Gold plated  | 0.14 ... 0.37 | 09 15 000 6124 | 09 15 000 6224 |  |
| | 0.5 | 09 15 000 6123 | 09 15 000 6223 | |
| | 0.75 | 09 15 000 6125 | 09 15 000 6225 | |
| | 1 | 09 15 000 6122 | 09 15 000 6222 | |
| | 1.5 | 09 15 000 6121 | 09 15 000 6221 | |
| | 2.5 | 09 15 000 6126 | 09 15 000 6226 | |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |



| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3212<br>20 10 001 3213 | 20 10 001 3222 | <br>20 10 001 3212 + 20 10 001 3222<br>for Han® 7 D, Han® 8 D, Han® 40 D, Han® 64 D, Han® 80 D, Han® 128 D<br><br>20 10 001 3213 + 20 10 001 3222<br>for Han® 15 D, Han® 25 D, Han® 50 D |
| Han D®,<br>Han DD®,<br>Han® DDD,<br>Coding pin<br><br>Only for crimp termination<br>With loss of one contact | | | 09 33 000 9915 |  |

## Features

- High density of contacts
- for requirements up to 250 V / 10 A
- Time saving rapid termination by use of crimping contacts
- Gold and silver contacts available
- Suitable for thermo- and 1 mm FO contacts

## Technical characteristics

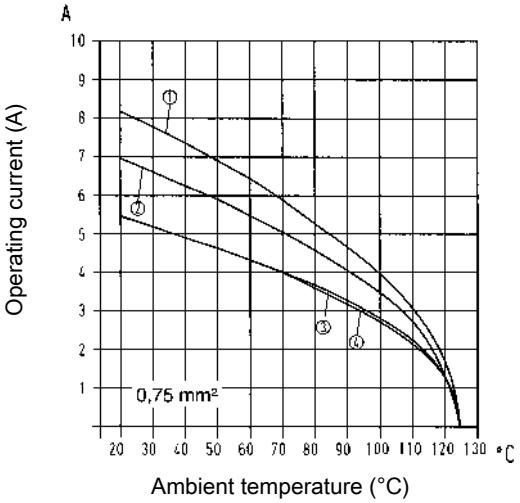
| | |
|---|---|
| Number of contacts | 24, 28, 40, 42, 72, 108, 144, 216 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Derating

### Current carrying capacity

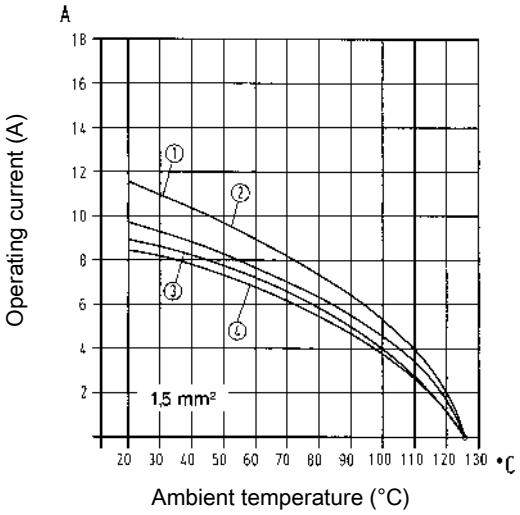
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

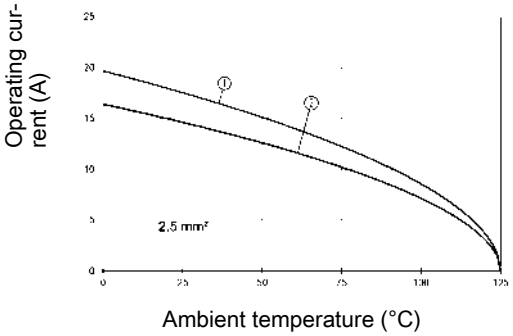



① Han® 24 DD
② Han® 42 DD
③ Han® 72 DD
④ Han® 108 DD

## Derating




① Han® 24 DD
② Han® 42 DD
③ Han® 72 DD
④ Han® 108 DD




① Han® 28 DD
② Han® 40 DD

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

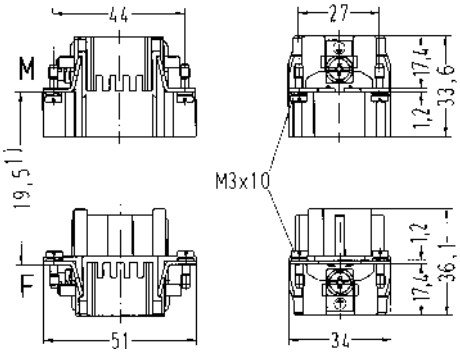
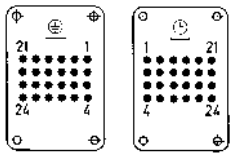
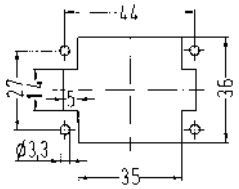
## Details

Guide pins and bushes are recommended (see chapter Han 80).

Number of contacts

24+ ⏚

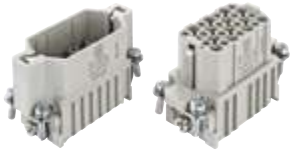
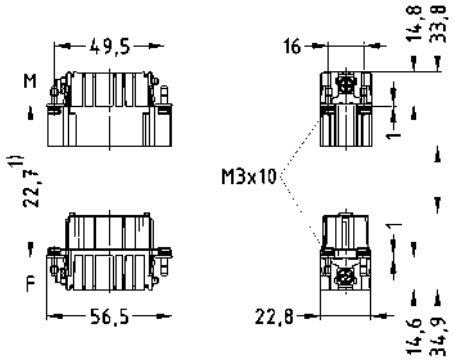
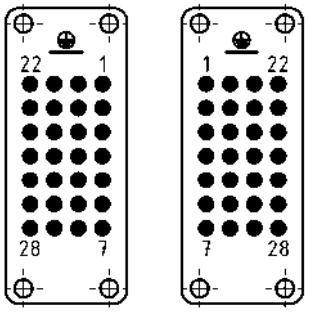
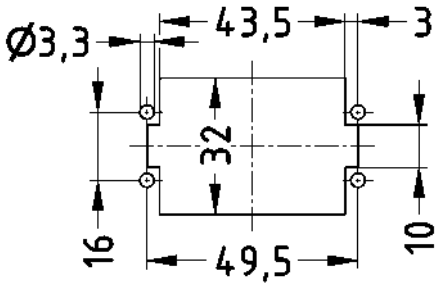
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 024 3001 | 09 16 024 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

28+ ⏚

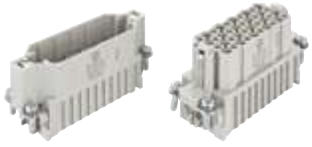
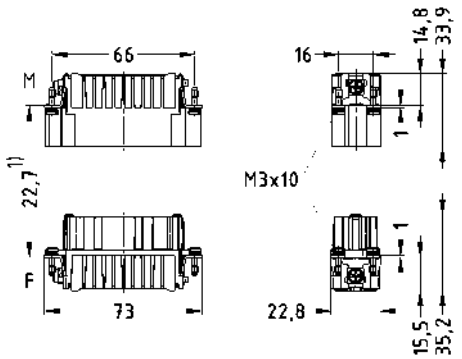
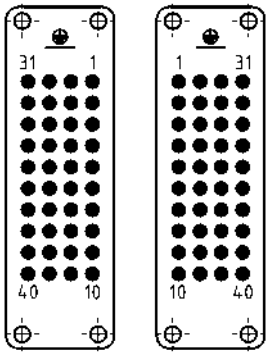
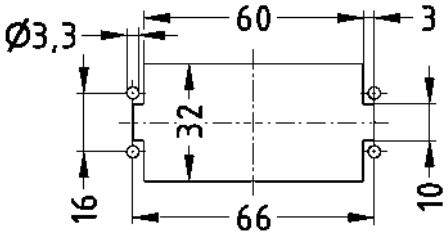
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 028 3001 | 09 16 028 3101 |   1) distance for contact max. 24 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

# 40+ ⏚

10 A 250 V 4 kV 3

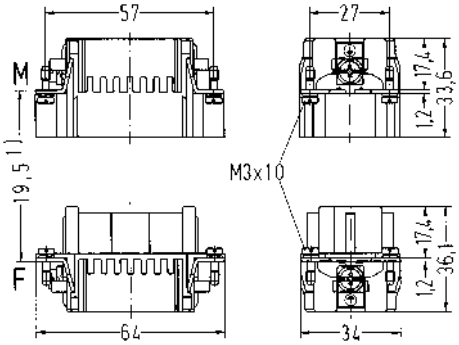
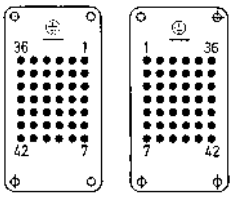
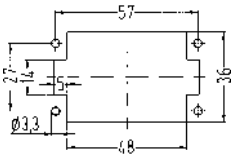
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 040 3001 | 09 16 040 3101 |   1) distance for contact max. 24 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Han D

Number of contacts

42+ ⏚

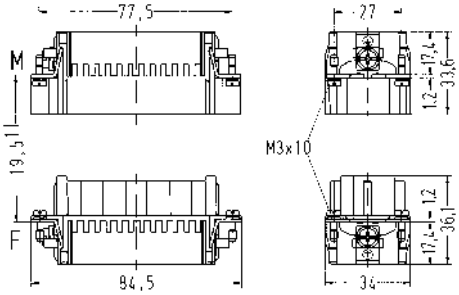
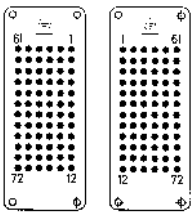
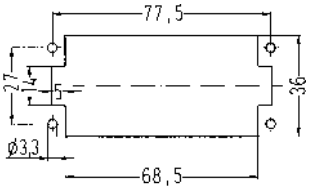
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 042 3001 | 09 16 042 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

72+ ⏚

10 A 250 V 4 kV 3

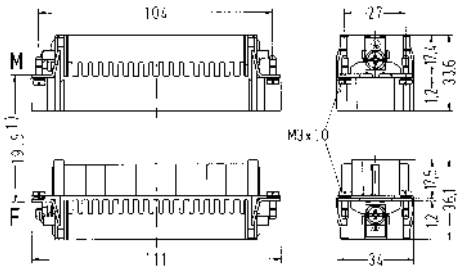
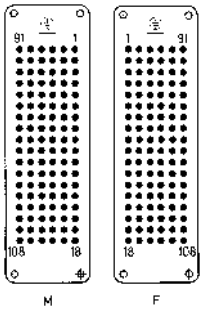
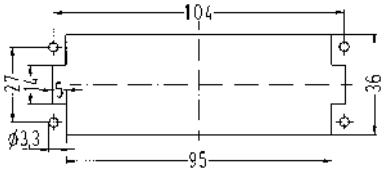
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 072 3001 | 09 16 072 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Han D

Number of contacts

# 108+ ⏚

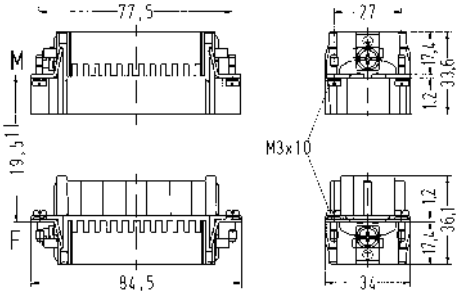
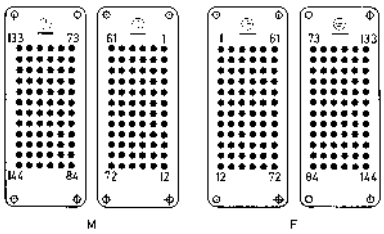
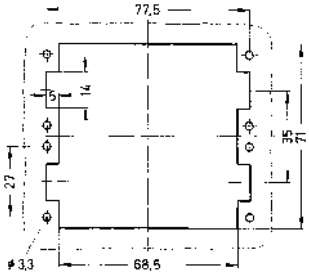
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 108 3001 | 09 16 108 3101 |  1) distance for contact max. 21 mm  Contact arrangement (view from termination side)  Panel cut out for use without Hoods/Housings |

Number of contacts

# 144+ ⏚

10 A 250 V 4 kV 3

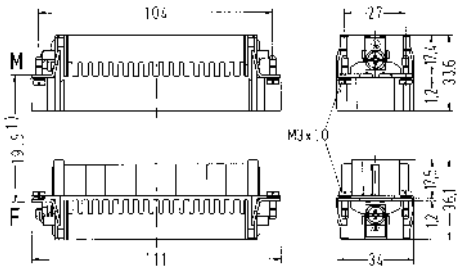
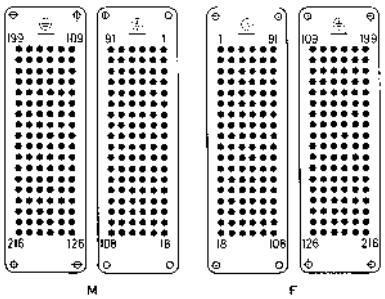
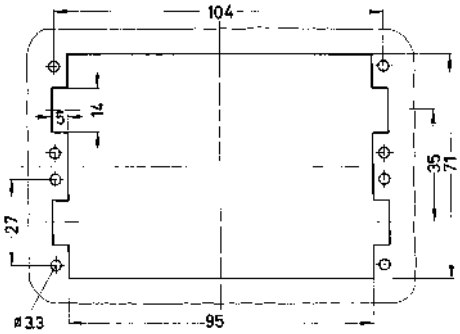
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®,<br>Crimp termination,<br>1 ... 72<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 16 072 3001 | 09 16 072 3101 | <br>1) distance for contact max. 21 mm |
| Han DD®,<br>Continuing marking,<br>Crimp termination,<br>73 ... 144<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 16 072 3011 | 09 16 072 3111 | <br>Contact arrangement (view from termination side)<br><br><br>Panel cut out<br>for use without Hoods/Housings |

Han D

Number of contacts

# 216+ ⏚

10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD®,<br>Crimp termination,<br>1 ... 108<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 16 108 3001 | 09 16 108 3101 | <br>1) distance for contact max. 21 mm |
| Han DD®,<br>Continuing marking,<br>Crimp termination,<br>109 ... 216<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 16 108 3011 | 09 16 108 3111 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤3 mΩ |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

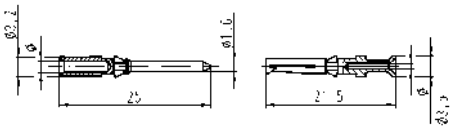
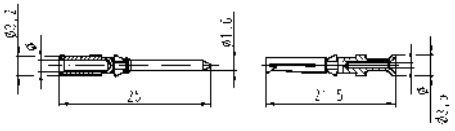
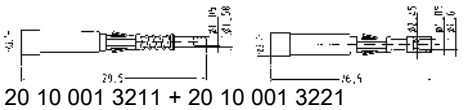
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

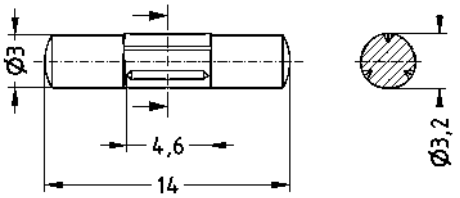
Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®, Crimp contact, Contact surface: Silver plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 |  |
| Han D®, Crimp contact, Contact surface: Gold plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |
| FO contact, for 1 mm plastic fibre  | | 20 10 001 3211 | 20 10 001 3221 |  20 10 001 3211 + 20 10 001 3221 |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |



| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Han DD®,<br>Han® DDD,<br>Coding pin<br><br>Only for crimp termination<br>With loss of one contact | | | 09 33 000 9915 |  |

## Features

- High density of contacts
- for requirements up to 250 V / 10 A
- Time saving rapid termination by use of crimping contacts
- Gold and silver contacts available

## Technical characteristics

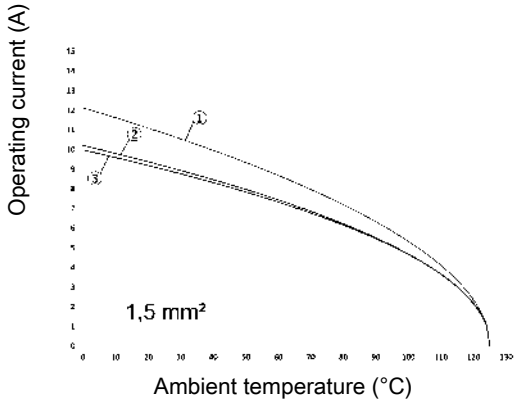
| | |
|---|---|
| Number of contacts | 55, 75, 107 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |

## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 55 DDD
② Han® 75 DDD
③ Han® 107 DDD

## Specifications and approvals

IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

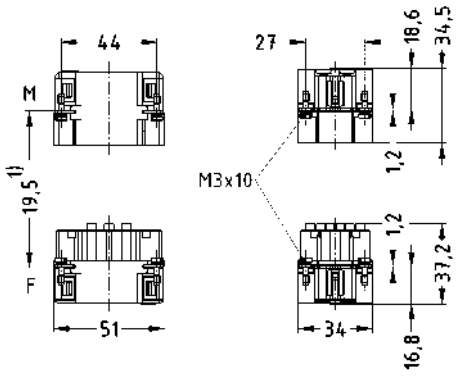
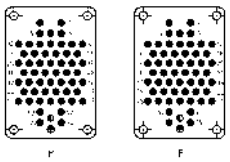
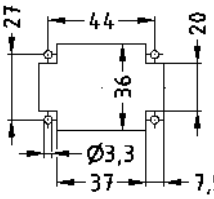
Guide pins and bushes are recommended (see chapter Han 80).

Han D

Number of contacts

55+

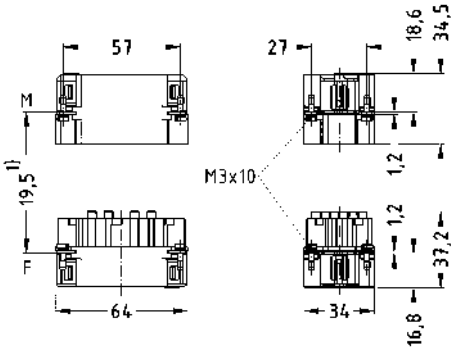
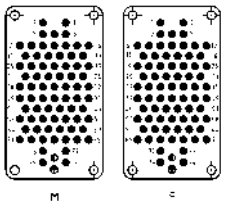
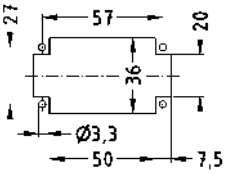
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® DDD, Crimp termination  PE connection with a Han D® crimp contact Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 055 2001 | 09 16 055 2101 |   1) distance for contact max. 21 mm  Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

75+ ⏚

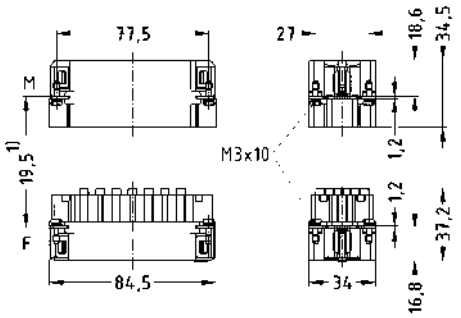
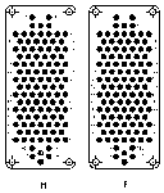
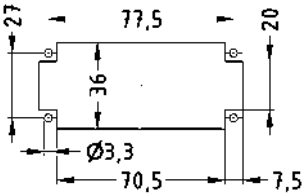
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® DDD,<br>Crimp termination<br><br>PE connection with a Han D® crimp contact<br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 075 2001 | 09 16 075 2101 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

# 107+ ⏚

10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® DDD, Crimp termination  PE connection with a Han D® crimp contact Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 107 2001 | 09 16 107 2101 |   1) distance for contact max. 21 mm  Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤3 mΩ |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

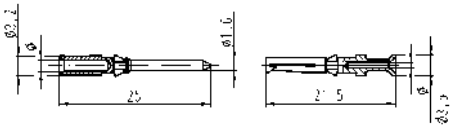
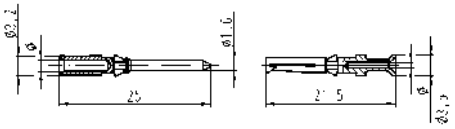
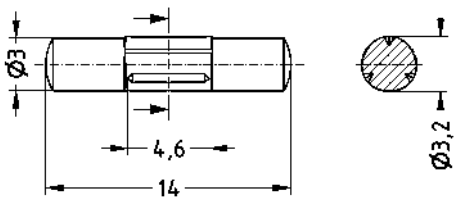
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®, Crimp contact, Contact surface: Silver plated  | 0.14 ... 0.37 | 09 15 000 6104 | 09 15 000 6204 |  |
| | 0.5 | 09 15 000 6103 | 09 15 000 6203 | |
| | 0.75 | 09 15 000 6105 | 09 15 000 6205 | |
| | 1 | 09 15 000 6102 | 09 15 000 6202 | |
| | 1.5 | 09 15 000 6101 | 09 15 000 6201 | |
| | 2.5 | 09 15 000 6106 | 09 15 000 6206 | |
| Han D®, Crimp contact, Contact surface: Gold plated  | 0.14 ... 0.37 | 09 15 000 6124 | 09 15 000 6224 |  |
| | 0.5 | 09 15 000 6123 | 09 15 000 6223 | |
| | 0.75 | 09 15 000 6125 | 09 15 000 6225 | |
| | 1 | 09 15 000 6122 | 09 15 000 6222 | |
| | 1.5 | 09 15 000 6121 | 09 15 000 6221 | |
| | 2.5 | 09 15 000 6126 | 09 15 000 6226 | |
| Han D®, Han DD®, Han® DDD, Coding pin  Only for crimp termination With loss of one contact | | | 09 33 000 9915 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |


| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

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| Han E® | **Han 03.3** |
| Han® ES/ES Press/ESS | **Han 03.13** |
| Han® ES Press plug-in jumpers | **Han 03.29** |
| Han® EE | **Han 03.31** |
| Han® EEE | **Han 03.38** |
| Contacts | **Han 03.41** |

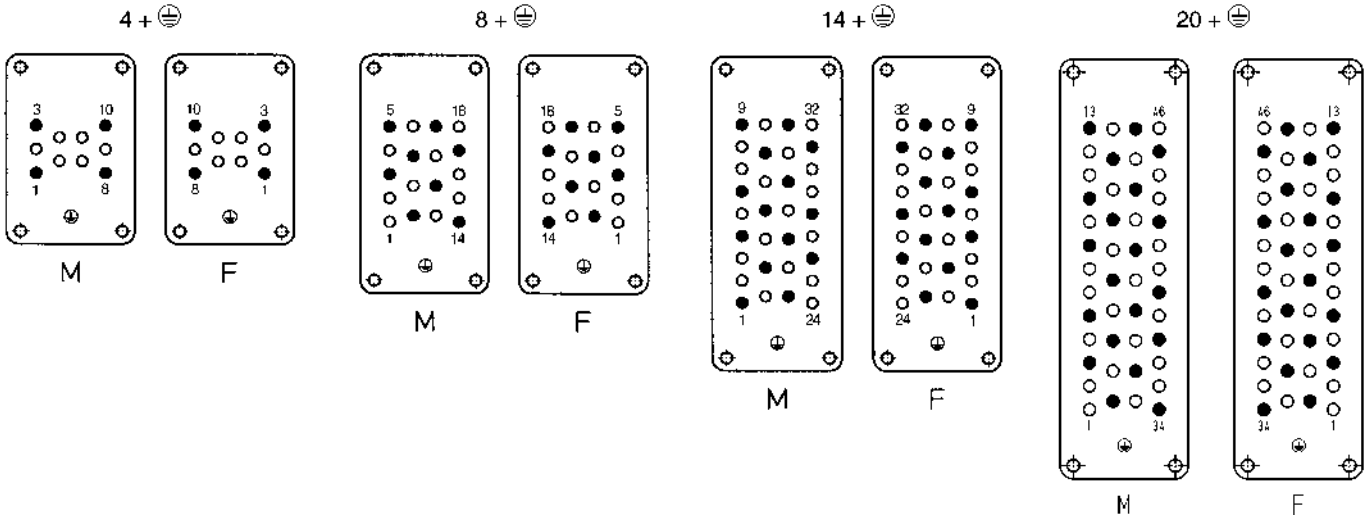
# Modified contact arrangement Han® EE



The connector series Han® EE equipped with all contacts may be used for voltages up to 500 V ~ pollution degree 3. A modified contact loading arrangement permits use up to 1000 V ~ pollution degree also in pollution degree 3. Fully equipped connectors may also be used up to 1000 V ~ but in a lower pollution degree. See chapter 00. According to IEC 61984 connectors should not be coupled or decoupled under electrical load.

## 690 V Pollution degree 3

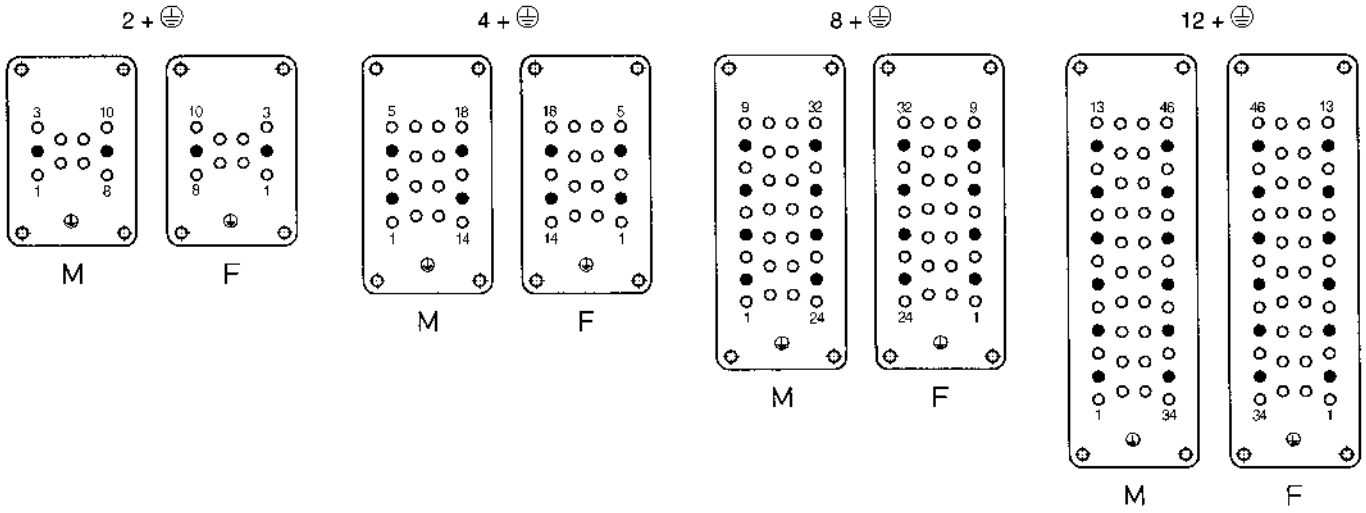
Contact arrangement view from termination side




● Working contact ○ Without contact M - Male insert F - Female insert

## 1000 V Pollution degree 3

Contact arrangement view from termination side




● Working contact ○ Without contact M - Male insert F - Female insert

## Features

- Covers a wide range of cross-sections
- Screw termination with wire protection

## Technical characteristics

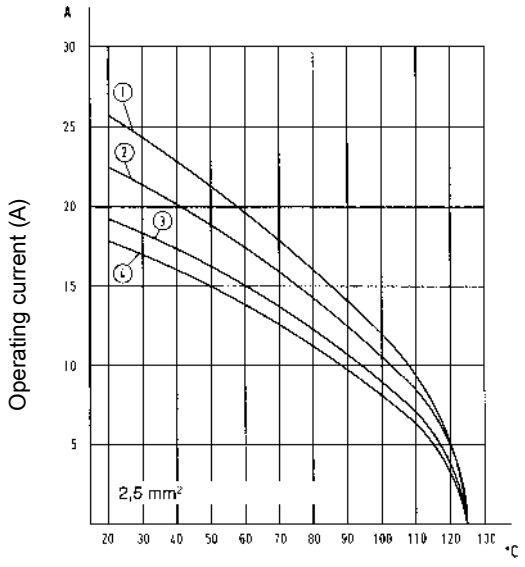
| | |
|---|---|
| Number of contacts | 6, 10, 16, 24, 32, 48 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

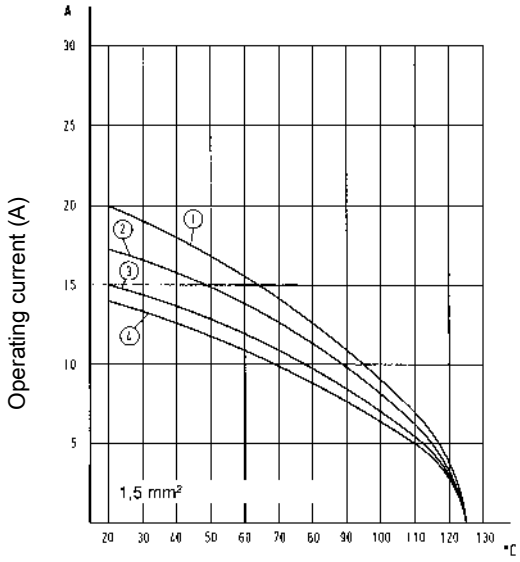
Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Han® 6 E
② Han® 10 E
③ Han® 16 E Han® 32 E
④ Han® 24 E Han® 48 E

## Derating




Ambient temperature (°C)

① Han® 6 E
② Han® 10 E
③ Han® 16 E Han® 32 E
④ Han® 24 E Han® 48 E

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

Internal use in the switch cabinet in conjunction with Han-Snap® (see chapter Han 11)

Suitable for hoods/housings of series Han® B, Han® M, Han® EMC, Han® HPR, Han® Easy Hood (see chapter Han 31)

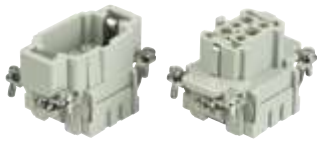
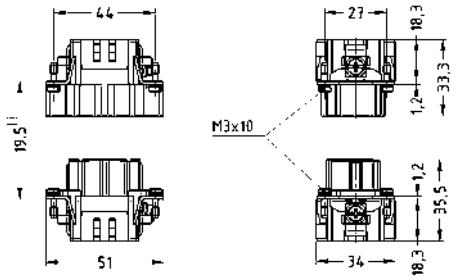
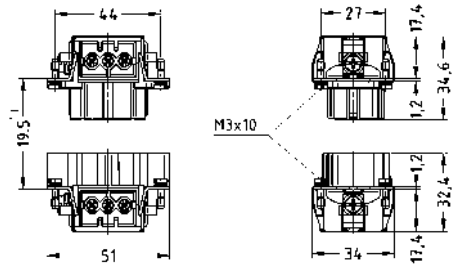
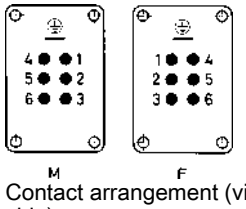
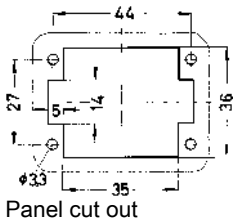
Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm

Number of contacts

6+ ⏚

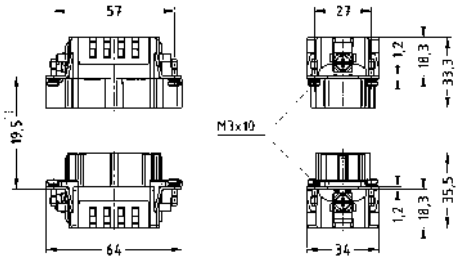
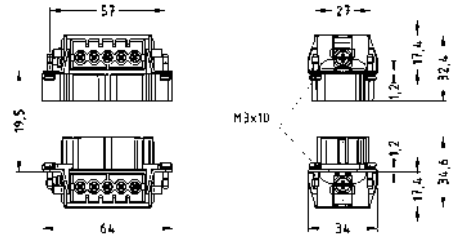
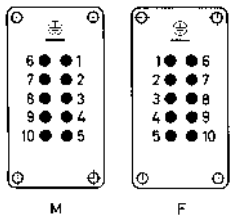
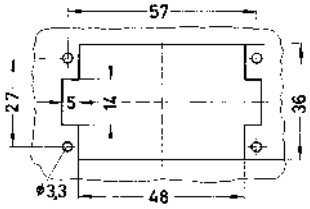
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 33 006 2602 | 09 33 006 2702 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 33 006 2601 | 09 33 006 2701 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

10+ ⏚

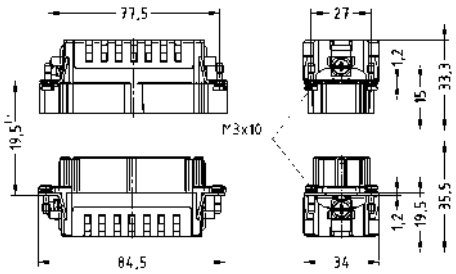
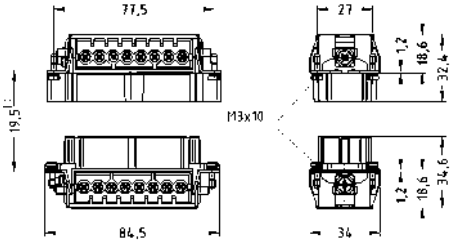
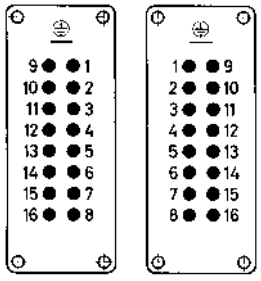
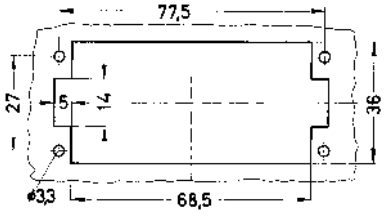
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 33 010 2602 | 09 33 010 2702 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 33 010 2601 | 09 33 010 2701 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

16+ ⏚

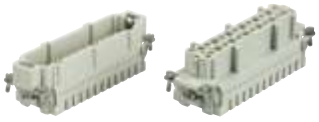
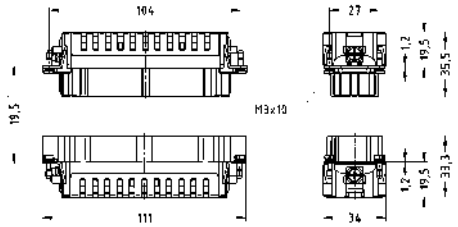
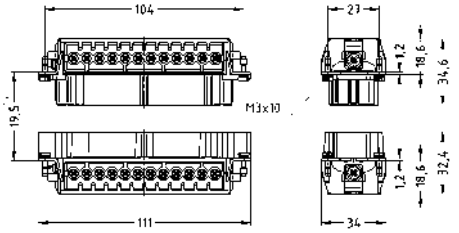
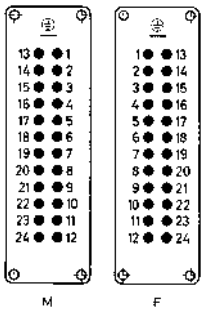
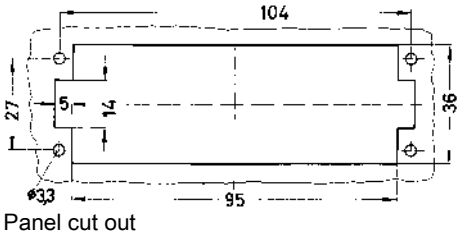
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 33 016 2602 | 09 33 016 2702 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 33 016 2601 | 09 33 016 2701 | <br>1) distance for contact max. 21 mm<br><br>M F<br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

24+ ⏚

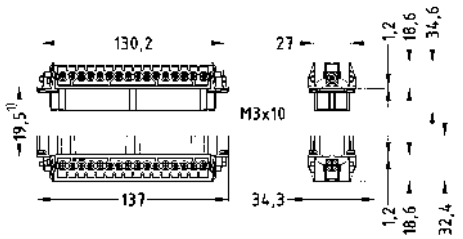
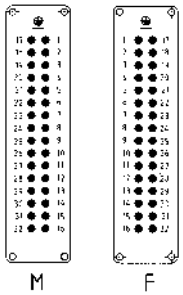
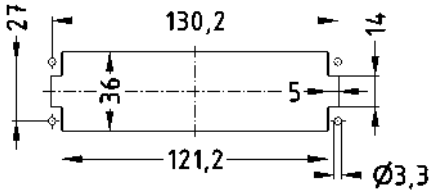
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 33 024 2602 | 09 33 024 2702 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 33 024 2601 | 09 33 024 2701 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

32+ ⏚

16 A 500 V 6 kV 3

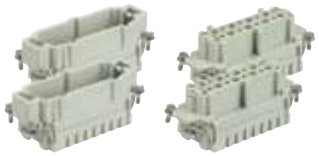
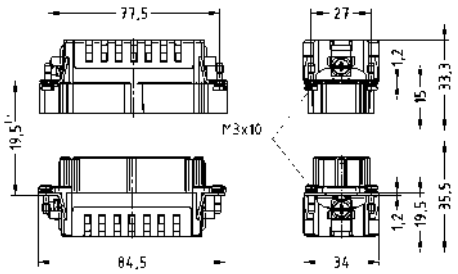
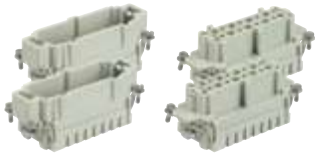
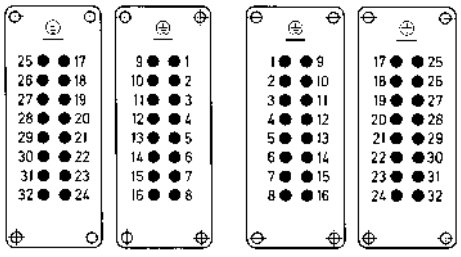
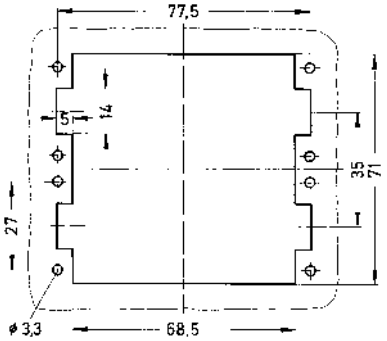
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 33 032 2601 | 09 33 032 2701 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

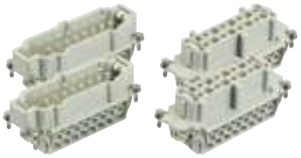
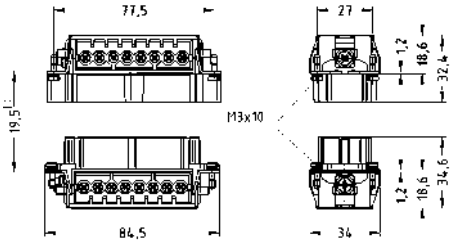
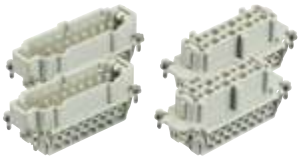
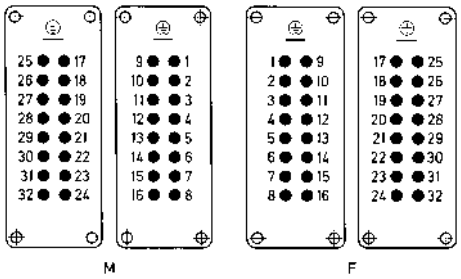
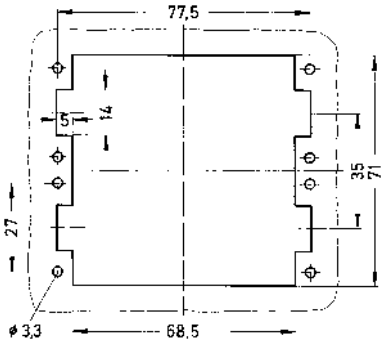
Number of contacts

32+ ⏚

16 A 500 V 6 kV 3



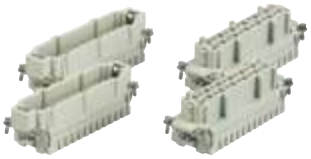
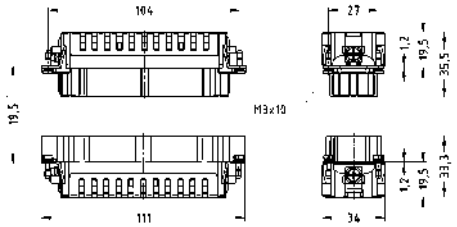
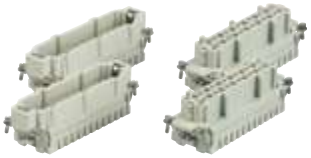
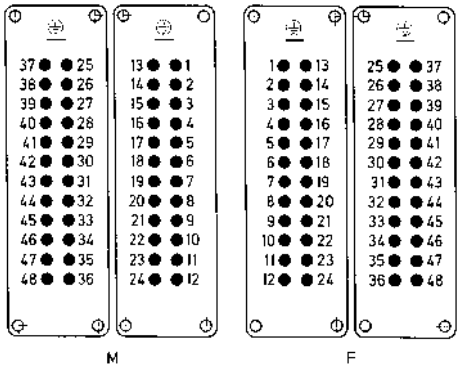
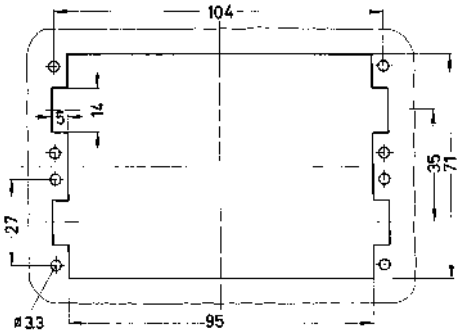
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp termination,<br>1 ... 16<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 33 016 2602 | 09 33 016 2702 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Continuing marking,<br>Crimp termination,<br>17 ... 32<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 33 016 2612 | 09 33 016 2712 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

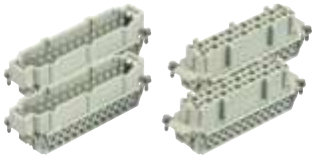
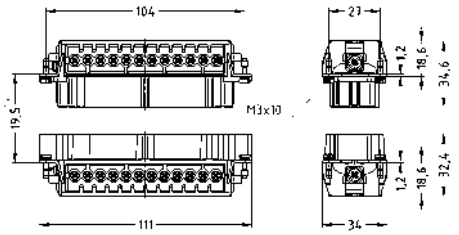
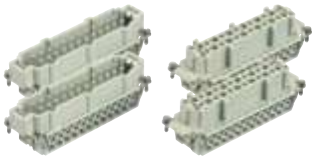
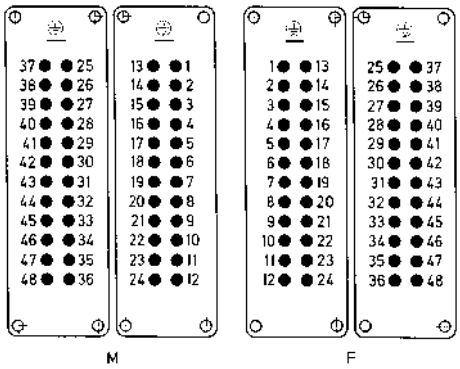
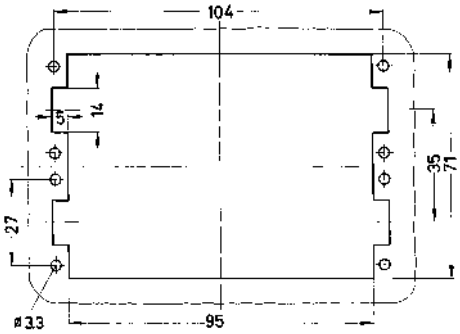
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Screw termination,<br>With wire protection,<br>1 ... 16<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 33 016 2601 | 09 33 016 2701 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Continuing marking,<br>Screw termination,<br>With wire protection,<br>17 ... 32<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 33 016 2611 | 09 33 016 2711 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

48+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp termination,<br>1 ... 24<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 33 024 2602 | 09 33 024 2702 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Continuing marking,<br>Crimp termination,<br>25 ... 48<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 33 024 2612 | 09 33 024 2712 | <br>M F<br>Contact arrangement (view from termination side)<br><br>Panel cut out |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Screw termination,<br>With wire protection,<br>1 ... 24<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 33 024 2601 | 09 33 024 2701 | <br>1) distance for contact max. 21 mm |
| Han E®,<br>Continuing marking,<br>Screw termination,<br>With wire protection,<br>25 ... 48<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 33 024 2611 | 09 33 024 2711 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

## Features

- Rapid termination technology without tools for a time saving assembly and for optimal processreliability
- Vibration-proved
- Han® ES Press: Easy bridging functionality of contacts by means of plug-in jumpers directly on the connector
- Han® ES Press: Fast realisation of potential multiplication as well as star and delta bridges
- Han® ESS: two termination points per contact

## Technical characteristics

| | |
|---|---|
| Number of contacts | 6, 10, 16, 24, 32, 48 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

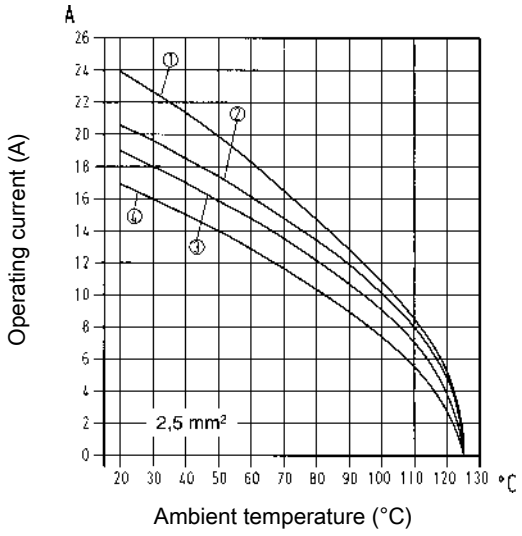
## Derating

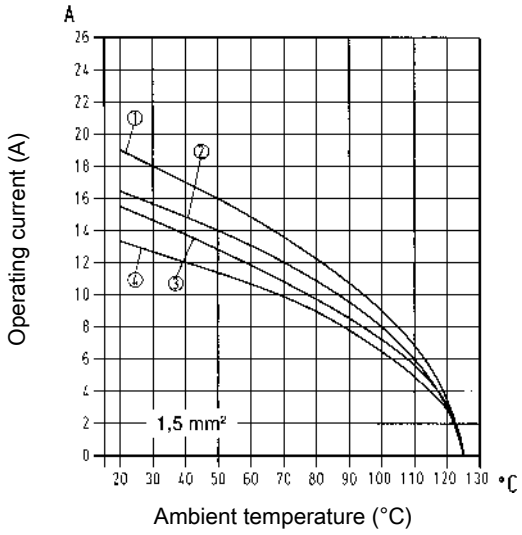
### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

**Han® ES**

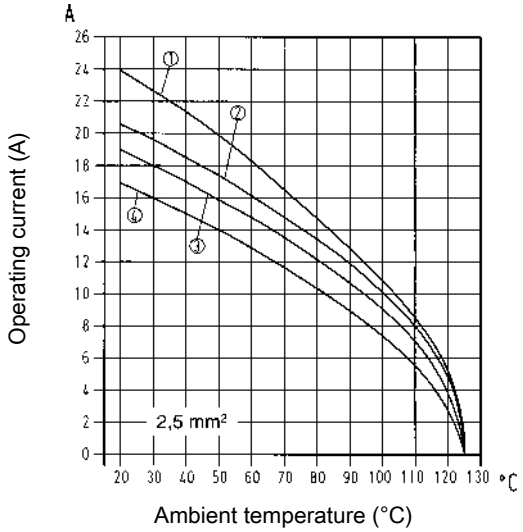


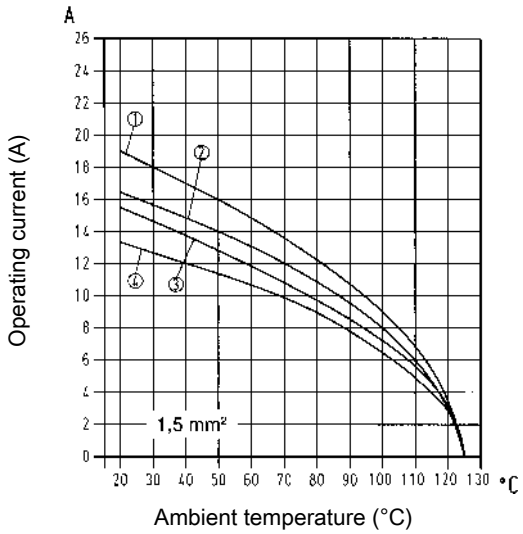




① Han® 6 ES
② Han® 10 ES
③ Han® 16 ES Han® 32 ES
④ Han® 24 ES Han® 48 ES

## Derating

**Han® ES Press**

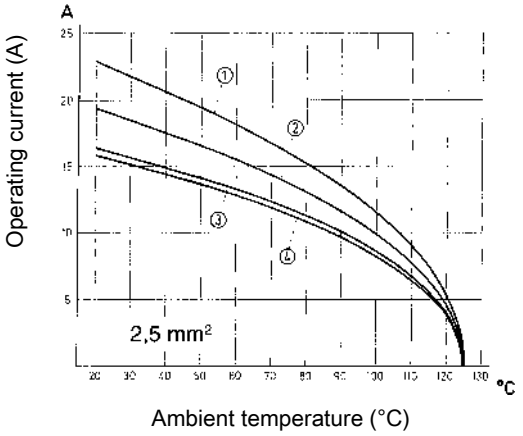


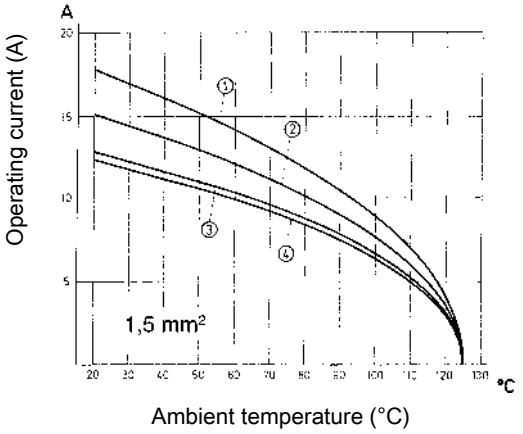




① Han® 6 ES Press
② Han® 10 ES Press
③ Han® 16 ES Press Han® 32 ES Press
④ Han® 24 ES Press Han® 48 ES Press

## Derating

**Han® ESS**




① Han® 6 ESS
② Han® 10 ESS
③ Han® 16 ESS Han® 32 ESS
④ Han® 24 ESS Han® 48 ESS

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

Internal use in the switch cabinet in conjunction with Han-Snap® (see chapter Han 11)

Suitable for hoods/housings of series Han® B, Han® M, Han® EMC, Han® HPR, Han® Easy Hood (see chapter Han 31)

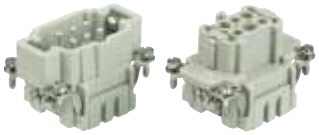
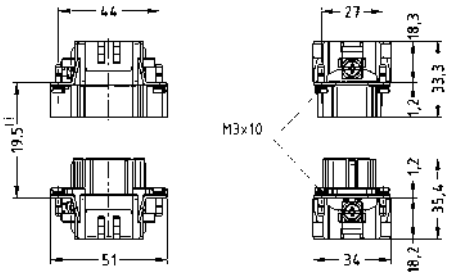
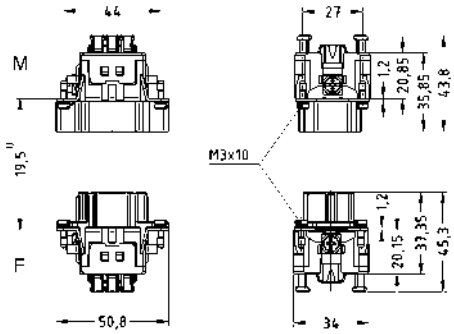
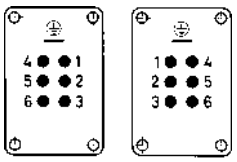
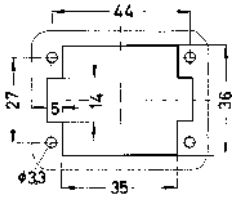
Tightening torque 0.5 Nm

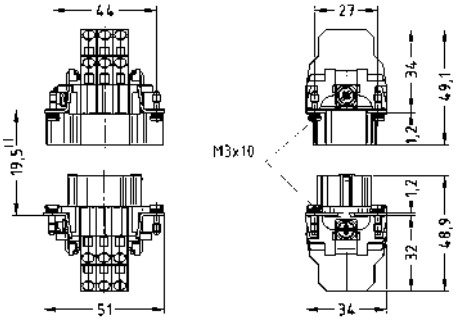
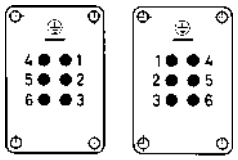
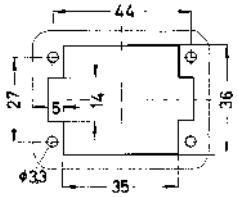
Tightening torque PE screw 1.2 Nm

Number of contacts

6+ ⏚

16 A 500 V 6 kV 3

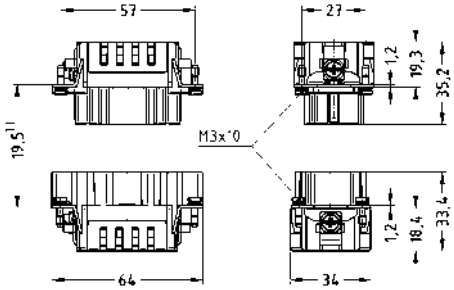
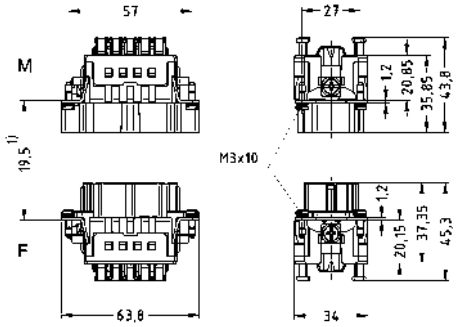
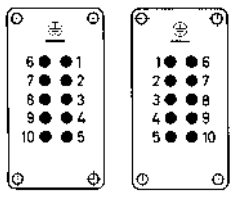
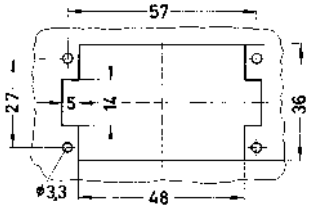
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 006 2616 | 09 33 006 2716 | <br>1) distance for contact max. 21 mm |
| Han® ES Press,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 006 2648 | 09 33 006 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

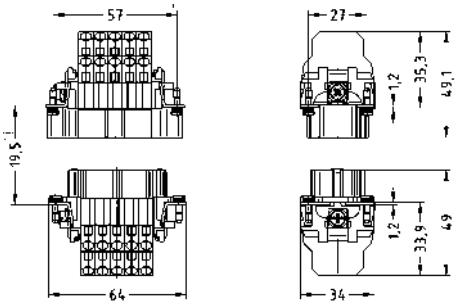
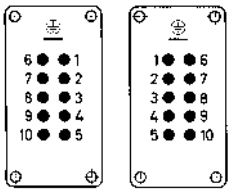
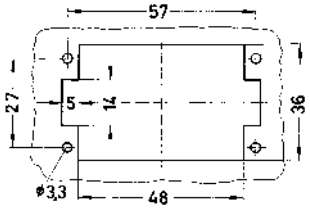
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ESS,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>two terminations per contact for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 006 2672 | 09 33 006 2772 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

10+ ⏚

16 A 500 V 6 kV 3

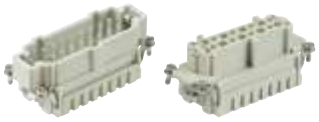
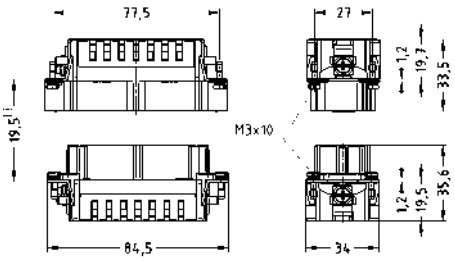
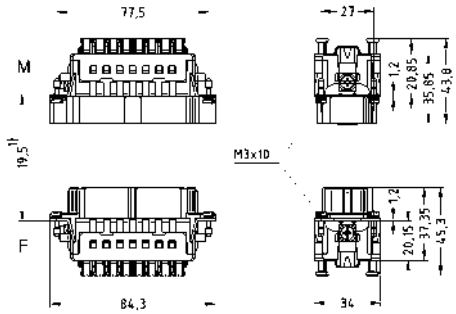
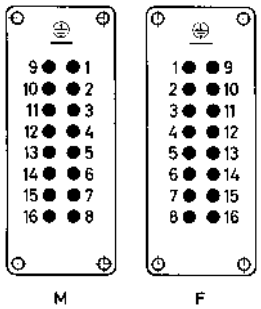
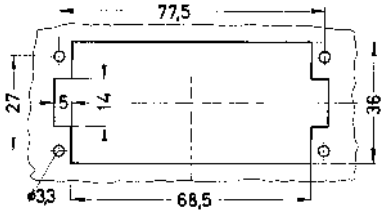
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 010 2616 | 09 33 010 2716 | <br>1) distance for contact max. 21 mm |
| Han® ES Press,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 010 2648 | 09 33 010 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

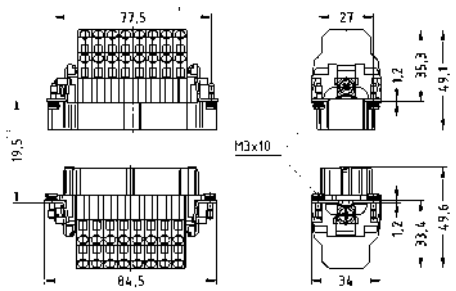
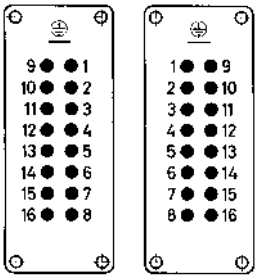
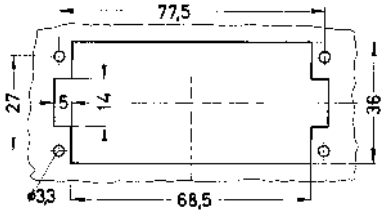
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ESS,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>two terminations per contact for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 010 2672 | 09 33 010 2772 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

16+ ⏚

16 A 500 V 6 kV 3

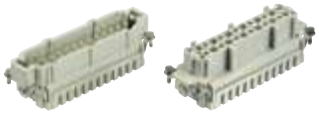
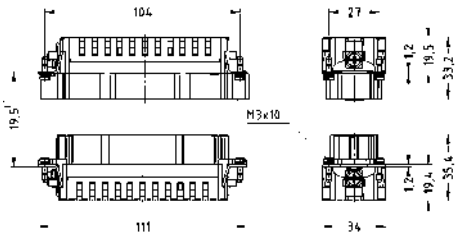
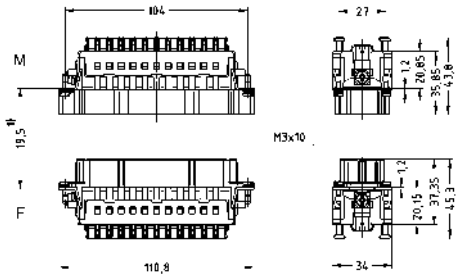
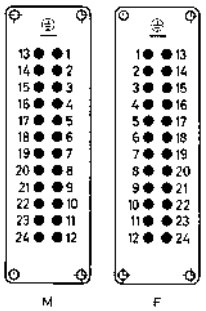
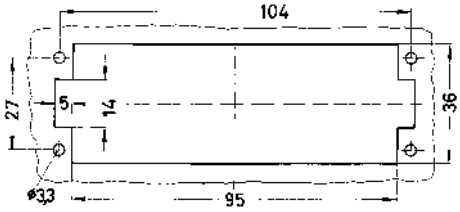
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 016 2616 | 09 33 016 2716 | <br>1) distance for contact max. 21 mm |
| Han® ES Press,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 016 2648 | 09 33 016 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

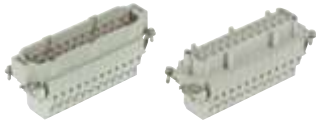
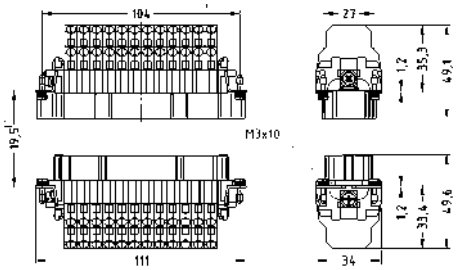
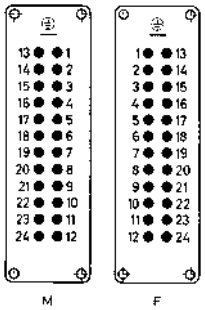
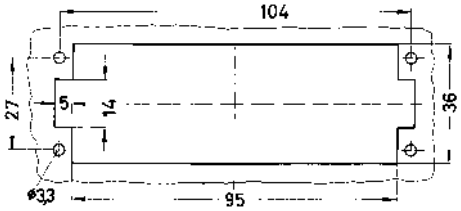
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ESS,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>two terminations per contact for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 016 2672 | 09 33 016 2772 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

24+

16 A 500 V 6 kV 3

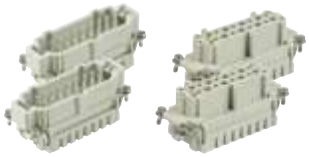
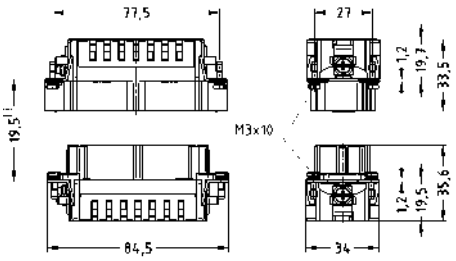
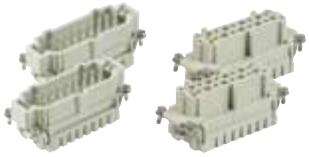
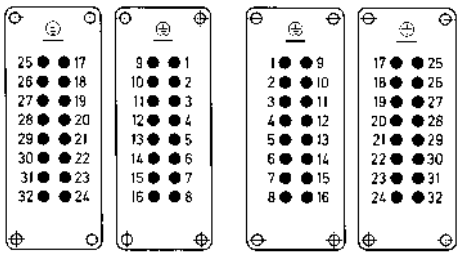
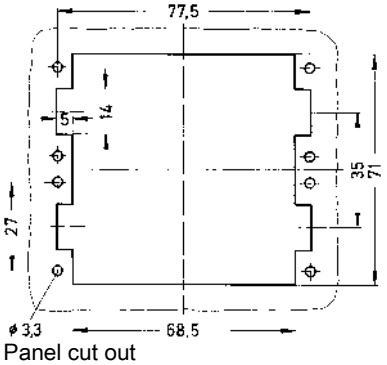
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 024 2616 | 09 33 024 2716 | <br>1) distance for contact max. 21 mm |
| Han® ES Press,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 024 2648 | 09 33 024 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

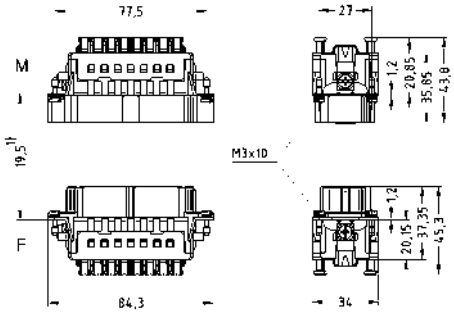
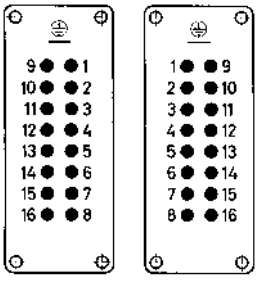
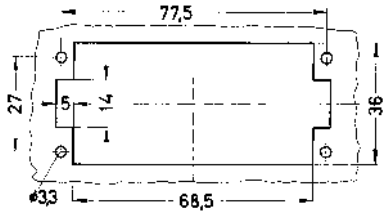
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ESS,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>two terminations per contact for hoods/housings high construction only | 0.14 ... 2.5 | 09 33 024 2672 | 09 33 024 2772 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

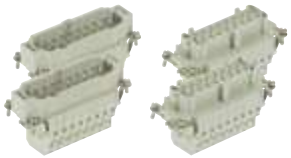
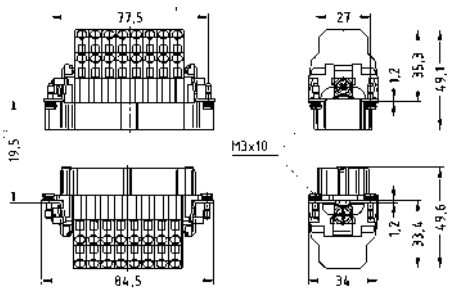
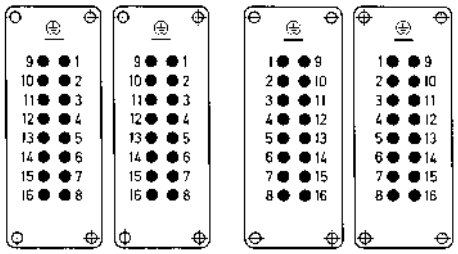
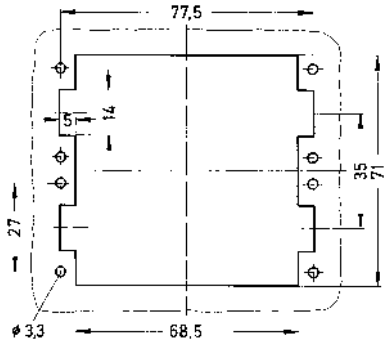
Number of contacts

32+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES,<br>Cage-clamp termination,<br>1 ... 16<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 016 2616 | 09 33 016 2716 | <br>1) distance for contact max. 21 mm |
| Han® ES,<br>Continuing marking,<br>Cage-clamp termination,<br>17 ... 32<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 016 2626 | 09 33 016 2726 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

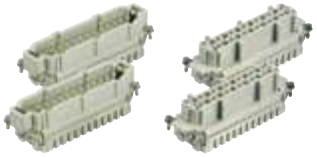
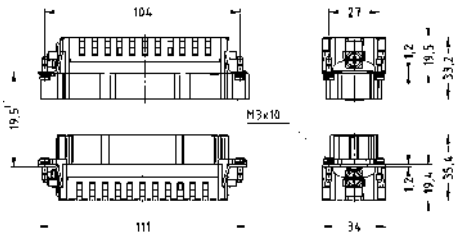
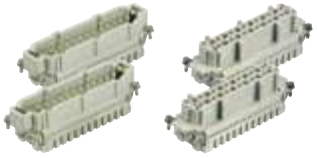
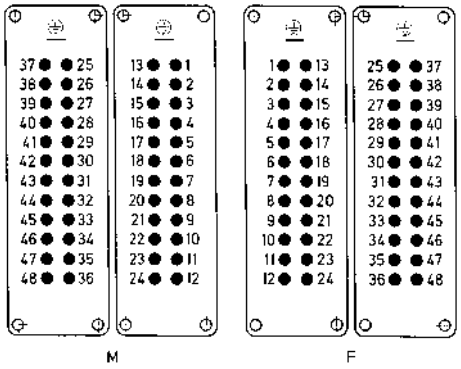
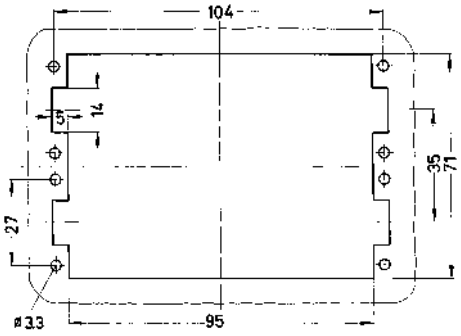
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES Press,<br>Cage-clamp termination,<br>1 ... 16<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 016 2648 | 09 33 016 2748 | <br>Distance for contact max. 21 mm |
| Han® ES Press,<br>Continuing marking,<br>Cage-clamp termination,<br>17 ... 32<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 016 2688 | 09 33 016 2788 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

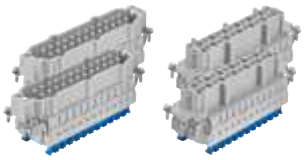
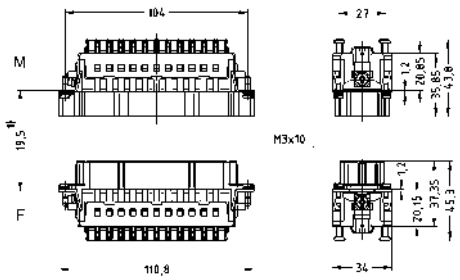
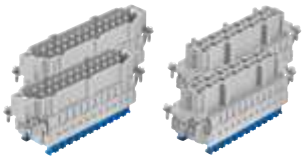
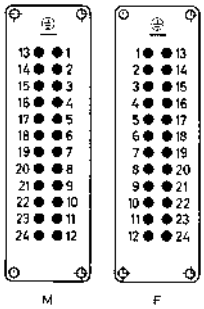
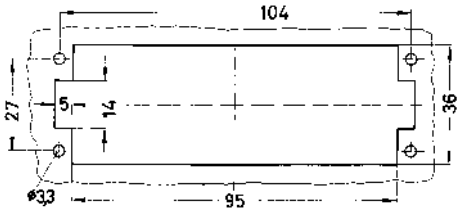
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ESS,<br>Cage-clamp termination,<br>1 ... 16<br>Contact surface:<br>Silver plated<br><br>two terminations per contact for hoods/housings high construction only<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 016 2672 | 09 33 016 2772 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

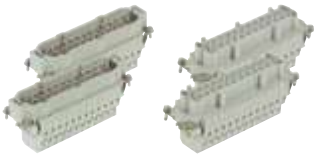
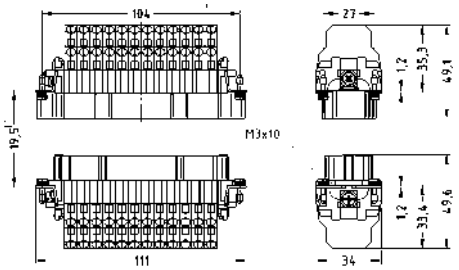
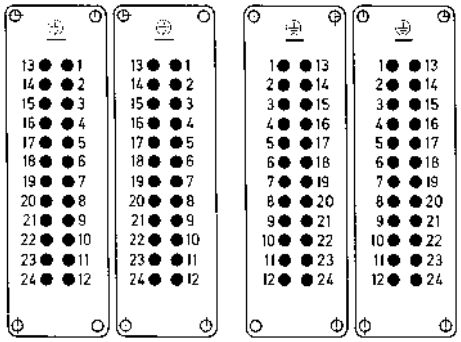
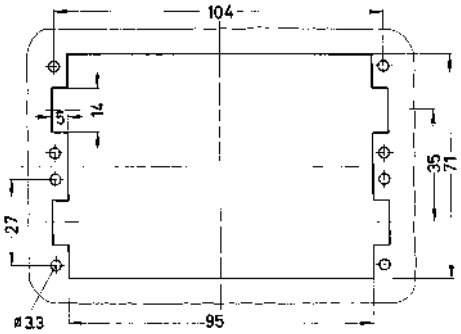
Number of contacts

48+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES,<br>Cage-clamp termination,<br>1 ... 24<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 024 2616 | 09 33 024 2716 | <br>1) distance for contact max. 21 mm |
| Han® ES,<br>Continuing marking,<br>Cage-clamp termination,<br>25 ... 48<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 024 2626 | 09 33 024 2726 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES Press,<br>Cage-clamp termination,<br>1 ... 24<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 024 2648 | 09 33 024 2748 | <br>Distance for contact max. 21 mm |
| Han® ES Press,<br>Continuing marking,<br>Cage-clamp termination,<br>25 ... 48<br>Contact surface:<br>Silver plated<br><br>Blue slide<br>for hoods/housings high construction only<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 024 2688 | 09 33 024 2788 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ESS,<br>Cage-clamp termination,<br>1 ... 24<br>Contact surface:<br>Silver plated<br><br>two terminations per contact<br>for hoods/housings high construction only<br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 33 024 2672 | 09 33 024 2772 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

# Han® ES Press plug-in jumpers

16 A 500 V 6 kV 3





## Technical characteristics

| | |
|---|---|
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥5 |
| Material (contacts) | Copper alloy |
| Material (accessories) | Polyamide (PA) |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | RAL 3018 (strawberry red), RAL 5012 (light blue), RAL 5004 (black blue) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

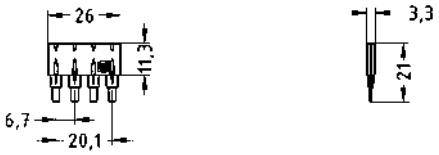
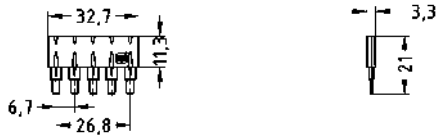
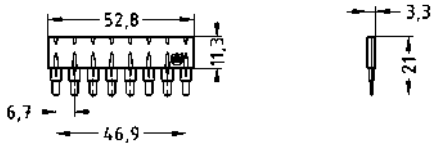
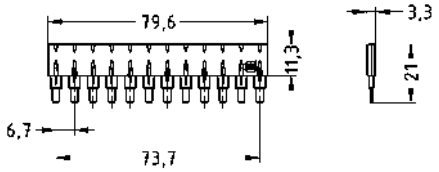
## Details

When using plug-in jumpers within Han® ES Press hoods of high construction must be used.

| Identification | | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® ES Press,<br>Plug-in jumper,<br>2x 1,<br>Transverse,<br>Contact surface:<br>Tin plated | Black<br>Blue<br>Red | 09 33 000 9822<br>09 33 000 9821<br>09 33 000 9820 |  |
| Han® ES Press,<br>Plug-in jumper,<br>1x 2,<br>Longitudinal,<br>Contact surface:<br>Tin plated | Black<br>Blue<br>Red | 09 33 000 9852<br>09 33 000 9841<br>09 33 000 9830 |  |
| Han® ES Press,<br>Plug-in jumper,<br>1x 3,<br>Longitudinal,<br>Contact surface:<br>Tin plated | Black<br>Blue<br>Red | 09 33 000 9853<br>09 33 000 9842<br>09 33 000 9831 |  |

# Han® ES Press plug-in jumpers



| Identification | | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® ES Press,<br>Plug-in jumper,<br>1x 4,<br>Longitudinal,<br>Contact surface:<br>Tin plated | Black<br>Blue<br>Red | 09 33 000 9854<br>09 33 000 9843<br>09 33 000 9832 |  |
| Han® ES Press,<br>Plug-in jumper,<br>1x 5,<br>Longitudinal,<br>Contact surface:<br>Tin plated | Black<br>Blue<br>Red | 09 33 000 9855<br>09 33 000 9844<br>09 33 000 9833 |  |
| Han® ES Press,<br>Plug-in jumper,<br>1x 8,<br>Longitudinal,<br>Contact surface:<br>Tin plated | Black<br>Blue<br>Red | 09 33 000 9858<br>09 33 000 9847<br>09 33 000 9836 |  |
| Han® ES Press,<br>Plug-in jumper,<br>1x 12,<br>Longitudinal,<br>Contact surface:<br>Tin plated | Black<br>Blue<br>Red | 09 33 000 9862<br>09 33 000 9851<br>09 33 000 9840 |  |

## Features

- Higher density of crimping contacts
- Coded insert
- Gold and silver contacts available

## Technical characteristics

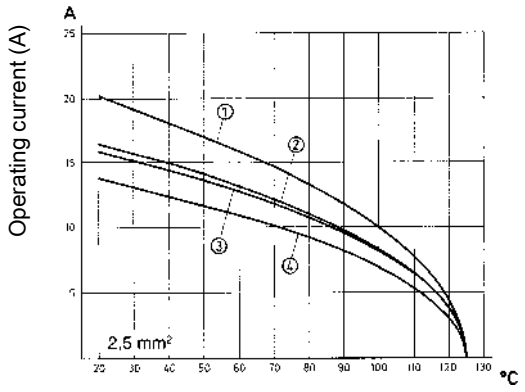
| | |
|---|---|
| Number of contacts | 10, 18, 32, 46, 64, 92 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

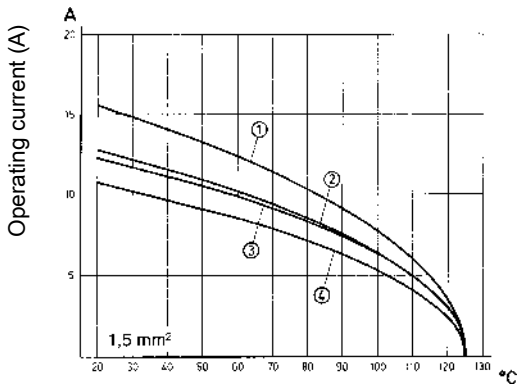
Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Han® 10 EE
② Han® 18 EE
③ Han® 32 EE Han® 64 EE
④ Han® 46 EE Han® 92 EE

## Derating




Ambient temperature (°C)

① Han® 10 EE
② Han® 18 EE
③ Han® 32 EE Han® 64 EE
④ Han® 46 EE Han® 92 EE

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

Internal use in the switch cabinet in conjunction with Han-Snap® (see chapter Han 11)

Suitable for hoods/housings of series Han® B, Han® M, Han® EMC, Han® HPR, Han® Easy Hood (see chapter Han 31)

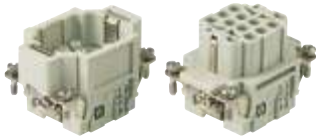
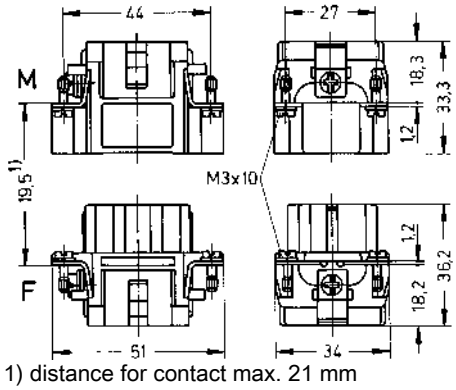
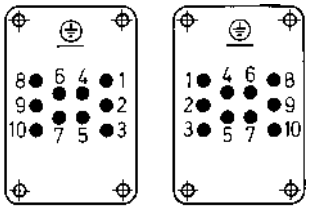
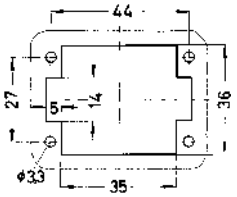
Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm

Number of contacts

10+ ⏚

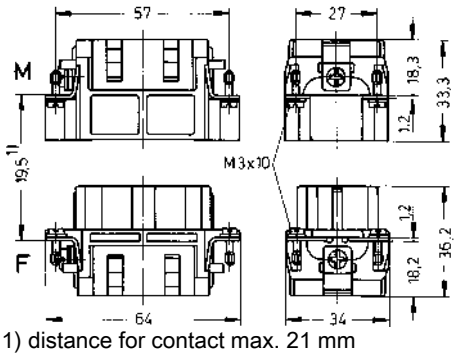
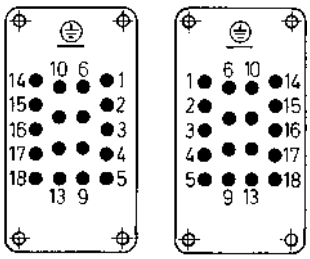
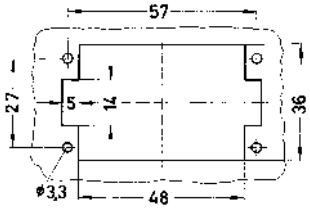
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EE, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 010 3001 | 09 32 010 3101 |   1) distance for contact max. 21 mm   M F Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

18+ ⏚

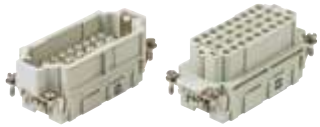
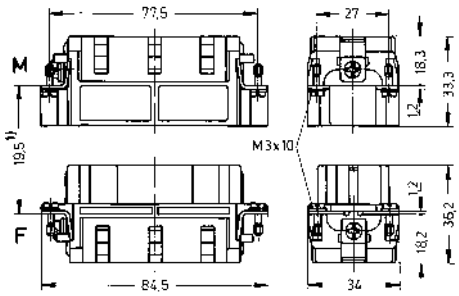
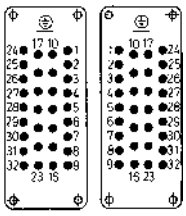
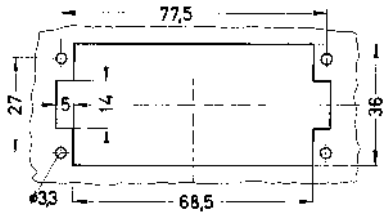
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EE, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 018 3001 | 09 32 018 3101 |   1) distance for contact max. 21 mm   M F Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

32+ ⏚

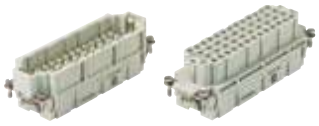
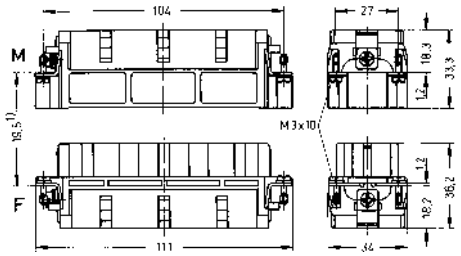
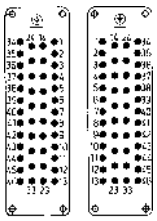
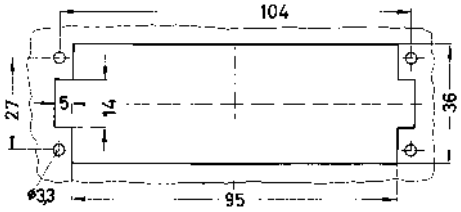
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EE, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 032 3001 | 09 32 032 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

# 46+ ⏚

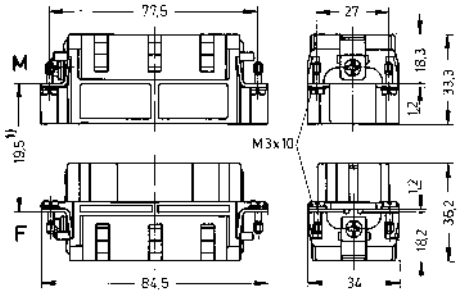
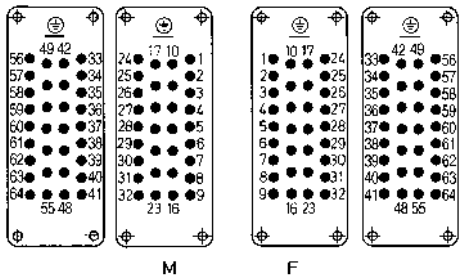
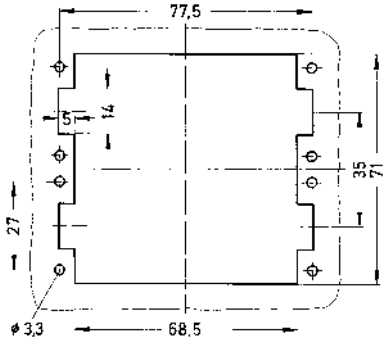
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EE, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 046 3001 | 09 32 046 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

# 64+ ⏚

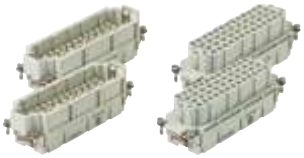
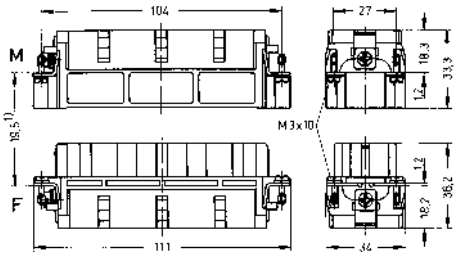
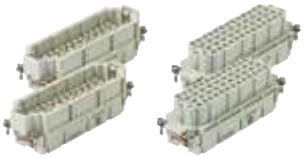
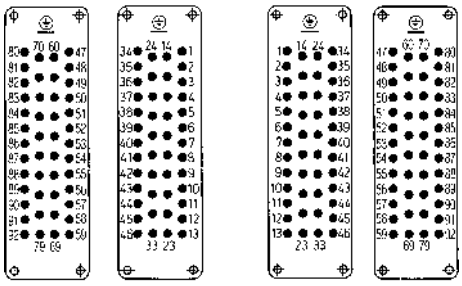
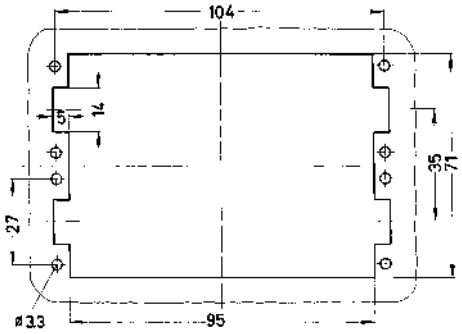
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EE,<br>Crimp termination,<br>1 ... 32<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 32 032 3001 | 09 32 032 3101 | <br>1) distance for contact max. 21 mm |
| Han® EE,<br>Continuing marking,<br>Crimp termination,<br>33 ... 64<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 32 032 3011 | 09 32 032 3111 | <br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

92+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EE,<br>Crimp termination,<br>1 ... 46<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 32 046 3001 | 09 32 046 3101 | <br>1) distance for contact max. 21 mm |
| Han® EE,<br>Continuing marking,<br>Crimp termination,<br>47 ... 92<br><br>Please order crimp contacts separately.<br>You need two inserts for a complete assembly! | 0.14 ... 4 | 09 32 046 3011 | 09 32 046 3111 | <br>M F<br>Contact arrangement (view from termination side)<br><br>Panel cut out |

## Features

- Highest density of crimping contacts
- Coded insert
- Gold and silver contacts available

## Technical characteristics

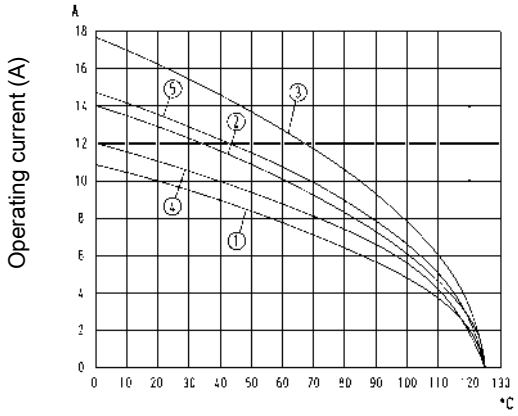
| | |
|---|---|
| Number of contacts | 40, 64 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Han® 64 EEE / 1.5 mm²
② Han® 64 EEE / 2.5 mm²
③ Han® 64 EEE / 4 mm²
④ Han® 40 EEE / 1.5 mm²
⑤ Han® 40 EEE / 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

Internal use in the switch cabinet in conjunction with Han-Snap® (see chapter Han 11)

Suitable for hoods/housings of series Han® B, Han® M, Han® EMC, Han® HPR, Han® Easy Hood (see chapter Han 31)

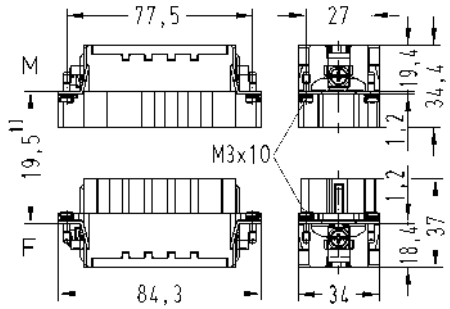
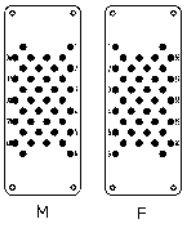
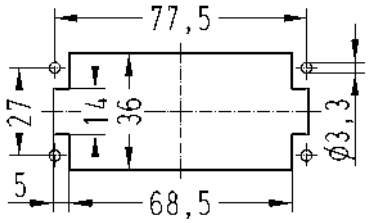
Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm

Number of contacts

# 40+ ⏚

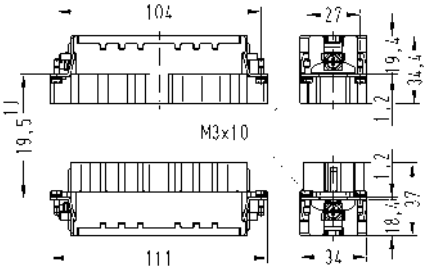
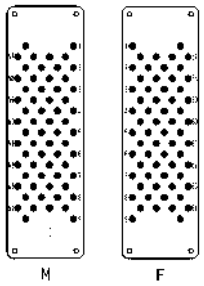
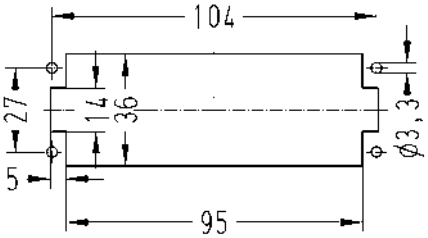
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EEE, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 040 3001 | 09 32 040 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

# 64+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EEE, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 064 3001 | 09 32 064 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

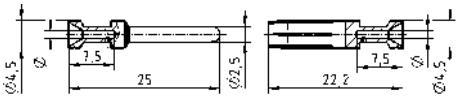
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

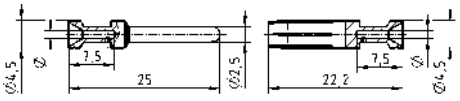
**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  |

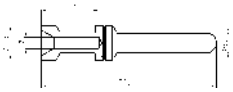
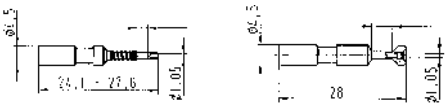
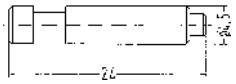
| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Relay contact,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 1<br>1.5<br>2.5 | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111 | | <br>Conductor cross-section / ø / Stripping length<br>0.75-1 mm² AWG 18 / 1.45 mm / 7.5 mm<br>1.5 mm² AWG 16 / 1.75 mm / 7.5 mm<br>2.5 mm² AWG 14 / 2.25 mm / 7.5 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3311 | 20 10 001 3321 | <br>Crimp zone |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br>for crimp inserts only<br>With loss of one contact | | | 09 33 000 9954 |  |

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Hoods/Housings ..... **Han 04.19**

# Difference: Han Hv E® to standard hoods/housings



## Standard Hoods/Housings Han® B

Suitable for
Han® Hv ES cage-clamp terminal
and Han Hv E® crimp terminal




## Special hood/housing Han Hv E®

Suitable for
Han Hv E® screw terminal



## Features

- Designed for application up to 830 V
- Available in multiple termination techniques

## Technical characteristics

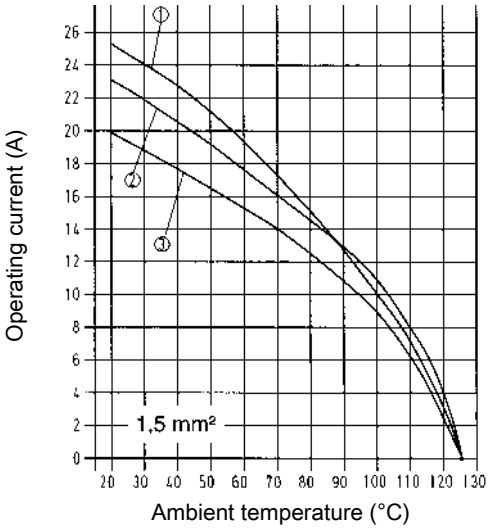
| | |
|---|---|
| Number of contacts | 3, 6, 10, 12, 20 |
| Additional contacts | + 2 additional relay contacts, + 4 additional relay contacts |
| Rated current | 16 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

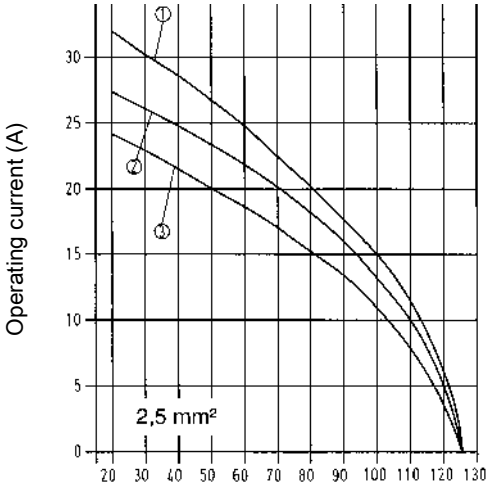
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

## Derating




① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

## Details

Han Hv E® screw requires special Han Hv E® housings

Tightening torque 0.5 Nm

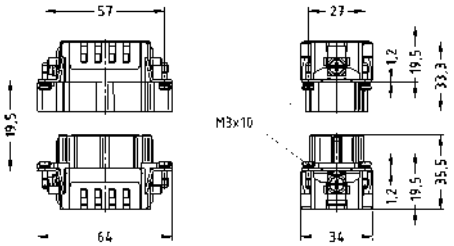
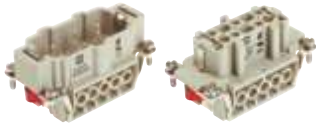
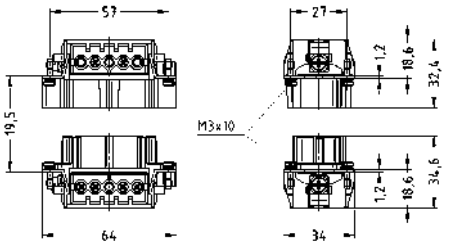
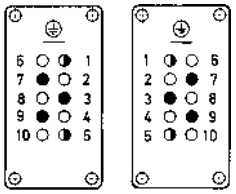
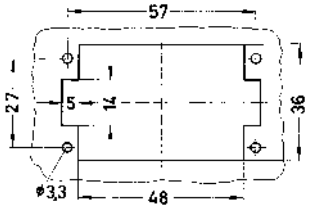
Tightening torque PE screw 1.2 Nm

# Han® 3 Hv E — Size 10 B

Number of contacts

3+ ⏚

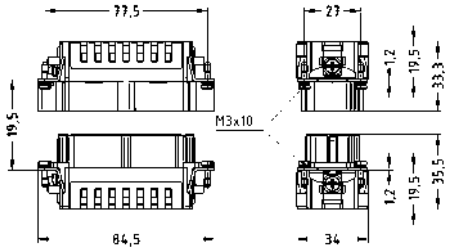
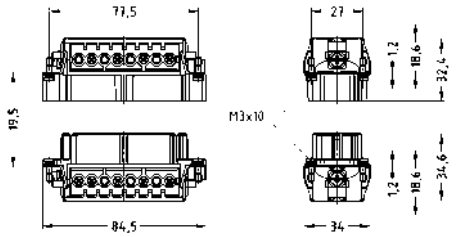
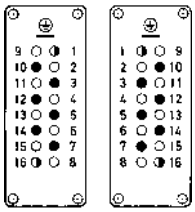
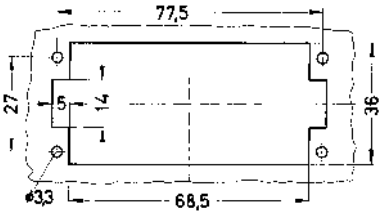
16 A 830 V 8 kV 3
+ 2 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han Hv E®, Crimp termination  Please order crimp contacts separately. | 0.5 ... 4 | 09 34 003 2602 | 09 34 003 2702 |   |
| Han Hv E®, Screw termination, With wire protection, Contact surface: Silver plated  | 0.75 ... 2.5 | 09 34 003 2601 | 09 34 003 2701 |     M F Contact arrangement (view from termination side) Han® 3 Hv E ◆ Power contacts ◐ Relay contact ○ Without contact   Panel cut out for use without Hoods/Housings |

Number of contacts

6+ ⏚

16 A 830 V 8 kV 3
+ 2 additional relay contacts

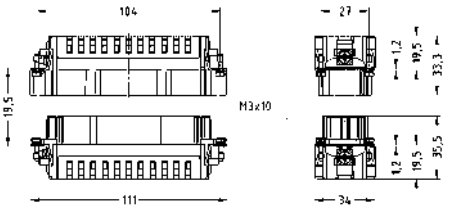
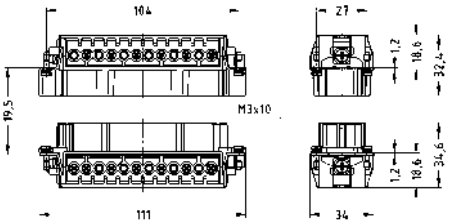
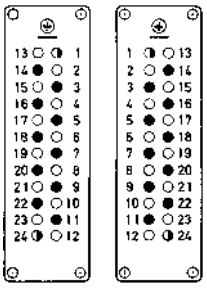
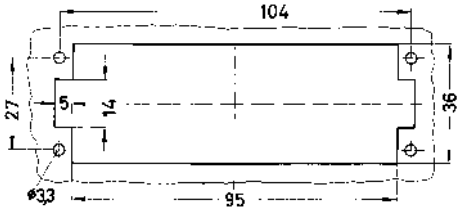
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han Hv E®, Crimp termination  Please order crimp contacts separately. | 0.5 ... 4 | 09 34 006 2602 | 09 34 006 2702 |   |
| Han Hv E®, Screw termination, With wire protection, Contact surface: Silver plated  | 0.75 ... 2.5 | 09 34 006 2601 | 09 34 006 2701 |     Contact arrangement (view from termination side) Han® 6 Hv E ◆ Power contacts ◐ Relay contact ○ Without contact   Panel cut out for use without Hoods/Housings |

# Han® 10 Hv E — Size 24 B

Number of contacts

10+ ⏚

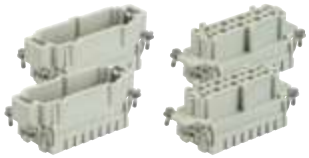
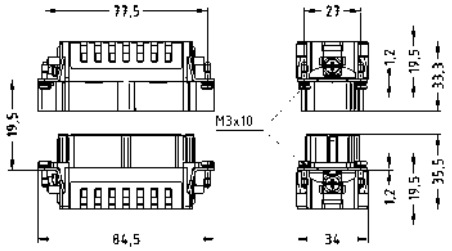
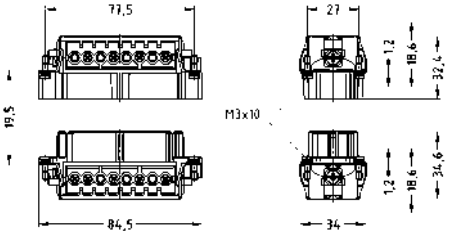
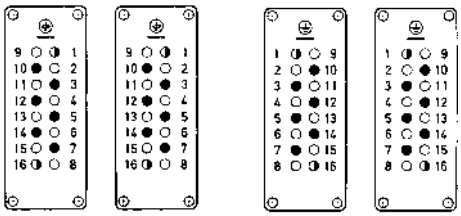
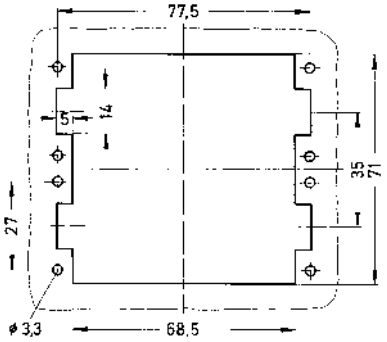
16 A 830 V 8 kV 3
+ 2 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han Hv E®, Crimp termination  Please order crimp contacts separately. | 0.5 ... 4 | 09 34 010 2602 | 09 34 010 2702 |  |
| Han Hv E®, Screw termination, With wire protection, Contact surface: Silver plated  | 0.75 ... 2.5 | 09 34 010 2601 | 09 34 010 2701 |   M F Contact arrangement (view from termination side) Han® 10 Hv E ◆ Power contacts ◐ Relay contact ○ Without contact  Panel cut out for use without Hoods/Housings |

Number of contacts

12+ ⏚

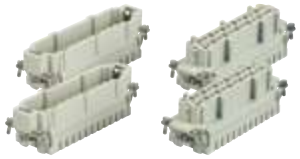
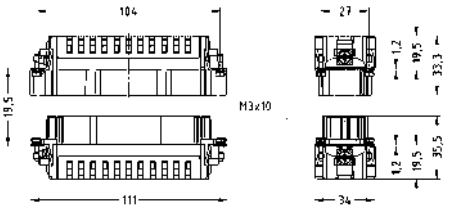
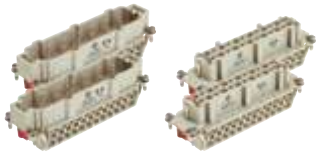
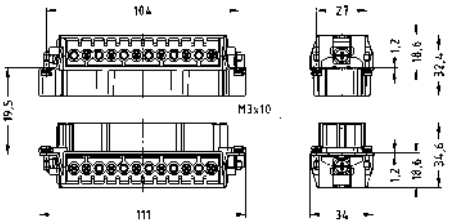
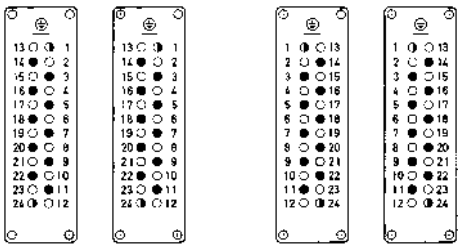
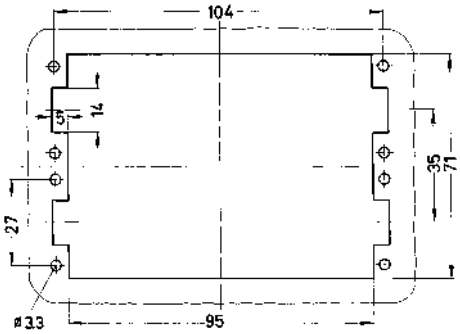
16 A 830 V 8 kV 3
+ 4 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han Hv E®, Crimp termination  Please order crimp contacts separately. You need two inserts for a complete assembly! | 0.5 ... 4 | 09 34 006 2602 | 09 34 006 2702 |   |
| Han Hv E®, Screw termination, With wire protection, Contact surface: Silver plated  You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 34 006 2601 | 09 34 006 2701 |    M F Contact arrangement (view from termination side) Han® 12 Hv E ◆ Power contacts ◐ Relay contact ○ Without contact   Panel cut out for use without Hoods/Housings |

Number of contacts

20+ ⏚

16 A 830 V 8 kV 3
+ 4 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han Hv E®, Crimp termination  Please order crimp contacts separately. You need two inserts for a complete assembly! | 0.5 ... 4 | 09 34 010 2602 | 09 34 010 2702 |  |
| Han Hv E®, Screw termination, With wire protection, Contact surface: Silver plated  You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 34 010 2601 | 09 34 010 2701 |   M F Contact arrangement (view from termination side) Han® 20 Hv E ◆ Power contacts ◐ Relay contact ○ Without contact  Panel cut out for use without Hoods/Housings |

## Features

- Designed for application up to 690 V
- No special tools required

## Technical characteristics

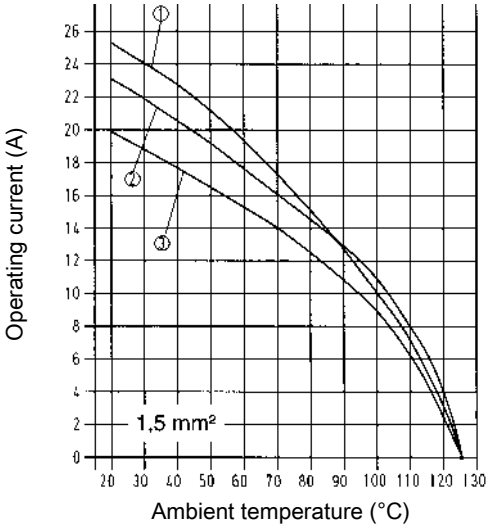
| | |
|---|---|
| Number of contacts | 16, 32 |
| Additional contacts | + 2 additional relay contacts, + 4 additional relay contacts |
| Rated current | 16 A |
| Rated voltage conductor-earth | 400 V |
| Rated voltage conductor-conductor | 690 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

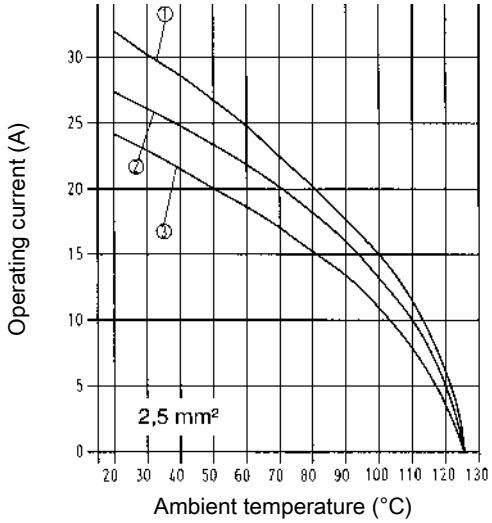
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

## Derating




① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

## Details

Han Hv E® screw requires special Han Hv E® housings

Tightening torque 0.5 Nm

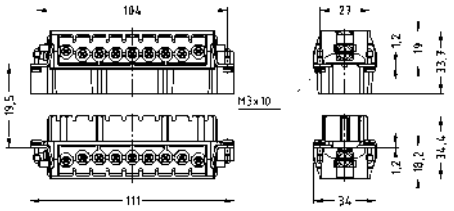
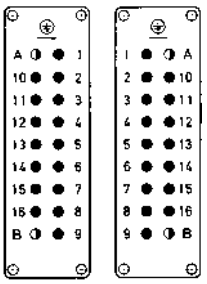
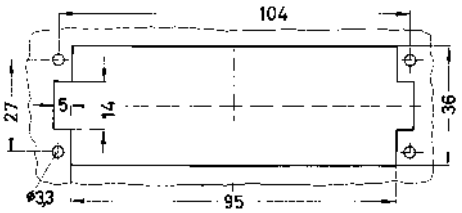
Tightening torque PE screw 1.2 Nm

# Han® 16 Hv E — Size 24 B

Number of contacts

## 16+ ⏚

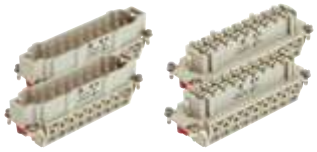
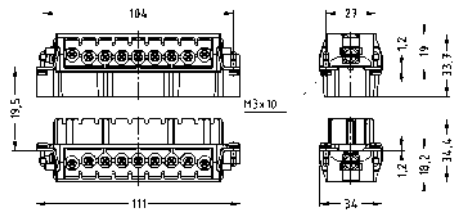
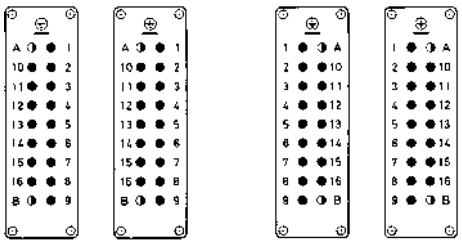
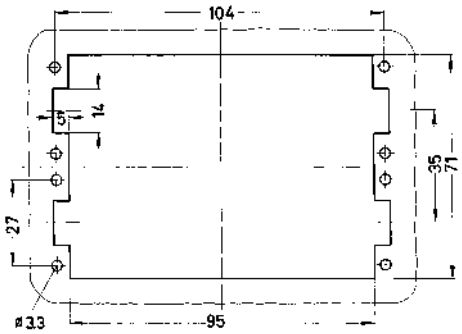
16 A 400/690 V 6 kV 3
+ 2 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han Hv E®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated  | 0.75 ... 2.5 | 09 34 016 2601 | 09 34 016 2701 | <br><br>M F<br>Contact arrangement (view from termination side)<br>Han® 16 Hv E<br>◆ Power contacts<br>◐ Relay contact<br>○ Without contact<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

32+ ⏚

16 A 400/690 V 6 kV 3
+ 4 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han Hv E®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.75 ... 2.5 | 09 34 016 2601 | 09 34 016 2701 | <br><br>M F<br>Contact arrangement (view from termination side)<br>Han® 32 Hv E<br>◆ Power contacts<br>◐ Relay contact<br>○ Without contact<br><br>Panel cut out<br>for use without Hoods/Housings |

## Features

- Designed for application up to 830 V
- Reliable cage clamp termination
- No special tools required
- Vibration-proved

## Technical characteristics

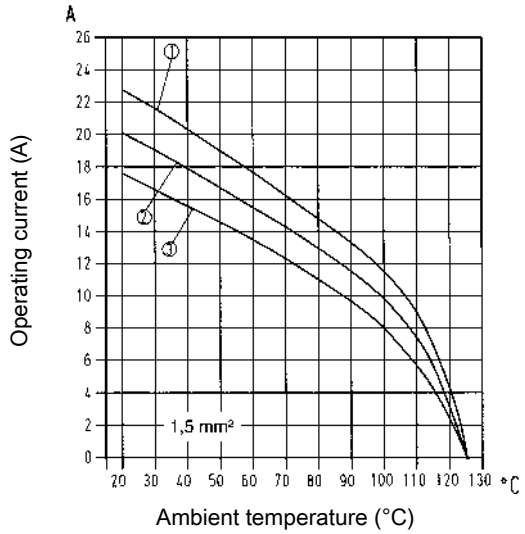
| | |
|---|---|
| Number of contacts | 3, 6, 10, 12, 20 |
| Additional contacts | + 2 additional relay contacts, + 4 additional relay contacts |
| Rated current | 16 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

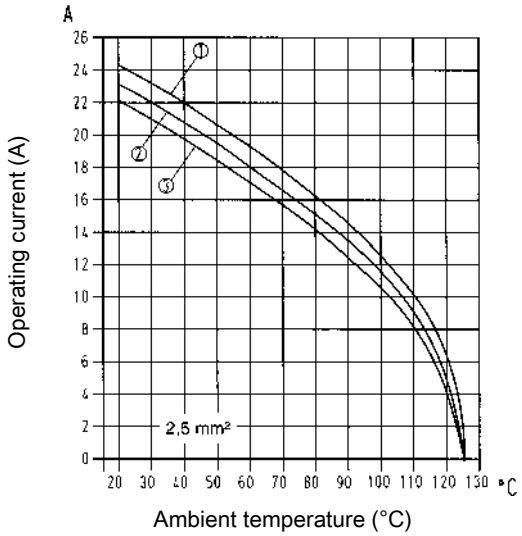
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 3 Hv ES
② Han® 6 Hv ES / Han® 12 Hv ES
③ Han® 10 Hv ES / Han® 20 Hv ES

## Derating




① Han® 3 Hv ES
② Han® 6 Hv ES / Han® 12 Hv ES
③ Han® 10 Hv ES / Han® 20 Hv ES

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

## Details

Not mating compatible to Han Hv E® screw/crimp termination

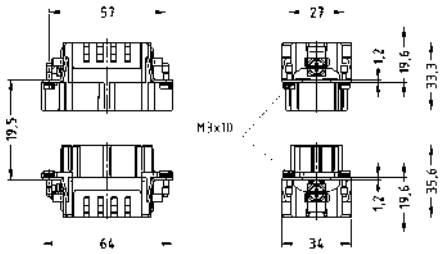
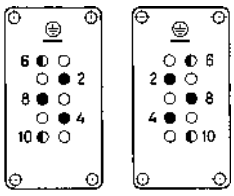
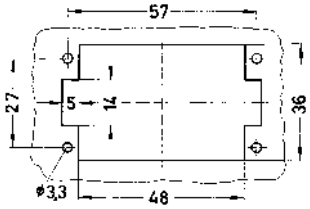
Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm

Number of contacts

3+ ⏚

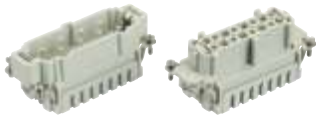
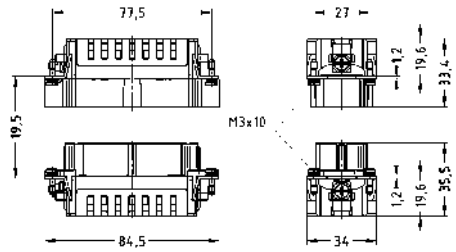
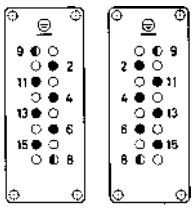
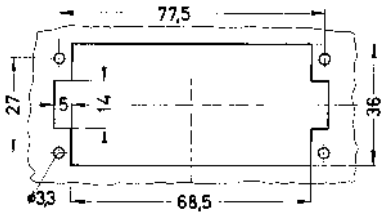
16 A 830 V 8 kV 3
+ 2 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Hv ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated  | 0.14 ... 2.5 | 09 34 003 2616 | 09 34 003 2716 |   M F<br>Contact arrangement (view from termination side)<br>Han® 3 Hv ES<br>◆ Power contacts<br>◐ Relay contact<br>○ Without contact  Panel cut out<br>for use without Hoods/Housings |

Number of contacts

6+ ⏚

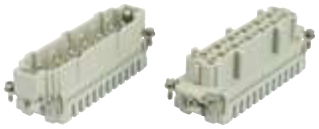
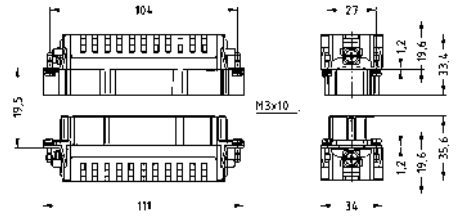
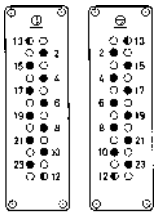
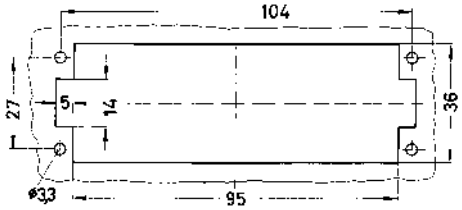
16 A 830 V 8 kV 3
+ 2 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Hv ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 34 006 2616 | 09 34 006 2716 | <br><br>M F<br>Contact arrangement (view from termination side)<br>Han® 6 Hv ES<br>◆ Power contacts<br>◐ Relay contact<br>○ Without contact<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

10+ ⏚

16 A 830 V 8 kV 3
+ 2 additional relay contacts

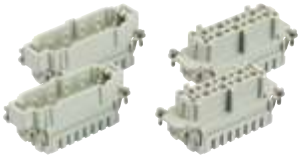
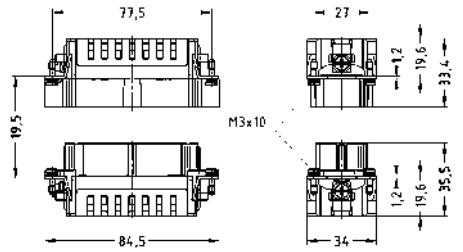
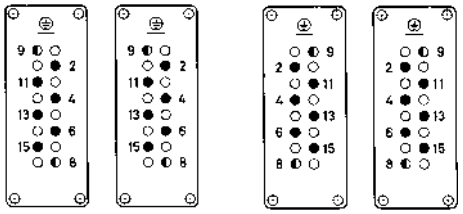
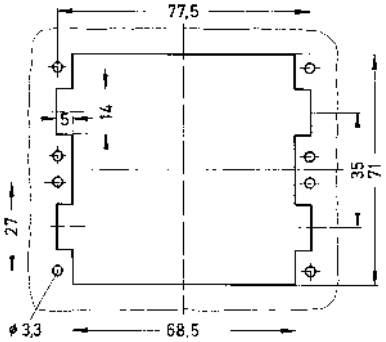
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Hv ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated  | 0.14 ... 2.5 | 09 34 010 2616 | 09 34 010 2716 | <br><br>M F<br>Contact arrangement (view from termination side)<br>Han® 10 Hv ES<br>◆ Power contacts<br>◐ Relay contact<br>○ Without contact<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

12+ ⏚

16 A 830 V 8 kV 3
+ 4 additional relay contacts

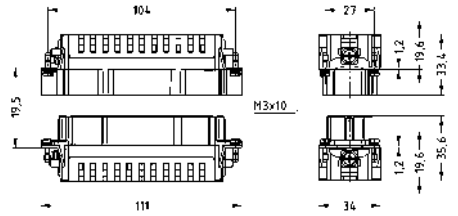
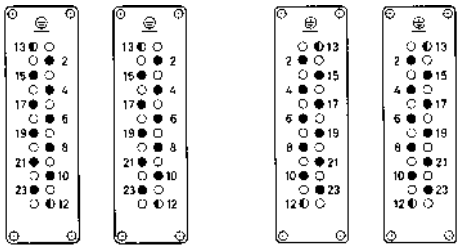
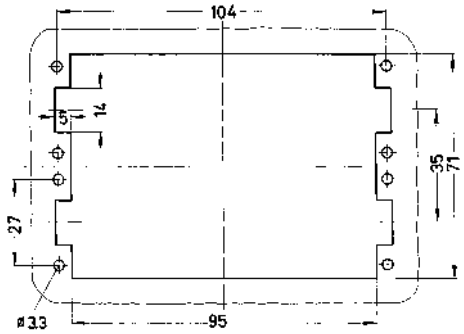


| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Hv ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 34 006 2616 | 09 34 006 2716 | <br><br>M F<br>Contact arrangement (view from termination side)<br>Han® 12 Hv ES<br>◆ Power contacts<br>◐ Relay contact<br>○ Without contact<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

20+ ⏚

16 A 830 V 8 kV 3
+ 4 additional relay contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Hv ES,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 0.14 ... 2.5 | 09 34 010 2616 | 09 34 010 2716 | <br><br>M F<br>Contact arrangement (view from termination side)<br>Han® 20 Hv ES<br>◆ Power contacts<br>◐ Relay contact<br>○ Without contact<br><br>Panel cut out<br>for use without Hoods/Housings |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

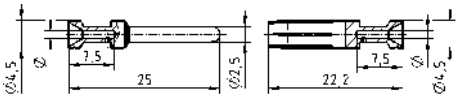
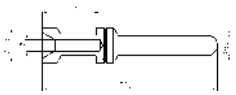
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated | 0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  |
| Han E®,<br>Crimp contact,<br>Relay contact,<br>Contact surface:<br>Silver plated | 0.75 ... 1<br>1.5<br>2.5 | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111 | |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.75-1 mm² | AWG 18 | 1.45 mm | 7.5 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 7.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 7.5 mm |

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel |
| Colour (locking) | RAL 7037 (dust grey) |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

## Specifications and approvals

DNV GL

CE

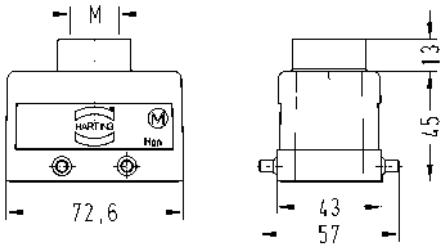
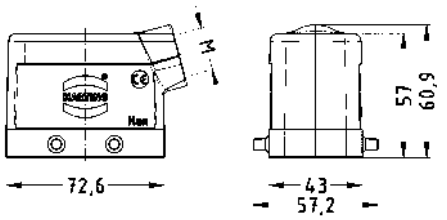
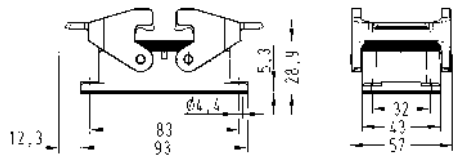
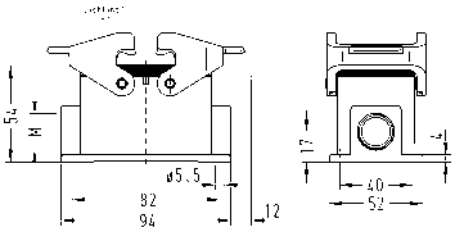
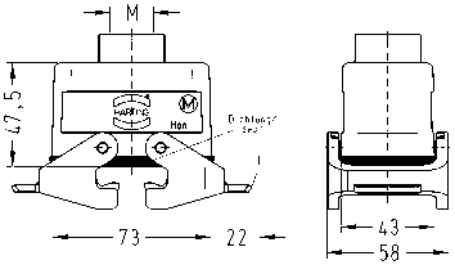
## Details

Special hoods/housings for Han Hv E® screw terminal

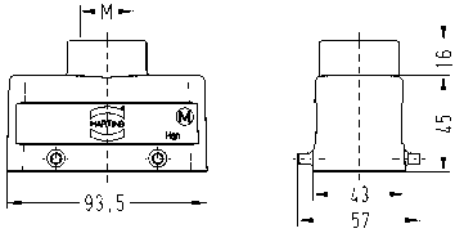
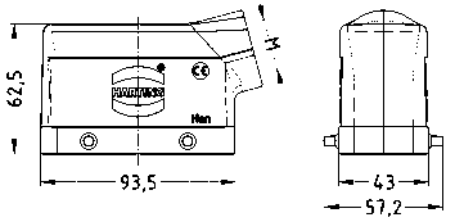
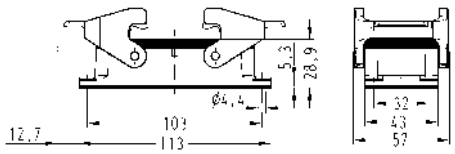
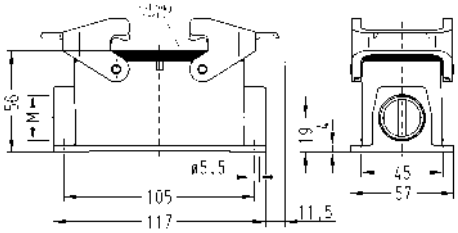
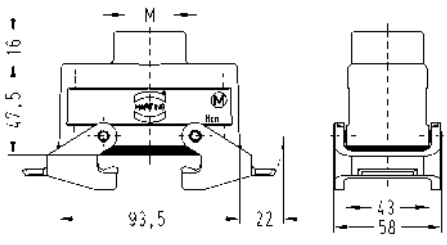
**Standard hoods/housings** see chapter Han 31

Special hoods/housings for Han Hv E® screw terminal
Double locking lever



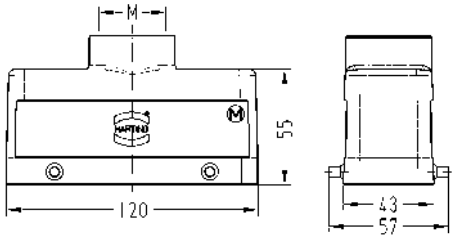
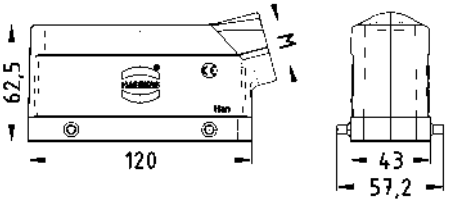
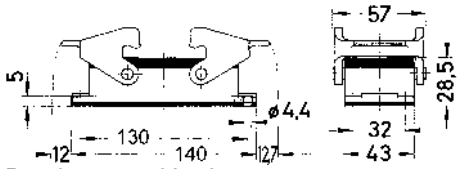
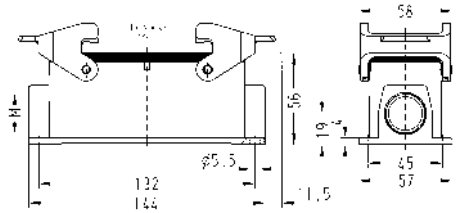
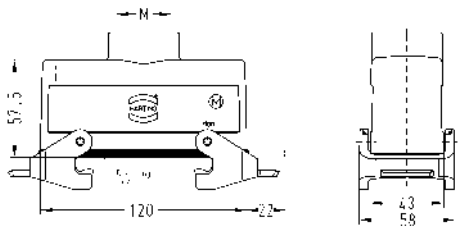
| Identification | Cable entry | Part number Low construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|
| Han Hv E®,<br>Hood,<br>Top entry,<br>IP65  | 1x M20<br>1x M25 | 19 34 003 0420<br>19 34 003 0421 |   |
| Han Hv E®,<br>Hood,<br>Side entry,<br>IP65  | 1x M20 | 19 34 003 0520 |   |
| Han Hv E®,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65  | | 09 34 003 0301 |   Panel cut out 60 x 35 mm |
| Han Hv E®,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65  | 2x M20 | 19 34 003 0270 |   |
| Han Hv E®,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65  | 1x M20<br>1x M25 | 19 34 003 0730<br>19 34 003 0731 |   |

Special hoods/housings for Han Hv E® screw terminal
Double locking lever

| Identification | Cable entry | Part number Low construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|
| Han Hv E®, Hood, Top entry, IP65  | 1x M25 | 19 34 006 0421 |   |
| Han Hv E®, Hood, Side entry, IP65  | 1x M25 | 19 34 006 0521 |   |
| Han Hv E®, Bulkhead mounted housing, Han-Easy Lock®, IP65  | | 09 34 006 0301 |   Panel cut out 82 x 35mm |
| Han Hv E®, Surface mounted housing, Side entry, Han-Easy Lock®, IP65  | 2x M25 | 19 34 006 0271 |   |
| Han Hv E®, Cable to cable housing, Top entry, Han-Easy Lock®, IP65  | 1x M25 1x M32 | 19 34 006 0731 19 34 006 0732 |   |

Special hoods/housings for Han Hv E® screw terminal
Double locking lever



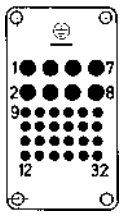
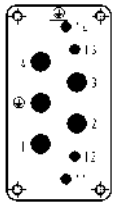
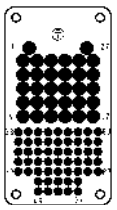
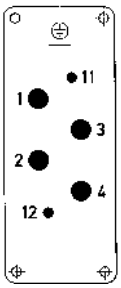
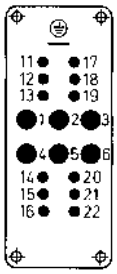
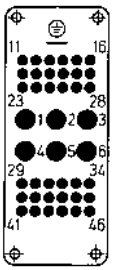
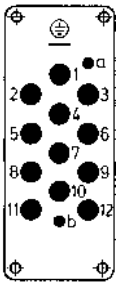
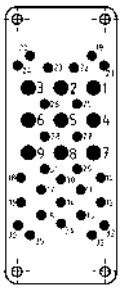
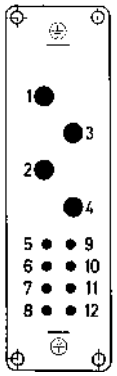
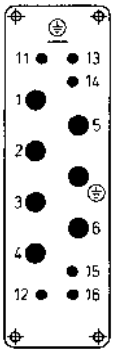
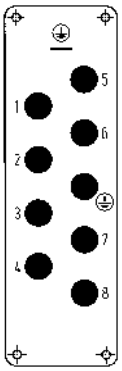
| Identification | Cable entry | Part number Low construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|
| Han Hv E®, Hood, Top entry, IP65  | 1x M32 | 19 34 010 0422 |   |
| Han Hv E®, Hood, Side entry, IP65  | 1x M25 | 19 34 010 0521 |   |
| Han Hv E®, Bulkhead mounted housing, Han-Easy Lock®, IP65  | | 09 34 010 0301 |   Panel cut out 108 x 35 mm |
| Han Hv E®, Surface mounted housing, Side entry, Han-Easy Lock®, IP65  | 2x M25 | 19 34 010 0271 |   |
| Han Hv E®, Cable to cable housing, Top entry, Han-Easy Lock®, IP65  | 1x M32 | 19 34 010 0732 |   |

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| Han® K 4/4 Axial screw / Cage-clamp | **Han 05.8** |
| Han® K 8/24 Crimp | **Han 05.11** |
| Han® K 32/55 Crimp | **Han 05.14** |
| Han® K 4/0 Screw | **Han 05.17** |
| Han® K 4/2 Screw | **Han 05.19** |
| Han® K 6/12 Crimp | **Han 05.21** |
| Han® K 6/12 Axial screw / Screw | **Han 05.24** |
| Han® K 6/36 Crimp | **Han 05.26** |
| Han® K 12/2 Crimp | **Han 05.29** |
| Han® K 9/9/18 Crimp | **Han 05.32** |
| Han® K 4/8 Screw | **Han 05.35** |
| Han® K 6/6 Crimp | **Han 05.37** |
| Han® K 6/6 Axial screw / Screw | **Han 05.40** |
| Han® K 8/0 Axial screw | **Han 05.42** |

# Summary



| Size | Description | | | | |
|---|---|---|---|---|---|
| 10 B |  |  |  | | |
| | Han® K 8/24 | Han® K 4/4 | Han® K 32/55 | | |
| Power | 16 A / 230/400 V | 63 A / 690 V | 10 A / 250 V | | |
| Signal | 10 A / 160 V | 16 A / 230 V | 4 A / 50 V | | |
| 16 B |  |  |  |  |  |
| | Han® K 4/0, 4/2 | Han® K 6/12 | Han® K 6/36 | Han® K 12/2 | Han® K 9/9/18 |
| Power | | | | | 40 A / 830 V |
| Power | 80 A / 830 V | 40 A / 690 V | 40 A / 690 V | 40 A / 690 V | 16 A / 830 V |
| Signal | 16 A / 400 V | 10 A / 230/400 V | 10 A / 160 V | 10 A / 250 V | 10 A / 250 V |
| 24 B |  |  |  | | |
| | Han® K 4/8 | Han® K 6/6 | Han® K 8/0 | | |
| Power | 80 A / 400 V | 100 A / 690 V | 100 A / 690 V | | |
| Signal | 16 A / 400 V | 16 A / 400 V | | | |
| 32 B | suitable for 2 inserts of size 16 B | | | | |
| 48 B | suitable for 2 inserts of size 24 B | | | | |

## Summary



| Type | Technical characteristics | | | | | | | | Suitable Hoods/ Housings |
|---|---|---|---|---|---|---|---|---|---|
| | Power area | | | | Signal area | | | | |
| | Number of contacts | A | V ~ | Termination | Number of contacts | A | V ~ | Termination | Size |
| Han® K 4/0 | 4+PE | 80 | 830 | screw | — | — | — | — | 16 B, 32 B |
| Han® K 4/2 | 4+PE | 80 | 830 | screw | 2 | 16 | 400 | screw | 16 B, 32 B |
| Han® K 4/4 | 4+PE | 63 | 690 | axial screw | 4 | 16 | 250 | cage clamp | 10 B |
| Han® K 4/8 | 4+PE | 80 | 400 | screw | 8 | 16 | 400 | screw | 24 B, 48 B |
| Han® K 6/6 | 6+PE | 100 | 690 | crimp | 6 | 16 | 400 | crimp | 24 B, 48 B |
| Han® K 6/6 | 6+PE | 100 | 690 | axial screw | 6 | 16 | 400 | screw | 24 B, 48 B |
| Han® K 6/12 | 6+PE | 40 | 690 | crimp | 12 | 10 | 230/400 | crimp | 16 B, 32 B |
| Han® K 6/12 | 6+PE | 40 | 690 | axial screw | 12 | 10 | 230/400 | screw | 16 B, 32 B |
| Han® K 6/36 | 6+PE | 40 | 690 | crimp | 36 | 10 | 160 | crimp | 16 B, 32 B |
| Han® K 8/0 | 8+PE | 100 | 690 | axial screw | — | — | — | — | 24 B, 48 B |
| Han® K 8/24 | 8+PE | 16 | 230/400 | crimp | 24 | 10 | 160 | crimp | 10 B |
| Han® K 12/2 | 12+PE | 40 | 690 | crimp | 2 | 10 | 250 | crimp | 16 B, 32 B |
| Han® K 9/9/18 | 9+9+PE | 40/16 | 830 | crimp | 18 | 10 | 250 | crimp | 16 B, 32 B |
| Han® K 32/55 | 32+PE | 10 | 250 | crimp | 55 | 4 | 50 | crimp | 10 B |

## Type identification

Han® K 6/12

| | |
|---|---|
| Han® | Industrial connectors Han® |
| K | Series Han® K / Han-Com® |
| 6 | Number of power contacts |
| 12 | Number of signal contacts |

## Identification of contact position

| | |
|---|---|
| Han® K connectors | from 1 to ... (power area)<br>from 11 to... (signal area) |
| Exceptions | |
| Han® K 4/8 and Han® K 8/24 | from 1 to ... (consecutively) |
| Han® K 12/2 | from 1 to 12 (power area)<br>with „a“ and „b“ (signal area) |

## Comment for users

For the combination of several circuits in one cable and/or e.g. one connector the following standards are valid:
DIN VDE 0100-410/10.2018 § 414.4 and DIN EN 60204-1/06.2007 § 13.1.3

## Accessories

| | |
|---|---|
| Crimping tools | chapter 90 |
| Cable clamps | chapter 80 |
| Coding of hoods/housings | chapter 80 |
| Label acc. to CSA-approval | chapter 80 |
| Han-Snap® | chapter 11 |
| PCB adapter | chapter 80 |

# Assembly instructions Han® K 4/4

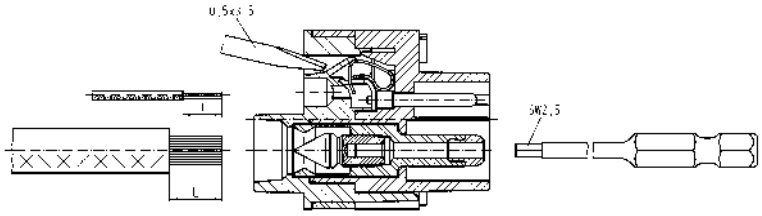
Han-Com

| Description | Depiction | Dimensions in mm |
|---|---|---|

### Step 1:

Signal contacts:
Push screwdriver (0.5 x 3.5) into rectangular chamber. Strip insulation from the wire with a length and insert the wire into the round contact chamber.

Power contacts:
Strip insulation from the wire with a length and insert the wire into the contact chamber until insulation is flush with contact.
Do not twist the strands of the wire.



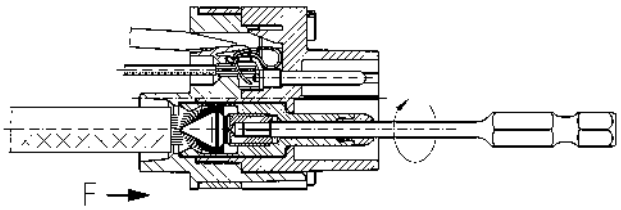

l: Stripping length for signal contacts

L: Stripping length for power contacts

### Step 2:

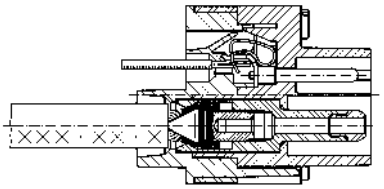
Signal contacts:
Push screwdriver (0.5 x 3.5) out of rectangular chamber.

Power contacts:
Hold the wire in position and tighten by a hexagonal driver (SW 2.5) from the mating side with a tightening torque.




### Step 3:

Complete connection



The male insert is shown. The same method is applicable for female inserts.

# Assembly instructions Han® K 6/12

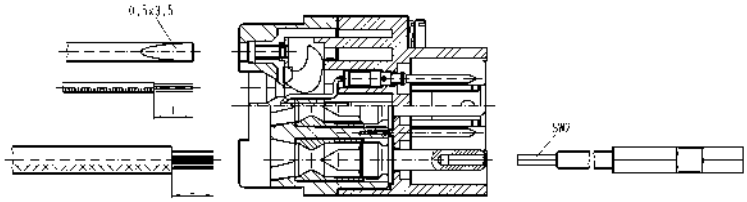


| Description | Depiction | Dimensions in mm |
|---|---|---|

### Step 1:

Signal contacts:
Strip insulation from the wire with a length and insert the wire into the rectangular contact chamber.

Power contacts:
Strip insulation from the wire with a length and insert the wire into the contact chamber until insulation is flush with contact.
Do not twist the strands of the wire.



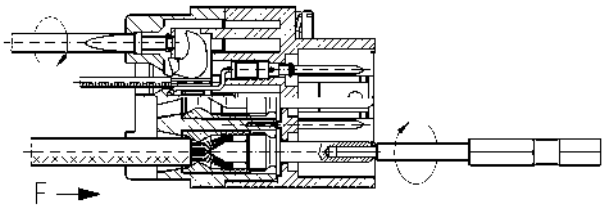

I: Stripping length for signal contacts

L: Stripping length for power contacts

### Step 2:

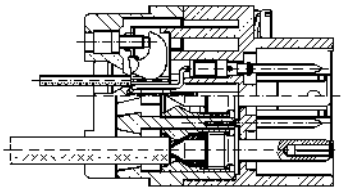
Signal contacts:
Tighten screw termination with screwdriver (0.5 x 3.5) with a tightening torque.

Power contacts:
Hold the wire in position and tighten by a hexagonal driver (SW 2) from the mating side with a tightening torque.




### Step 3:

Complete connection



The male insert is shown. The same method is applicable for female inserts.

# Assembly instructions Han® K 6/6

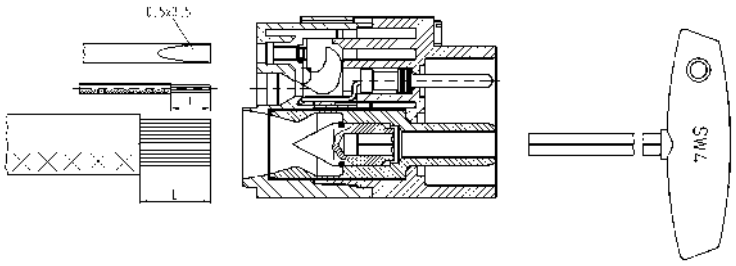
Han-Com

| Description | Depiction | Dimensions in mm |
|---|---|---|

## Step 1:

Signal contacts:
Strip insulation from the wire with a length and insert the wire into the rectangular contact chamber.

Power contacts:
Strip insulation from the wire with a length and insert the wire into the contact chamber until insulation is flush with contact.
Do not twist the strands of the wire.



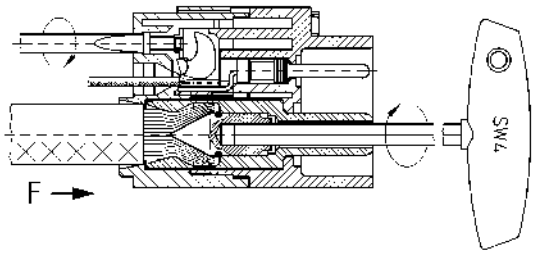

I: Stripping length for signal contacts

L: Stripping length for power contacts

## Step 2:

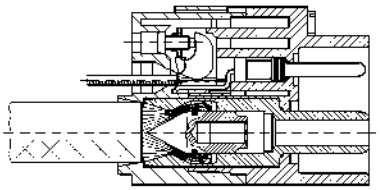
Signal contacts:
Tighten screw termination with screwdriver (0.5 x 3.5) with a tightening torque.

Power contacts:
Hold the wire in position and tighten by a hexagonal driver (SW 4) from the mating side with a tightening torque.




## Step 3:

Complete connection



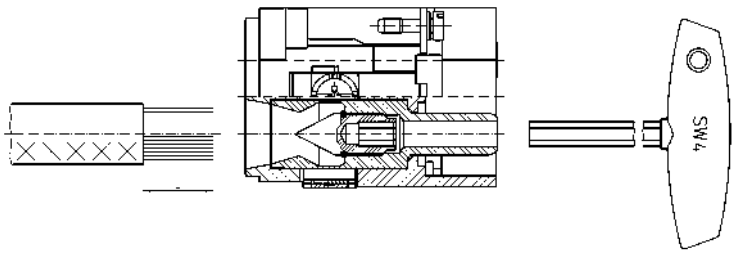
The male insert is shown. The same method is applicable for female inserts.

# Assembly instructions Han® K 8/0



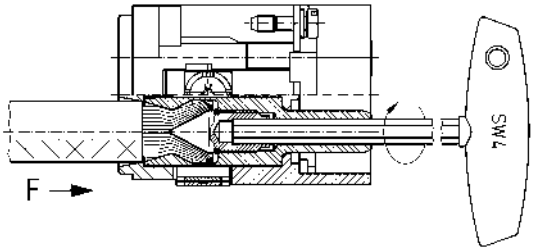
| Description | Depiction | Dimensions in mm |
|---|---|---|

**Step 1:**
Strip insulation from the wire with a length and insert the wire into the contact chamber until insulation is flush with contact.
Do not twist the strands of the wire.

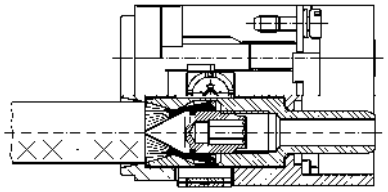



L: Stripping length for power contacts

**Step 2:**
Hold the wire in position and tighten by a hexagonal driver (SW 4) from the mating side with a tightening torque.




**Step 3:**
Complete connection



The male insert is shown. The same method is applicable for female inserts.

# Han® K 4/4 Axial screw / Cage-clamp



## Features

- Combination of signal and power in one connector
- Axial screw termination for power area
- Cage clamp termination for signal area
- Same range of cross-section for PE contacts and power contacts

## Technical characteristics

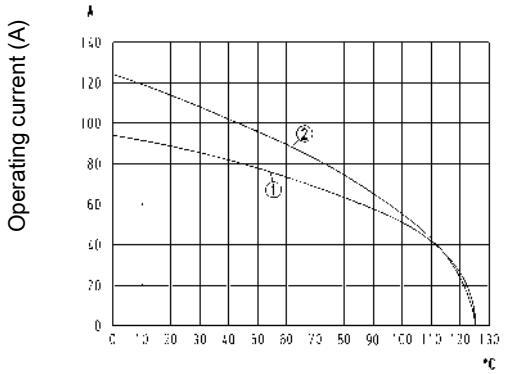
| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + 4 additional signal contacts |
| Rated current | 63 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 16 A |
| Rated voltage (signal) | 250 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 63 A |
| Rated current acc. to UL (signal) | 16 A |
| Rated current acc. to CSA | 63 A |
| Rated current acc. to CSA (signal) | 16 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 230 V |
| Rated voltage acc. to CSA | 600 V |
| Rated voltage acc. to CSA (signal) | 230 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.5 mΩ |
| Contact resistance, signal area | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤8.9 mm, ≤11 mm @ 22 mm² |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 16 mm²
② Conductor cross-section 22 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

**Hex key (A/F 2.5)** see chapter Han 90

**Remarks on the axial screw technique**

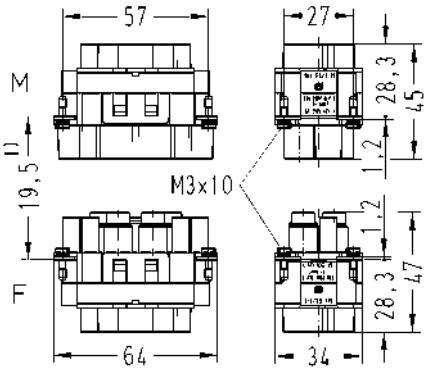
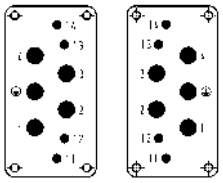
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® K 4/4 Axial screw / Cage-clamp Size 10 B

Number of contacts

4+ ⏚

63 A 690 V 8 kV 3
16 A 250 V 4 kV 3
+ 4 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®, Han® K 4/4, Axial screw termination / cage-clamp termination, Contact surface: Silver plated  Finger safe | 6 ... 16, 0.14 ... 2.5 Signal | 09 38 008 2601 | 09 38 008 2701 |   1) distance for contact max. 21 mm |
| Han-Com®, Han® K 4/4, Axial screw termination / cage-clamp termination, Contact surface: Silver plated  Not finger safe | 6 ... 16, 0.14 ... 2.5 Signal | 09 38 008 2611 | |   Contact arrangement (view from termination side) |

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 6 mm² | 2 Nm | **11** ... 12 mm |
| 10 mm² | 3 Nm | **11** ... 12 mm |
| 16 mm² | 4 Nm | **11** ... 12 mm |
| 22 mm² | 4 Nm | **11** ... 12 mm |

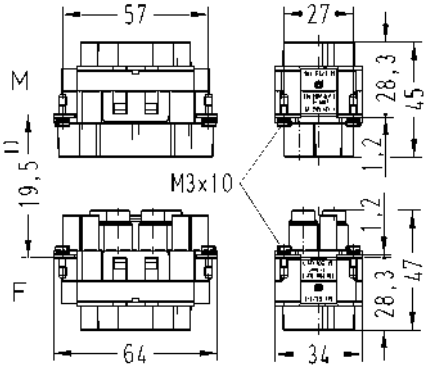
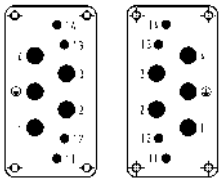
Signal contacts :
Stripping length 7 ... 9 mm

# Han® K 4/4 Axial screw / Cage-clamp Size 10 B

Number of contacts

4+ ⏚

63 A 690 V 8 kV 3
16 A 250 V 4 kV 3
+ 4 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®, Han® K 4/4, Axial screw termination / cage-clamp termination, Contact surface: Silver plated  Finger safe | 10 ... 22, 0.14 ... 2.5 Signal | 09 38 008 2602 | 09 38 008 2702 |   1) distance for contact max. 21 mm |
| Han-Com®, Han® K 4/4, Axial screw termination / cage-clamp termination, Contact surface: Silver plated  Not finger safe | 10 ... 22, 0.14 ... 2.5 Signal | 09 38 008 2612 | |   Contact arrangement (view from termination side) |

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 6 mm² | 2 Nm | 11 ... 12 mm |
| 10 mm² | 3 Nm | 11 ... 12 mm |
| 16 mm² | 4 Nm | 11 ... 12 mm |
| 22 mm² | 4 Nm | 11 ... 12 mm |

Signal contacts :
Stripping length 7 ... 9 mm

# Han® K 8/24 Crimp



## Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han E® and Han D® contacts

## Technical characteristics

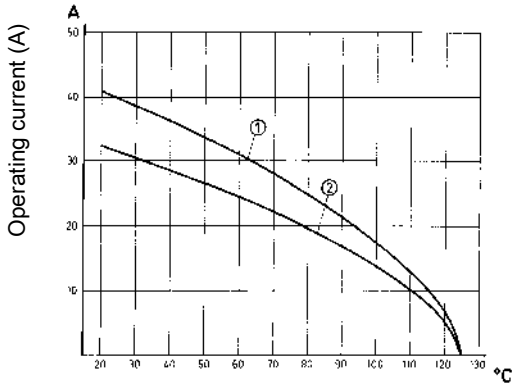
| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + 24 additional signal contacts |
| Rated current | 16 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 160 V |
| Rated impulse voltage (signal) | 2.5 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 16 A |
| Rated current acc. to UL (signal) | 10 A |
| Rated current acc. to CSA | 16 A |
| Rated current acc. to CSA (signal) | 10 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 600 V |
| Rated voltage acc. to CSA | 300 V |
| Rated voltage acc. to CSA (signal) | 300 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ, ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | HB |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 4 mm²
② Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han E® crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Removal of power contacts (Han E®)**



① Push cross-slotted screw driver (size 0) in the relevant hole of the contact until it reaches the bottom
② Withdraw the crimped contact from the insert

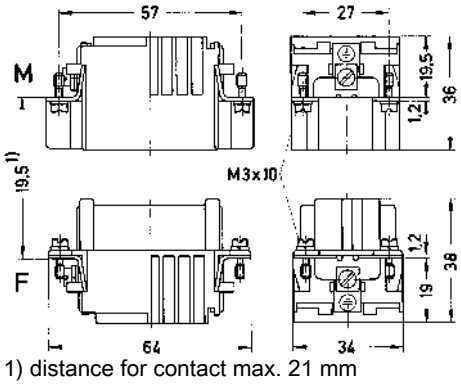
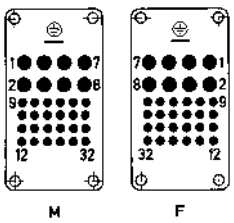
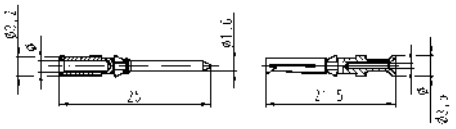
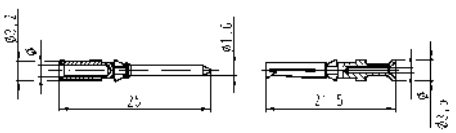
# Han® K 8/24 Crimp

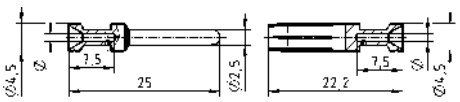
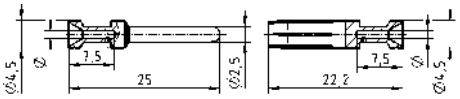
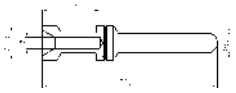
Size 10 B

Number of contacts

8+ ⏚

16 A 230/400 V 4 kV 3
10 A 160 V 2.5 kV 3
+ 24 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 8/24,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.5 ... 4,<br>0.14 ... 2.5<br>Signal | 09 38 032 3001 | 09 38 032 3101 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6107 | 09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6207 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Relay contact,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 1<br>1.5<br>2.5 | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111 | | <br>Conductor cross-section / ø / Stripping length<br>0.75-1 mm² AWG 18 — 1.45 mm — 7.5 mm<br>1.5 mm² AWG 16 — 1.75 mm — 7.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 7.5 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |

# Han® K 32/55 Crimp



## Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han D® and Han® D-sub contacts

## Technical characteristics

| | |
|---|---|
| Number of contacts | 32 |
| Additional contacts | + 55 additional signal contacts |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 2 |
| Rated current (signal) | 4 A |
| Rated voltage (signal) | 50 V |
| Rated impulse voltage (signal) | 0.8 kV |
| Pollution degree (signal) | 2 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 30 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ, ≤10 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance D-Sub crimp contact: ≤ 10 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

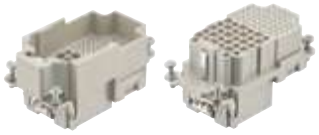
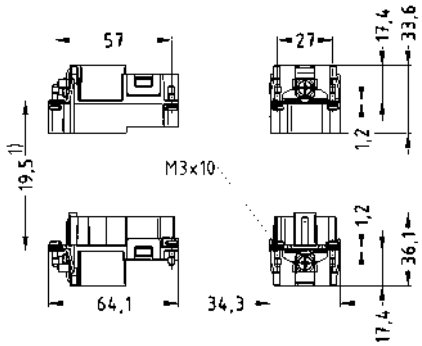
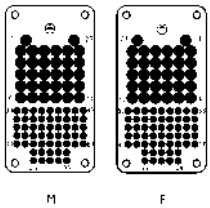
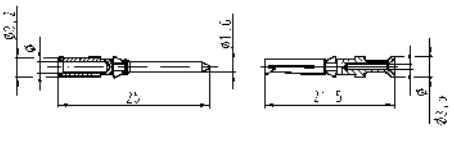
# Han® K 32/55 Crimp

Size 10 B

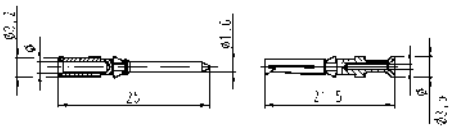
Number of contacts

32+ ⏚

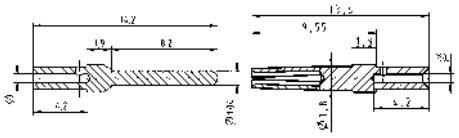
10 A 250 V 4 kV 2
4 A 50 V 0.8 kV 2
+ 55 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 32/55,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5,<br>0.09 ... 0.52<br>Signal | 09 38 087 3001 | 09 38 087 3101 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

| | | | | |
|---|---|---|---|---|
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 |  |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

# Han® K 4/0 Screw

## Features

- Screw termination
- No signal contacts

## Technical characteristics

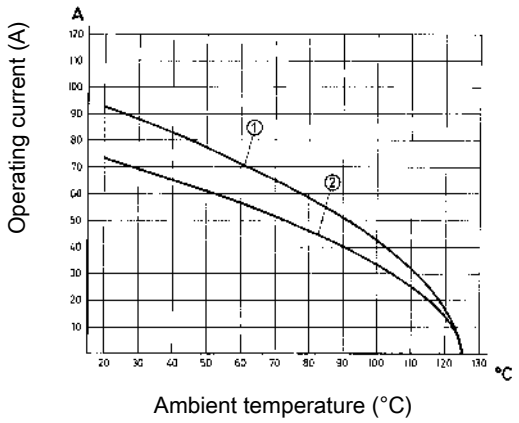
| | |
|---|---|
| Number of contacts | 4 |
| Rated current | 80 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current acc. to UL | 80 A |
| Rated current acc. to CSA | 80 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 300 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 16 mm²
② Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

In accordance with the appropriate regulations a wire-end sleeve has to be used at clamps without wire protection (see “screw terminal”, chapter Han 00).

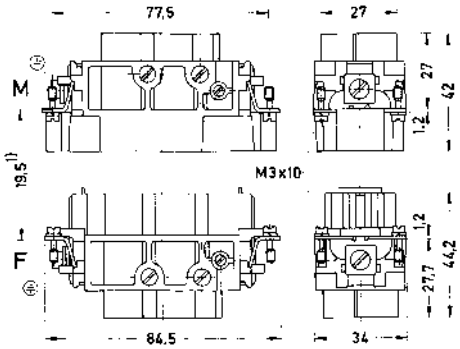
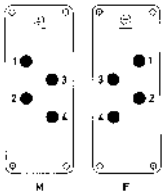
# Han® K 4/0 Screw

Size 16 B

Number of contacts

4+ ⏚

80 A 830 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 4/0,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 1.5 ... 16 | 09 38 006 2611 | 09 38 006 2711 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side) |

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 1.5 mm² | 1.2 Nm | 14 mm |
| 2.5 mm² | 2 Nm | 14 mm |
| 4 mm² | 3 Nm | 14 mm |
| 6 mm² | 3 Nm | 14 mm |
| 10 mm² | 3 Nm | 14 mm |
| 16 mm² | 3 Nm | 14 mm |

# Han® K 4/2 Screw



## Features

- Combination of signal and power in one connector
- Screw termination for power and signal area

## Technical characteristics

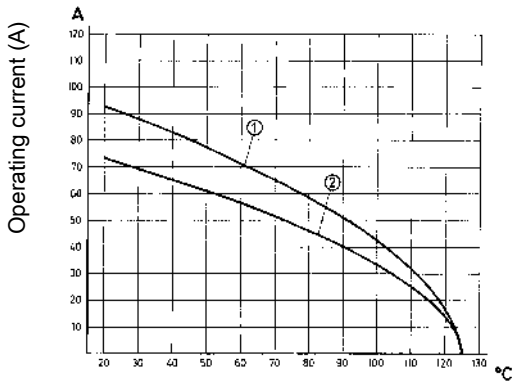
| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + 2 additional signal contacts |
| Rated current | 80 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 16 A |
| Rated voltage (signal) | 400 V |
| Rated impulse voltage (signal) | 6 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 80 A |
| Rated current acc. to UL (signal) | 16 A |
| Rated current acc. to CSA | 80 A |
| Rated current acc. to CSA (signal) | 16 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 600 V |
| Rated voltage acc. to CSA | 300 V |
| Rated voltage acc. to CSA (signal) | 300 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Contact resistance, signal area | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 16 mm²
② Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

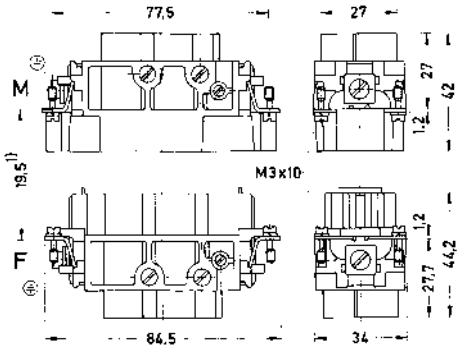
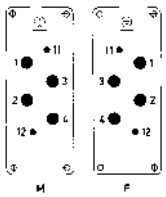
In accordance with the appropriate regulations a wire-end sleeve has to be used at clamps without wire protection (see “screw terminal”, chapter Han 00).

# Han® K 4/2 Screw — Size 16 B

Number of contacts

4+ ⏚

80 A 830 V 8 kV 3
16 A 400 V 6 kV 3
+ 2 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 4/2,<br>Screw termination,<br>Contact surface:<br>Silver plated  | 1.5 ... 16,<br>0.5 ... 2.5<br>Signal | 09 38 006 2601 | 09 38 006 2701 |  1) distance for contact max. 21 mm  Contact arrangement (view from termination side) |

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 1.5 mm² | 1.2 Nm | 14 mm |
| 2.5 mm² | 2 Nm | 14 mm |
| 4 mm² | 3 Nm | 14 mm |
| 6 mm² | 3 Nm | 14 mm |
| 10 mm² | 3 Nm | 14 mm |
| 16 mm² | 3 Nm | 14 mm |

Signal contacts :
Stripping length 7.5 mm
Tightening torque 0.5 Nm

# Han® K 6/12 Crimp



## Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han® C and Han D® contacts
- 16 coding options

## Technical characteristics

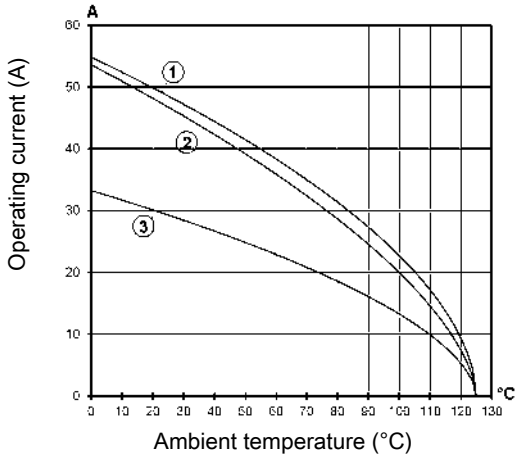
| | |
|---|---|
| Number of contacts | 6 |
| Additional contacts | + 12 additional signal contacts |
| Rated current | 40 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage conductor-earth (signal) | 230 V |
| Rated voltage conductor-conductor (signal) | 400 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤5 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 6 mm²
② Conductor cross-section 4 mm²
③ Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

## Details

Contact resistance Han® C crimp contact: ≤ 1 mOhm

Contact resistance Han D® crimp contact: ≤ 3 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

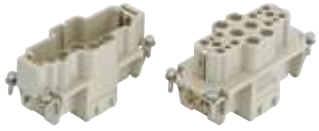
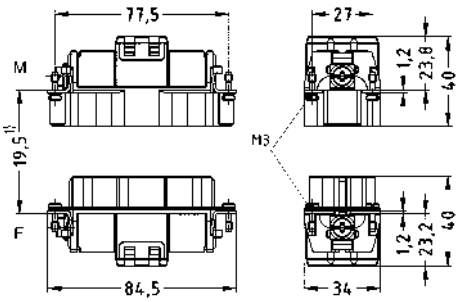
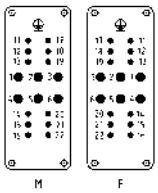
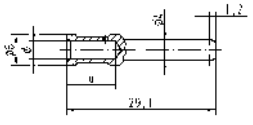
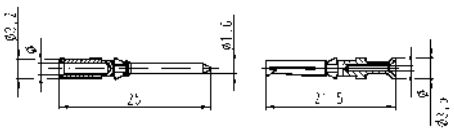
# Han® K 6/12 Crimp

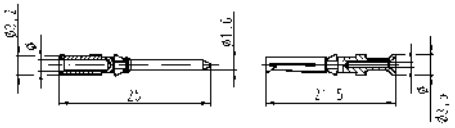
Size 16 B

Number of contacts

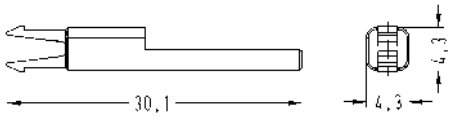
6+ ⏚

40 A 690 V 8 kV 3
10 A 230/400 V 4 kV 3
+ 12 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 6/12,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Please order coding pins separately. | 1.5 ... 6,<br>0.14 ... 2.5<br>Signal | 09 38 018 3002 | 09 38 018 3102 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side) |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 — 1.75 mm — 9.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 9.5 mm<br>4 mm² AWG 12 — 2.85 mm — 9.5 mm<br>6 mm² AWG 10 — 3.5 mm — 9.5 mm<br>10 mm² AWG 8 — 4.3 mm — 12 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0.75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

| | | | | |
|---|---|---|---|---|
| Coding element  | | 09 12 000 9922 | |  |

# Han® K 6/12 Axial screw / Screw

Han-Com

## Features

- Combination of signal and power in one connector
- Axial screw termination for power area
- Screw termination for signal area

## Technical characteristics

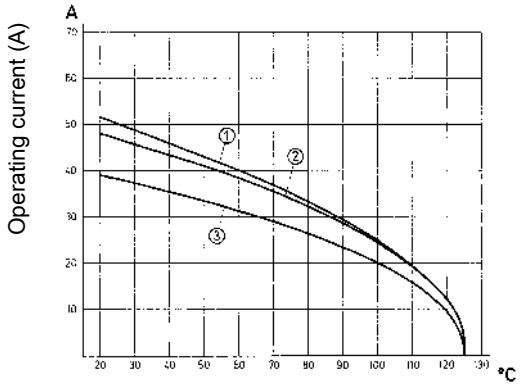
| | |
|---|---|
| Number of contacts | 6 |
| Additional contacts | + 12 additional signal contacts |
| Rated current | 40 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage conductor-earth (signal) | 230 V |
| Rated voltage conductor-conductor (signal) | 400 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 40 A |
| Rated current acc. to UL (signal) | 10 A |
| Rated current acc. to CSA | 40 A |
| Rated current acc. to CSA (signal) | 10 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 600 V |
| Rated voltage acc. to CSA | 300 V |
| Rated voltage acc. to CSA (signal) | 300 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.5 mΩ |
| Contact resistance, signal area | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤6.1 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 10 mm²
② Conductor cross-section 6 mm²
③ Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

**Hex key (A/F 2)** see chapter Han 90

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

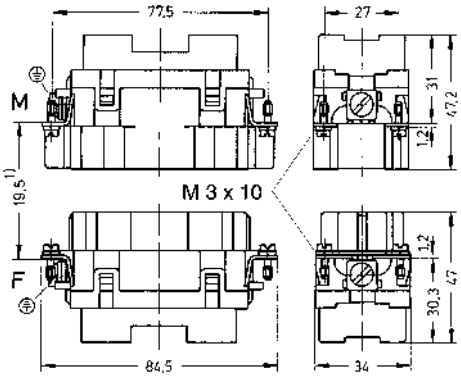
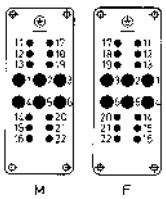
# Han® K 6/12 Axial screw / Screw — Size 16 B



Number of contacts

6+ ⏚

40 A 690 V 8 kV 3
10 A 230/400 V 4 kV 3
+ 12 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®, Han® K 6/12, Axial screw termination / screw termination, Contact surface: Silver plated  | 2.5 ... 8, 0.2 ... 2.5 Signal | 09 38 018 2601 | 09 38 018 2701 |   1) distance for contact max. 21 mm |
| Han-Com®, Han® K 6/12, Axial screw termination / screw termination, Contact surface: Silver plated  | 6 ... 10, 0.2 ... 2.5 Signal | 09 38 018 2602 | 09 38 018 2702 |   Contact arrangement (view from termination side) |

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 2.5 mm² | 1.5 Nm | 5 ... 6 mm |
| 4 mm² | 1.5 Nm | 5 ... 6 mm |
| 6 mm² | 2 Nm | 5 ... 6 mm |
| 10 mm² | 2 Nm | 5 ... 6 mm |

Signal contacts :
Stripping length 7.5 mm
Tightening torque 0.5 Nm

# Han® K 6/36 Crimp



## Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han® C and Han D® contacts

## Technical characteristics

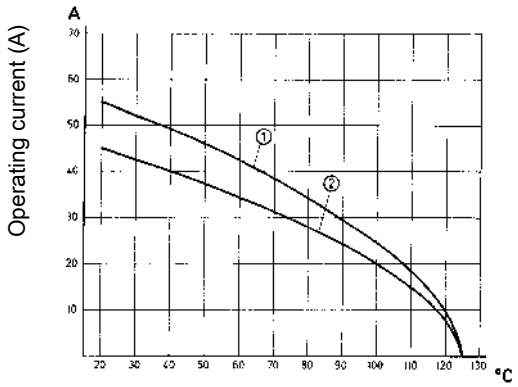
| | |
|---|---|
| Number of contacts | 6 |
| Additional contacts | + 36 additional signal contacts |
| Rated current | 40 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 160 V |
| Rated impulse voltage (signal) | 2.5 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 40 A |
| Rated current acc. to UL (signal) | 10 A |
| Rated current acc. to CSA | 40 A |
| Rated current acc. to CSA (signal) | 10 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 600 V |
| Rated voltage acc. to CSA | 300 V |
| Rated voltage acc. to CSA (signal) | 300 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤5 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 6 mm²
② Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

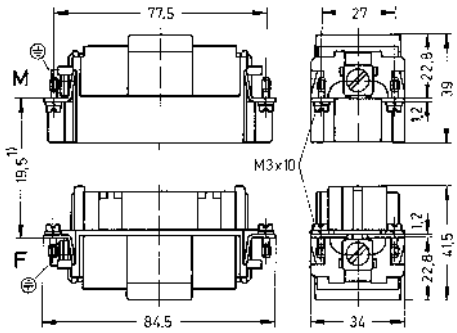
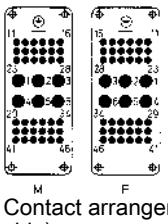
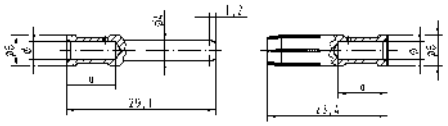
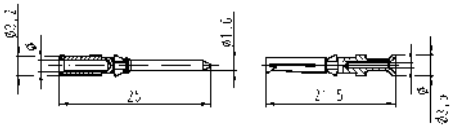
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

6+ ⏚

40 A 690 V 8 kV 3
10 A 160 V 2.5 kV 3
+ 36 additional signal contacts

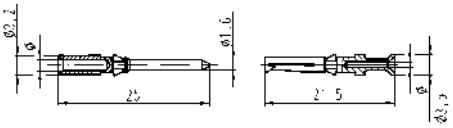
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®, Han® K 6/36, Crimp termination  Please order crimp contacts separately. | 1.5 ... 6, 0.14 ... 2.5 Signal | 09 38 042 3001 | 09 38 042 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side) |
| Han® C, Crimp contact, Contact surface: Silver plated  | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 |   |
| Han D®, Crimp contact, Contact surface: Silver plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 |   |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 1.5 mm² | AWG 16 | 1.75 mm | 9.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 9.5 mm |
| 4 mm² | AWG 12 | 2.85 mm | 9.5 mm |
| 6 mm² | AWG 10 | 3.5 mm | 9.5 mm |
| 10 mm² | AWG 8 | 4.3 mm | 12 mm |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han® K 6/36 Crimp

Size 16 B

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |

# Han® K 12/2 Crimp



## Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han® C and Han D® contacts

## Technical characteristics

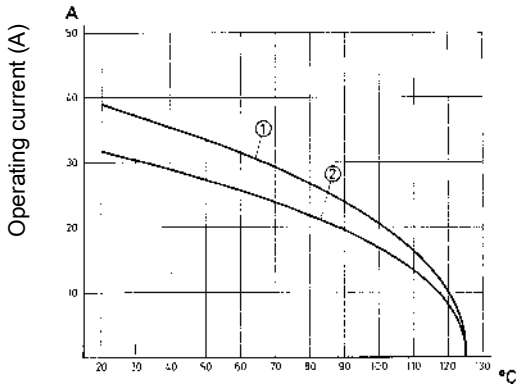
| | |
|---|---|
| Number of contacts | 12 |
| Additional contacts | + 2 additional signal contacts |
| Rated current | 40 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 250 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 40 A |
| Rated current acc. to UL (signal) | 10 A |
| Rated current acc. to CSA | 40 A |
| Rated current acc. to CSA (signal) | 10 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 600 V |
| Rated voltage acc. to CSA | 300 V |
| Rated voltage acc. to CSA (signal) | 300 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤5 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 6 mm²
② Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

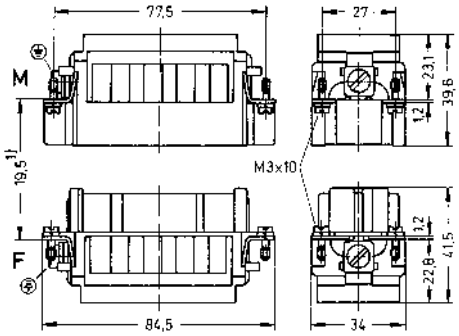
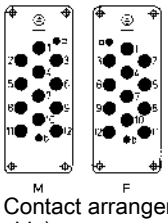
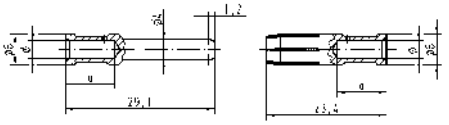
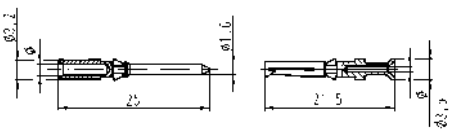
# Han® K 12/2 Crimp

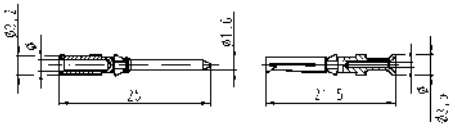
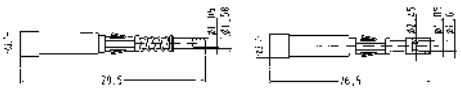
Size 16 B

Number of contacts

12+ ⏚

40 A 690 V 8 kV 3
10 A 250 V 4 kV 3
+ 2 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 12/2,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 6,<br>0.14 ... 2.5<br>Signal | 09 32 012 3001 | 09 32 012 3101 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side) |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 — 1.75 mm — 9.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 9.5 mm<br>4 mm² AWG 12 — 2.85 mm — 9.5 mm<br>6 mm² AWG 10 — 3.5 mm — 9.5 mm<br>10 mm² AWG 8 — 4.3 mm — 12 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0.75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |

# Han® K 9/9/18 Crimp



## Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Han® C power contacts
- Han E® power contacts
- Han D® signal contacts

## Technical characteristics

| | |
|---|---|
| Number of contacts | 18 |
| Additional contacts | + 18 additional signal contacts |
| Rated current | 40 A, 16 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 250 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

## Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han E® crimp contact: ≤ 1 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

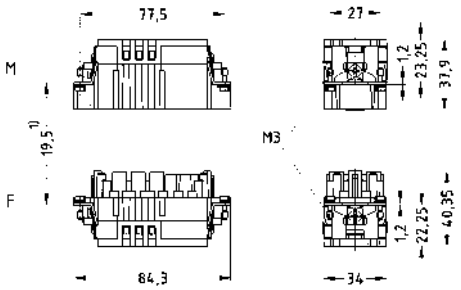
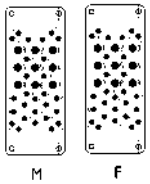
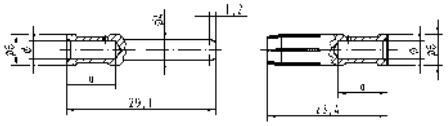
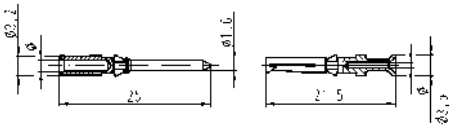
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

18+ ⏚

40 A 830 V 8 kV 3 16 A 830 V 8 kV 3
10 A 250 V 4 kV 3
+ 18 additional signal contacts

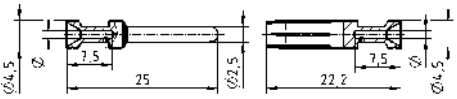
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®, Han® K 9/9/18, Crimp termination  Please order crimp contacts separately. To ensure a preleading PE-contact under all conditions, it is necessary to use guide pins/ bushes (09 33 000 9908 / 09 33 000 9909). | 1.5 ... 6, 0.14 ... 4, 0.14 ... 2.5 Signal | 09 38 036 3001 | 09 38 036 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side) |
| Han® C, Crimp contact, Contact surface: Silver plated  | 1.5 2.5 4 6 | 09 32 000 6104 09 32 000 6105 09 32 000 6107 09 32 000 6108 | 09 32 000 6204 09 32 000 6205 09 32 000 6207 09 32 000 6208 |   |
| Han D®, Crimp contact, Contact surface: Silver plated  | 0.14 ... 0.37 0.5 0.75 1 1.5 2.5 | 09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106 | 09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206 |   |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 1.5 mm² | AWG 16 | 1.75 mm | 9.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 9.5 mm |
| 4 mm² | AWG 12 | 2.85 mm | 9.5 mm |
| 6 mm² | AWG 10 | 3.5 mm | 9.5 mm |
| 10 mm² | AWG 8 | 4.3 mm | 12 mm |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han® K 9/9/18 Crimp

Size 16 B

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

# Han® K 4/8 Screw

## Features

- Combination of signal and power in one connector
- Screw termination for power and signal area

## Technical characteristics

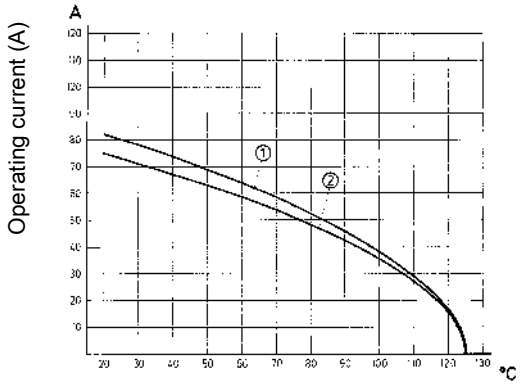
| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + 8 additional signal contacts |
| Rated current | 80 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated current (signal) | 16 A |
| Rated voltage (signal) | 400 V |
| Rated impulse voltage (signal) | 6 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 80 A |
| Rated current acc. to UL (signal) | 16 A |
| Rated current acc. to CSA | 80 A |
| Rated current acc. to CSA (signal) | 16 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Rated voltage acc. to CSA (signal) | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Contact resistance, signal area | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | HB |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 16 mm²
② Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

In accordance with the appropriate regulations a wire-end sleeve has to be used at clamps without wire protection (see “screw terminal”, chapter Han 00).

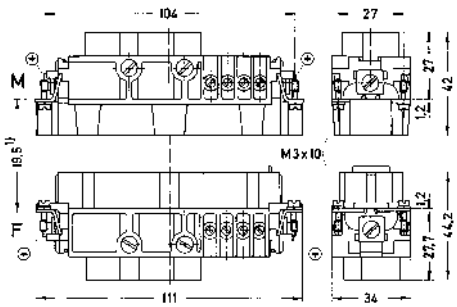
# Han® K 4/8 Screw

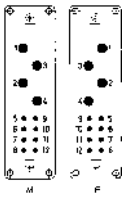
Size 24 B

Number of contacts

4+ ⏚

80 A 400 V 6 kV 3
16 A 400 V 6 kV 3
+ 8 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 4/8,<br>Screw termination,<br>Contact surface:<br>Silver plated  | 1.5 ... 16,<br>0.5 ... 2.5<br>Signal | 09 38 012 2601 | 09 38 012 2701 |   1) distance for contact max. 21 mm |



Contact arrangement (view from termination side)

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 1.5 mm² | 1.2 Nm | 14 mm |
| 2.5 mm² | 2 Nm | 14 mm |
| 4 mm² | 3 Nm | 14 mm |
| 6 mm² | 3 Nm | 14 mm |
| 10 mm² | 3 Nm | 14 mm |
| 16 mm² | 3 Nm | 14 mm |

Signal contacts :
Stripping length 7.5 mm
Tightening torque 0.5 Nm

# Han® K 6/6 Crimp

## Features

- Combination of signal and power in one connector
- Crimp termination for power and signal area
- Use of standard Han® TC 100 and Han E® contacts
- 16 coding options

## Technical characteristics

| | |
|---|---|
| Number of contacts | 6 |
| Additional contacts | + 6 additional signal contacts |
| Rated current | 100 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 16 A |
| Rated voltage (signal) | 400 V |
| Rated impulse voltage (signal) | 6 kV |
| Pollution degree (signal) | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤12.8 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

## Details

Contact resistance Han E® crimp contact: ≤ 1 mOhm

Contact resistance TC 100: ≤ 0.3 mOhm

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Crimping tools** see chapter Han 90

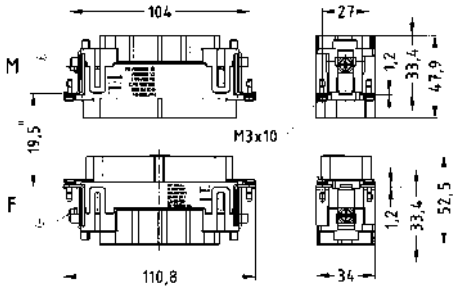
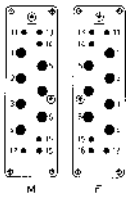
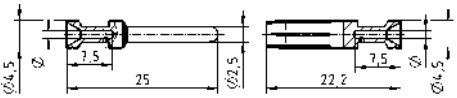
**Remarks on the crimp technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han-Com

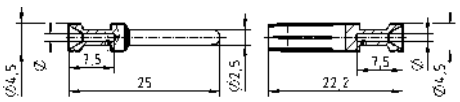
Number of contacts

6+ ⏚

100 A 690 V 8 kV 3
16 A 400 V 6 kV 3
+ 6 additional signal contacts

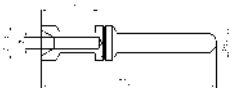
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 6/6,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Please order coding pins separately. | 10 ... 25,<br>0.14 ... 2.5<br>Signal | 09 38 012 3002 | 09 38 012 3102 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side) |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6107 | 09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6207 | <br>Stripping length 7.5 mm |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

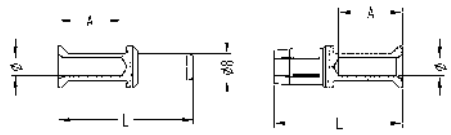
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated | 0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

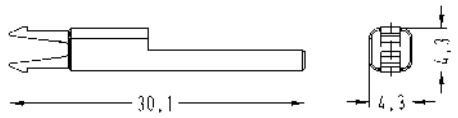
| | | | |
|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Relay contact,<br>Contact surface:<br>Silver plated | 0.75 ... 1<br>1.5<br>2.5 | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111 | |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.75-1 mm² | AWG 18 | 1.45 mm | 7.5 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 7.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 7.5 mm |

| | | | |
|---|---|---|---|
| TC 100,<br>Crimp contact,<br>Contact surface:<br>Silver plated | 10<br>16<br>25<br>35 | 09 11 000 6114<br>09 11 000 6116<br>09 11 000 6125<br>09 11 000 6529 | 09 11 000 6214<br>09 11 000 6216<br>09 11 000 6225<br>09 11 000 6629 |  |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 10 mm² | 4.3 | 19 mm |
| 16 mm² | 5.5 | 19 mm |
| 25 mm² | 7 | 19 mm |
| 35 mm² | 8.2 | 16 mm |
| for stranded wire according to IEC 60 228 Class 5 | | |

| | | | |
|---|---|---|---|
| Coding element | | 09 12 000 9922 | |



# Han® K 6/6 Axial screw / Screw



## Features

- Combination of signal and power in one connector
- Axial screw termination for power area
- Screw termination for signal area

## Technical characteristics

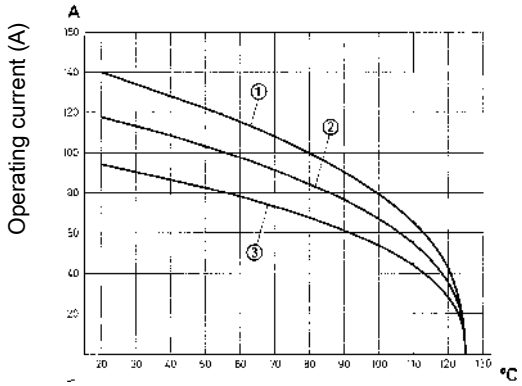
| | |
|---|---|
| Number of contacts | 6 |
| Additional contacts | + 6 additional signal contacts |
| Rated current | 100 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 16 A |
| Rated voltage (signal) | 400 V |
| Rated impulse voltage (signal) | 6 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 100 A |
| Rated current acc. to UL (signal) | 16 A |
| Rated current acc. to CSA | 100 A |
| Rated current acc. to CSA (signal) | 15 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 300 V |
| Rated voltage acc. to CSA | 600 V |
| Rated voltage acc. to CSA (signal) | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.5 mΩ |
| Contact resistance, signal area | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤11.4 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 35 mm²
② Conductor cross-section 25 mm²
③ Conductor cross-section 16 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

**Hex key (A/F 4)** see chapter Han 90

**Adapter 3/8“** 09 99 000 0370 see chapter Han 90

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

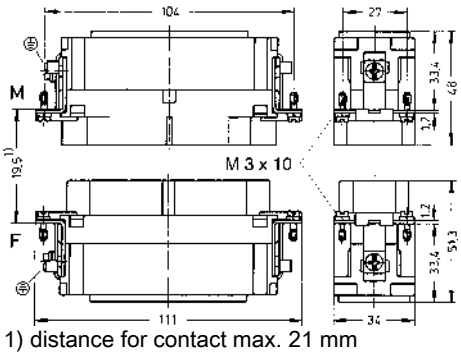
# Han® K 6/6 Axial screw / Screw

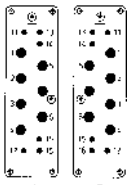
Size 24 B

Number of contacts

6+ ⏚

100 A 690 V 8 kV 3
16 A 400 V 6 kV 3
+ 6 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 6/6,<br>Axial screw termination / screw termination,<br>Contact surface:<br>Silver plated<br> | 16 ... 35,<br>0.2 ... 2.5<br>Signal | 09 38 012 2651 | 09 38 012 2751 | <br>1) distance for contact max. 21 mm |



Contact arrangement (view from termination side)

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 16 mm² | 6 Nm | 13 ... 14 mm |
| 25 mm² | 7 Nm | 13 ... 14 mm |
| 35 mm² | 8 Nm | 13 ... 14 mm |

Signal contacts :
Stripping length 7.5 mm
Tightening torque 0.5 Nm

# Han® K 8/0 Axial screw



## Features

- Axial screw termination
- No signal contacts

## Technical characteristics

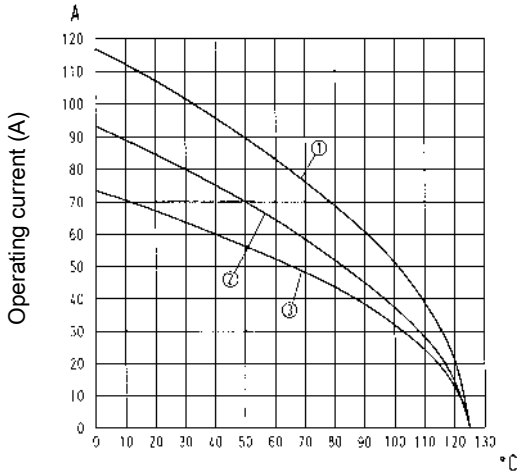
| | |
|---|---|
| Number of contacts | 8 |
| Rated current | 100 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current acc. to UL | 82 A |
| Rated current acc. to CSA | 100 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.5 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤11.4 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 25 mm²
② Conductor cross-section 16 mm²
③ Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Hoods/Housings** see chapter Han 31

**Hex key (A/F 4)** see chapter Han 90

**Adapter 3/8“** 09 99 000 0370 see chapter Han 90

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

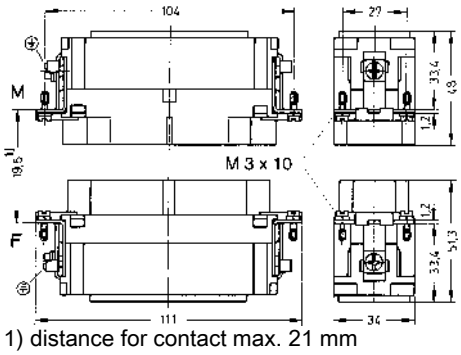
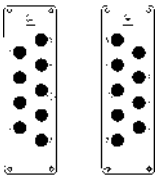
# Han® K 8/0 Axial screw

Size 24 B

Number of contacts

8+ ⏚

100 A 690 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 8/0,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 10 ... 25 | 09 38 008 2653 | 09 38 008 2753 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side) |

| Power contacts | | |
|---|---|---|
| Conductor cross-section | Tightening torque | Stripping length |
| 10 mm² | 6 Nm | 13 . . 14 mm |
| 16 mm² | 6 Nm | 13 . . 14 mm |
| 25 mm² | 7 Nm | 13 ... 14 mm |

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| Han-Modular® hinged frames | **Han 06.9** |
| Han® PE module | **Han 06.15** |
| Han® 300 A module | **Han 06.17** |
| Han® 200 A module | **Han 06.19** |
| Han® 200 A PE module | **Han 06.23** |
| Han® 100 A module | **Han 06.25** |
| Han® 100 A Single module | **Han 06.27** |
| Han® 70 A module | **Han 06.29** |
| Han® 70 A Hybrid module | **Han 06.32** |
| Han® 40 A module | **Han 06.35** |
| Han® C module | **Han 06.38** |
| Han® CC Protected module | **Han 06.41** |
| Han® CD module | **Han 06.43** |
| Han® Guiding Dummy module | **Han 06.46** |
| Han® Guiding Relay module | **Han 06.47** |
| Han® Guiding PE module | **Han 06.49** |
| Han E® module | **Han 06.51** |
| Han E® Screw module | **Han 06.54** |
| Han E® Protected module | **Han 06.56** |
| Han® EE module | **Han 06.58** |
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| Han® ES module | **Han 06.63** |

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| Han® HV module | **Han 06.69** |
| Han® HV Single module | **Han 06.72** |
| Han DD® module | **Han 06.74** |
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| Han DD® Quad module | **Han 06.79** |
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| Han® High Density module | **Han 06.83** |
| Han® Full High Density module | **Han 06.85** |
| Han® Shielded module basic | **Han 06.87** |
| Han® D-Sub module | **Han 06.89** |
| Han® USB module | **Han 06.92** |
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## Description of the Han-Modular® system

The Han-Modular® series is designed for combining different transmission media in one connector. The multifaceted system of inserts, contacts, frames, hoods and housings as well as accessories fulfils individual customer requirements. The customer can choose between more than 100 different modules. These are suitable for different transmission media and cover various termination techniques. The patented Han-Modular® hinged frame enables the configuration of all modules in the well-accepted Han® hoods and housings.



Further additional solutions are available, e.g. suitable docking frames for drawer units. Individual customer requirements can be realised by means of the Han-Modular® series. Combining various transmission media in one single connector results in lower expenditures in installation time and production downtime. Space savings and cost savings are further benefits. The easy extension possibilities secure the ideal solution for an actual as well as future safe design.

## Highlights

- **Combination of different connectors to one unit**
- **Shorter installation times**
- **Important space saving**
- **Save money for components as well as for the whole industrial site**
- **Future safe design due to easy extensions**

## Configuration of the Han-Modular® connectors

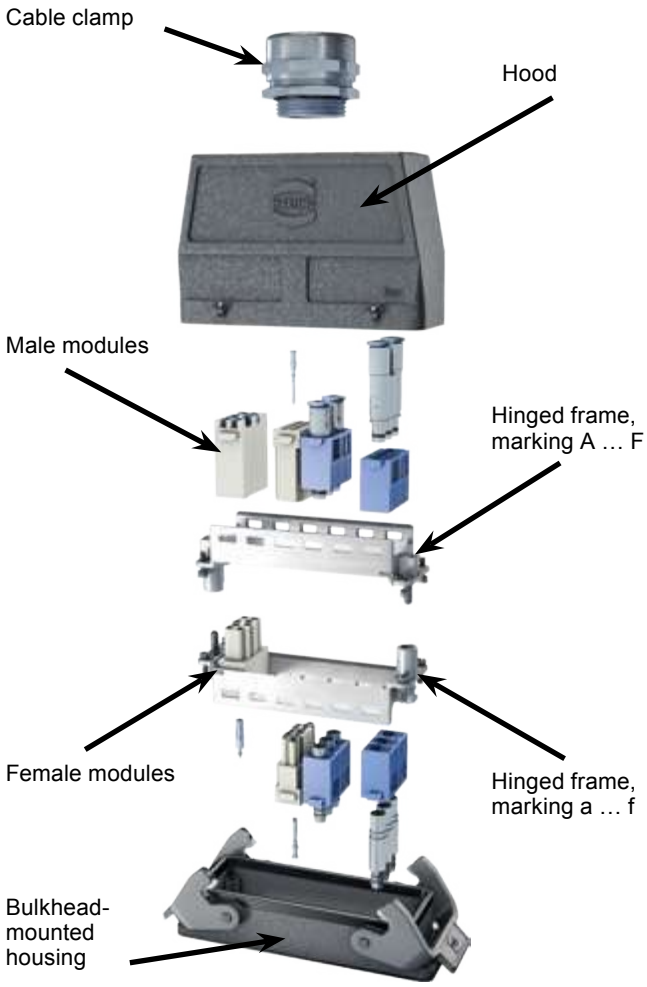
Use the Han® Online Configurator and quickly and easily assemble your
Han-Modular® interface and benefit from the advantages.

- Ensure the compatibility of the components with each other
- Selection always in view through interactive 3D visualization
- Documentation via download package for the complete interface
- Working in a team using the save, load and share function

*You can find the Han® configurator at:*
**www.harting.com/configurator**

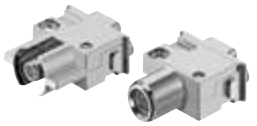


## System description

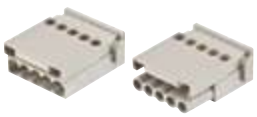


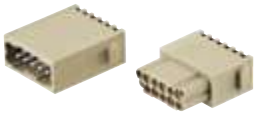
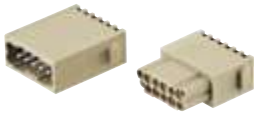
# Summary



| | | Han® 200 A Axial Module | Han® 200 A PE Module | Han® 100 A Axial Module | Han® PE Module |
|---|---|---|---|---|---|
| 100 - 200 A | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Termination type | 1*<br>200 A / 1000 V<br>Axial screw termination | 1 x PE*<br>200 A<br>Axial screw termination | 1*<br>100 A / 1000 V<br>Axial screw termination | 1 x PE<br>100 A<br>Axial screw termination |
| | Cross-section | 40 … 70 mm² | 40 … 70 mm² | 16 … 35 mm² | 16 … 35 mm² |
| | Male module (M) | 09 14 001 2662 | 09 14 001 2667 | 09 14 002 2651 | 09 14 001 2633 |
| | Female module (F) | 09 14 001 2762 | 09 14 001 2767 | 09 14 002 2751 | 09 14 001 2733 |
| | Cross-section | 25 … 40 mm² | 25 … 40 mm² | 10 … 25 mm² | 10 … 25 mm² |
| | Male module (M) | 09 14 001 2663 | 09 14 001 2668 | 09 14 002 2653 | 09 14 001 2632 |
| | Female module (F) | 09 14 001 2763 | 09 14 002 2768 | 09 14 002 2753 | 09 14 001 2732 |

| | | Han® 70 A Axial module | Han® 70 A Hybrid module | Han® 40 A Axial module | Han® C Axial module |
|---|---|---|---|---|---|
| 40 - 70 A | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Termination type | 2<br>70 A / 1000 V<br>Axial screw termination | 1 + (4 x Han E®)<br>70 A / 1000 V<br>Axial screw termination | 2<br>40 A / 1000 V<br>Axial screw termination | 3<br>40 A / 690 V<br>Axial screw termination |
| | Cross-section | 14 … 22 mm² | 14 … 22 mm² | 6 … 10 mm² | 6 … 10 mm² |
| | Male module (M) | 09 14 002 2647 | 09 14 005 2647 | 09 14 002 2602 | 09 14 003 2602 |
| | Female module (F) | 09 14 002 2742 | 09 14 005 2742 | 09 14 002 2702 | 09 14 003 2702 |
| | Cross-section | 6 … 16 mm² | 6 … 16 mm² | 2.5 … 8 mm² | 2.5 … 8 mm² |
| | Male module (M) | 09 14 002 2646 | 09 14 005 2646 | 09 14 002 2601 | 09 14 003 2601 |
| | Female module (F) | 09 14 002 2741 | 09 14 005 2741 | 09 14 002 2701 | 09 14 003 2701 |

| | | Han E® Quick Lock module | Han® EE Quick Lock module | Han® ES module | Han E® screw module |
|---|---|---|---|---|---|
| 16 A | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Termination type<br>Cross-section | 6<br>16 A / 500 V<br>Quick Lock termination<br>0.5 … 2.5 mm² | 8<br>16 A / 400 V<br>Quick Lock termination<br>0.5 … 2.5 mm² | 5<br>16 A / 400 V<br>Cage clamp termination<br>0.14 … 2.5 mm² | 5<br>16 A / 230/400 V<br>Screw termination<br>0.5 … 2.5 mm² |
| | Male module (M) | 09 14 006 2633 | 09 14 008 2633 | 09 14 005 2616 | 09 14 005 2601 |
| | Female module (F) | 09 14 006 2733 | 09 14 008 2733 | 09 14 005 2716 | 09 14 005 2701 |

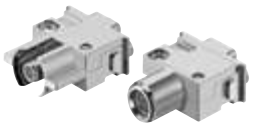
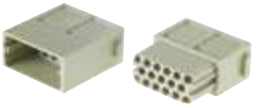
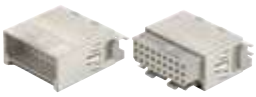
| | | Han DD® Quick Lock module | Han DD® Quick Lock module | | |
|---|---|---|---|---|---|
| ≤ 10 A | |  |  | | |
| | Number of contacts<br>Electrical data<br>Termination type<br>Cross-section | 12, silver plated<br>10 A / 250 V<br>Quick Lock termination<br>0.25 … 1.5 mm² | 12, gold plated<br>10 A / 250 V<br>Quick Lock termination<br>0.25 … 1.5 mm² | | |
| | Male module (M) | 09 14 012 2632 | 09 14 012 2634 | | |
| | Female module (F) | 09 14 012 2732 | 09 14 012 2734 | | |

| | Hexagonal drivers | with grip | Bit 1/4'' | Adapter 3/8'' | Hexagonal torque set |
|---|---|---|---|---|---|
| Axial screw termination | |  |  |  |  |
| | 2 mm ( 40 A) | 09 99 000 0313 | 09 99 000 0369 | | 09 99 000 0834 |
| | 2.5 mm ( 70 A) | | 09 99 000 0375 | | 09 99 000 0834 |
| | 4 mm (100 A) | 09 99 000 0363 | | 09 99 000 0370 | 09 99 000 0833 |
| | 5 mm (200 A) | 09 99 000 0364 | | 09 99 000 0371 | 09 99 000 0833 |

* Double module, requires two places in the frame

# Summary



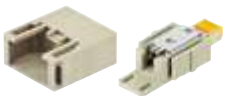
| | | | | | |
|---|---|---|---|---|---|
| PE | | Han® PE module (Including crimp contact for earthing) | | | |
| | Number of contacts<br>Cross-section<br>Termination type | 1 x PE<br>35 mm²<br>Crimp termination, Han® HC | 1 x PE<br>25 mm²<br>Crimp termination, Han® HC | 1 x PE<br>16 mm²<br>Crimp termination, Han® HC |  |
| | Male module (M) | 09 14 001 3074 | 09 14 001 3073 | 09 14 001 3072 | |
| | Female module (F) | 09 14 001 3174 | 09 14 001 3173 | 09 14 001 3172 | |
| 70 - 200 A | | Han® 200 A Crimp module | Han® 100 A Crimp module | Han® 100 A Single module | Han® 70 A Crimp module |
| | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Cross-section<br>Termination type | 1*<br>200 A / 1000 V<br>25 … 70 mm²<br>Crimp termination, Han® HC | 2*<br>100 A / 1000 V<br>10 … 35 mm²<br>Crimp termination, Han® HC | 1<br>100 A / 830 V<br>10 … 35 mm²<br>Crimp termination, Han® HC | 2<br>70 A / 1000 V<br>6 … 25 mm²<br>Crimp termination, Han® HC |
| | Male module (M) | 09 14 001 3003 | 09 14 002 3051 | 09 14 001 3031 | 09 14 002 3041 |
| | Female module (F) | 09 14 001 3103 | 09 14 002 3151 | 09 14 001 3131 | 09 14 002 3141 |
| 40 A | | Han® 40 A Crimp module | Han® C module | Han® CC module | Han® CD module |
| | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Cross-section<br>Termination type | 2<br>40 A / 1000 V<br>1.5 … 10 mm²<br>Crimp termination, Han® C | 3<br>40 A / 690 V<br>1.5 … 6 mm²<br>Crimp termination, Han® C | 4<br>40 A / 830 V<br>1.5 … 6 mm²<br>Crimp termination, Han® C | 3 + 4<br>40 A + 10 A / 830 V<br>0.14 … 6 mm²<br>Crimp, Han® C + Han D® |
| | Male module (M) | 09 14 002 3002 | 09 14 003 3001 | 09 14 004 3041 | 09 14 007 3001 |
| | Female module (F) | 09 14 002 3102 | 09 14 003 3101 | 09 14 004 3141 | 09 14 007 3101 |
| 16 A | | Han E® module | Han® EE module | Han® EEE module | Han E® Protected module |
| | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Cross-section<br>Termination type | 6<br>16 A / 500 V<br>0.14 … 4 mm²<br>Crimp termination, Han E® | 8<br>16 A / 400 V<br>0.14 … 4 mm²<br>Crimp termination, Han E® | 20*<br>16 A / 500 V<br>0.14 … 4 mm²<br>Crimp termination, Han E® | 6<br>16 A / 830 V<br>0.14 … 4 mm²<br>Crimp termination, Han E® |
| | Male module (M) | 09 14 006 3001 | 09 14 008 3001 | 09 14 020 3001 | 09 14 006 3041 |
| | Female module (F) | 09 14 006 3101 | 09 14 008 3101 | 09 14 020 3101 | 09 14 006 3141 |
| ≤ 10 A | | Han DD® module | Han® DDD module | Han DD® double module | Han DD® Quad module |
| | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Cross-section<br>Termination type | 12<br>10 A / 250 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D® | 17<br>10 A / 150 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D® | 36*<br>10 A / 400 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D® | 42*<br>10 A / 150 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D® |
| | Male module (M) | 09 14 012 3002 | 09 14 017 3001 | 09 14 036 3002 | 09 14 042 3001 |
| | Female module (F) | 09 14 012 3102 | 09 14 017 3101 | 09 14 036 3102 | 09 14 042 3101 |
| Signal + Shielded | | Han® High Density module | Han® Full High Density module | Han® Shielded module Basic | Han® Shielded Power module |
| | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Cross-section<br>Termination type | 25<br>4 A / 50 V<br>0.08 … 0.52 mm²<br>Crimp termination, D-Sub | 36<br>4 A / 32 V<br>0.14 … 0,5 mm²<br>Crimp termination, D-Sub | 27 + shielding<br>4 A / 32 V<br>0.09 … 0.5 mm²<br>Crimp termination, D-Sub | 4 + 2 + shielding<br>16 A / 400 V<br>0.14 … 4 mm²<br>Crimp, Han E® + Han D® |
| | Male module (M) | 09 14 025 3001 | 09 14 036 3001 | 09 14 027 3022 | 09 14 006 3021 |
| | Female module (F) | 09 14 025 3101 | 09 14 036 3101 | 09 14 027 3122 | 09 14 006 3121 |

* Double module, requires two places in the frame

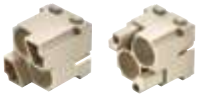
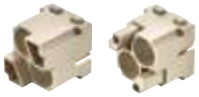
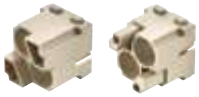
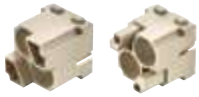
# Summary



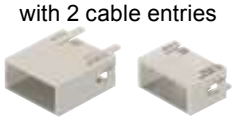
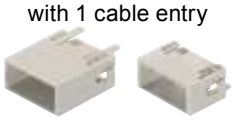
## Han® RJ45 module

| Han® RJ45 module | for patch cable | for IDC | for patch cable | for IDC and preLink |
|---|---|---|---|---|
| - 8 contacts<br>- cat. $6_A$<br>- 10 Gbit/s |  |  |  |  |
| Part numbers | Male module (M)<br>09 14 001 4623 | Male module (M)<br>09 14 001 4623 | Female module (F)<br>09 14 001 4721 | Female module (F)<br>09 14 001 4722 |
| | Adapter for patch cable:<br>09 14 000 9966 | RJ Industrial IDC:<br>09 45 400 1560 | | RJ45 female IDC:<br>09 14 545 1561 |
| | Patch cable cat. 6:<br>09 47 474 71xx | | | RJ45 female preLink:<br>09 14 008 4720 |

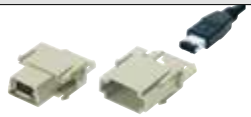
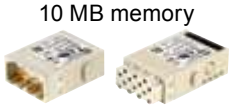
## Han-Quintax® Modules

| | Han-Quintax® | Han® High Density Quintax | Han D® Coax | Han E® Coax |
|---|---|---|---|---|
| Quintax modul |  |  |  |  |
| Number of contacts | 2 x 4* | 2 x 8* | 2 x Coax* | 2 x Coax* |
| Male module (M) | 09 14 002 3004 | 09 14 002 3004 | 09 14 002 3004 | 09 14 002 3004 |
| Female module (F) | 09 14 002 3104 | 09 14 002 3104 | 09 14 002 3104 | 09 14 002 3104 |
| Insert<br>(Cable Ø ≤ 9.5 mm) |  |  |  |  |
| Data rate<br>Electrical data<br>Cross-section<br>Termination type | 100 Mbit/s (cat. 5e)<br>10 A / 50 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D® | 100 Mbit/s (cat. 5e)<br>5 A / 50 V<br>0.09 … 0.52 mm²<br>Crimp termination, D-Sub | ≤ 500 Mhz / 75 Ω<br>10 A / 50 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D® | ≤ 500 Mhz / 50 Ω<br>16 A / 50 V<br>0.14 … 4 mm²<br>Crimp termination, Han E® |
| Male insert (M) | 09 15 004 3013 | 09 15 008 3013 | 09 15 001 3013 | 09 15 001 3023 |
| Female insert (F) | 09 15 004 3113 | 09 15 008 3113 | 09 15 001 3113 | 09 15 001 3123 |
| PE shielding termination | *Optional shielding termination to the hinged frame with the aid of Han-Quintax® metal adapter 09 14 000 9915* | | | |

## Han® GigaBit – Han® MegaBit Modules

| | Han® GigaBit module | Han® MegaBit module | Han® MegaBit module | Han® Shielded Module |
|---|---|---|---|---|
| Adapter Module |  | with 2 cable entries<br> | with 1 cable entry<br> |  |
| Male module (M) | 09 14 001 3011 | 09 14 001 3011 | 09 14 001 3011 | 09 14 001 3011 |
| Female module (F) | 09 14 001 3111 | 09 14 001 3111 | 09 14 001 3111 | 09 14 001 3111 |
| Insert<br>(Cable Ø ≤ 14 mm) |  |  |  |  |
| Number of contacts<br>Data rate<br>Electrical data<br>Cross-section<br>Termination type<br>Shielding termination | 8<br>10 Gbit/s (cat. $6_A$)**<br>5 A / 50 V<br>0.09 … 0.52 mm²<br>Crimp termination, D-Sub<br>Crimp flange | 2 x 4<br>2 x 100 Mbit/s (cat. 5e)<br>10 A / 50 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D®<br>2 x crimp flange | 8<br>1 Gbit/s (cat. 5e)<br>10 A / 50 V<br>0.14 … 2.5 mm²<br>Crimp termination, Han D®<br>Crimp flange | 20<br><br>4 A / 32 V<br>0.09 … 0.52 mm²<br>Crimp termination, D-Sub<br>Crimp flange |
| Male insert (M) | 09 14 008 3011 | 09 14 008 3016 | 09 14 008 3021 | 09 14 020 3013 |
| Female insert (F) | 09 14 008 3111 | 09 14 008 3116 | 09 14 008 3121 | 09 14 020 3113 |
| | with PE shielding termination | with PE shielding termination | with PE shielding termination | |
| Male insert (M) | 09 14 008 3012 | 09 14 008 3017 | 09 14 008 3022 | |
| Female insert (F) | 09 14 008 3112 | 09 14 008 3117 | 09 14 008 3122 | |

## Serial Bus Modules

| | Han D-Sub module | Han® USB module | Han® FireWire module | Han® ID CAN module |
|---|---|---|---|---|
| |  |  |  | 10 MB memory<br> |
| Number of contacts<br>Data rate<br>Electrical data<br>Cross-section<br>Termination type | 9 + shielding<br>12 Mbit/s (Profibus)<br>5 A / 50 V<br>0.09 … 0.52 mm²<br>Crimp termination, D-Sub | 8<br>5 Gbit/s (USB 3.0)<br>1 A / 50 V<br><br>USB patch cable | 6<br>400 Mbit/s (IEEE 1394a)<br>1 A / 50 V<br><br>FireWire patch cable | 7<br>1 Mbit/s (CAN bus)<br>24 V<br>0.13 … 1.5 mm²<br>Cage clamp termination |
| Male module (M) | 09 14 009 3001 | 09 14 001 4601 | 09 14 001 4611 | 09 80 015 0100 |
| Female module (F) | 09 14 009 3101 | 09 14 001 4703 | 09 14 001 4711 | 09 80 115 0200 |

* Double module, requires two places in the frame ** Cat $7_A$ version also available

# Summary

## Coaxial Modules

| | Han® Multi Module (for D-Sub coaxial contacts) | | Han® Multi Module (for DIN 41626 coaxial contacts) | |
|---|---|---|---|---|
| |  | |  | |
| Number of contacts | 4 | 4 | 12* | 12* |
| Male module (M) | 09 14 004 4501 | 09 14 004 4501 | 09 14 012 4501 | 09 14 012 4501 |
| Female module (F) | 09 14 004 4513 | 09 14 004 4513 | 09 14 012 4512 | 09 14 012 4512 |
| Coaxial contacts (≤ 2 GHz) |  |  |  |  |
| Impedance<br>Coaxial cable<br>Termination type | 75 Ω<br>RG179, RG187<br>Crimp /crimp termination | 50 Ω<br>RG174, RG188, RG316<br>Crimp /crimp termination | 75 Ω<br>RG179, RG187<br>Solder /crimp termination | 50 Ω<br>RG174, RG188, RG316<br>Solder /crimp termination |
| Male contact | 09 69 282 5230 | 09 69 282 5140 | 09 14 000 6221 | 09 14 000 6211 |
| Female contact | 09 69 182 5230 | 09 69 182 5140 | 09 14 000 6121 | 09 14 000 6111 |

## Optical Modules

| | Han® LC module | Han® SC module | Han® Multi module | Han® Multi module |
|---|---|---|---|---|
| |  |  |  |  |
| Number of contacts | 6 | 4 | 4 | 12* |
| Male module (M) | 09 14 006 4701 | 09 14 004 4701 | 09 14 004 4501 | 09 14 012 4501 |
| Female module (F) | 09 14 006 4711 | 09 14 004 4711 | 09 14 004 4512 | 09 14 012 4512 |
| Contacts |  |  |  |  |
| 1 mm POF | | 20 10 001 5211 | Male: 20 10 001 4211<br>Female: 20 10 001 4221 | Male: 20 10 001 4211<br>Female: 20 10 001 4221 |
| 1 mm POF<br>Fast assembly termination | | 20 10 001 5217 | | |
| SI-Fibre 200 / 230 µm<br>Multi-Mode | | 20 10 230 5211 | Male: 20 10 230 4211<br>Female: 20 10 230 4221 | Male: 20 10 230 4211<br>Female: 20 10 230 4221 |
| GI-Fibre 50-62,5 / 125 µm<br>Multi-Mode | 20 10 125 8211 | 20 10 125 5211 | Male: 20 10 125 4212<br>Female: 20 10 125 4222 | Male: 20 10 125 4212<br>Female: 20 10 125 4222 |
| GI-Fibre 9 / 125 µm<br>Single-Mode | 20 10 125 8220 | 20 10 125 5220 | | |

## Pneumatic Modules

| | Pneumatic contacts (max. 10 bar) | | | Pneumatic module |
|---|---|---|---|---|
| For tube outer diameter |  |  |  | Number of contacts: 3<br>(order separately)<br> |
| Tube-Ø | 6 mm OD | 4 mm OD | 3 mm OD | |
| Male contact | 09 14 000 6356 | 09 14 000 6354 | 09 14 000 6353 | |
| Female without shut-off | 09 14 000 6456 | 09 14 000 6454 | 09 14 000 6453 | |
| Female with shut-off | 09 14 000 6466 | 09 14 000 6464 | 09 14 000 6463 | |
| For tube inner diameter |  |  |  | |
| Tube-Ø | 6 mm ID | 4 mm ID | 3 mm ID | male module (M)<br>09 14 003 3501 |
| Male contact | 09 14 000 6306 | 09 14 000 6304 | 09 14 000 6303 | |
| Female without shut-off | 09 14 000 6406 | 09 14 000 6404 | 09 14 000 6403 | Female module (F)<br>09 14 003 3501 |
| Female with shut-off | 09 14 000 6416 | 09 14 000 6414 | 09 14 000 6413 | |

## Further Modules

| | Han® HV module 40A | Han® HV Single module | Han-Eco® PE module | Han® Dummy module |
|---|---|---|---|---|
| |  |  | for Han-Eco® hoods/housings only<br> | to fill-up empty<br>module places<br> |
| Number of contacts<br>Electrical data<br>Cross-section<br>Termination type | 2*<br>40 A / 2900 / 5000 V<br>1.5 … 10 mm²<br>Crimp termination, Han C® | 2<br>16 A / 2500 V<br>0.14 … 4 mm²<br>Crimp termination, Han E® | 1 x PE<br><br>1.5 … 16 mm²<br>Screw termination | |
| Male module (M) | 09 14 002 3023 | 09 14 002 3025 | 19 41 001 2600 | 09 14 000 9950 |
| Female module (F) | 09 14 002 3123 | 09 14 002 3125 | 19 41 001 2700 | |

* Double module, requires two places in the frame

# Han-Modular® hinged frames

## Features

- Suitable for more than 100 different modules
- Quick and easy assembly supported by an audible “Click”
- Very robust mechanical characteristics
- Modules can be assembled/removed without tools
- Two leading PE contacts

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (frames) | Zinc die-cast, Stainless steel |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Both different markings must be used for one connector!

Conductor cross-section PE (power side) 4 ... 10 mm²

Conductor cross-section 10 mm² only with ferrule crimping tool 09 99 000 0374

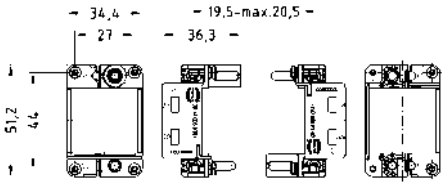
Conductor cross-section PE (signal side) 1 ... 2.5 mm²

**Locking element** 09 14 000 9960 see accessories in chapter Han 06

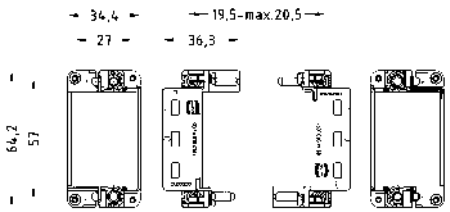
# Han-Modular® hinged frames

Size 6 B



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Hinged frame plus,<br>for 2 modules,<br>A ... B  | 09 14 006 0361 |   |
| Han-Modular®,<br>Hinged frame plus,<br>for 2 modules,<br>a ... b  | 09 14 006 0371 | |

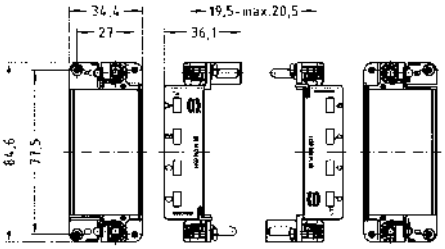


| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Hinged frame plus,<br>for 3 modules,<br>A ... C  | 09 14 010 0361 |  |
| Han-Modular®,<br>Hinged frame plus,<br>for 3 modules,<br>a ... c  | 09 14 010 0371 | |

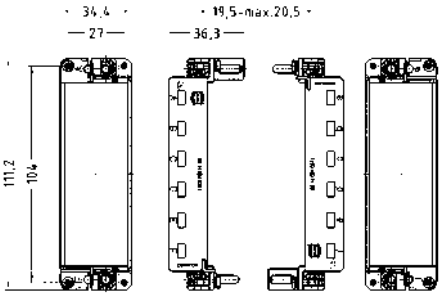
# Han-Modular® hinged frames

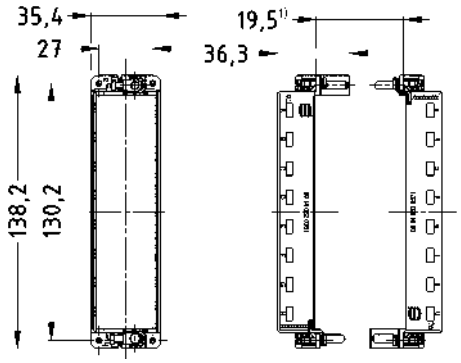
Size 16 B



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Hinged frame plus,<br>for 4 modules,<br>A ... D  | 09 14 016 0361 |   |
| Han-Modular®,<br>Hinged frame plus,<br>for 4 modules,<br>a ... d  | 09 14 016 0371 | |



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Hinged frame plus,<br>for 6 modules,<br>A ... F  | 09 14 024 0361 |   |
| Han-Modular®,<br>Hinged frame plus,<br>for 6 modules,<br>a ... f  | 09 14 024 0371 | |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Hinged frame plus,<br>for 8 modules,<br>A … H<br> | 09 14 032 0361 | <br>1) distance for contact max. 20.5 mm |
| Han-Modular®,<br>Hinged frame plus,<br>for 8 modules,<br>a … h<br> | 09 14 032 0371 | |

# Han® PE module

Number of contacts

1



## Features

- PE module to connect large cable diameters within the Han-Modular® hinged frames
- Electrically conductive connection of the PE contact to the hinged frames and the hoods and housings acc. to EN 61984
- Pre-leading and robust 100 A PE contact
- Suitable for the connection of standard power cables even with large cross-sections (no special cables with reduced PE necessary)
- Crimp- and axial module are compatible modules

## Technical characteristics

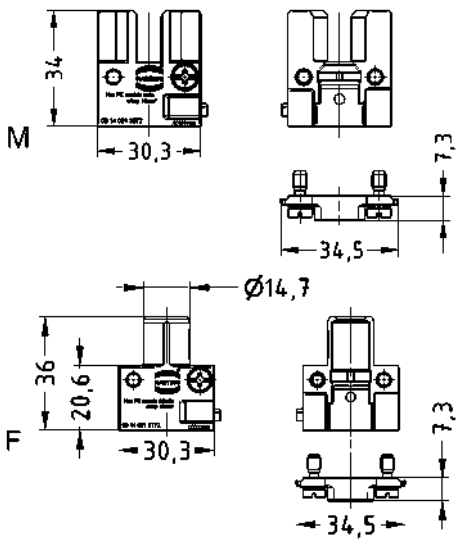
| | |
|---|---|
| Number of contacts | 1 |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Zinc die-cast, nickel-plated |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

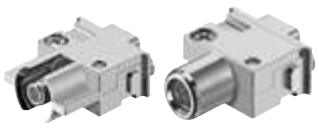
## Specifications and approvals

IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

Short-time withstand current: 1920 A for 1 second (acc. to IEC 60947-7-2)

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® PE module,<br>Crimp termination,<br>Pack contents:<br>2 PE module halves,<br>1 contact pressure plate,<br>1 crimp contact<br>Contact surface:<br>Silver plated | 10<br>16<br>25<br>35 | 09 14 001 3071<br>09 14 001 3072<br>09 14 001 3073<br>09 14 001 3074 | 09 14 001 3171<br>09 14 001 3172<br>09 14 001 3173<br>09 14 001 3174 |  |



Stripping length

| mm² | 10 | 16 | 25 | 35 |
|---|---|---|---|---|
| mm | 19 | 19 | 19 | 16 |

# Han® PE module

Number of contacts

1

Modu-
lar

## Features

- PE module to connect large cable diameters within the Han-Modular® hinged frames
- Electrically conductive connection of the PE contact to the hinged frames and the hoods and housings acc. to EN 61984
- Pre-leading and robust 100 A PE contact
- Suitable for the connection of standard power cables even with large cross-sections (no special cables with reduced PE necessary)
- Crimp- and axial module are compatible modules

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Zinc die-cast, nickel-plated |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

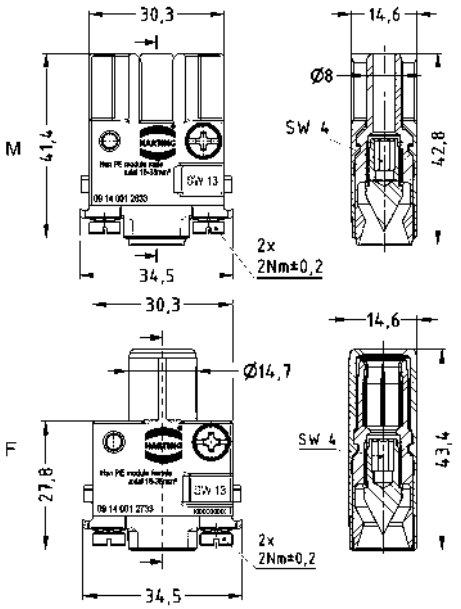
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

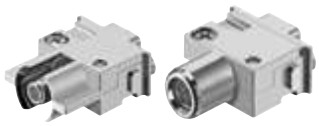
**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Short-time withstand current: 1920 A for 1 second (acc. to IEC 60947-7-2)

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® PE module,<br>Axial screw termination,<br>Pack contents:<br>PE module with pre-assembled axial screw contact<br>Contact surface:<br>Silver plated | 10 ... 25<br>16 ... 35<br>22 ... 38 | 09 14 001 2632<br>09 14 001 2633<br>09 14 001 2634 | 09 14 001 2732<br>09 14 001 2733<br>09 14 001 2734 | <br>Stripping length 13 mm<br>Tightening torque |

| mm² | 10 | 16 | 25 | 35 |
|---|---|---|---|---|
| Nm | 6 | 6 | 7 | 8 |



# Han® 300 A module



## Features

- Power module for big wire gauges up to 120 mm²
- High rated voltage up to 1300 V
- IP20 protection for female and male module (by using male contacts with protective cap)
- Compatible to the Han® 200 A crimp module
- Short and space saving contacts
- Easy removal of the contacts

## Technical characteristics

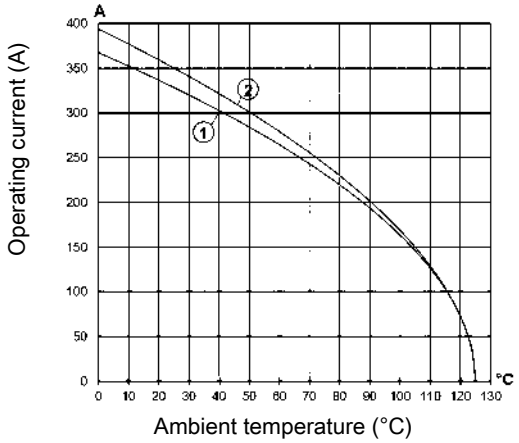
| | |
|---|---|
| Number of contacts | 1 |
| Rated current | 300 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage | 1000 V AC, 1300 V DC |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 3 modules Conductor cross-section 95 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 120 mm²

## Specifications and approvals

EN 50124-1
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

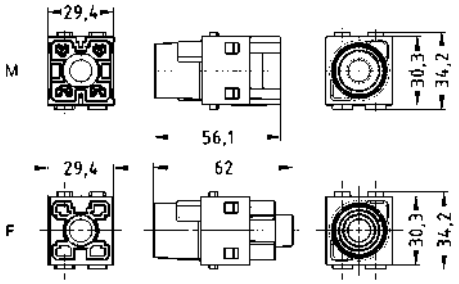
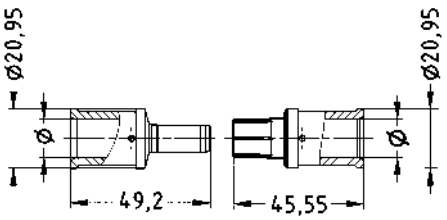
# Han® 300 A module

Modu-
lar

Number of contacts

**1**

300 A  1.000 V  8 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 300 A module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 95 ... 120 | 09 14 001 3004 | 09 14 001 3104 |  |
| Crimp contact,<br>Contact surface:<br>Silver plated<br> | 95<br>120 | 09 11 000 7536<br>09 11 000 7537 | 09 11 000 6636<br>09 11 000 6637 | <br>Wire gauge / ø / Stripping length<br>95 mm² / 13.55 mm / 22.5 mm<br>120 mm² / 15.55 mm / 22.5 mm |

# Han® 200 A module

Number of contacts

**1**

200 A 1.000 V 8 kV 3



## Features

- Power module for big cross-sections up to 70 mm²
- High rated voltage up to 1300 V
- IP20 protection for female and male module (by using male contacts with protective cap)
- Compatible to the Han® 300 A module
- Easy removal of the contacts

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Rated current | 200 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage | 1000 V AC, 1300 V DC |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 50124-1
EN 60664-1
IEC 61984
DNV GL

## Details

**Attention**

The TC 200 screw contacts are intended for connection to busbars and, due to their design, are not touch-protected in the connection area.

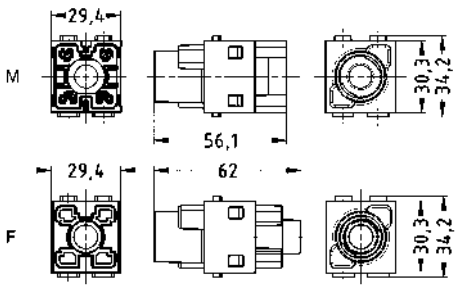
The user must ensure that the clearance and creepage distances of the TC 200 screw contacts are maintained.

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Crimping tools** see chapter Han 90

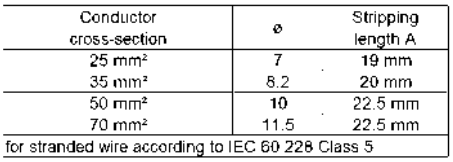
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 200 A module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 16 ... 70 | 09 14 001 3003 | 09 14 001 3103 |  |
| TC 200,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 16<br>25<br>35<br>50<br>70 | 09 11 000 6150<br>09 11 000 6120<br>09 11 000 6121<br>09 11 000 6122<br>09 11 000 6123 | 09 11 000 6250<br>09 11 000 6220<br>09 11 000 6221<br>09 11 000 6222<br>09 11 000 6223 | |

| Conductor cross-section | ø | Stripping length A |
|---|---|---|
| 25 mm² | 7 | 19 mm |
| 35 mm² | 8.2 | 20 mm |
| 50 mm² | 10 | 22.5 mm |
| 70 mm² | 11.5 | 22.5 mm |
| for stranded wire according to IEC 60 228 Class 5 | | |

# Han® 200 A module

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| TC 200,<br>Crimp contact,<br>With protective insert,<br>Contact surface:<br>Silver plated<br> | 25<br>35<br>50<br>70 | 09 11 000 7120<br>09 11 000 7121<br>09 11 000 7122<br>09 11 000 7123 | |  |
| TC 200,<br>Screw contact,<br>M8,<br>Contact surface:<br>Silver plated<br> | 70 | 09 11 000 6124 | 09 11 000 6224 | |

| Conductor cross-section | ø | Stripping length A |
|---|---|---|
| 25 mm² | 7 | 19 mm |
| 35 mm² | 8.2 | 20 mm |
| 50 mm² | 10 | 22.5 mm |
| 70 mm² | 11.5 | 22.5 mm |

for stranded wire according to IEC 60 228 Class 5

# Han® 200 A module

Number of contacts

1

200 A 1.000 V 8 kV 3



## Features

- No special tools required for axial-screw termination
- Power module for big cross-sections up to 70 mm²
- Can be used e.g. as 3 + PE connector in the Han® 32 B housing.
- Not compatible to the Han® 200 A crimp module

## Technical characteristics

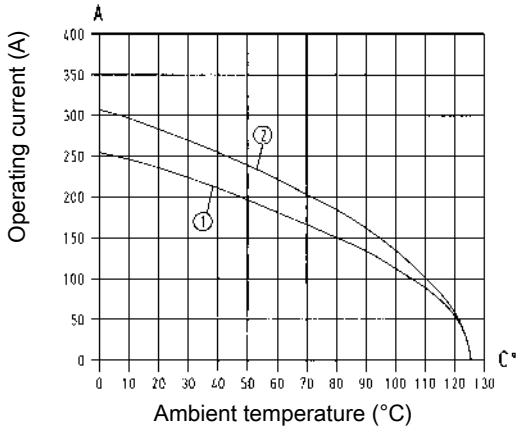
| | |
|---|---|
| Number of contacts | 1 |
| Rated current | 200 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 3 modules Conductor cross-section 50 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 70 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

## Details

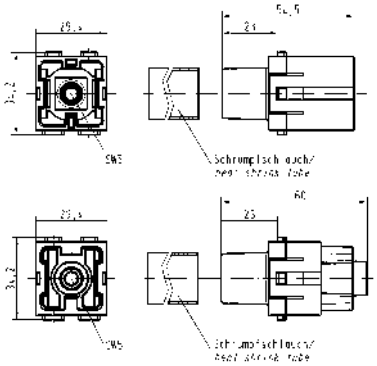
### Remarks on the axial screw technique

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Contact resistance axial screw contact: ≤ 0.2 mOhm

# Han® 200 A module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 200 A module,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 25 ... 40<br>40 ... 70 | 09 14 001 2663<br>09 14 001 2662 | 09 14 001 2763<br>09 14 001 2762 | M<br>F<br><br>Stripping length 16 mm<br>Tightening torque<br>8 Nm @ 25 ... 40 mm², 9 Nm @ 40 mm²,<br>10 Nm @ 70 mm² |

# Han® 200 A PE module

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Specifications and approvals

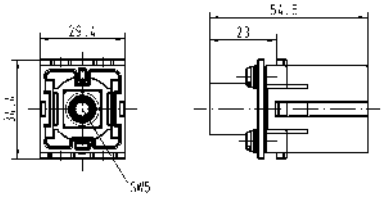
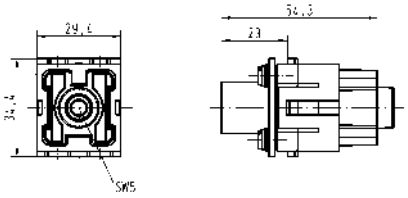
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

# Han® 200 A PE module

Number of contacts

1

Modu-
lar

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 200 A PE module,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 25 ... 40<br>40 ... 70 | 09 14 001 2668<br>09 14 001 2667 | 09 14 001 2768<br>09 14 001 2767 | M<br><br>F<br><br>Hex key with grip 09 99 000 0364<br>Adapter 3/8” 09 99 000 0371<br>See chapter Han 90<br>Stripping length 16 mm<br>Tightening torque<br>8 Nm @ 25 ... 40 mm², 9 Nm @ 40 mm²,<br>10 Nm @ 70 mm² |

## Features

- Crimp- and axial module are compatible modules
- Contacts can be unlocked from the mating side

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 100 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

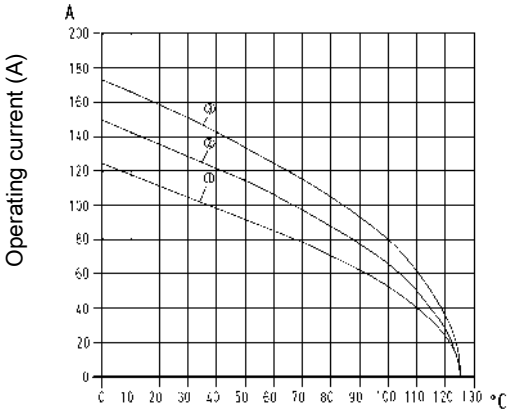
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Crimp termination

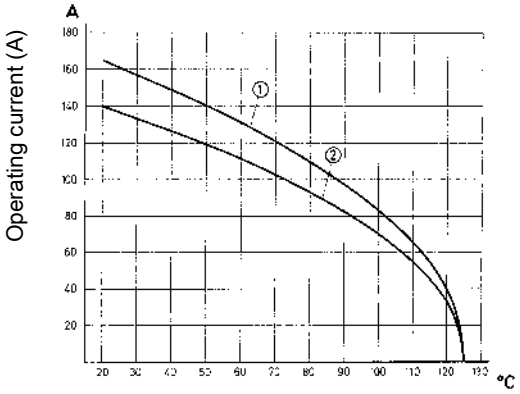



Ambient temperature (°C)

① 24 B hoods/housings with 3 modules Conductor cross-section 16 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 25 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 35 mm²

## Derating

Axial screw termination




Ambient temperature (°C)

① 24 B hoods/housings with 3 modules Conductor cross-section 35 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 25 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

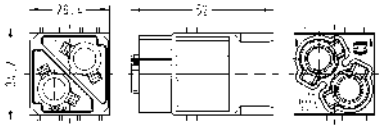
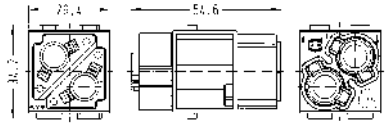
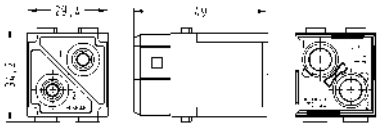
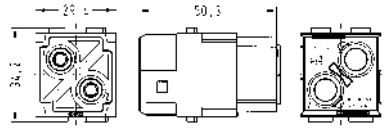
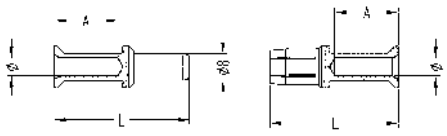
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® 100 A module

Number of contacts

## 2

100 A 1.000 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 100 A module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 10 ... 35 | 09 14 002 3051 | 09 14 002 3151 | M<br><br>F<br> |
| Han-Modular®,<br>Han® 100 A module,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 10 ... 25<br>16 ... 35<br>22 ... 38 | 09 14 002 2653<br>09 14 002 2651<br>09 14 002 2650 | 09 14 002 2753<br>09 14 002 2751<br>09 14 002 2750 | M<br><br>F<br><br>Stripping length 12 ... 14 mm<br>Tightening torque<br>6 Nm @ 10 ... 16 mm², 7 Nm @ 25 mm²,<br>8 Nm @ 35 ... 38 mm² |
| TC 100,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 10<br>16<br>25<br>35 | 09 11 000 6114<br>09 11 000 6116<br>09 11 000 6125<br>09 11 000 6135 | 09 11 000 6214<br>09 11 000 6216<br>09 11 000 6225<br>09 11 000 6235 | <br>Conductor cross-section / ø / Stripping length<br>10 mm² / 4.3 / 19 mm<br>16 mm² / 5.5 / 19 mm<br>25 mm² / 7 / 19 mm<br>35 mm² / 8.2 / 16 mm<br>for stranded wire according to IEC 60 228 Class 5 |

# Han® 100 A Single module



## Features

- Crimp or axial screw termination available
- Unlock of contacts with a screw driver from mating side
- Separate axial screw contacts can be terminated without any special tools directly to the wire

## Technical characteristics

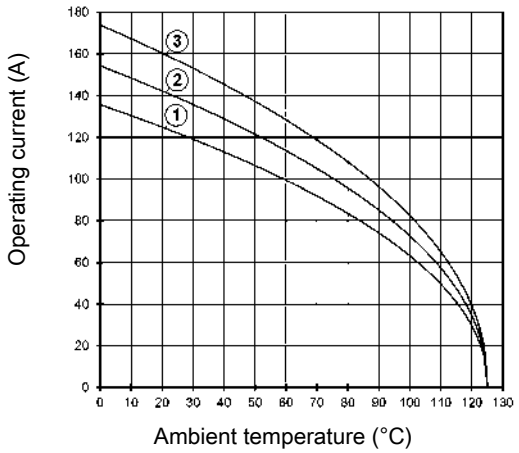
| | |
|---|---|
| Number of contacts | 1 |
| Rated current | 100 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 16 mm²
② Conductor cross-section 25 mm²
③ Conductor cross-section 35 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Hex key (A/F 4)** see chapter Han 90

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

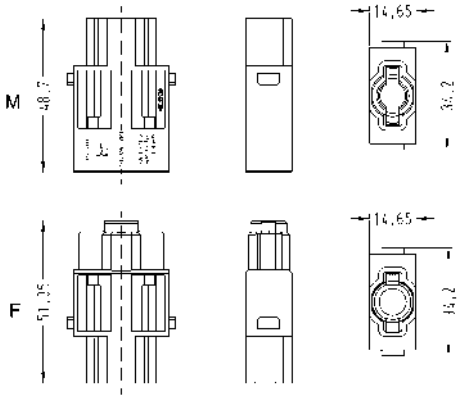
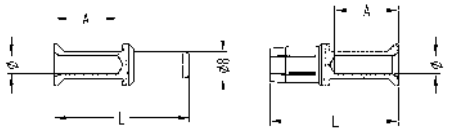
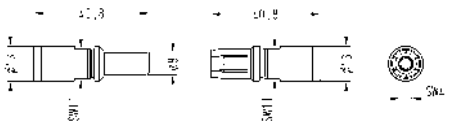
# Han® 100 A Single module

Number of contacts

**1**

100 A 830 V 8 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 100 A module,<br>Single module<br><br>Please order contacts separately. | 10 ... 35 | 09 14 001 3031 | 09 14 001 3131 |  |
| TC 100,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 10<br>16<br>25<br>35 | 09 11 000 6114<br>09 11 000 6116<br>09 11 000 6125<br>09 11 000 6135 | 09 11 000 6214<br>09 11 000 6216<br>09 11 000 6225<br>09 11 000 6235 | <br>Conductor cross-section / ø / Stripping length<br>10 mm² / 4.3 / 19 mm<br>16 mm² / 5.5 / 19 mm<br>25 mm² / 7 / 19 mm<br>35 mm² / 8.2 / 16 mm<br>for stranded wire according to IEC 60 228 Class 5 |
| TC 100,<br>Axial screw contact,<br>Contact surface:<br>Silver plated<br> | 10 ... 25<br>16 ... 35 | 09 11 000 6112<br>09 11 000 6113 | 09 11 000 6212<br>09 11 000 6213 | <br>Stripping length 13 mm<br><br>Tightening torque<br>mm² / 10 / 16 / 25 / 35<br>Nm / 6 / 6 / 7 / 8 |

## Features

- for power circuits
- Male inserts with protection collar
- Polarisation of module

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 70 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.5 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

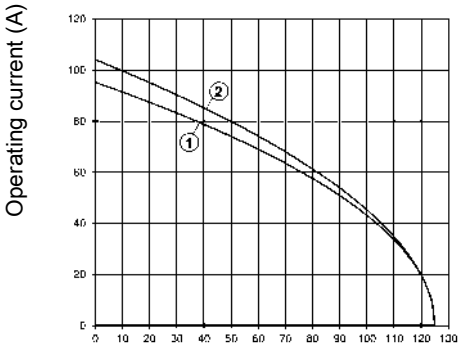
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Crimp termination

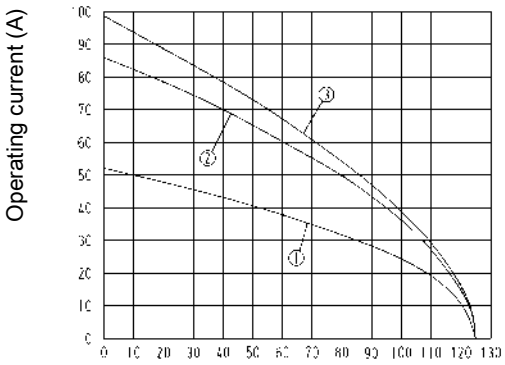



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 16 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 25 mm²

## Derating

Axial screw termination




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 16 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 22 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Hex key (A/F 2.5)** see chapter Han 90

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

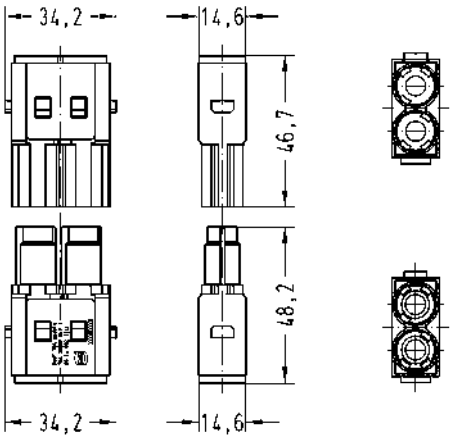
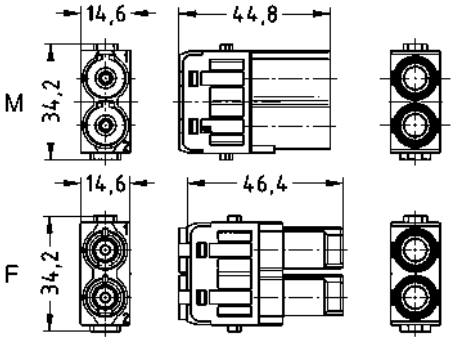
# Han® 70 A module

Modu-
lar

Number of contacts

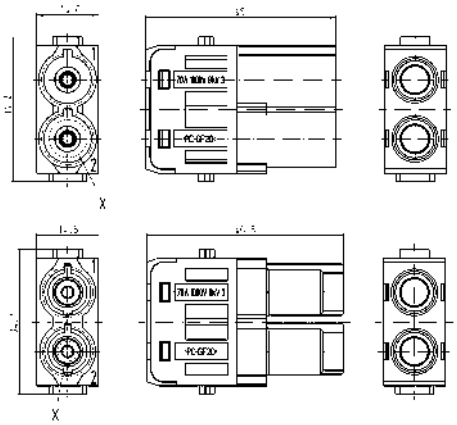
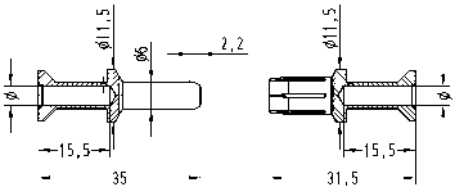
## 2

70 A 1.000 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 70 A module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 10 ... 25 | 09 14 002 3041 | 09 14 002 3141 |  |
| Han-Modular®,<br>Han® 70 A module,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br><br>Finger safe | 6 ... 16<br>14 ... 22 | 09 14 002 2641<br>09 14 002 2642 | |  |

# Han® 70 A module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 70 A module,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 6 ... 16<br>14 ... 22 | 09 14 002 2646<br>09 14 002 2647 | 09 14 002 2741<br>09 14 002 2742 | <br>6 ... 16 mm²: Stripping length 11 ... 12 mm<br>14 ... 22 mm²: Stripping length 12,5 ... 13.5 mm<br>Tightening torque<br>2 Nm @ 6 mm², 3 Nm @ 10 mm², 4 Nm @ 14 mm², 4 Nm @ 16 mm², 4 Nm @ 22 mm² |
| TC 70,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 10<br>16<br>25 | 09 11 000 6131<br>09 11 000 6132<br>09 11 000 6133 | 09 11 000 6231<br>09 11 000 6232<br>09 11 000 6233 | <br>Conductor cross-section / ø / Stripping length<br>10 mm² / 4.3 / 15.5 mm<br>16 mm² / 5.5 / 15.5 mm<br>25 mm² / 7 / 15.5 mm<br>for stranded wire according to IEC 60 228 Class 5 |

# Han® 70 A Hybrid module



## Features

- Axial screw termination
- for power circuits
- Male inserts with protection collar
- Polarisation of module

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Additional contacts | + 4 additional signal contacts |
| Rated current | 70 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 16 A |
| Rated voltage (signal) | 400 V |
| Rated impulse voltage (signal) | 6 kV |
| Pollution degree (signal) | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.5 mΩ, ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

**Hex key (A/F 2.5)** see chapter Han 90

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Contact resistance axial screw contact: ≤ 0.5 mOhm

Contact resistance Han E® crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

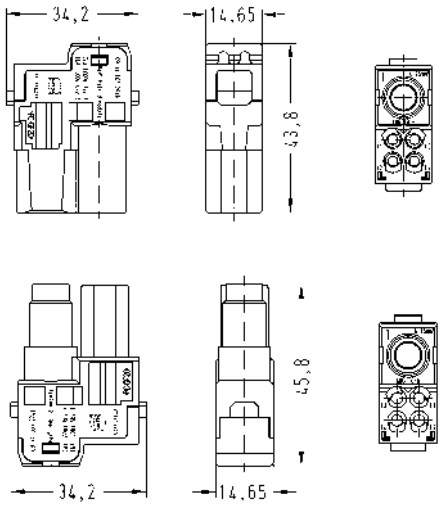
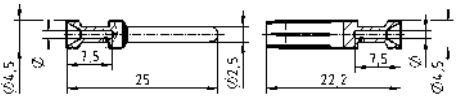
# Han® 70 A Hybrid module



Number of contacts

1

70 A 1.000 V 8 kV 3
16 A 400 V 6 kV 3
+ 4 additional signal contacts

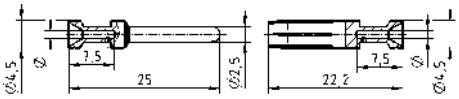
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 70 A Hybrid module,<br>Axial screw termination / crimp termination<br><br>Please order signal contacts separately. | 6 ... 16<br>14 ... 22 | 09 14 005 2646<br>09 14 005 2647 | 09 14 005 2741<br>09 14 005 2742 | <br>6 ... 16 mm²: Stripping length 11 ... 12 mm<br>14 ... 22 mm²: Stripping length 12,5 ... 13.5 mm<br>Tightening torque<br>2 Nm @ 6 mm², 3 Nm @ 10 mm², 4 Nm @ 14 mm², 4 Nm @ 16 mm², 4 Nm @ 22 mm² |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

# Han® 70 A Hybrid module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

# Han® 40 A module

## Features

- Crimp or axial screw termination available
- No special tools required for axial-screw termination

## Technical characteristics

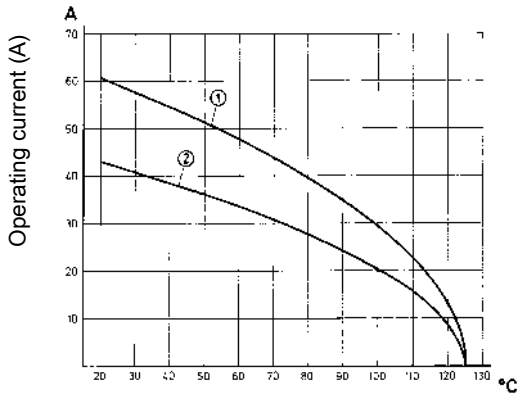
| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 40 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ, ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 10 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

## Details

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Remarks on the axial screw technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Contact resistance axial screw contact: ≤ 0.3 mOhm

**Hex key (A/F 2)** see chapter Han 90

**Crimping tools** see chapter Han 90

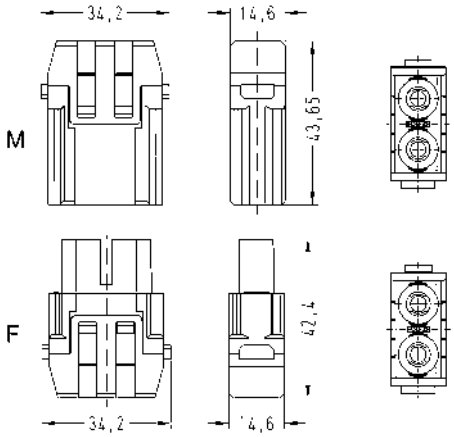
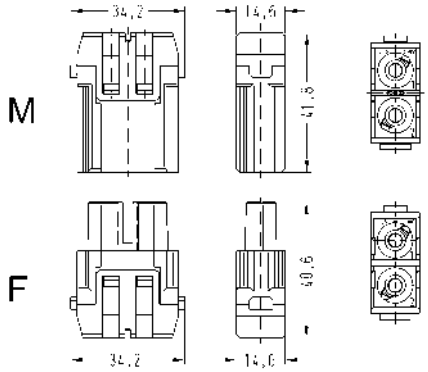
**Remarks on the crimp technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® 40 A module

Number of contacts

## 2

40 A 1.000 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 40 A module,<br>Crimp termination,<br>UL: 600 V<br><br>Please order crimp contacts separately. | 1.5 ... 10 | 09 14 002 3002 | 09 14 002 3102 | <br>Contact arrangement (view from termination side) |
| Han-Modular®,<br>Han® 40 A module,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 2.5 ... 8<br>6 ... 10 | 09 14 002 2601<br>09 14 002 2602 | 09 14 002 2701<br>09 14 002 2702 | <br>Contact arrangement (view from termination side) |

Stripping length

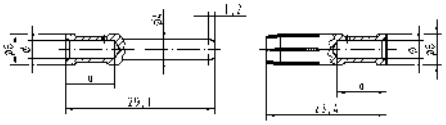
| mm² | 2,5 | 4 | 6 | 10 |
|---|---|---|---|---|
| mm | $5^{+1}$ | $5^{+1}$ | $8^{+1}$ | $11^{+1}$ |

Tightening torque

| mm² | 2,5 | 4 | 6 | 10 |
|---|---|---|---|---|
| Nm | 1,5 | 1,5 | 2 | 2 |

# Han® 40 A module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108<br>09 32 000 6109 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208<br>09 32 000 6209 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 1.5 mm² | AWG 16 | 1.75 mm | 9.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 9.5 mm |
| 4 mm² | AWG 12 | 2.85 mm | 9.5 mm |
| 6 mm² | AWG 10 | 3.5 mm | 9.5 mm |
| 10 mm² | AWG 8 | 4.3 mm | 12 mm |

## Features

- Standard module for power up to 40 A
- No special tools required for axial-screw termination

## Technical characteristics

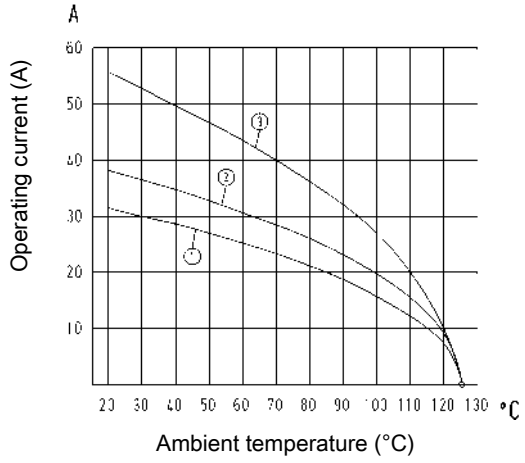
| | |
|---|---|
| Number of contacts | 3 |
| Rated current | 40 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current acc. to UL | 40 A |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ, ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

## Details

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Remarks on the axial screw technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Contact resistance axial screw contact: ≤ 0.3 mOhm

**Hex key (A/F 2)** see chapter Han 90

**Crimping tools** see chapter Han 90

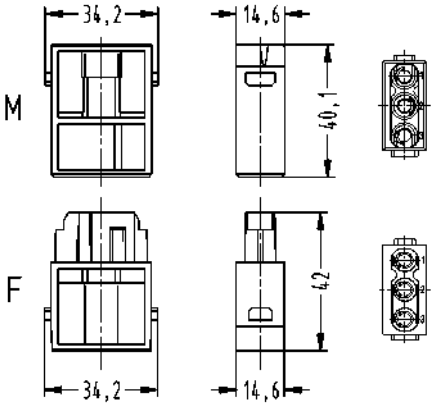
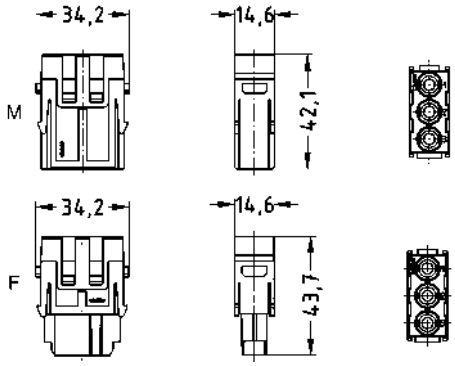
**Remarks on the crimp technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® C module

Number of contacts

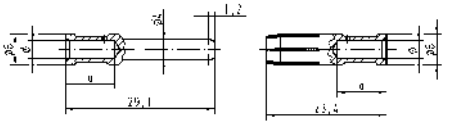
## 3

40 A 690 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® C module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 6 | 09 14 003 3001 | 09 14 003 3101 | <br>Contact arrangement (view from termination side) |
| Han-Modular®,<br>Han® C module,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 2.5 ... 8<br>6 ... 10 | 09 14 003 2601<br>09 14 003 2602 | 09 14 003 2701<br>09 14 003 2702 | <br>Contact arrangement (view from termination side)<br><br>Stripping length<br>mm² 2,5 4 6 10<br>mm $5^{+1}$ $5^{+1}$ $8^{+1}$ $11^{+1}$<br>Tightening torque<br>mm² 2,5 4 6 10<br>Nm 1,5 1,5 2 2 |

# Han® C module

Modu-
lar

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 1.5 mm² | AWG 16 | 1.75 mm | 9.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 9.5 mm |
| 4 mm² | AWG 12 | 2.85 mm | 9.5 mm |
| 6 mm² | AWG 10 | 3.5 mm | 9.5 mm |
| 10 mm² | AWG 8 | 4.3 mm | 12 mm |

# Han® CC Protected module



## Features

- Suitable for Han® C crimp contacts
- Designed for a high working voltage up to 830 V
- Finger safe male and female contacts
- High density of contacts

## Technical characteristics

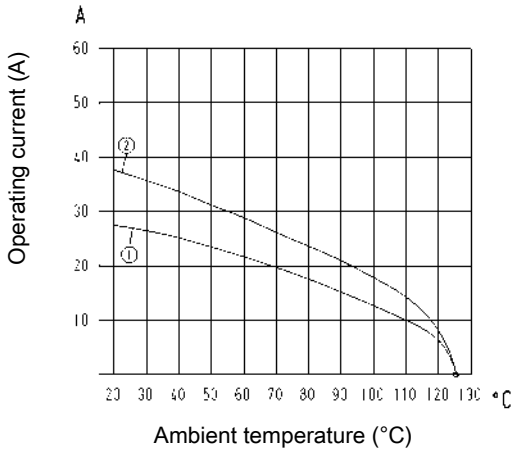
| | |
|---|---|
| Number of contacts | 4 |
| Rated current | 40 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

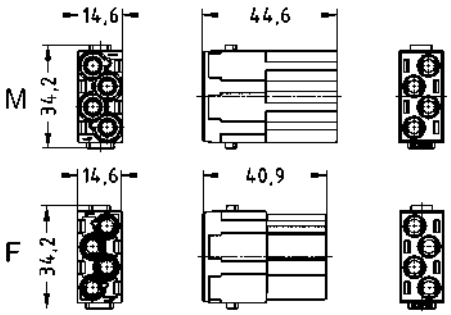
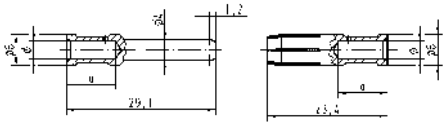
# Han® CC Protected module

Modu-
lar

Number of contacts

## 4

40 A 830 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® CC Protected module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 6 | 09 14 004 3041 | 09 14 004 3141 | <br>Contact arrangement (view from termination side) |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 1.5 mm² | AWG 16 | 1.75 mm | 9.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 9.5 mm |
| 4 mm² | AWG 12 | 2.85 mm | 9.5 mm |
| 6 mm² | AWG 10 | 3.5 mm | 9.5 mm |
| 10 mm² | AWG 8 | 4.3 mm | 12 mm |

# Han® CD module

## Features

- 3 contacts (40 A) for power circuits and 4 contacts (10 A) for signal circuits
- Ideal as motor drive connector
- Finger safe male and female contacts

## Technical characteristics

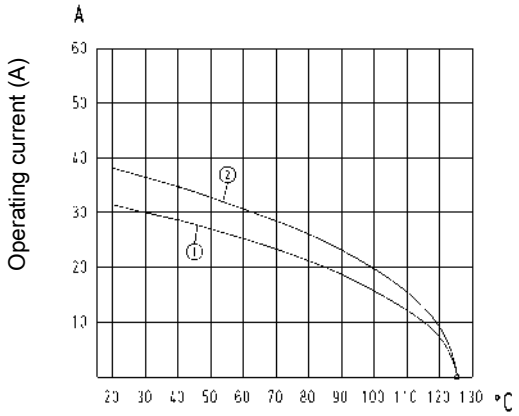
| | |
|---|---|
| Number of contacts | 3 |
| Additional contacts | + 4 additional signal contacts |
| Rated current | 40 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 830 V |
| Rated impulse voltage (signal) | 8 kV |
| Pollution degree (signal) | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤5 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

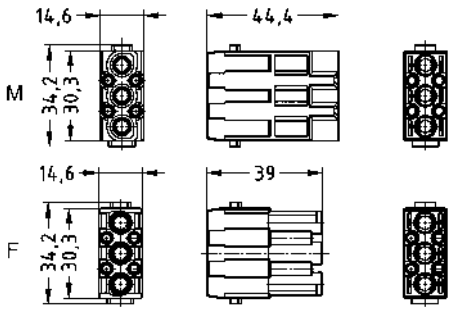
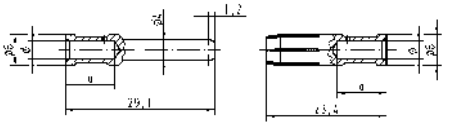
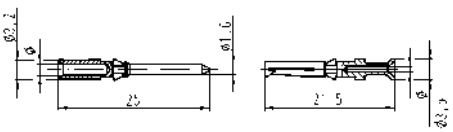
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® CD module

Number of contacts

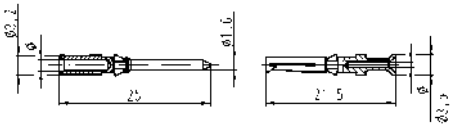
## 3

40 A 830 V 8 kV 3
10 A 830 V 8 kV 3
+ 4 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® CD module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 6 | 09 14 007 3001 | 09 14 007 3101 | <br>Contact arrangement (view from termination side) |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 — 1.75 mm — 9.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 9.5 mm<br>4 mm² AWG 12 — 2.85 mm — 9.5 mm<br>6 mm² AWG 10 — 3.5 mm — 9.5 mm<br>10 mm² AWG 8 — 4.3 mm — 12 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0.75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |

# Han® CD module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han® Guiding Dummy module



## Features

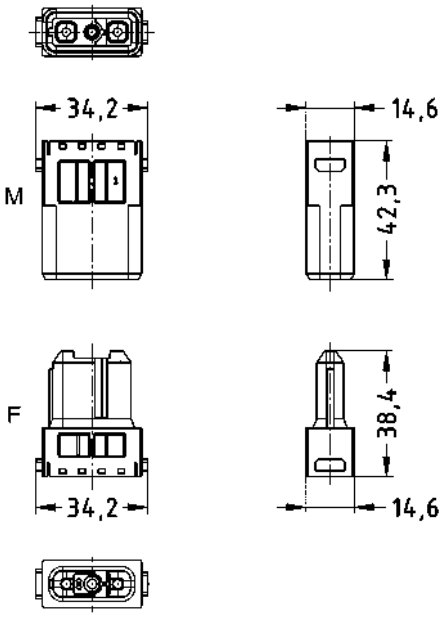
- Affordable module without contacts
- Centring function with a very large inlet cone of +/- 4 mm
- Significantly better handling compared to conventional guide pins/sockets
- Ideal add-on when dealing with many mating cycles or inaccessible connectors

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Lock-in range | ±4 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han® Guiding module,<br>Dummy module  | 09 14 003 3050 | 09 14 003 3150 |  |

# Han® Guiding Relay module



Number of contacts

3

16 A 500 V 6 kV 3

## Features

- 2 contacts with relay function (last mate - first break)
- Enables other power contacts to be switched off via a relay and thus offers greater safety in the event of a fault (when used as intended, the connector must not be plugged in or disconnected under voltage / load)

## Technical characteristics

| | |
|---|---|
| Number of contacts | 3 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Lock-in range | ±4 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

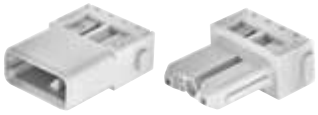
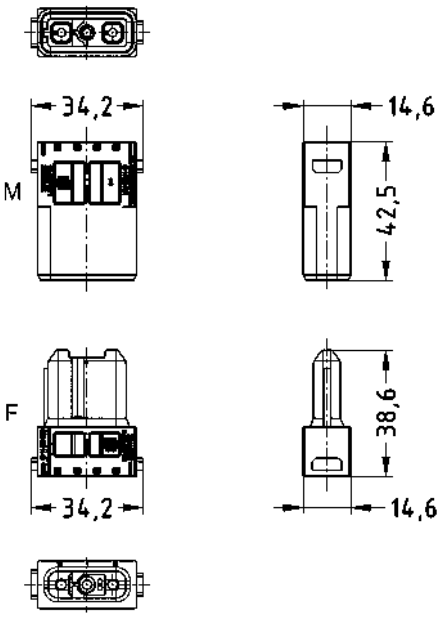
EN 60664-1
IEC 61984

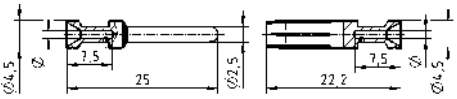
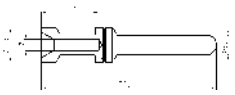
## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® Guiding module,<br>Relay module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 003 3051 | 09 14 003 3151 |  |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  |
| Han E®,<br>Crimp contact,<br>Relay contact,<br>Contact surface:<br>Silver plated  | 0.75 ... 1<br>1.5<br>2.5 | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111 | |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.75-1 mm² | AWG 18 | 1.45 mm | 7.5 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 7.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 7.5 mm |

# Han® Guiding PE module



Number of contacts

2+ ⏚

16 A 500 V 6 kV 3

## Features

- PE connection with a Han E® crimp contact
- Only for use in the Han-Eco® Modular plastic housings
- Centring function with a very large inlet cone of +/- 4 mm

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Lock-in range | ±4 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

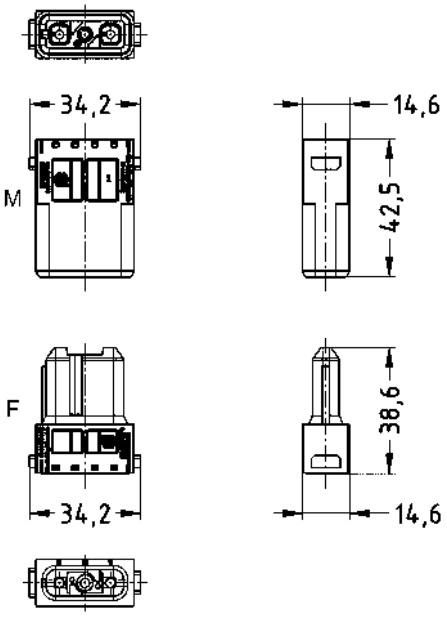
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

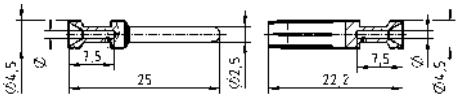
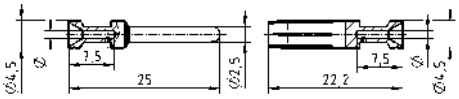
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® Guiding module,<br>PE module,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Not for Han-Modular® hinged frames! | 0.14 ... 4 | 09 14 003 3052 | 09 14 003 3152 |  |

# Han® Guiding PE module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |

## Features

- Standard module for power up to 16 A
- Han-Quick Lock® or crimp termination available

## Technical characteristics

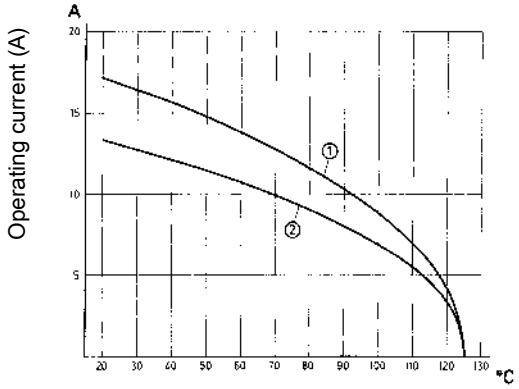
| | |
|---|---|
| Number of contacts | 6 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

**Crimping tools** see chapter Han 90

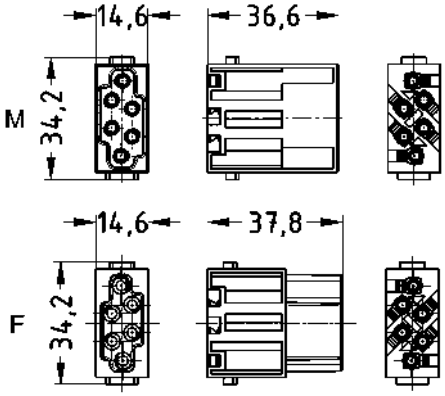
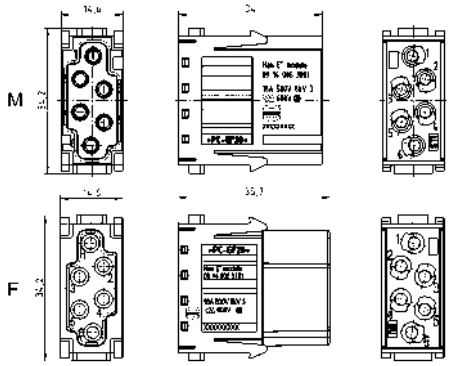
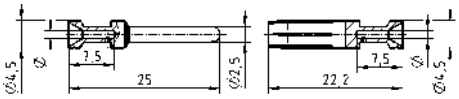
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

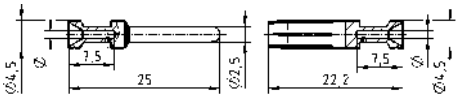
Number of contacts

# 6

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han E® module,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br> | 0.5 ... 2.5 | 09 14 006 2633 | 09 14 006 2733 |  |
| Han-Modular®,<br>Han E® module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 006 3001 | 09 14 006 3101 | <br>Contact arrangement (view from termination side) |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br>Stripping length 7.5 mm |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

# Han E® Screw module

Number of contacts

5

16 A 230/400 V 4 kV 3

Modu-
lar

## Features

- Screw connection, suitable for all users around the world
- No special tools required
- for flexible and solid conductors from 0.5 to 2.5 mm²
- Additional protection against voltage and accidental contact by a sliding insulation cover which closes automatically during mating.

## Technical characteristics

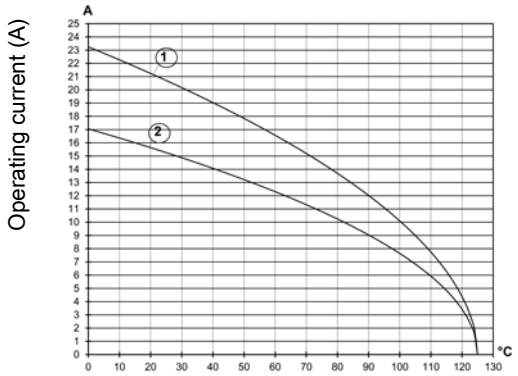
| | |
|---|---|
| Number of contacts | 5 |
| Rated current | 16 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2



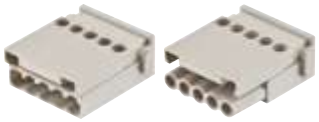
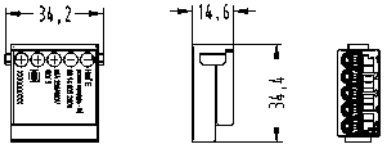
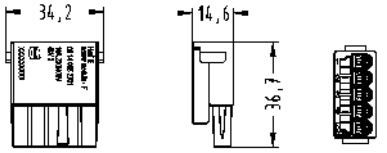

① Conductor cross-section 2.5 mm²
② Conductor cross-section 1.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

# Han E® Screw module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han E® module,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.5 ... 2.5 | 09 14 005 2601 | 09 14 005 2701 | M<br><br>F<br><br>Stripping length 7.5 mm<br>Tightening torque 0.5 Nm |

## Features

- Suitable for Han E® crimp contacts
- Designed for a high working voltage up to 830 V
- Finger safe male and female contacts

## Technical characteristics

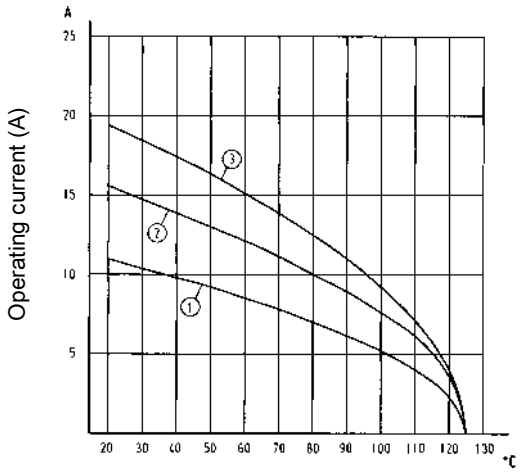
| | |
|---|---|
| Number of contacts | 6 |
| Rated current | 16 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

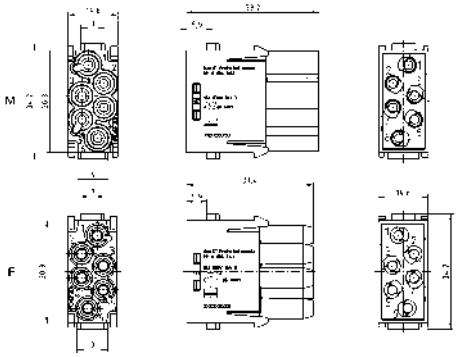
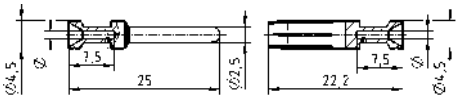
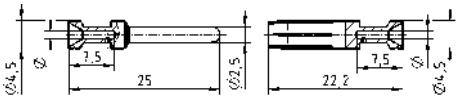
# Han E® Protected module



Number of contacts

## 6

16 A 830 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han E® Protected module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 006 3041 | 09 14 006 3141 | <br>Contact arrangement (view from termination side) |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |

## Features

- Han-Quick Lock® or crimp termination available
- High packing density

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Rated current | 16 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

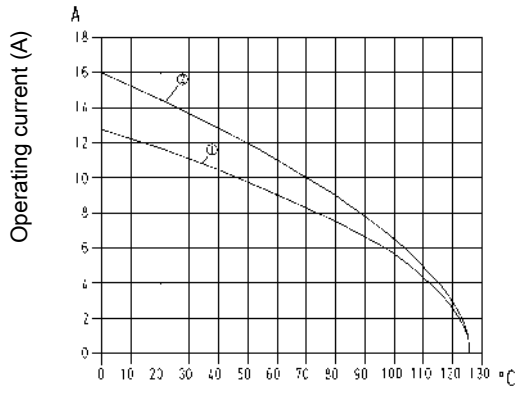
## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Han-Quick Lock® termination

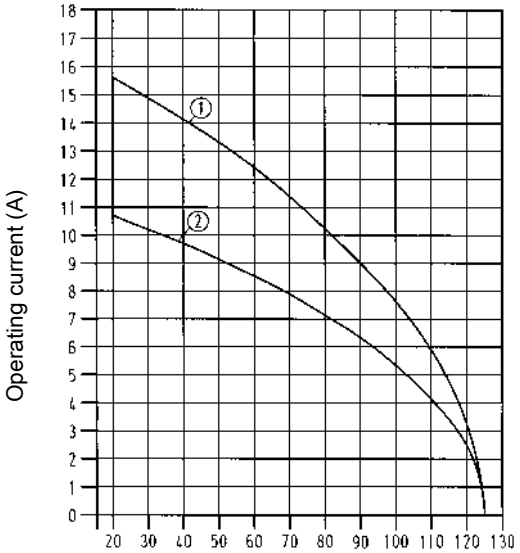



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²

## Derating

Crimp termination




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

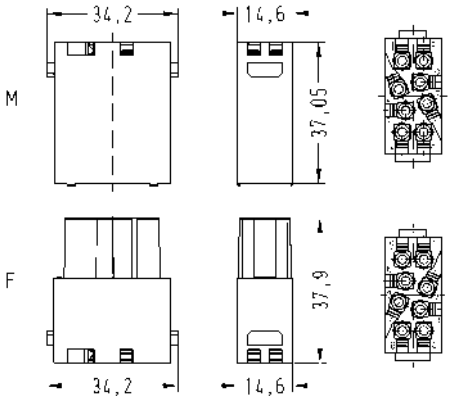
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

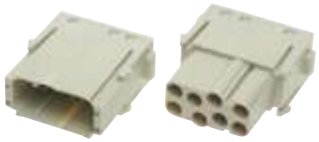
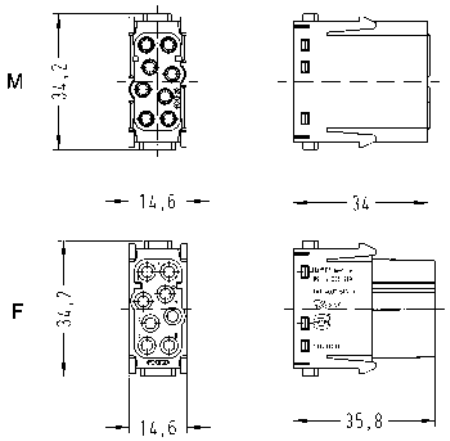
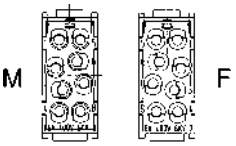
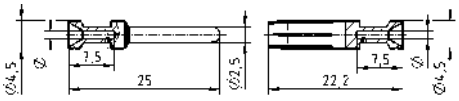
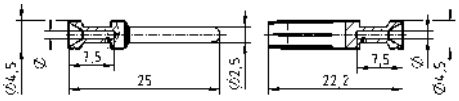
Number of contacts

# 8

16 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® EE module,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide | 0.5 ... 2.5 | 09 14 008 2633 | 09 14 008 2733 | <br>Contact arrangement (view from termination side)<br>Stripping length 10 mm |
| Han-Modular®,<br>Han® EE module,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Black slide | 0.25 ... 1.5 | 09 14 008 2634 | 09 14 008 2734 | |

# Han® EE module

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® EE module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 008 3001 | 09 14 008 3101 | <br><br>Contact arrangement (view from termination side)<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |

# Han® EEE module



## Features

- Suitable for Han E® crimp contacts
- Higher density of crimping contacts
- Standard module for power up to 16 A
- Also suitable as a reliable signal connector

## Technical characteristics

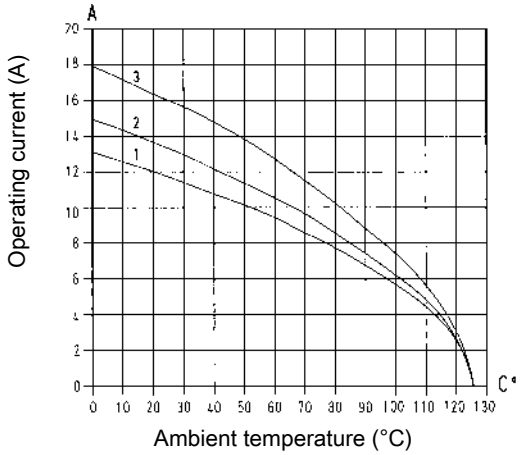
| | |
|---|---|
| Number of contacts | 20 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 2.5 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

## Details

**Crimping tools** see chapter Han 90

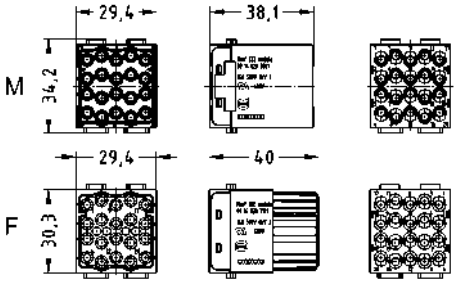
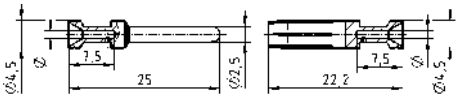
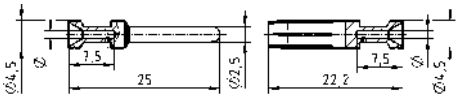
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

# 20

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® EEE module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 020 3001 | 09 14 020 3101 | <br>Contact arrangement (view from termination side) |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |

## Features

- Reliable cage clamp termination
- No special tools required

## Technical characteristics

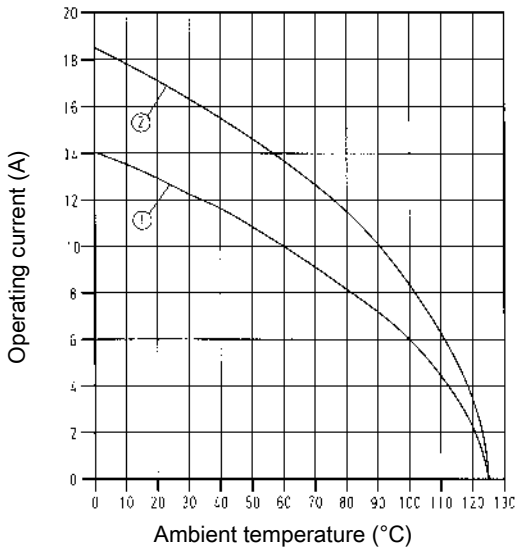
| | |
|---|---|
| Number of contacts | 5 |
| Rated current | 16 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²

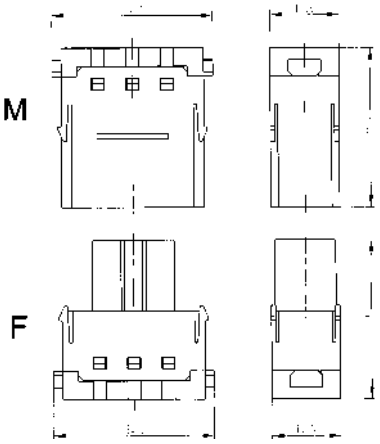
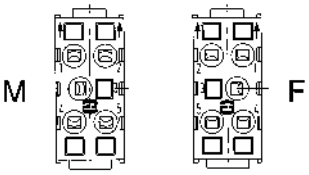
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

Number of contacts

# 5

16 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® ES module,<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated  | 0.14 ... 2.5 | 09 14 005 2616 | 09 14 005 2716 |   |
| Han-Modular®,<br>Han® ES module,<br>Cage-clamp termination,<br>Contact surface:<br>Gold plated | 0.14 ... 2.5 | 09 14 005 2617 | 09 14 005 2717 |   Contact arrangement (view from termination side) |

# Han® Shielded power module



## Features

- Interface for typical motor applications such as frequency-controlled drives
- 4 power contacts (pin 4 is pre-leading to be used as a PE)
- 2 signal contacts for temperature monitoring or breaks
- EMC compatible connection of the cable screen with a large-area shielding plate
- Shielded power cables can now be connectorised in combination with other cables

## Technical characteristics

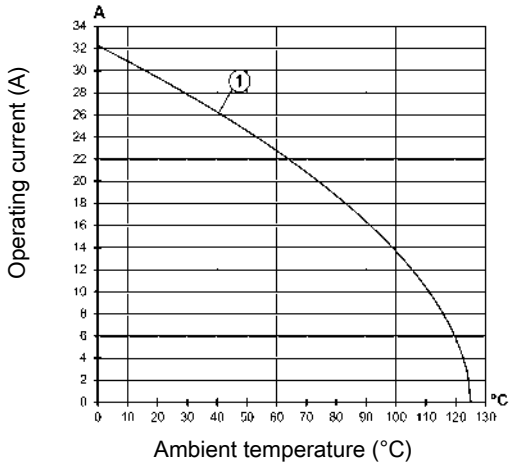
| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + 2 additional signal contacts, + shielding |
| Rated current | 16 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 400 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ, ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han E® crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

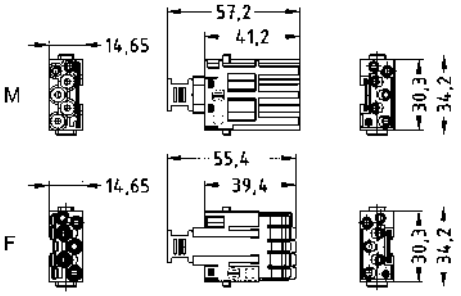
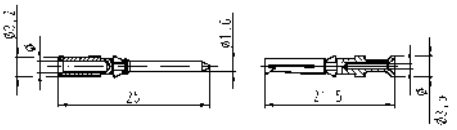
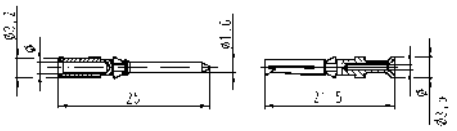
# Han® Shielded power module



Number of contacts

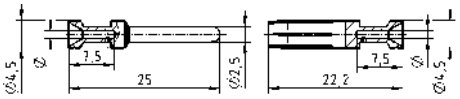
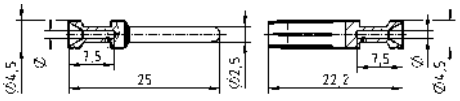
**4**

16 A 400 V 4 kV 3
10 A 400 V 4 kV 3
+ 2 additional signal contacts + shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® Shielded power module,<br>With shielding plate,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>4x Han E®<br>2x Han D® | 0.14 ... 4 | 09 14 006 3021 | 09 14 006 3121 | <br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |

# Han® Shielded power module



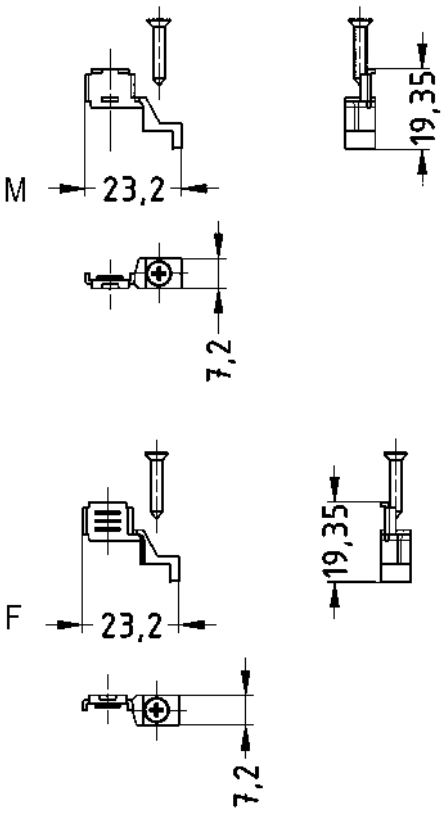
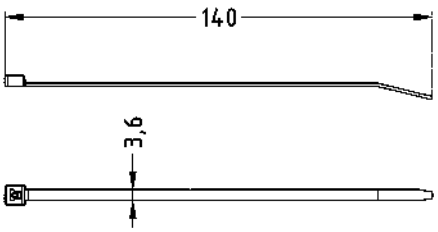
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |

## Features

- Optional Shielding termination to the hinged frames with the GND adapter

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Metal, Polyamide (PA) |
| Colour (accessories) | Black |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® Shielded power module, GND Adapter  | 09 14 000 9807 | 09 14 000 9808 |   |
| Cable tie, With metal latch  | 09 14 000 9809 | 09 14 000 9809 |   |

## Features

- Available in two versions: for Han® C or Han E® crimp contacts
- 2 contacts up to 5000 V
- Insulator out of a voltage resistant teflon material
- Combination with all other modules (pneumatic, signal etc.)

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 40 A, 16 A |
| Rated voltage conductor-earth | 2900 V |
| Rated voltage conductor-conductor | 5000 V |
| Rated impulse voltage | 15 kV |
| Pollution degree | 3 |
| Rated current acc. to UL | 31 A, 16 A |
| Rated voltage acc. to UL | 5000 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate / Teflon (PTFE) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

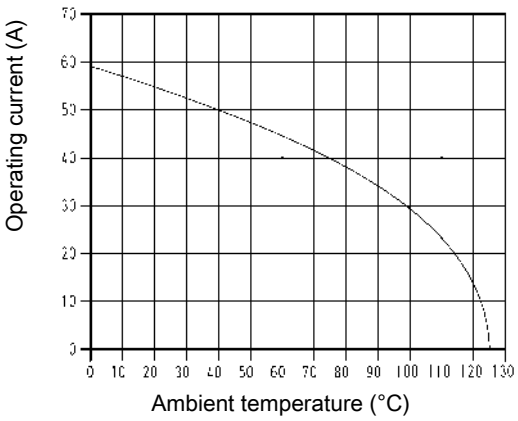
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

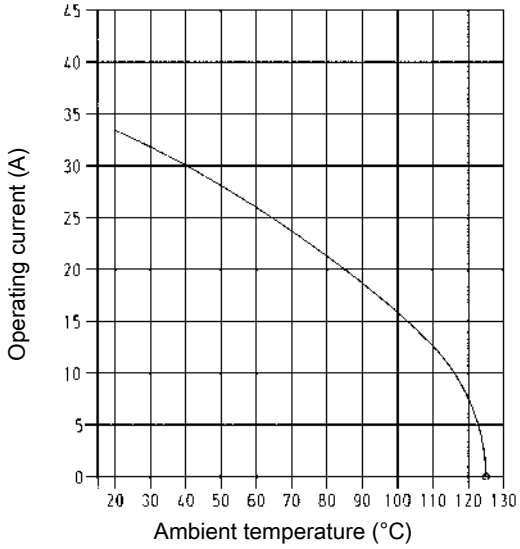
Han® C crimp contacts




① 24 B hoods/housings with 3 modules Conductor cross-section 6 mm²

## Derating

Han E® crimp contacts




① Housing Han® 16 B with 1 Han® HV module Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
EN 50124-1
IEC 60352-4
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

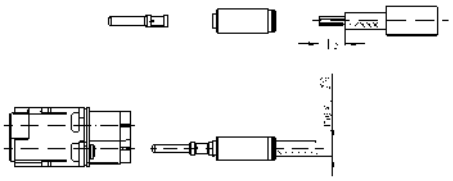
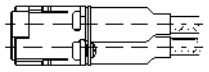
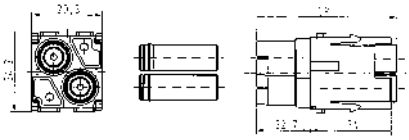
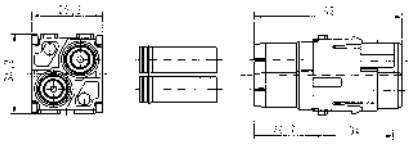
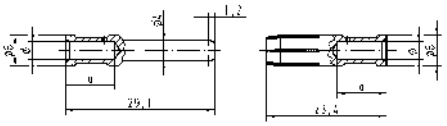
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® HV module

Number of contacts

## 2

40 A 2.900/5.000 V 15 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® HV module,<br>for Han® C crimp contacts,<br>Crimp termination,<br>Pack contents:<br>1 module,<br>2 locking sleeves,<br>2 heat shrink tubes<br><br>Please order crimp contacts separately. | 1.5 ... 10 | 09 14 002 3023 | 09 14 002 3123 | Assembly instructions<br><br><br>**ATTENTION!** Stripping length 13 mm<br>Crimp with tool 09 99 000 0888, 09 99 000 0110 or 09 99 000 0377<br>Snap crimped cable in the insert.<br>Shrink the heat shrink tube over the rear of contact.<br>M <br>F  |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108<br>09 32 000 6109 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208<br>09 32 000 6209 |  |

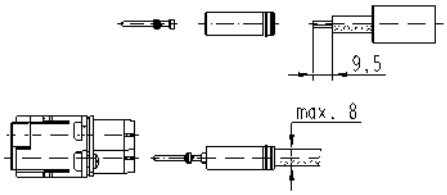
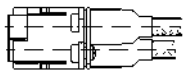
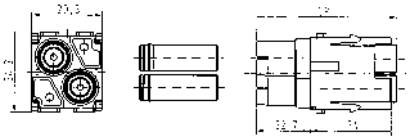
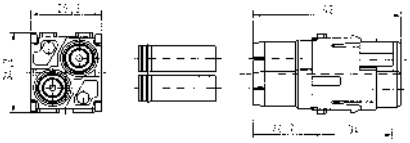
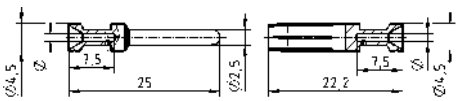
# Han® HV module

Number of contacts

## 2

16 A 2.900/5.000 V 15 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® HV module,<br>for Han E® crimp contacts,<br>Crimp termination,<br>Pack contents:<br>1 module,<br>2 locking sleeves,<br>2 heat shrink tubes<br><br>Please order crimp contacts separately. | 0.5 ... 4 | 09 14 002 3021 | 09 14 002 3121 | Assembly instructions<br><br><br><br>**ATTENTION!** Stripping length 9.5 mm<br>Crimp with crimping tool 09 99 000 0888<br>Snap crimped cable in the insert.<br>Shrink the heat shrink tube over the rear of contact.<br>M <br>F  |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 | <br> |

## Features

- Suitable for Han E® crimp contacts
- 2 contacts up to 2500 V
- Insulator out of a voltage resistant teflon material
- Combination with all other modules (pneumatic, signal etc.)

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 16 A |
| Rated voltage | 2500 V |
| Rated impulse voltage | 15 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate / Teflon (PTFE) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

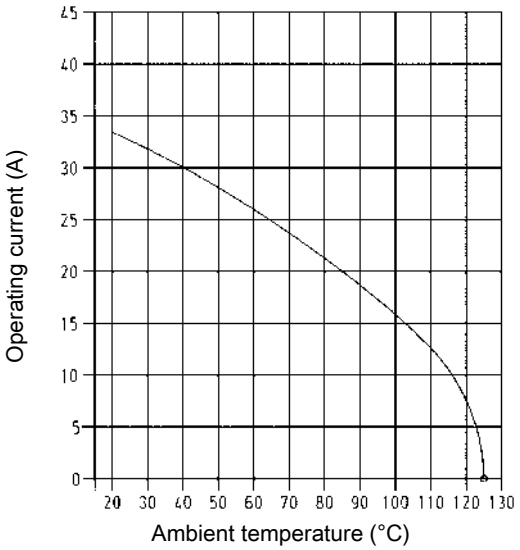
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Han E® crimp contacts




① Housing Han® 16 B with 1 Han® HV module Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
EN 50124-1
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

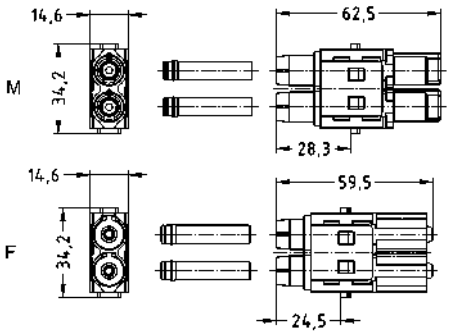
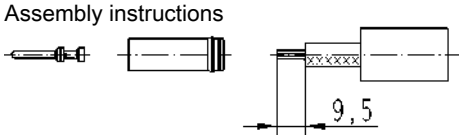
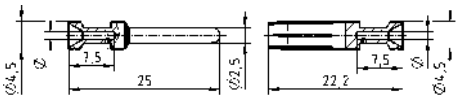
# Han® HV Single module



Number of contacts

## 2

16 A  2.500 V  15 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® HV module,<br>Single module,<br>Crimp termination,<br>Pack contents:<br>1 module,<br>2 locking sleeves,<br>2 heat shrink tubes<br><br>Please order crimp contacts separately. | 0.5 ... 4 | 09 14 002 3025 | 09 14 002 3125 | <br>Assembly instructions<br><br>**ATTENTION!** Stripping length 9.5 mm<br>Crimp with crimping tool 09 99 000 0888<br>Snap crimped cable in the insert.<br>Shrink the heat shrink tube over the rear of contact. |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  |

## Features

- Han-Quick Lock® or crimp termination available
- Standard module for signal up to 10 A

## Technical characteristics

| | |
|---|---|
| Number of contacts | 12 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

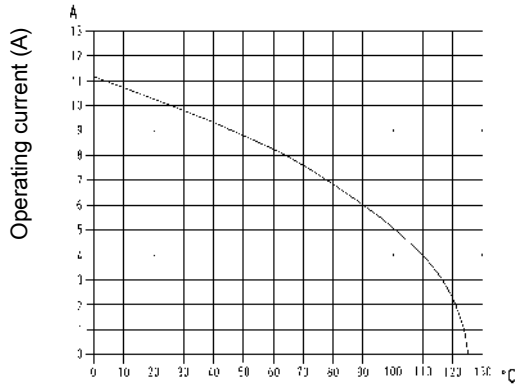
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Han-Quick Lock® termination

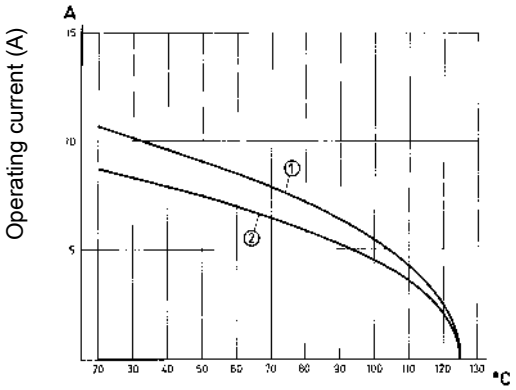



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

## Derating

Crimp termination




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

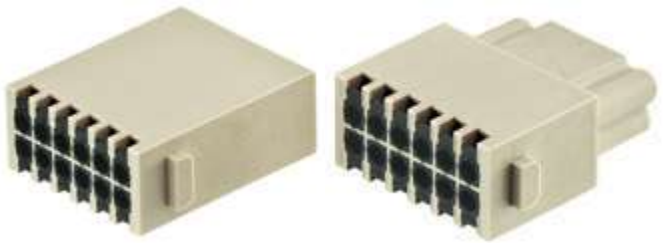
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

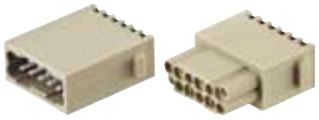
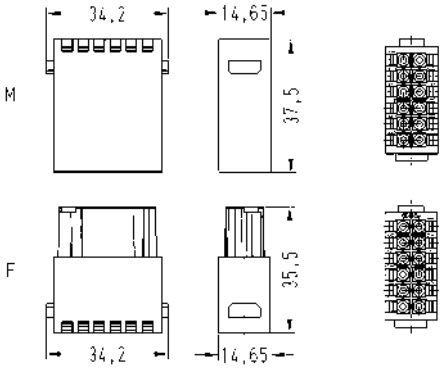
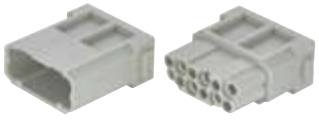
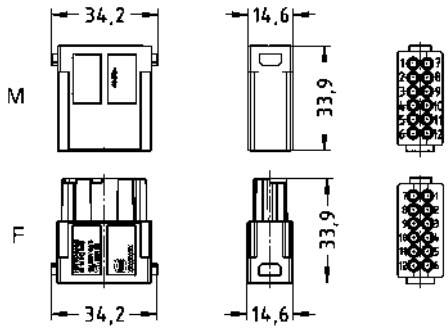
# Han DD® module

Number of contacts

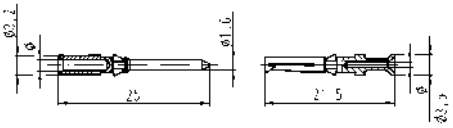
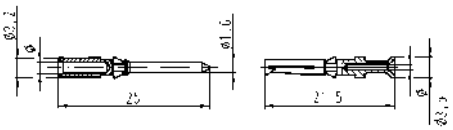
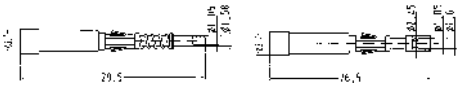
## 12

10 A 250 V 4 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han DD® module,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Black slide | 0.25 ... 1.5 | 09 14 012 2632 | 09 14 012 2732 | <br>Contact arrangement (view from termination side)<br>Stripping length 10 mm |
| Han-Modular®,<br>Han DD® module,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Gold plated<br>Black slide | 0.25 ... 1.5 | 09 14 012 2634 | 09 14 012 2734 | |
| Han-Modular®,<br>Han DD® module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 14 012 3002 | 09 14 012 3102 | <br>Contact arrangement (view from termination side) |

# Han DD® module

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |

# Han DD® double module

## Features

- 36 Han D® contacts up to 400 V
- Suitable for transmitting power (10 A) and signals in one module
- e.g. for three phase AC motors including feedback for all six axes of a robot

## Technical characteristics

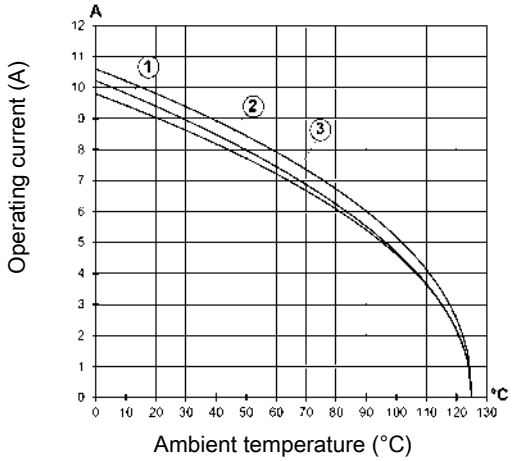
| | |
|---|---|
| Number of contacts | 36 |
| Rated current | 10 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 3 modules Conductor cross-section 1 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

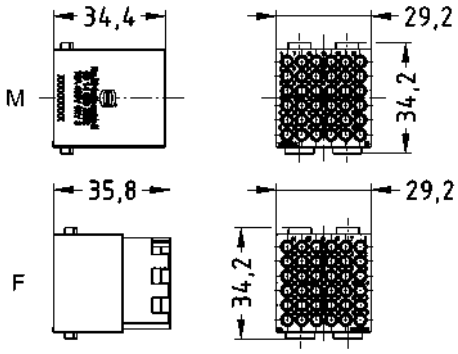
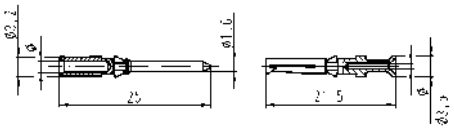
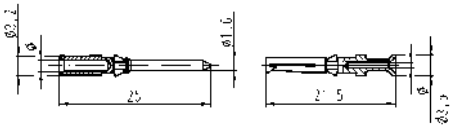
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han DD® double module

Number of contacts

## 36

10 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han DD® module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 14 036 3002 | 09 14 036 3102 | <br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0 14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0 75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0 14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0 75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |

## Technical characteristics

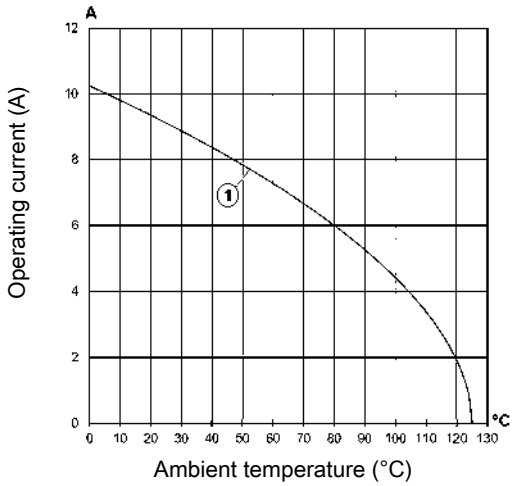
| | |
|---|---|
| Number of contacts | 42 |
| Rated current | 10 A |
| Rated voltage | 150 V |
| Rated impulse voltage | 2.5 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 250 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Liquid crystal polymer (LCP) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²

## Specifications and approvals

UL 1977 ECBT2.E235076
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

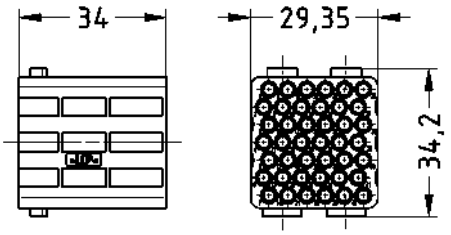
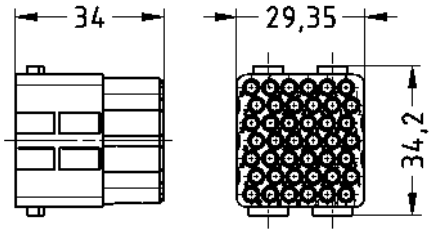
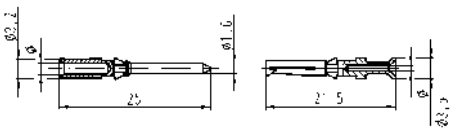
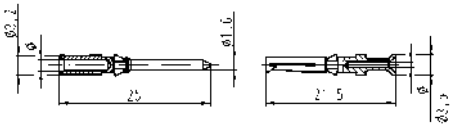
# Han DD® Quad module

Modu-
lar

Number of contacts

## 42

10 A 150 V 2.5 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han DD® Quad module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 14 042 3001 | 09 14 042 3101 | <br> |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |

# Han® DDD module

## Features

- Suitable for Han D® crimp contacts
- High packing density

## Technical characteristics

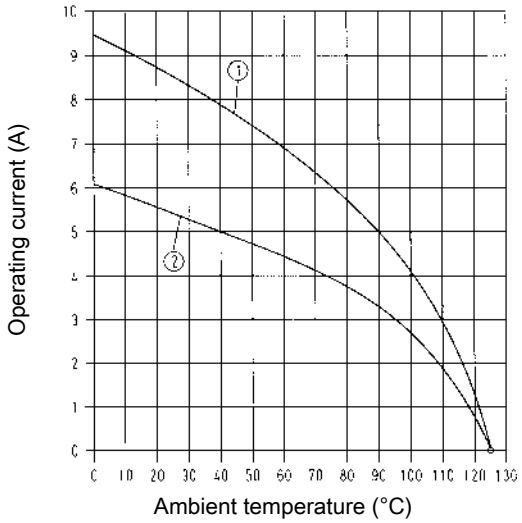
| | |
|---|---|
| Number of contacts | 17 |
| Rated current | 10 A |
| Rated voltage | 160 V |
| Rated impulse voltage | 2.5 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 250 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

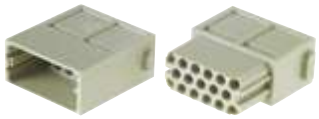
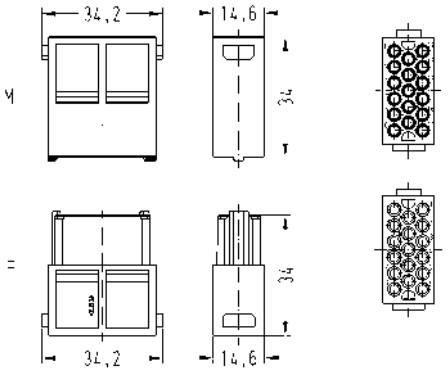
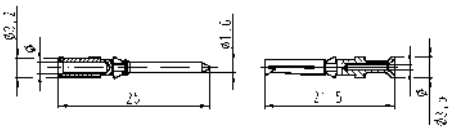
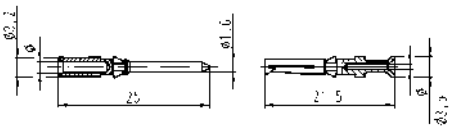
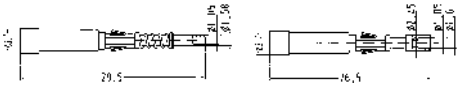
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® DDD module

Number of contacts

## 17

10 A 160 V 2.5 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® DDD module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 14 017 3001 | 09 14 017 3101 | <br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |

## Features

- Suitable for standard D-Sub crimp contacts
- High packing density

## Technical characteristics

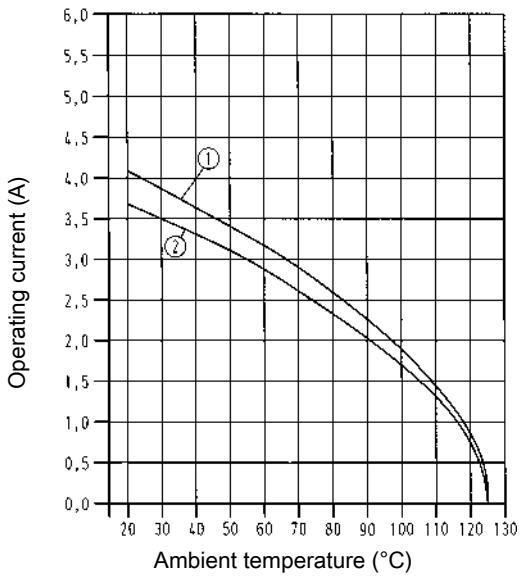
| | |
|---|---|
| Number of contacts | 25 |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 30 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules; turned contacts Conductor cross-section 0.5 mm²
② 24 B hoods/housings with 6 modules; stamped contacts Conductor cross-section 0.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

## Details

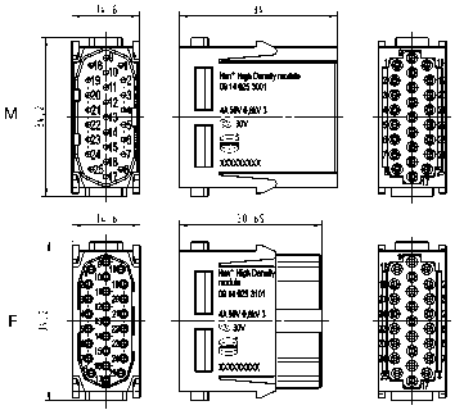
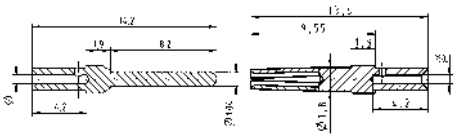
Guide pins and bushes are recommended (see chapter Han 80).

# Han® High Density module

Number of contacts

## 25

4 A  50 V  0.8 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® High Density module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 14 025 3001 | 09 14 025 3101 | <br>Contact arrangement (view from termination side) |
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 |  |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

# Han® Full High Density module



## Features

- Suitable for standard D-Sub crimp contacts
- 44 % higher density

## Technical characteristics

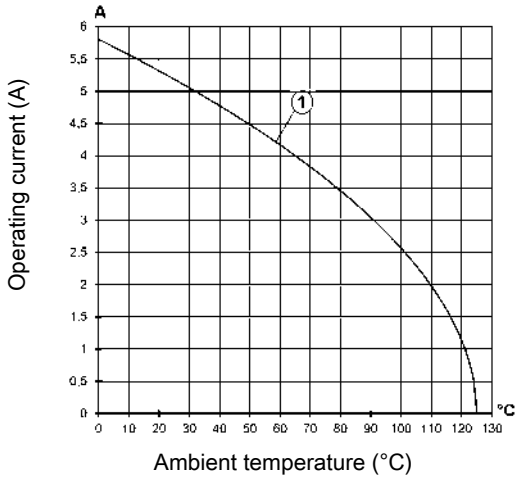
| | |
|---|---|
| Number of contacts | 36 |
| Rated current | 4 A |
| Rated voltage | 32 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 6 B hoods/housings with 2 modules Conductor cross-section 0.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984

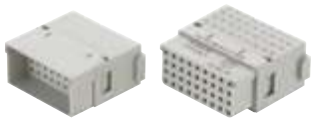
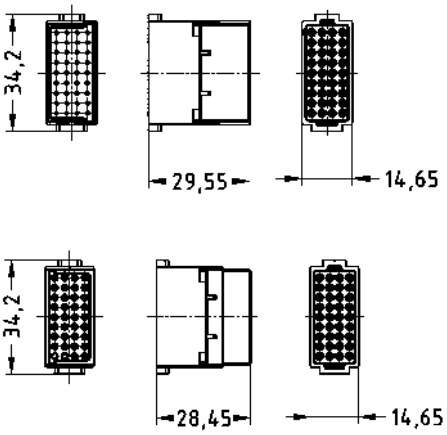
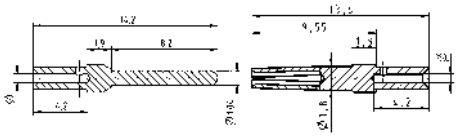
# Han® Full High Density module

Modu-
lar

Number of contacts

## 36

4 A  32 V  0.8 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® Full High Density module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 14 036 3001 | 09 14 036 3101 |  |
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 |  |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

# Han® Shielded module basic

## Features

- EMC compatible connection of the cable screen with a large-area shielding plate
- High contact density up to 27 shielded contacts
- Suitable for turned or stamped D-Sub contacts
- Applicable as cost effective shielding connection

## Technical characteristics

| | |
|---|---|
| Number of contacts | 27 |
| Additional contacts | + shielding |
| Rated current | 4 A |
| Rated voltage | 32 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Polyamide (PA), Metal |
| Colour (accessories) | Black |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

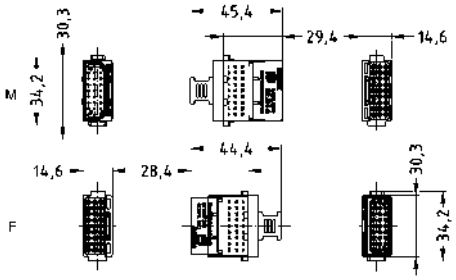
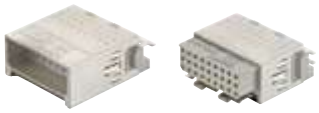
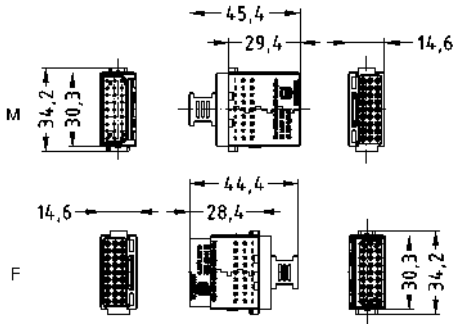
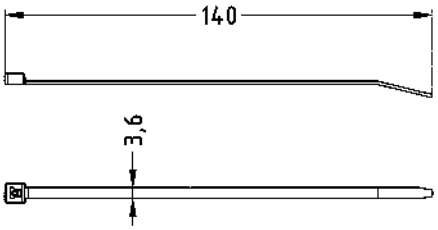
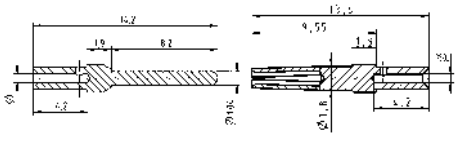
# Han® Shielded module basic

Modu-
lar

Number of contacts

## 27

4 A 32 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® Shielded module basic,<br>With 180° shielding element,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 14 027 3021 | 09 14 027 3121 |  |
| Han-Modular®,<br>Han® Shielded module basic plus,<br>With 360° shielding element,<br>Crimp termination<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 14 027 3022 | 09 14 027 3122 |  |
| Cable tie,<br>With metal latch<br> | | 09 14 000 9809 | 09 14 000 9809 |  |
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 | <br>Conductor cross-section / ø / Stripping length<br>0.09-0.25 mm² / 0.64 mm / 4 mm<br>0.13-0.33 mm² / 0.88 mm / 4 mm<br>0.25-0.52 mm² / 1.13 mm / 4 mm<br>0.33-0.82 mm² / 1.34 mm / 4 mm<br>for stranded wire according IEC 60228 Class 5 |

# Han® D-Sub module

## Features

- D-Sub 1 (9-pin) in the Han-Modular® system
- Suitable for the transmission of sensitive signals
- Compatible to crimp, solder or IDC termination

## Technical characteristics

| | |
|---|---|
| Number of contacts | 9 |
| Rated current | 5 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 30 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC), Zinc die-cast |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

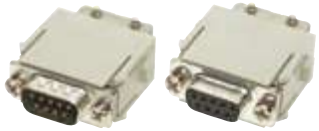
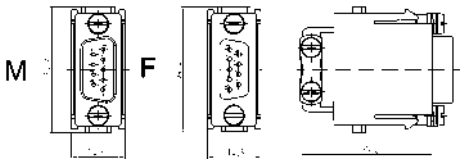
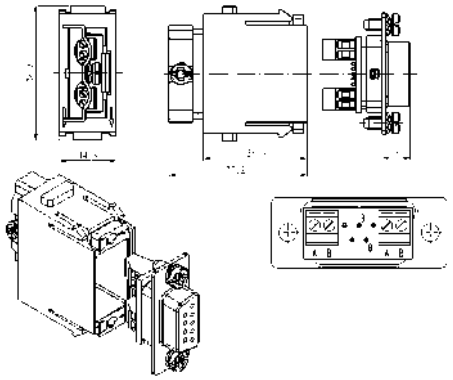
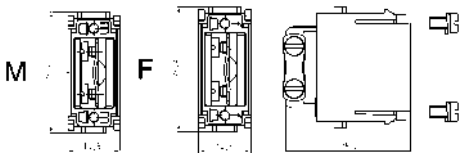
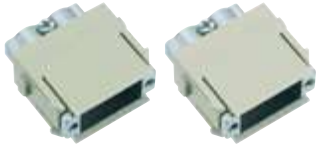
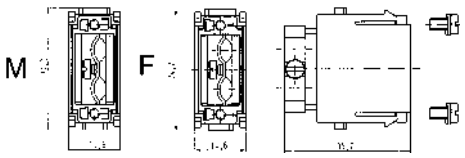
Guide pins and bushes are recommended (see chapter Han 80).

# Han® D-Sub module

Number of contacts

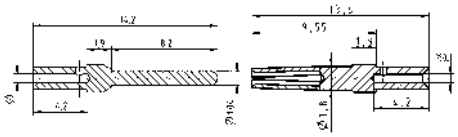
## 9

5 A 50 V 0.8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® D-Sub module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.08 ... 0.52 | 09 14 009 3001 | 09 14 009 3101 |  |
| Han-Modular®,<br>Han® D-Sub module,<br>Screw termination<br><br>for RS 485-based bus systems with T-functionality | 0.08 ... 0.52 | | 09 14 009 3151 | <br>Contact arrangement (view from termination side)<br>Signal A: Contact no. 8<br>Signal B: Contact no. 3 |
| Han-Modular®,<br>Adapter module,<br>for D-Sub 1 (9-pin)<br><br>for one cable | | 09 14 000 9930 | 09 14 000 9931 |  |
| Han-Modular®,<br>Adapter module,<br>for D-Sub 1 (9-pin)<br><br>for two cables | | 09 14 000 9932 | 09 14 000 9933 |  |

# Han® D-Sub module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| D-Sub,<br>Standard,<br>Crimp contact | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 |  |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

# Han® USB module

Modu-
lar

## Features

- According to USB 2.0 / USB 3.0 specification
- Simple and cost effective termination by plug in patch cable
- Cable tie strain relief

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4, 8 |
| Rated current | 1 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 30 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 60352-4
UL 1977 ECBT2.E235076
DNV GL

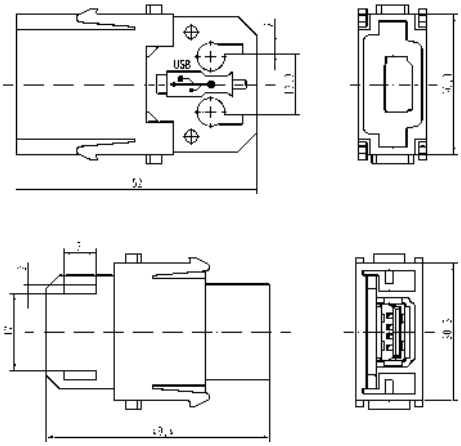
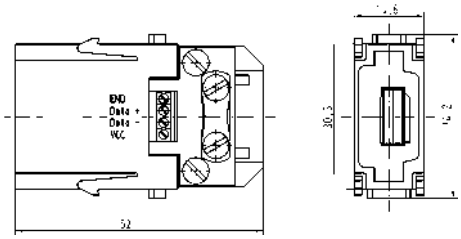
# Han® USB module



Number of contacts

4

1 A  50 V  0.8 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® USB module,<br>for patch cable<br><br>USB 2.0 | | 09 14 001 4601 | 09 14 001 4701 |  |
| Han-Modular®,<br>Han® USB module,<br>for patch cable<br><br>USB 3.0 | | | 09 14 001 4703 | |
| Han-Modular®,<br>Han® USB module,<br>for screw termination,<br>Screw termination<br><br>USB 2.0 | 0.14 ... 0.5 | 09 14 001 4651 | | <br>Stripping length 4.5 mm<br>Tightening torque 0.12 Nm |

# Han® FireWire module

1 A 50 V 0.8 kV 3



## Features

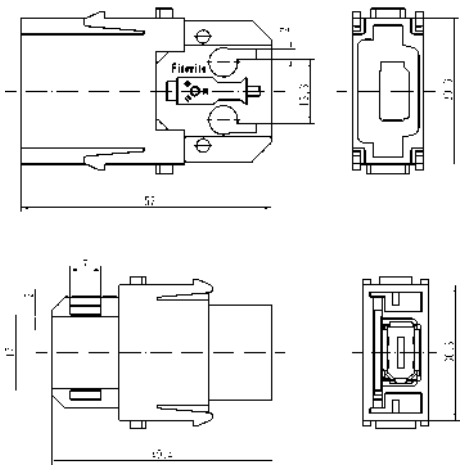
- Compatibel to IEEE 1394
- Simple and cost effective termination by plug in patch cable
- Cable tie strain relief

## Technical characteristics

| | |
|---|---|
| Number of contacts | 6 |
| Rated current | 1 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®, Han® FireWire module, for patch cable  | 09 14 001 4611 | 09 14 001 4711 |  |

# Han® RJ45 module, female

Number of contacts

8



## Features

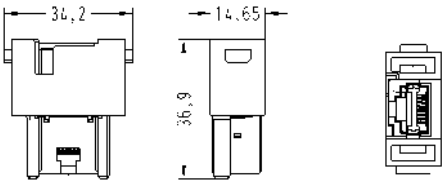
- Single module with standard shielded RJ45 plug and jack
- Cat. 6 for all data pairs (8-pin)
- Patch cables are assembled/removed without tools

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8, 4 |
| Rated current | 1 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 30 V |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +70 °C |
| Mating cycles | ≥500 |
| Transmission characteristics | Cat. $6_A$, Class $E_A$ up to 500 MHz, Cat. 5, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Material (insert) | Polyamide (PA), Polycarbonate (PC), Zinc die-cast, nickel-plated |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
UL 1977 ECBT2.E235076

| Identification | Part number Female | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Han® RJ45 module,<br>Gender changer,<br>for patch cable,<br>8-pins,<br>Cat. $6_A$  | 09 14 001 4721 |   |
| Han-Modular®,<br>Han® RJ45 module,<br>Single module  | 09 14 001 4722 | |
| Please order insert separately. | | |

# Han® RJ45 module, female



| Identification | | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Data connectors,<br>Han® RJ45 cable jack,<br>preLink® IDC insulation displacement termination,<br>8-pins,<br>Cat. $6_A$  | AWG 23 ... AWG 22 | 09 14 008 4720 | |
| Data connectors,<br>Han® RJ45 cable jack,<br>IDC termination,<br>4-pin,<br>Cat. 5  | AWG 24 ... AWG 22 | 09 14 545 1120 | |
| Data connectors,<br>Han® RJ45 cable jack,<br>IDC termination,<br>8-pins,<br>Cat. $6_A$  | AWG 24 ... AWG 22<br>AWG 28 ... AWG 24 | 09 14 545 1562<br>09 14 545 1561 | |

# Han® RJ45 module, male



## Features

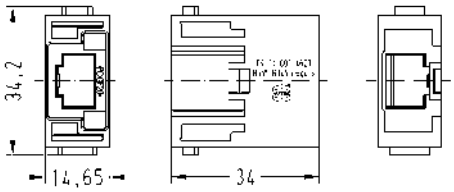
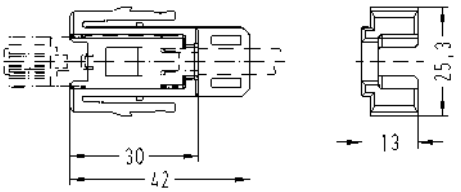
- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- 360° shielded contact
- Field assembly without tools possible by means of *HARAX*® rapid termination in IDC technology
- Suitable for termination of massive and flexible wires

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4 |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +70 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤1.6 mm |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s |
| Material (insert) | Polycarbonate (PC), Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
IEC 60603-7
DIN EN 45545-2 R26: HL1, HL2, HL3

| Identification | | Part number Male | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han® RJ45 module,<br>Single module<br> | | 09 14 001 4623 |  |
| Data connectors,<br>RJ Industrial RJ45 connector set,<br>Shielded<br> | AWG 24 ... AWG 22<br>AWG 26 | 09 45 400 1100<br>09 45 400 1109 | <br>Wire outer diameter ≤ 1.6 mm |

# Han® RJ45 module, male

Number of contacts

# 8



## Features

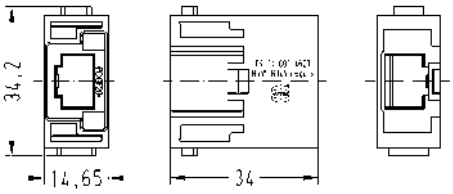
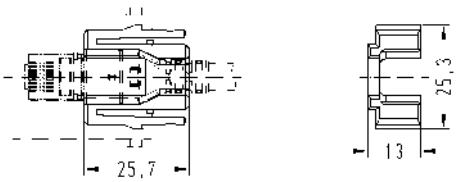
- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- 360° shielded contact
- Field assembly without tools possible by means of *HARAX*® rapid termination in IDC technology
- Gigalink: Field assembly by means of piercing contacts (Assembly tool 09 45 800 0520)
- Suitable for termination of massive and flexible wires
- Gigalink: Suitable for termination of flexible wires

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +70 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤1.05 mm, ≤1.5 mm |
| Transmission characteristics | Cat. $6_A$, Class $E_A$ up to 500 MHz, Cat. 6, Class E up to 250 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Material (insert) | Polycarbonate (PC), Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

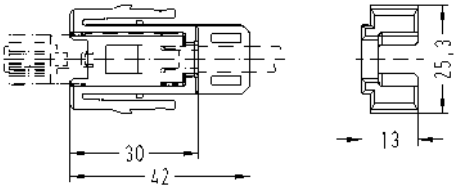
## Specifications and approvals

EN 60664-1
IEC 61984
IEC 60603-7
DIN EN 45545-2 R22: HL1, HL2, HL3
DIN EN 45545-2 R23: HL1, HL2, HL3
UL 1977 ECBT2.E102079
CSA-C22.2 No. 182.3 ECBT8.E102079
DNV GL

| Identification | | Part number Male | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han® RJ45 module,<br>Single module<br> | | 09 14 001 4623 |  |
| Data connectors,<br>RJ Industrial RJ45 Gigalink connector set,<br>Piercing termination,<br>Fully shielded, 360° shielding contact,<br>Cat. $6_A$<br> | AWG 28 ... AWG 24 | 09 45 400 1520 | <br>Wire outer diameter ≤ 1.05 mm |

# Han® RJ45 module, male



| Identification | | Part number Male | Drawing (dimensions in mm) |
|---|---|---|---|
| Data connectors,<br>RJ Industrial RJ45 connector set,<br>Shielded,<br>Cat. 6<br> | AWG 27 ... AWG 22 | 09 45 400 1560 | <br>Wire outer diameter ≤ 1.5 mm |

# RJ45 patch cable

## Features

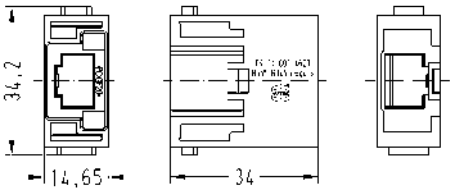
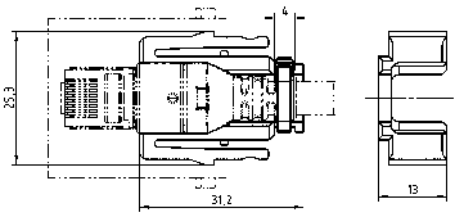
- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- Patch cables are assembled/removed without tools

## Technical characteristics

| | |
|---|---|
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

| Identification | Part number Male | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®, Han® RJ45 module, Single module  | 09 14 001 4623 |   |
| Han-Modular®, Han® RJ45 module, Adapter, for patch cable  | 09 14 000 9966 |   |

# RJ45 patch cable

4x 2 Twisted Pair
HARTING RJ Industrial®
HARTING RJ Industrial®





## Features

- Locking lever protection for RJ45 connector latch
- Very short plug design in combination with robust bend protection
- Fully EMC screened (aluminium-clad foil and braid)

## Technical characteristics

| | |
|---|---|
| Number of cores | 8 |
| Core structure | 4x 2 Twisted Pair |
| Connector 1 | HARTING RJ Industrial® |
| Connector 2 | HARTING RJ Industrial® |
| Limiting temperature | -30 ... +75 °C unmoved,<br>-5 ... +50 °C moved |
| Degree of protection acc. to IEC 60529 | IP20 |
| Transmission characteristics | Cat. 5e, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s |
| Material (cable) | PUR (polyurethane) |
| Colour (cable) | Yellow |
| RoHS | compliant |

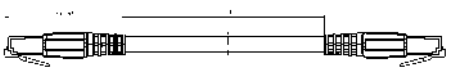
## Specifications and approvals

IEC 11801
IEC 24702
IEC 61935-2

CE

## Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| RJ45,<br>Copper cable (round),<br>Halogen-free,<br>Oil resistant,<br>Cable assemblies,<br>Pre-assembled on both sides,<br>IP20 | 0.2 m<br>0.3 m<br>0.4 m<br>0.5 m<br>0.6 m<br>0.7 m<br>0.8 m<br>0.9 m<br>1 m<br>1.5 m<br>2 m<br>2.5 m<br>3 m<br>3.5 m<br>4 m<br>5 m<br>6 m<br>7 m<br>7.5 m<br>8 m<br>9 m<br>10 m<br>12 m<br>15 m<br>20 m<br>25 m<br>30 m<br>35 m<br>40 m<br>50 m | 09 47 474 7001<br>09 47 474 7002<br>09 47 474 7003<br>09 47 474 7004<br>09 47 474 7005<br>09 47 474 7006<br>09 47 474 7007<br>09 47 474 7008<br>09 47 474 7009<br>09 47 474 7010<br>09 47 474 7011<br>09 47 474 7012<br>09 47 474 7013<br>09 47 474 7024<br>09 47 474 7014<br>09 47 474 7015<br>09 47 474 7016<br>09 47 474 7017<br>09 47 474 7018<br>09 47 474 7019<br>09 47 474 7020<br>09 47 474 7021<br>09 47 474 7035<br>09 47 474 7022<br>09 47 474 7023<br>09 47 474 7025<br>09 47 474 7027<br>09 47 474 7026<br>09 47 474 7028<br>09 47 474 7029 |  |

# RJ45 patch cable

Modu-
lar

4x 2 Twisted Pair
HARTING RJ Industrial®
HARTING RJ Industrial®



## Features

- Locking lever protection for RJ45 connector latch
- Very short plug design in combination with robust bend protection
- Fully EMC screened (aluminium-clad foil and braid)

## Technical characteristics

| | |
|---|---|
| Number of cores | 8 |
| Core structure | 4x 2 Twisted Pair |
| Connector 1 | HARTING RJ Industrial® |
| Connector 2 | HARTING RJ Industrial® |
| Limiting temperature | -30 ... +75 °C unmoved,<br>-5 ... +50 °C moved |
| Degree of protection acc. to IEC 60529 | IP20 |
| Transmission characteristics | Cat. $6_A$, Class $E_A$ up to 500 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s |
| Material (cable) | PUR (polyurethane) |
| Colour (cable) | Yellow |
| RoHS | compliant |

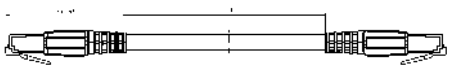
## Specifications and approvals

IEC 11801
IEC 61156-6
IEC 24702

CE

## Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| RJ45,<br>Copper cable (round),<br>Wiring 1:1,<br>Halogen-free,<br>Oil resistant,<br>Cable assemblies,<br>Pre-assembled on both sides,<br>IP20 | 0.2 m<br>0.3 m<br>0.4 m<br>0.5 m<br>0.6 m<br>0.7 m<br>0.8 m<br>0.9 m<br>1 m<br>1.5 m<br>2 m<br>2.5 m<br>3 m<br>4 m<br>5 m<br>6 m<br>7 m<br>7.5 m<br>8 m<br>9 m<br>10 m<br>15 m<br>16 m<br>20 m<br>25 m<br>30 m<br>100 m | 09 47 474 7101<br>09 47 474 7102<br>09 47 474 7103<br>09 47 474 7104<br>09 47 474 7105<br>09 47 474 7106<br>09 47 474 7107<br>09 47 474 7108<br>09 47 474 7109<br>09 47 474 7110<br>09 47 474 7111<br>09 47 474 7112<br>09 47 474 7113<br>09 47 474 7114<br>09 47 474 7115<br>09 47 474 7116<br>09 47 474 7117<br>09 47 474 7118<br>09 47 474 7119<br>09 47 474 7120<br>09 47 474 7121<br>09 47 474 7122<br>09 47 474 7124<br>09 47 474 7123<br>09 47 474 7126<br>09 47 474 7125<br>09 47 474 7199 |  |

# Han® Gigabit module

## Features

- Shielding bus separate from housing potential
- Suitable for the transmission of sensitive signals (e.g. bus signals)
- Usable for Gigabit Ethernet cat. $6_A$
- Suitable for PoE++

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + shielding |
| Rated current | 5 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage | 50 V AC, 60 V DC |
| Rated voltage acc. to UL | 30 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Transmission characteristics | Cat. $6_A$, Class $E_A$ up to 500 MHz, Cat. $7_A$, Class $F_A$ up to 1,000 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

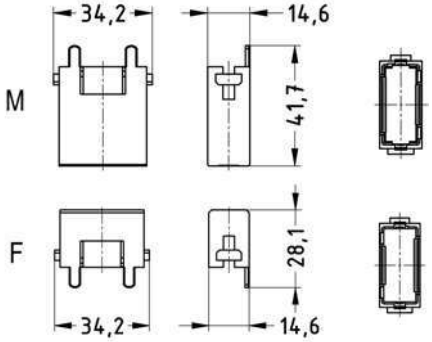
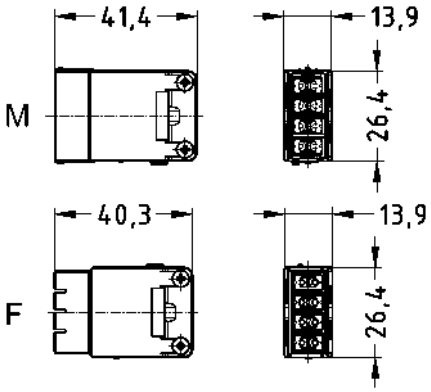
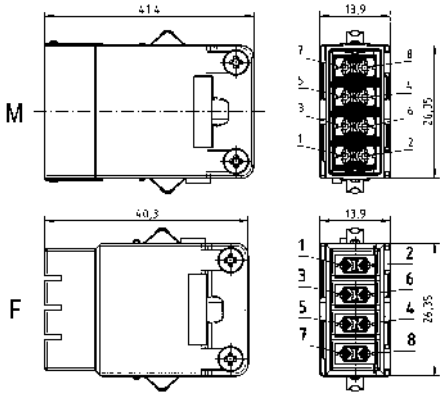
# Han® Gigabit module



Number of contacts

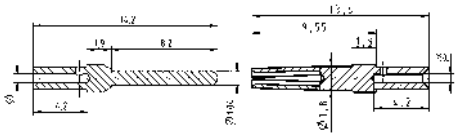
8

5 A 50 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han® Gigabit insert,<br>Crimp termination,<br>Cat. $6_A$<br><br>Please order crimp contacts separately.<br>Please order adapter module separately.<br>Please order cable clamp or crimp flange separately. | 0.09 ... 0.52 | 09 14 008 3011 | 09 14 008 3111 | <br>Cable outer diameter ≤ 14 mm |
| Han® Gigabit insert,<br>Crimp termination,<br>Cat. $6_A$<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.09 ... 0.52 | 09 14 008 3012 | 09 14 008 3112 | <br>Cable outer diameter ≤ 14 mm |

# Han® Gigabit module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| D-Sub,<br>Standard,<br>Crimp contact | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 |  |

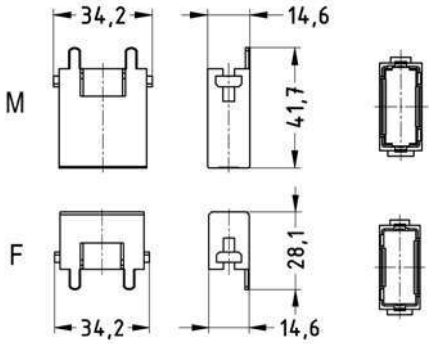
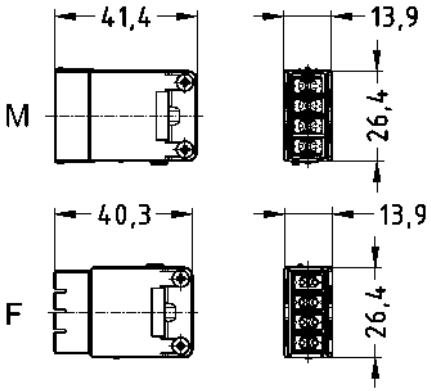
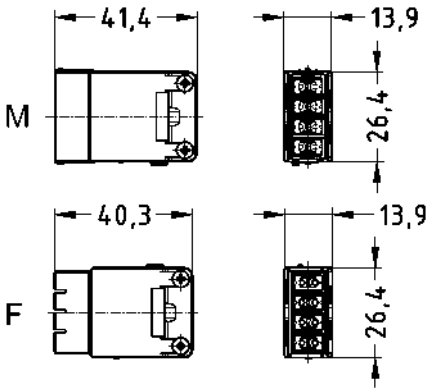
| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

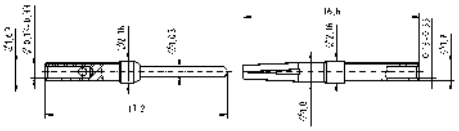
# Han® Gigabit module

Number of contacts

## 8

5 A 50 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han® Gigabit insert,<br>Crimp termination,<br>Cat. $7_A$<br><br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.09 ... 0.52 | 09 14 008 3031 | 09 14 008 3131 | <br>Cable outer diameter ≤ 14 mm |
| Han® Gigabit insert,<br>Crimp termination,<br>Cat. $7_A$<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.09 ... 0.52 | 09 14 008 3032 | 09 14 008 3132 | <br>Cable outer diameter ≤ 14 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| D-Sub,<br>Crimp contact,<br>Cat. $7_A$  | 0.13 ... 0.33 | 09 93 000 5576 | 09 93 000 5476 |  |

# Han® Shielded module

Modu-
lar

## Features

- Shielding bus separate from housing potential
- Suitable for the transmission of sensitive signals (e.g. bus signals)

## Technical characteristics

| | |
|---|---|
| Number of contacts | 20 |
| Additional contacts | + shielding |
| Rated current | 4 A |
| Rated voltage | 32 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Liquid crystal polymer (LCP), Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

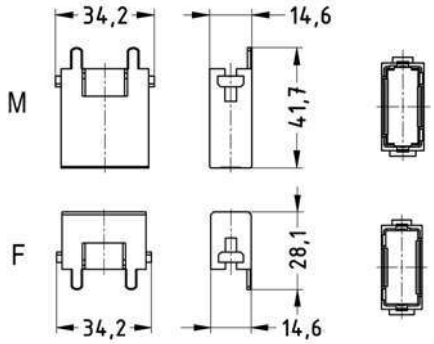
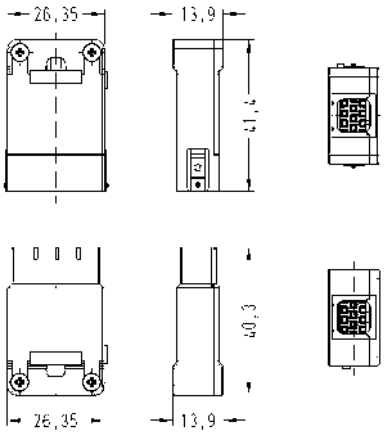
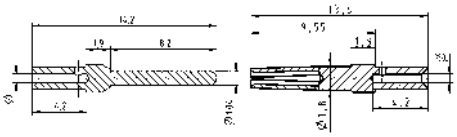
# Han® Shielded module



Number of contacts

## 20

4 A 32 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han® Shielded Module insert,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 14 020 3013 | 09 14 020 3113 |  |
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 | <br>Conductor cross-section / ø / Stripping length<br>0.09-0.25 mm² / 0.64 mm / 4 mm<br>0.13-0.33 mm² / 0.88 mm / 4 mm<br>0.25-0.52 mm² / 1.13 mm / 4 mm<br>0.33-0.82 mm² / 1.34 mm / 4 mm<br>for stranded wire according IEC 60228 Class 5 |

# Han® High density shielded module

Modu-
lar

## Features

- Transmission of shielding separately from the hood’s ground
- Suitable for the transmission of sensitive signals (e.g. bus signals)
- Higher density of crimping contacts

## Technical characteristics

| | |
|---|---|
| Number of contacts | 27 |
| Additional contacts | + shielding |
| Rated current | 2 A |
| Rated voltage | 16 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Liquid crystal polymer (LCP), Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

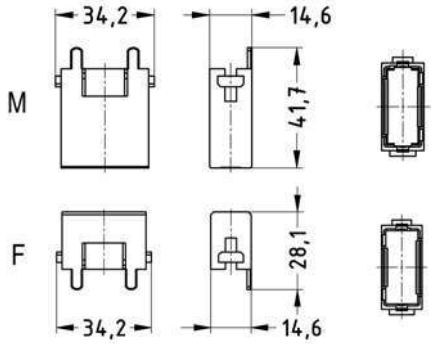
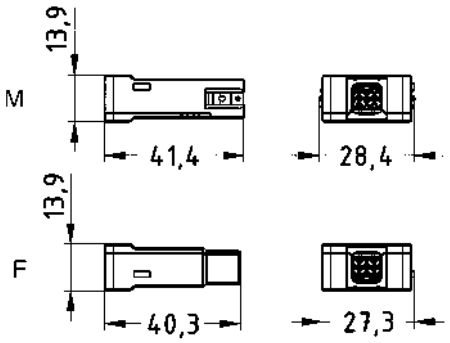
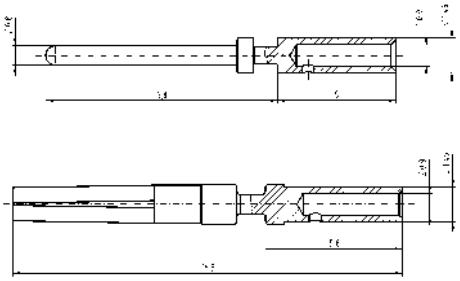
# Han® High density shielded module



Number of contacts

## 27

2 A 16 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han-Modular®,<br>Han® High density shielded module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.13 ... 0.33 | 09 14 027 3013 | 09 14 027 3113 |  |
| Circular connectors M12,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.13 ... 0.33 | 21 01 100 9020 | 21 01 100 9025 |  |

# Han® Megabit module



## Features

- Shielding bus separate from housing potential
- Usable for Megabit Ethernet cat. 5e
- Suitable for Han® B, Han® M, Han® EMC and Han® HPR hoods/housings, high construction

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + shielding |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

Not suitable for hoods/housings low construction as well as Han-Modular® Eco, Han-Modular® Compact and Han-Modular® Twin.

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

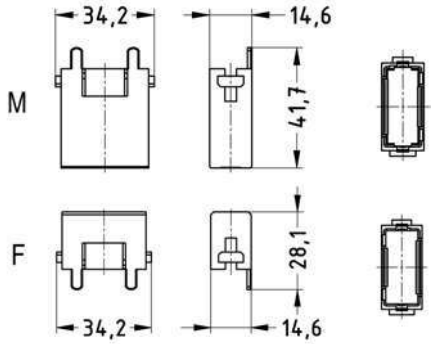
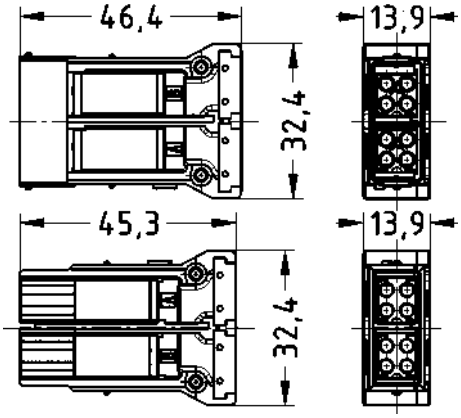
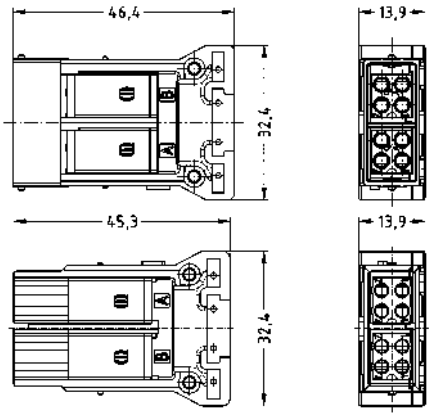
# Han® Megabit module



Number of contacts

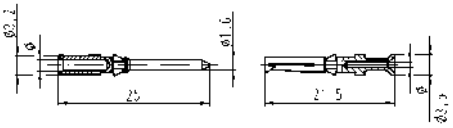
8

10 A 50 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han® Megabit insert,<br>2x 4 contacts,<br>2 cable entries,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 008 3016 | 09 14 008 3116 |  |
| Han® Megabit insert,<br>2x 4 contacts,<br>One entry,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 008 3021 | 09 14 008 3121 |  |

# Han® Megabit module

Modu-
lar

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

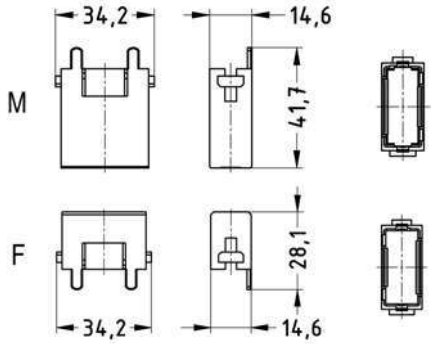
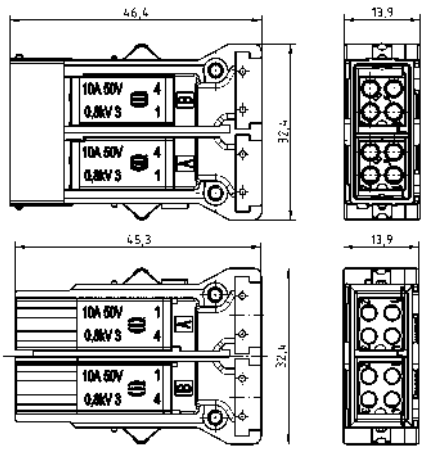
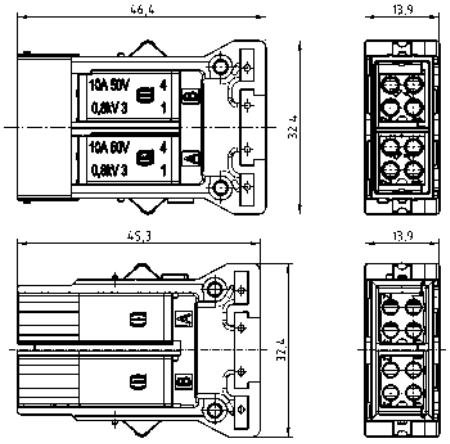
# Han® Megabit module



Number of contacts

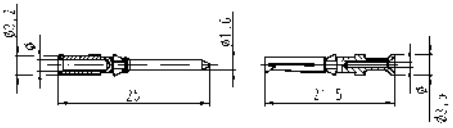
## 8

10 A 50 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han® Megabit insert,<br>2x 4 contacts,<br>2 cable entries,<br>Crimp termination<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 008 3017 | 09 14 008 3117 |  |
| Han® Megabit insert,<br>2x 4 contacts,<br>One entry,<br>Crimp termination<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 008 3022 | 09 14 008 3122 |  |

# Han® Megabit module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

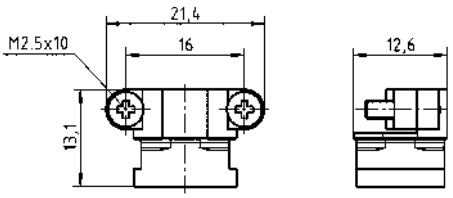
| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0 14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0 75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Zinc die-cast |
| RoHS | compliant, compliant with exemption |

## Details

09 14 000 9983, 61 03 000 0143 and 61 03 000 0148 only for modules with one cable entry!

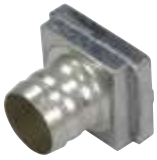
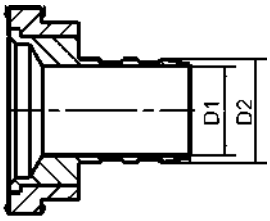
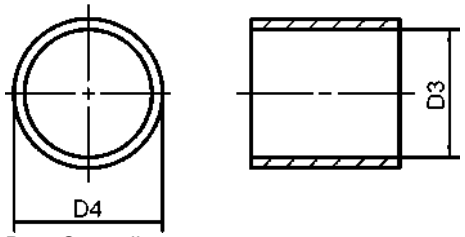
| Identification | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Cable clamp  | 6 ... 10 | 09 14 000 9983 |   |
| Cable clamp, D-Sub 1 ... 4  | 5 ... 7<br>7 ... 10<br>9 ... 12<br>11 ... 14 | 61 03 000 0141<br>61 03 000 0044<br>61 03 000 0143<br>61 03 000 0148 | |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

## Details

HARTING offers to test and define the best crimp flange and ferrule combination for customer specific cables.

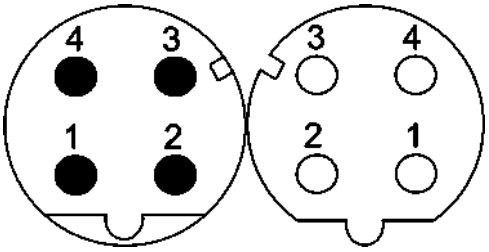
| Identification | Inner diameter | Outer diameter | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| D-Sub,<br>Crimp flange,<br>D-Sub 1 ... 4  | 3 mm<br>3.5 mm<br>4 mm<br>4.5 mm<br>5 mm<br>5.5 mm<br>6 mm<br>6.5 mm<br>7 mm<br>7.5 mm<br>8 mm<br>8.5 mm<br>9 mm | 4 mm<br>4.5 mm<br>5 mm<br>5.5 mm<br>6 mm<br>6.5 mm<br>7 mm<br>7.5 mm<br>8 mm<br>8.5 mm<br>9 mm<br>9.5 mm<br>10 mm | 61 03 000 0062<br>61 03 000 0063<br>61 03 000 0064<br>61 03 000 0065<br>61 03 000 0066<br>61 03 000 0166<br>61 03 000 0067<br>61 03 000 0068<br>61 03 000 0069<br>61 03 000 0070<br>61 03 000 0071<br>61 03 000 0165<br>61 03 000 0072 | <br>D1 = Inner diameter<br>D2 = Outer diameter |
| D-Sub,<br>Crimp ferrule  | 5 mm<br>5.5 mm<br>6 mm<br>6.5 mm<br>7 mm<br>7.5 mm<br>8 mm<br>8.5 mm<br>9 mm<br>9.5 mm<br>10 mm<br>10.5 mm<br>11 mm<br>11.5 mm<br>12 mm<br>12.5 mm<br>13 mm<br>13.7 mm<br>14 mm | 6 mm<br>6.5 mm<br>7 mm<br>7.5 mm<br>8 mm<br>8.5 mm<br>9 mm<br>9.5 mm<br>10 mm<br>10.5 mm<br>11 mm<br>11.5 mm<br>12 mm<br>12.5 mm<br>13 mm<br>13.5 mm<br>14 mm<br>15 mm<br>15 mm | 61 03 000 0045<br>61 03 000 0046<br>61 03 000 0047<br>61 03 000 0048<br>61 03 000 0049<br>61 03 000 0050<br>61 03 000 0051<br>61 03 000 0052<br>61 03 000 0053<br>61 03 000 0054<br>61 03 000 0055<br>61 03 000 0056<br>61 03 000 0057<br>61 03 000 0058<br>61 03 000 0142<br>61 03 000 0059<br>61 03 000 0127<br>61 03 000 0060<br>61 03 000 0061 | <br>D4 = Outer diameter<br>D3 = Inner diameter |

# Han® M12 module

Number of contacts

**4**

4 A 32 V 0.8 kV 3
+ shielding




## Technical characteristics

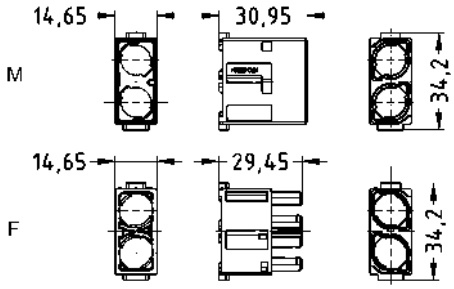
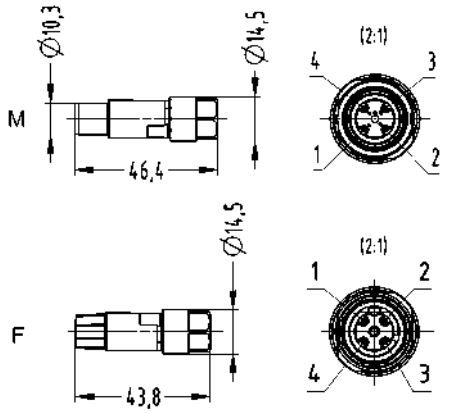
| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + shielding |
| Rated current | 4 A |
| Rated voltage | 32 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^8$ Ω |
| Contact resistance | ≤10 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤2.3 mm |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |

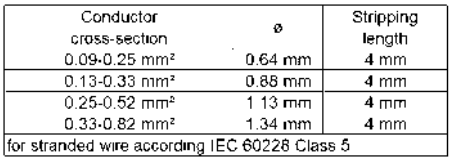
## Technical characteristics

| | |
|---|---|
| Material (insert) | Liquid crystal polymer (LCP), Polycarbonate (PC) |
| Material (shielding) | Copper alloy, nickel plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® M12 module<br> | | 09 14 002 3061 | 09 14 002 3161 |  |
| Han-Modular®,<br>D-coding,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.13 ... 0.82 | 09 14 881 1405 | 09 14 881 2405 | <br>Cable diameter 5.7 ... 8.8 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.13 ... 0.33<br>0.25 ... 0.52<br>0.33 ... 0.82 | 09 67 000 5576<br>09 67 000 8576<br>09 67 000 3576 | 09 67 000 5476<br>09 67 000 8476<br>09 67 000 3476 |  |

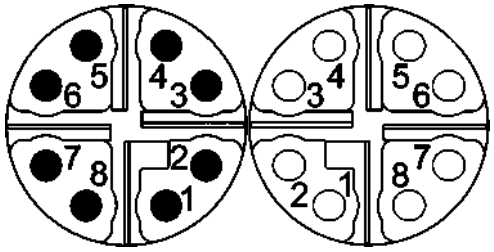
| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

# Han® M12 module

Number of contacts

**8**

0.5 A 32 V 0.8 kV 3
+ shielding




Modu-
lar

## Technical characteristics

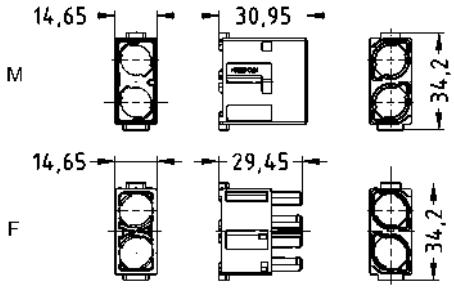
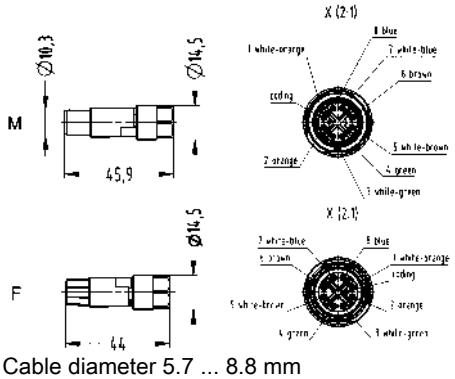
| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + shielding |
| Rated current | 0.5 A |
| Rated voltage | 32 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^8$ Ω |
| Contact resistance | ≤10 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤1.4 mm |
| Transmission characteristics | Cat. $6_A$, Class $E_A$ up to 500 MHz |

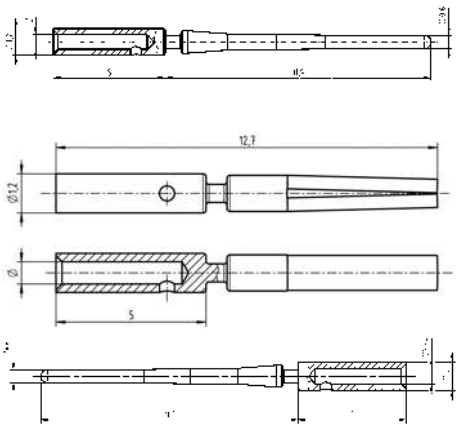
## Technical characteristics

| | |
|---|---|
| Material (insert) | Liquid crystal polymer (LCP), Polycarbonate (PC) |
| Material (shielding) | Copper alloy, nickel plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®, Han® M12 module  | | 09 14 002 3061 | 09 14 002 3161 |   |
| Han-Modular®, X-coding, Crimp termination  Please order crimp contacts separately. | 0.08 ... 0.25 | 09 14 881 1805 | 09 14 881 2805 |   Cable diameter 5.7 ... 8.8 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| *har*-speed,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.08 ... 0.22<br>0.13 ... 0.25 | 21 01 100 9014<br>21 01 100 9019 | 21 01 100 9023<br>21 01 100 9021 |  |

# Han-Quintax® module

## Features

- Shielding bus separate from housing potential
- Suitable for the transmission of sensitive signals (e.g. bus signals)
- The four pole Han® Quintax contact is suitable for Ethernet cat. 5 and PROFIBUS when diagonally wiring of the data pairs.

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + shielding |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Metal |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

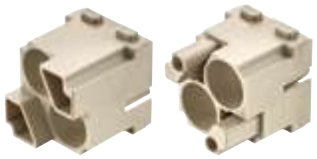
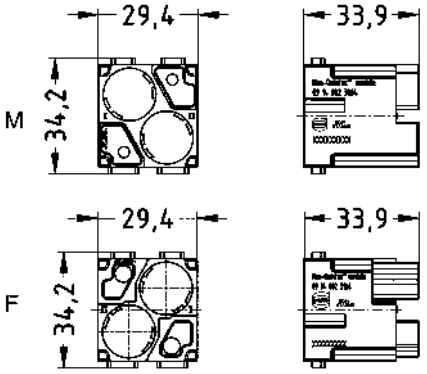
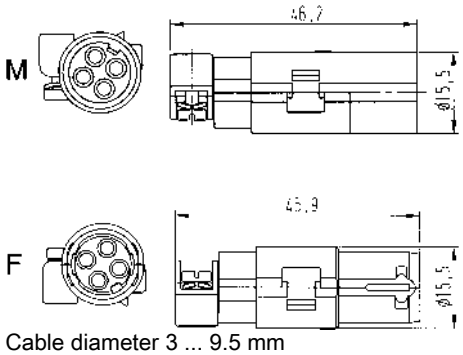
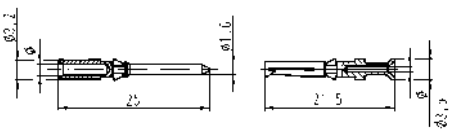
## Details

**Crimping tools** see chapter Han 90

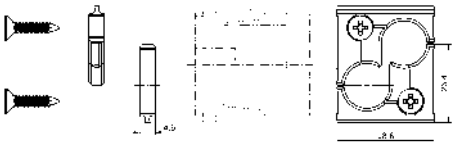
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han-Quintax® module

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han-Quintax® module,<br>Crimp termination<br> | | 09 14 002 3004 | 09 14 002 3104 |  |
| Han-Quintax®,<br>for Han D® crimp contacts<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 15 004 3013 | 09 15 004 3113 | <br>Cable diameter 3 ... 9.5 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Quintax®, Adapter, Metal  Optional | | 09 14 000 9915 | 09 14 000 9915 |  |

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + shielding |
| Rated current | 5 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |

## Technical characteristics

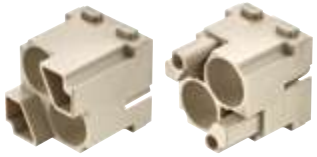
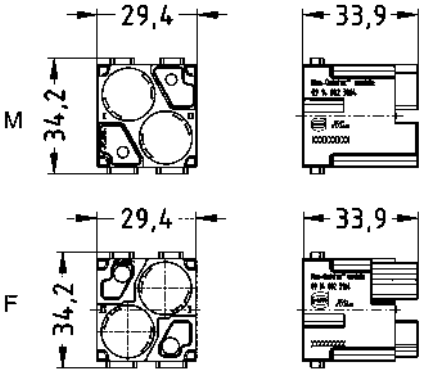
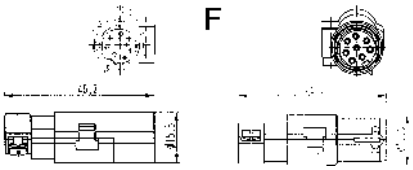
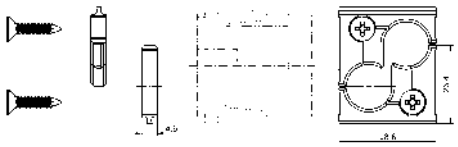
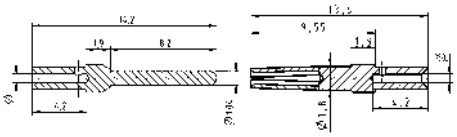
| | |
|---|---|
| Material (accessories) | Metal |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL
UL 1977 ECBT2.E102079
CSA-C22.2 No. 182.3 ECBT8.E102079

# Han-Quintax® High Density module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han-Quintax® module,<br>Crimp termination<br> | | 09 14 002 3004 | 09 14 002 3104 |  |
| Han-Quintax® High Density,<br>for Han® D-Sub crimp contacts<br><br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 15 008 3013 | 09 15 008 3113 | M F<br><br>Cable diameter 3 ... 9.5 mm |
| Han-Quintax®,<br>Adapter,<br>Metal<br><br>Optional | | 09 14 000 9915 | 09 14 000 9915 |  |
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 | <br>Conductor cross-section / ø / Stripping length<br>0.09-0.25 mm² / 0.64 mm / 4 mm<br>0.13-0.33 mm² / 0.88 mm / 4 mm<br>0.25-0.52 mm² / 1.13 mm / 4 mm<br>0.33-0.82 mm² / 1.34 mm / 4 mm<br>for stranded wire according IEC 60228 Class 5 |

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Additional contacts | + shielding |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Impedance | 75 Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

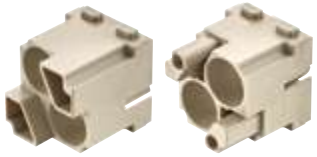
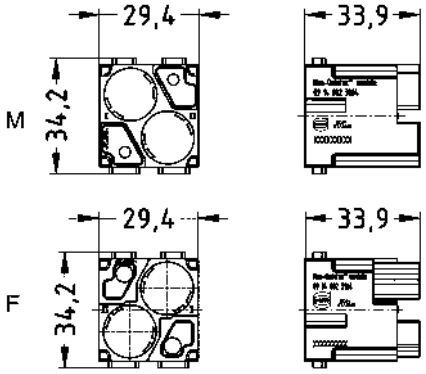
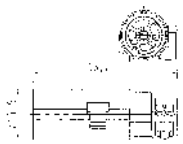
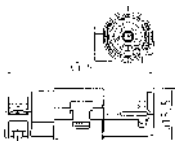
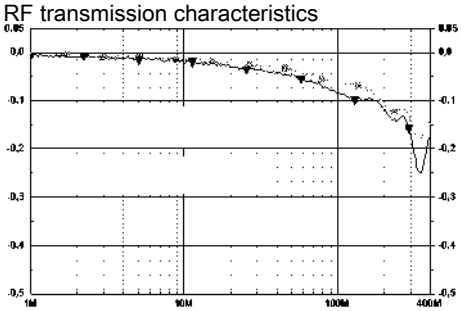
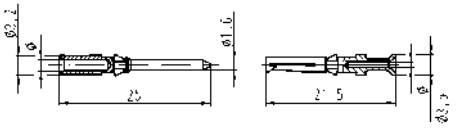
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® D Coax



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han-Quintax® module,<br>Crimp termination<br> | | 09 14 002 3004 | 09 14 002 3104 |  |
| Han® D Coax,<br>Crimp termination,<br>for Han D® crimp contacts<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 15 001 3013 | 09 15 001 3113 | M  F <br>RF transmission characteristics<br><br>▪ 75 Ohm Cable<br>▾ 75 Ohm Cable with Han D® Coax |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0.75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Additional contacts | + shielding |
| Rated current | 16 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Impedance | 50 Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

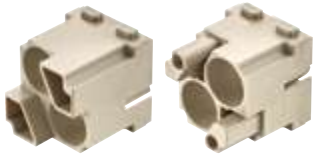
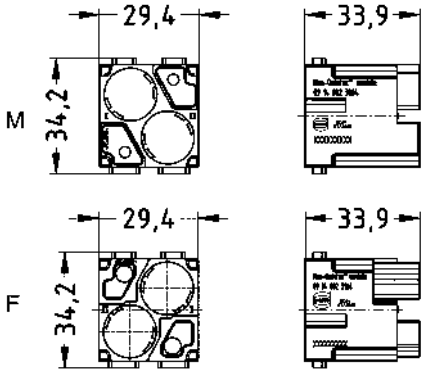
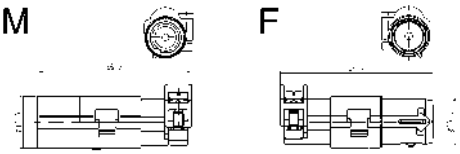
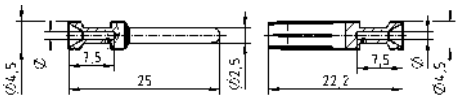
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® E Coax



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han-Quintax® module,<br>Crimp termination<br> | | 09 14 002 3004 | 09 14 002 3104 |  |
| Han® E Coax,<br>Crimp termination,<br>for Han E® crimp contacts<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 15 001 3023 | 09 15 001 3123 | M F<br><br>Han E® Coax with RG 213 cable (2.5 mm²) / 200 MHz / 500 MHz / 1.0 GHz / 1.2 GHz / 1.5 GHz / 2.0 GHz / 2.5 GHz<br>Return loss [db] / 23.8 / 21.1 / >18.7 / >17.7 / >16.4 / >14.1 / >12.0<br>Attenuation [db] / 0:07 / 0.11 / 0.17 / 0.2 / <0.23 / <0.53 / <2.0 |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 / no groove<br>0.5 mm² AWG 20 / no groove<br>0.75 mm² AWG 18 / 1 groove*<br>1 mm² AWG 18 / 1 groove<br>1.5 mm² AWG 16 / 2 groove<br>2.5 mm² AWG 14 / 3 groove<br>3 mm² AWG 12 / wide groove<br>4 mm² AWG 12 / no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |

Number of contacts

# 4

1.5 A  50 V

## Features

- Suitable for FOC and coaxial contacts acc. to EN 41626

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4 |
| Rated current | 1.5 A |
| Rated voltage | 50 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Impedance | 50 Ω, 75 Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

ATTENTION when using coaxial contacts:

Male module 09 14 004 4501 with contacts 09 14 000 62xx or 09 69 28x 5xxx

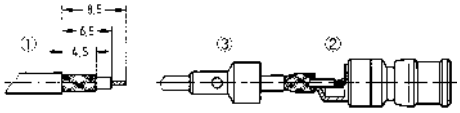
Female module 09 14 004 4513 with contacts 09 14 000 61xx or 09 69 18x 5xxx

When removing the contacts, the two-piece module can be opened using a 7mm screwdriver. This destroys the module.

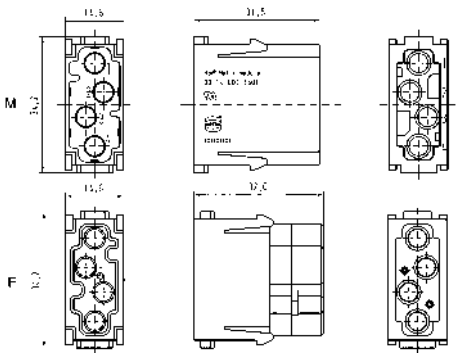
ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

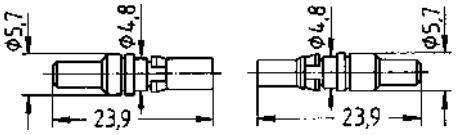
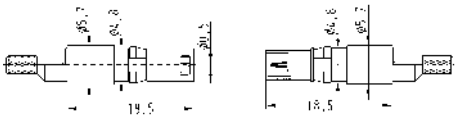
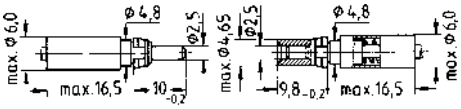
**Assembly instructions**

for coaxial contact



① Stripping length
② Solder termination (during soldering max. +300 °C for 2 s)
③ Crimp ferrule

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®, Han® Multi module  Please order contacts separately. | 09 14 004 4501 | 09 14 004 4512 |  Contact arrangement (view from termination side) |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| DIN 41626,<br>Coaxial contact,<br>Solder/crimp termination,<br>for cables RG 174 U, 188 AU, 316 U,<br>50 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 14 000 6211 | 09 14 000 6111 |  |
| DIN 41626,<br>Coaxial contact,<br>Solder/crimp termination,<br>for cables RG 179 BU, 187 AU,<br>75 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 14 000 6221 | 09 14 000 6121 | <br>Wires / Shell Ø mm / Internal wire Ø mm / Dämpfung db/100 m bei 100MHz 200MHz 800MHz<br>50 Ω<br>RG 174 / U 2.5 0.48 84<br>RG 188 A / U 2.6 0.54 29 40<br>RG 316 / U 2.5 0.54 40<br>75 Ω<br>RG 179 B / U 2.55 0.3 41<br>RG 187 A / U 2.7 0.3 41 |
| DIN 41626,<br>FO contact,<br>for 1 mm plastic fibre<br> | 20 10 001 4211 | 20 10 001 4221 |  |
| DIN 41626,<br>FO contact,<br>for SI fibre (HCS®) 200/230 µm<br> | 20 10 230 4211 | 20 10 230 4221 | |
| DIN 41626,<br>FO contact,<br>for GI fibre 50/125 µm,<br>for ceramic ferrule 62.5/125 µm<br> | 20 10 125 4212 | 20 10 125 4222 | |

Number of contacts

# 4

1.5 A 50 V

## Features

- Suitable for FOC and coaxial contacts acc. to D-Sub

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4 |
| Rated current | 1.5 A |
| Rated voltage | 50 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Impedance | 50 Ω, 75 Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (locking) | Copper alloy |
| Material (contacts) | Copper alloy, PBFE / PBTP / PI |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

ATTENTION when using coaxial contacts:

Male module 09 14 004 4501 with contacts 09 14 000 62xx or 09 69 28x 5xxx

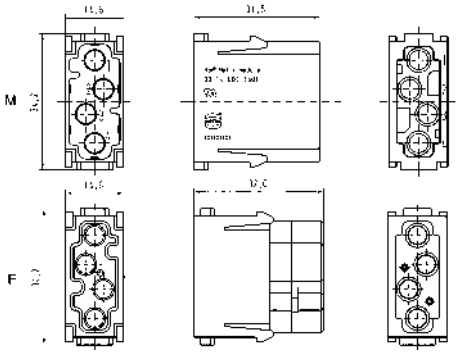
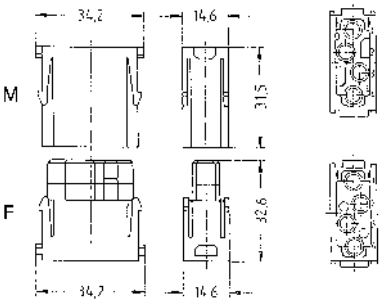
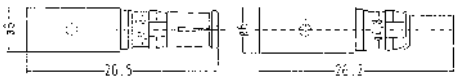
Female module 09 14 004 4513 with contacts 09 14 000 61xx or 09 69 18x 5xxx

When removing the contacts, the two-piece module can be opened using a 7mm screwdriver. This destroys the module.

ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

# Han® Multi module



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han® Multi module<br><br>Please order contacts separately. | 09 14 004 4501 | 09 14 004 4513 | <br>Contact arrangement (view from termination side)<br><br>Contact arrangement (view from termination side) |
| D-Sub,<br>Coaxial contact,<br>Solder / solder termination,<br>for cables RG 58,<br>50 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 14 000 6215 | 09 14 000 6115 |  |
| D-Sub,<br>Mixed,<br>Coaxial contact,<br>Crimp/crimp termination,<br>Straight,<br>for cables RG 174 U, 188 AU, 316 U,<br>50 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 69 282 5140 | 09 69 182 5140 | |
| D-Sub,<br>Mixed,<br>Coaxial contact,<br>Crimp/crimp termination,<br>Straight,<br>for cables RG 179 BU, 187 AU,<br>75 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 69 282 5230 | 09 69 182 5230 | |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| D-Sub,<br>Mixed,<br>Coaxial contact,<br>Solder/crimp termination,<br>Straight,<br>for cables RG 174 U, 188 AU, 316 U,<br>50 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 69 281 5140 | 09 69 181 5140 | |
| D-Sub,<br>Mixed,<br>Coaxial contact,<br>Solder/crimp termination,<br>Straight,<br>for cables RG 178 BU, 196 AU, 404 U,<br>50 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 69 281 5141 | 09 69 181 5141 | |
| D-Sub,<br>Mixed,<br>Coaxial contact,<br>Solder/crimp termination,<br>Straight,<br>for cables RG 58 CU, 141 AU,<br>50 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 69 281 5143 | 09 69 181 5143 | |
| D-Sub,<br>Mixed,<br>Coaxial contact,<br>Solder/crimp termination,<br>Straight,<br>for cables RG 179 BU, 187 AU,<br>75 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 69 281 5230 | 09 69 181 5230 | |

# Han® Multi module

Number of contacts

12

1.5 A 50 V



## Features

- Suitable for FOC and coaxial contacts acc. to EN 41626

## Technical characteristics

| | |
|---|---|
| Number of contacts | 12 |
| Rated current | 1.5 A |
| Rated voltage | 50 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Impedance | 50 Ω, 75 Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

ATTENTION when using coaxial contacts:

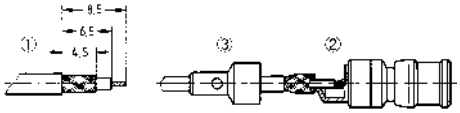
Male module 09 14 004 4501 with contacts 09 14 000 62xx

Female module 09 14 004 4512 with contacts 09 14 000 61xx

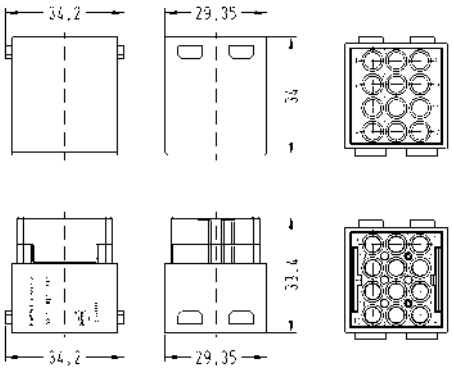
Due to the closed entry design of female insert the upper part has to be removed by screw driver before extracting the contacts.

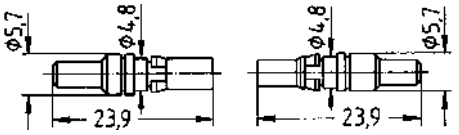
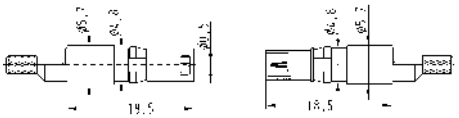
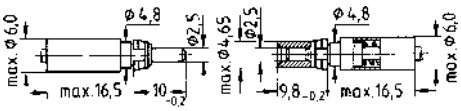
**Assembly instructions**

for coaxial contact




① Stripping length
② Solder termination (during soldering max. +300 °C for 2 s)
③ Crimp ferrule

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®, Han® Multi module, acc. to DIN 41626  Please order contacts separately. | 09 14 012 4501 | 09 14 012 4512 |   Contact arrangement (view from termination side) |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| DIN 41626,<br>Coaxial contact,<br>Solder/crimp termination,<br>for cables RG 174 U, 188 AU, 316 U,<br>50 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 14 000 6211 | 09 14 000 6111 |  |
| DIN 41626,<br>Coaxial contact,<br>Solder/crimp termination,<br>for cables RG 179 BU, 187 AU,<br>75 Ohm,<br><br>Contact surface:<br>Gold plated<br> | 09 14 000 6221 | 09 14 000 6121 | <br>Wires / Shell ∅ mm / Internal wire ∅ mm / Dämpfung db/100 m bei 100MHz, 200MHz, 800MHz<br>50 Ω<br>RG 174 / U: 2.5 / 0.48 / 84<br>RG 188 A / U: 2.6 / 0.54 / 29 / 40<br>RG 316 / U: 2.5 / 0.54 / 40<br>75 Ω<br>RG 179 B / U: 2.55 / 0.3 / 41<br>RG 187 A / U: 2.7 / 0.3 / 41 |
| DIN 41626,<br>FO contact,<br>for 1 mm plastic fibre<br> | 20 10 001 4211 | 20 10 001 4221 |  |
| DIN 41626,<br>FO contact,<br>for SI fibre (HCS®) 200/230 µm<br> | 20 10 230 4211 | 20 10 230 4221 | |
| DIN 41626,<br>FO contact,<br>for GI fibre 50/125 µm,<br>for ceramic ferrule 62.5/125 µm<br> | 20 10 125 4212 | 20 10 125 4222 | |

# Han® Pneumatic module



Number of contacts

3



## Features

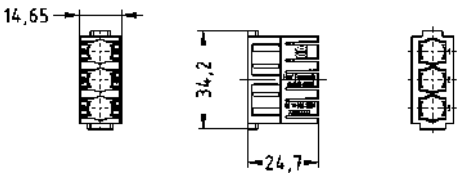
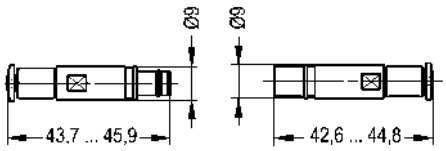
- for the transmission of clean and dry compressed air
- Female contacts with / without shut-off
- The Han® Pneumatic contacts without shut-off are suitable for the use inside a vacuum. (Limit: 100 mbar = 100 hPa ≈ approx 90% vacuum)

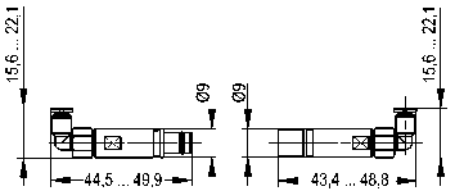
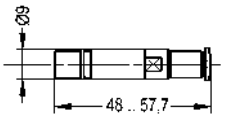
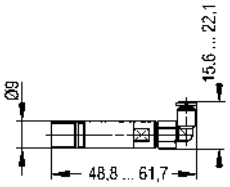
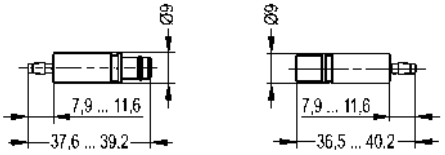
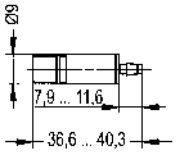
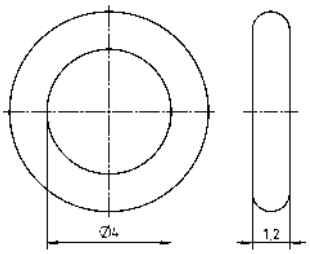
## Technical characteristics

| | |
|---|---|
| Number of contacts | 3 |
| Limiting temperature | -40 ... +85 °C, -20 ... +85 °C |
| | Tube outer diameter |
| Operating pressure | ≤10 bar |
| Mating cycles | ≥10000 |
| Tube inner diameter | 3 mm, 4 mm, 6 mm |
| Tube outer diameter | 3 mm, 4 mm, 6 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | Blue |
| Material (seal) | NBR |
| Colour (seal) | Black |
| Material (contacts) | Brass |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

IEC 61984
EN 60664-1
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

| Identification | | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® Pneumatic module<br><br>Please order contacts separately. | | 09 14 003 3501 | 09 14 003 3501 | <br>Contact arrangement (view from mating side) |
| Pneumatic contact,<br>Without shut-off,<br>Straight,<br>Tube outer diameter<br> | 3 mm<br>4 mm<br>6 mm | 09 14 000 6353<br>09 14 000 6354<br>09 14 000 6356 | 09 14 000 6453<br>09 14 000 6454<br>09 14 000 6456 |  |

| Identification | | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Pneumatic contact,<br>Without shut-off,<br>Angled,<br>Tube outer diameter | 3 mm<br>4 mm<br>6 mm | 09 14 000 7353<br>09 14 000 7354<br>09 14 000 7356 | 09 14 000 7453<br>09 14 000 7454<br>09 14 000 7456 |  |
| Pneumatic contact,<br>With shut-off,<br>Straight,<br>Tube outer diameter | 3 mm<br>4 mm<br>6 mm | | 09 14 000 6463<br>09 14 000 6464<br>09 14 000 6466 |  |
| Pneumatic contact,<br>With shut-off,<br>Angled,<br>Tube outer diameter | 3 mm<br>4 mm<br>6 mm | | 09 14 000 7463<br>09 14 000 7464<br>09 14 000 7466 |  |
| Pneumatic contact,<br>Without shut-off,<br>Straight,<br>Tube inner diameter | 3 mm<br>4 mm<br>6 mm | 09 14 000 6303<br>09 14 000 6304<br>09 14 000 6306 | 09 14 000 6403<br>09 14 000 6404<br>09 14 000 6406 |  |
| Pneumatic contact,<br>With shut-off,<br>Straight,<br>Tube inner diameter | 3 mm<br>4 mm<br>6 mm | | 09 14 000 6413<br>09 14 000 6414<br>09 14 000 6416 |  |
| O-ring rubber seal,<br>for pneumatic contacts | | 09 14 000 9806 | |  |

# Han® SC module

## Features

- Suitable for HARTING SC contacts
- for GI-Fibre 50 - 62,5 / 125µm
- Insertion loss < 0.5 dB

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4 |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

UL 1977 ECBT2.E235076
DNV GL

## Details

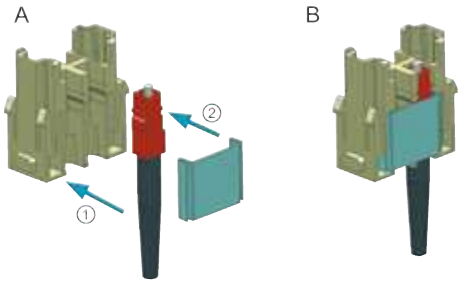
The male and female modules each use the same contacts.

Guide pins and bushes are recommended (see chapter Han 80).

## Details

**Assembly instructions**

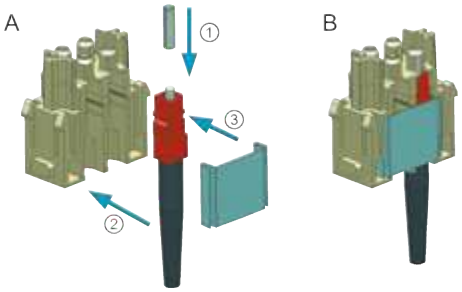
Male module




A) Assemble the SC contact
Push the SC contact from the side into the relevant insert ①
Push the fixing plate from the side over the contacts ②
B) SC contact fixed in the module

**Assembly instructions**

Female module

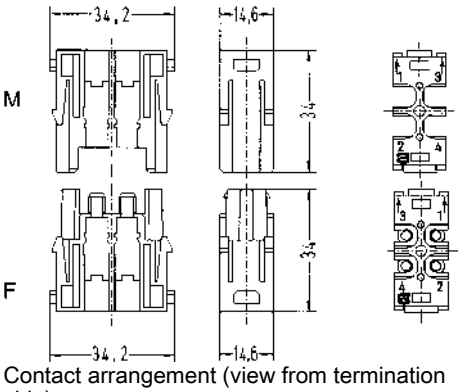
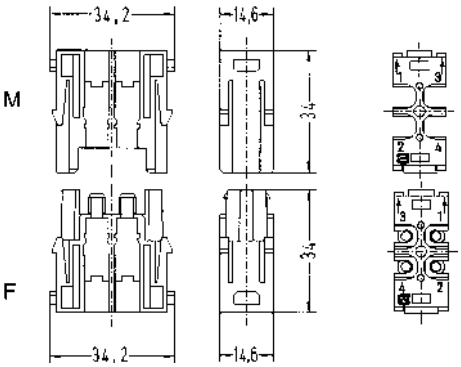
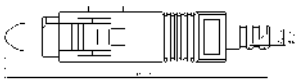



A) Assemble the SC contact
Push the centering ferrule (included in delivery) on the SC contact ①
Push the SC contact from the side into the relevant insert ②
Push the fixing plate from the side over the contacts ③
B) SC contact fixed in the module

# Han® SC module

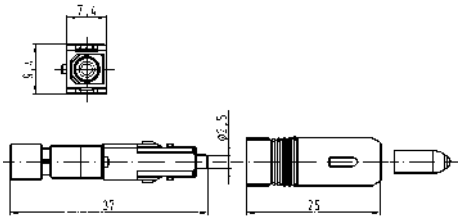
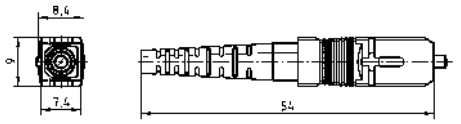
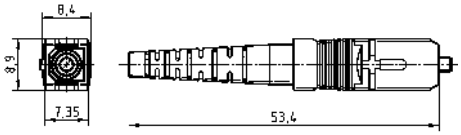
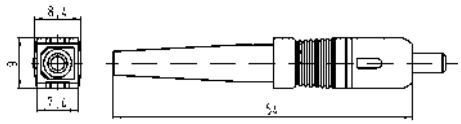
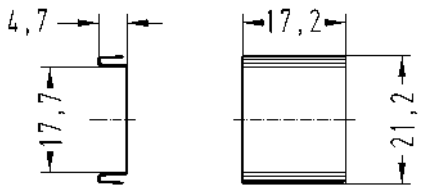
Number of contacts

## 4

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han® SC module<br><br>Please order contacts separately. | 09 14 004 4701 | 09 14 004 4712 | <br>Contact arrangement (view from termination side) |
| Han-Modular®,<br>Han® SC module,<br>with ceramic ferrule 62.5/125 µm<br><br>Please order contacts separately.<br>Please order fixing plate separately. | | 09 14 004 4711 | <br>Contact arrangement (view from termination side) |
| Han-Modular®,<br>Han® SC module,<br>with metal ferrule<br><br>Please order contacts separately. | | 09 14 004 4713 | |
| SC contact,<br>for 1 mm plastic fibre,<br>Crimp termination<br> | 20 10 001 5211 | |  |

# Han® SC module



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| SC contact,<br>for 1 mm plastic fibre,<br>Fast termination  | 20 10 001 5217 | |  |
| SC contact,<br>for singlemode fibre 9/125 µm  | 20 10 125 5220 | |  |
| SC contact,<br>for GI fibre 50/125 µm,<br>for ceramic ferrule 62.5/125 µm  | 20 10 125 5211 | |  |
| SC contact,<br>for SI fibre (HCS®) 200/230 µm | 20 10 230 5211 | |  |
| Han-Modular®,<br>Fixing plate,<br>for SC module  | 09 14 000 9965 | 09 14 000 9965 |  |

# Han® LC module

Number of contacts

# 6



## Features

- Suitable for HARTING LC contacts
- for GI-Fibre 50 - 62.5 / 125 µm and for singlemode fibre

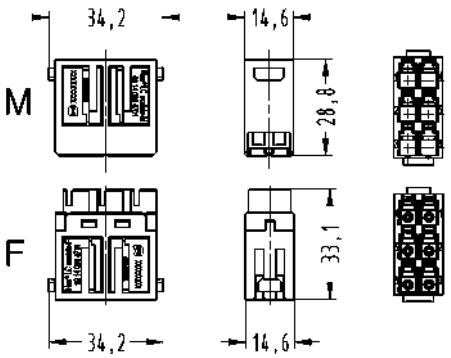
## Technical characteristics

| | |
|---|---|
| Number of contacts | 6 |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Details

The male and female modules each use the same contacts.

ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

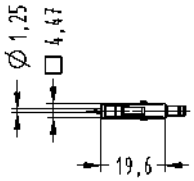
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®, Han® LC module  Please order contacts separately. | 09 14 006 4701 | 09 14 006 4711 |   Contact arrangement (view from termination side) |

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +75 °C |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption, compliant |

| Identification | Part number Male | Drawing (dimensions in mm) |
|---|---|---|
| LC contact, Singlemode for cable diameter up to 2 mm  | 20 10 125 8221 | |
| LC contact, Singlemode for cable diameter up to 3 mm  | 20 10 125 8220 | |
| LC contact, Multimode for cable diameter up to 2 mm  | 20 10 125 8212 | |
| LC contact, Multimode for cable diameter up to 3 mm  | 20 10 125 8211 |   |

# Han-Smart® Ethernet-Switch module

Modu-
lar

## Features

- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- Patch cables are assembled/removed without tools
- Auto-crossing
- Auto-negotiation
- Auto-polarity
- Store and Forward
- Fast Ethernet
- Full Gigabit Ethernet
- Non blocking
- Support of Jumbo-Frames (10 kBytes)
- Energy Efficient Ethernet acc. to IEEE 802.3az

## Technical characteristics

| | |
|---|---|
| Total number of ports | 4 |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Operating temperature | -40 ... +70 °C |
| Storage temperature | -40 ... +85 °C |
| Relative humidity | 30 ... 95 % Non-condensing |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP30, mated condition |
| Nominal voltage | 24 V DC |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s |
| Diagnostic display | Connection (Link), Data transfer (Act), Data transfer rate, Power connection |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
EN 55022 Radio disturbance characteristics
EN 61000-4-2 Electrostatic discharge (ESD)
EN 61000-4-3 Electromagnetic field
EN 61000-4-4 Rapid transients (burst)
EN 61000-4-5 Surge voltages
EN 61000-4-6 conducted disturbances
EN 61000-6-4 emission standard
IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock
IEEE 802.3

# Han-Smart® Ethernet-Switch module





| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han® RJ45 module,<br>Single module | 09 14 001 4623 | | |
| Han-Modular®,<br>Han® RJ45 module,<br>Adapter,<br>for patch cable | 09 14 000 9966 | | |
| Han-Modular®,<br>Han-Smart®,<br>Switch US4,<br>IP30 mated condition | | 09 80 113 0400 | |

# Han-Smart® ID CAN module

Modu-
lar

Number of contacts

7



## Features

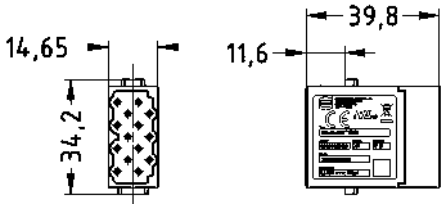
- Module for identifying industrial components
- Programming via the CANopen communication protocol
- Automatically detects baud rate
- Node ID configuration using LSS, acc. to DS305
- Status and diagnostics display
- Default Node ID: 127

## Technical characteristics

| | |
|---|---|
| Number of contacts | 7 |
| Operating temperature | -40 ... +70 °C |
| Storage temperature | -40 ... +70 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP30 |
| Nominal voltage | 24 V DC |
| Power consumption | <5 W |
| Memory | 10 MB Flash |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Polycarbonate (PC) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

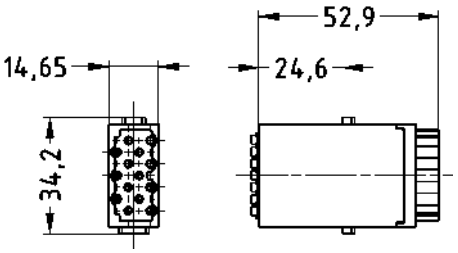
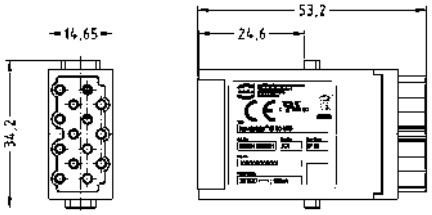
## Specifications and approvals

IEC 60721-3-3
EN 50102
EN 61000-4-2 Electrostatic discharge (ESD)
EN 61000-4-3 Electromagnetic field
EN 61000-4-4 Rapid transients (burst)
EN 61000-4-5 Surge voltages
EN 61000-4-6 conducted disturbances

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®, Han-Smart®, ID CAN, Memory module / CPU, IP30<br>Contact surface: Gold plated<br> | 09 80 015 0100 | |  |

# Han-Smart® ID CAN module



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han-Smart®,<br>ID CAN,<br>Network module,<br>Cage-clamp termination,<br>IP30<br>Contact surface:<br>Gold plated<br> | | 09 80 115 0200 |  |
| Han-Modular®,<br>Update module,<br>to update the male module<br> | | 09 80 115 0201 |  |

# Han-Smart® ID Profinet module

Number of contacts

7

Modu-
lar

## Features

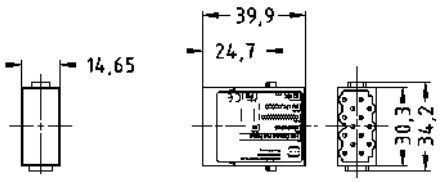
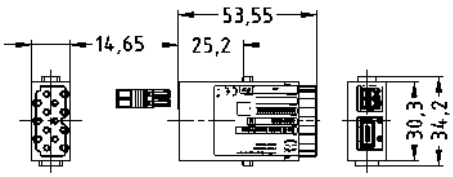
- Module for identifying industrial components
- Profinet I/O communication protocol conformance class B
- SNMP enabled (V1, V2C)

## Technical characteristics

| | |
|---|---|
| Number of contacts | 7 |
| Operating temperature | -40 ... +70 °C |
| Storage temperature | -40 ... +70 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP20 |
| Nominal voltage | 24 V DC ±10 % |
| Power consumption | <2 W |
| Memory | 32 KByte Flash |
| Write cycles | ≥100000 |
| Real-time class | RT acc. to IEC 61158 |
| Diagnostic display | Connection (Link), Power connection |
| Material (insert) | Polycarbonate (PC), Liquid crystal polymer (LCP) |
| Colour (insert) | RAL 7032 (pebble grey), White |
| Material flammability class acc. to UL 94 | V-0 |

## Specifications and approvals

IEC 60721-3-3
EN 50102
EN 61000-4-2 Electrostatic discharge (ESD)
EN 61000-4-3 Electromagnetic field
EN 61000-4-4 Rapid transients (burst)
EN 61000-4-5 Surge voltages
EN 61000-4-6 conducted disturbances
IEC 61158 PROFINET

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Han-Smart®,<br>ID Profinet,<br>Memory module / CPU,<br>IP20<br><br>GSD software file and operating instructions can be downloaded from the eCatalogue. | 09 80 615 0100 | |  |
| Han-Modular®,<br>Han-Smart®,<br>ID Profinet,<br>Power supply,<br>Data interface with HARTING ix Industrial® (Typ A),<br>IP20<br><br>GSD software file and operating instructions can be downloaded from the eCatalogue. | | 09 80 615 0200 |  |

# Han-Smart® Surge protection module

Number of contacts

5





## Features

- Surge protection for two pairs of balanced signals
- Protects symmetric signals interfaces with electrical isolation

## Technical characteristics

| | |
|---|---|
| Number of contacts | 5 |
| Operating temperature | -40 ... +85 °C |
| Storage temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP20 |
| Nominal current | 0.5 A |
| Nominal voltage | 24 V DC, 24 V AC |
| Material (insert) | Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Details

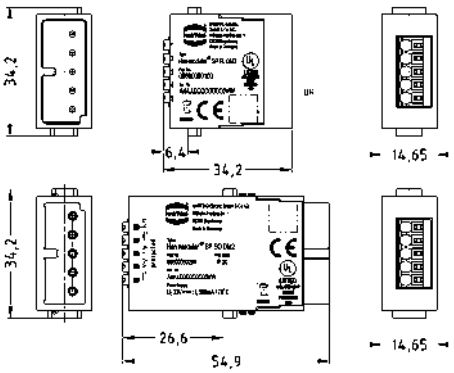
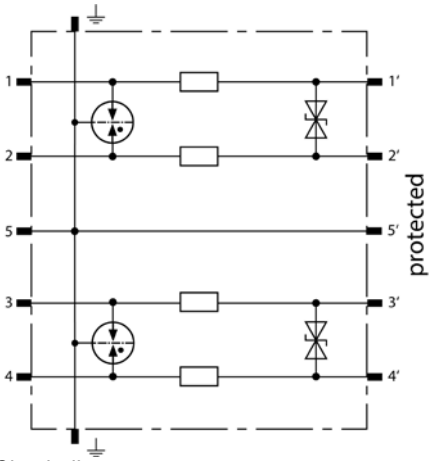
The surge protection module protects up to 2 pairs of balanced signal interfaces with electrical isolation against lightning strikes or overvoltage events.

Preferred field of application is the protection of analogue signal interfaces like for 0/4-20 mA or differential signals.

The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

# Han-Smart® Surge protection module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han-Smart®,<br>Han-Smart® Surge protection module,<br>Two channels,<br>Differential mode without common refence potential,<br>Push-in-spring-cage termination,<br>IP20<br> | 0.25 ... 1.5 | 09 80 000 0100 | 09 80 003 0200 | <br><br><br><br>Circuit diagram |

# Han-Smart® Surge protection module

Number of contacts

5





## Features

- Surge protection for four single lines
- Protects signals with common reference potential

## Technical characteristics

| | |
|---|---|
| Number of contacts | 5 |
| Operating temperature | -40 ... +85 °C |
| Storage temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP20 |
| Nominal current | 0.5 A |
| Nominal voltage | 24 V DC |
| Material (insert) | Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Details

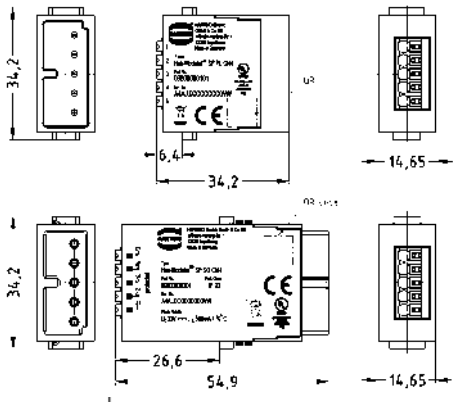
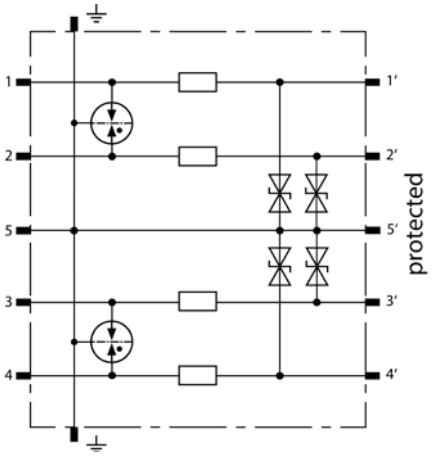
The surge protection module protects up to 4 single lines with common reference potential and unbalanced interfaces against lightning strikes or overvoltages.

Preferred field of application is the protection of digital signals up to 24 VDC with a max load of 0.5 A / line.

The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

# Han-Smart® Surge protection module

Modu-
lar

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han-Smart®,<br>Han-Smart® Surge protection module,<br>Four channels,<br>Common reference potential,<br>Push-in-spring-cage termination,<br>IP20<br> | 0.25 ... 1.5 | 09 80 000 0101 | 09 80 003 0201 | <br><br>Circuit diagram |

## Features

- Robust housing
- Compact design saves space
- Modular structure increases flexibility
- Simple and quick assembly
- Two-part hood

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65, locked condition |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Nickel plated |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| Material (accessories) | Metal |
| RoHS | compliant |

## Specifications and approvals

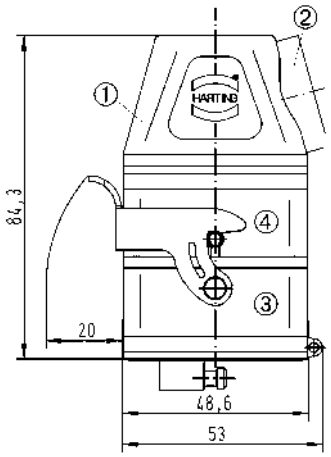
IEC 61984

CE

## Details

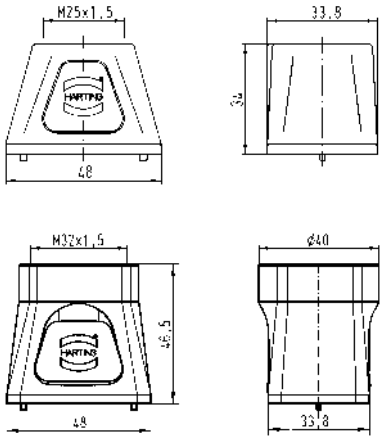
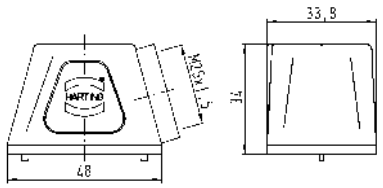
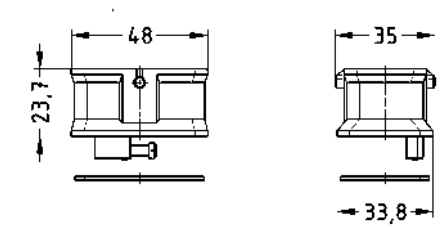
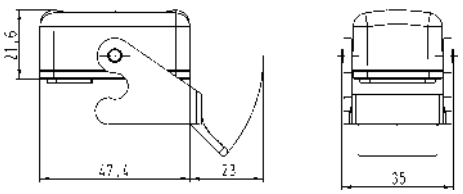
Conductor cross-section PE 0.5 ... 10 mm²

Conductor cross-section 10 mm² only with ferrule crimping tool 09 99 000 0374

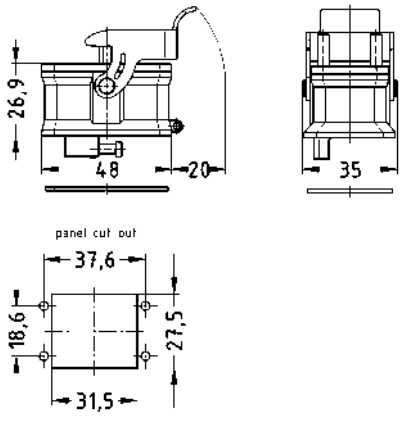
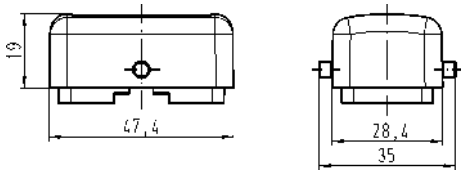
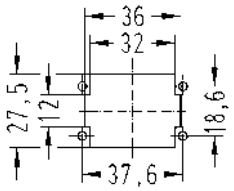



① Hood with side entry
② Cable entry M25
③ Bulkhead mounted housing with locking lever
④ Carrier hood

Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular® Compact,<br>Hood,<br>Top entry,<br>IP65 locked condition<br>Pack contents:<br>4 screws are included within the delivery<br> | 1x M25<br>1x M32 | 19 14 001 0401<br>19 14 001 0402 |  |
| Han-Modular® Compact,<br>Hood,<br>Side entry,<br>IP65 locked condition<br>Pack contents:<br>4 screws are included within the delivery<br> | 1x M25 | 19 14 001 0501 |  |
| Han-Modular® Compact,<br>Carrier hood,<br>IP65 locked condition<br> | | 09 14 001 0311 |  |
| Han-Modular® Compact,<br>Protection cover,<br>for carrier hoods,<br>Thermoplastic,<br>IP65 locked condition<br> | | 09 14 001 5402 |  |

Single locking lever

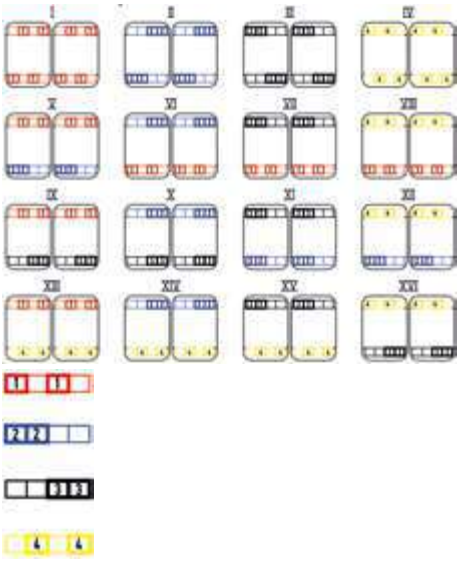
| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular® Compact,<br>Bulkhead mounted housing,<br>IP65 locked condition  | 09 14 001 0301 |  |
| Han-Modular® Compact,<br>Protection cover,<br>for bulkhead mounted housings,<br>Thermoplastic,<br>IP65 locked condition  | 09 14 001 5401 |  |
| Fixing bracket  | 09 14 000 9947 | <br>Panel cut out |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Polycarbonate (PC) |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | Red, Blue, Black, Yellow |
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Coding element, Red  | 09 14 000 9971 | |
| Coding element, Blue  | 09 14 000 9972 | |
| Coding element, Black  | 09 14 000 9973 | |
| Coding element, Yellow  | 09 14 000 9974 |  |

## Features

- Robust housing
- Compact design saves space
- Modular structure increases flexibility
- Simple and quick assembly
- Two-part hood

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Aluminium die-cast, Zinc die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel |
| Colour (locking) | RAL 7037 (dust grey) |
| Material (accessories) | Zinc die-cast |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

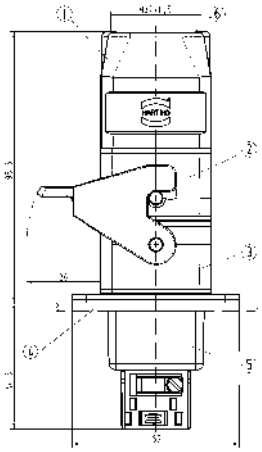
IEC 61984

CE

## Details

Conductor cross-section PE 0.5 ... 10 mm²

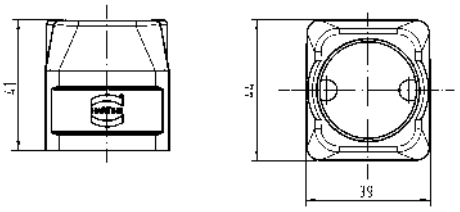
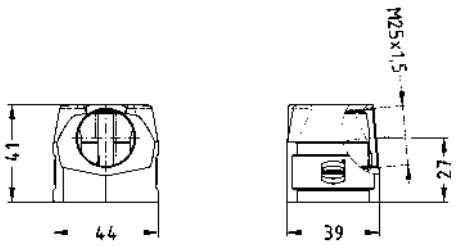
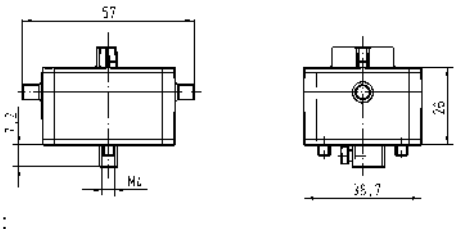
Conductor cross-section 10 mm² only with ferrule crimping tool 09 99 000 0374

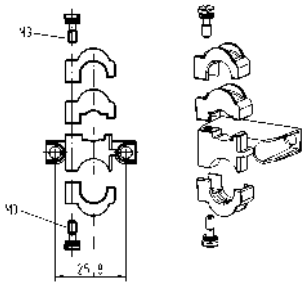


① Hood with top entry
② Carrier hood
③ Bulkhead mounted housing with locking lever
④ Switch board panel
⑤ Panel feed through housings
⑥ Cable entry

Single locking lever

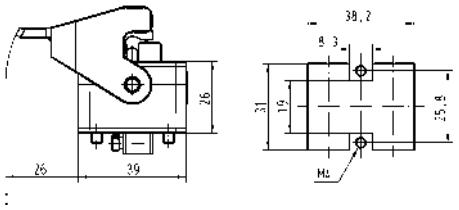
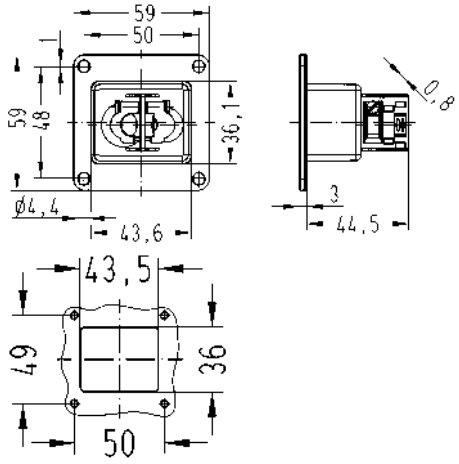
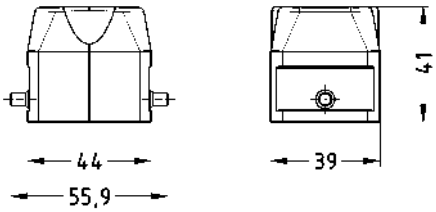


| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular® Twin,<br>Hood,<br>Top entry,<br>IP65  | 1x M20<br>1x M25<br>1x M32 | 19 14 002 0400<br>19 14 002 0401<br>19 14 002 0402 |  |
| Han-Modular® Twin,<br>Hood,<br>Side entry,<br>IP65  | 1x M25 | 19 14 002 0501 |  |
| Han-Modular® Twin,<br>Carrier hood,<br>IP65  | | 09 14 002 0311 |  |
| Han-Modular® Twin,<br>Angled housing,<br>Zinc die-cast,<br>IP65  | 1x M32 | 09 14 002 0950<br>19 14 002 0952 | |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Shielded frame  | | 09 14 000 9924 |   |

Single locking lever



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular® Twin,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65  | 09 14 002 0301 |  |
| Han-Modular® Twin,<br>Panel feed through housing,<br>Zinc die-cast,<br>IP65  | 09 14 000 9928 | <br>Panel cut out |
| Han-Modular® Twin,<br>Protection cover,<br>for bulkhead mounted housings,<br>Metal,<br>IP65  | 09 14 002 5401 |  |

## Features

- Suitable for all Han-Modular® single modules
- The variant with PE connection uses pin 1 of the module as PE
- Slim, space saving construction type
- Low cost plastic hoods and housings

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65, IP20 |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 7032 (pebble grey) |
| Material (seal) | NBR |
| Material (accessories) | Polycarbonate (PC) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

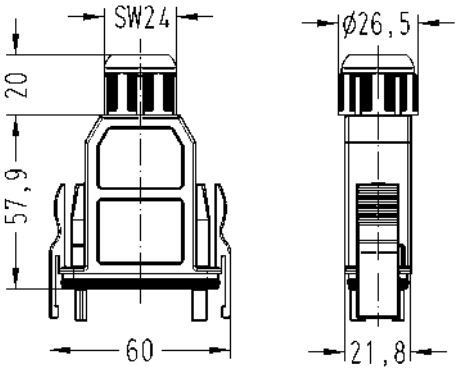
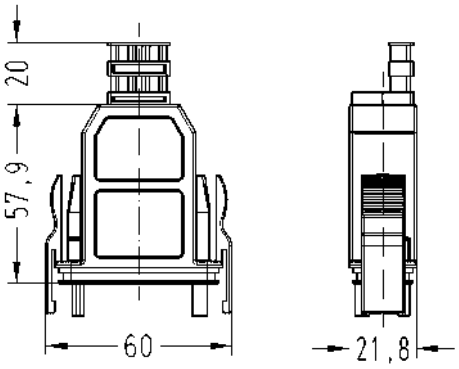
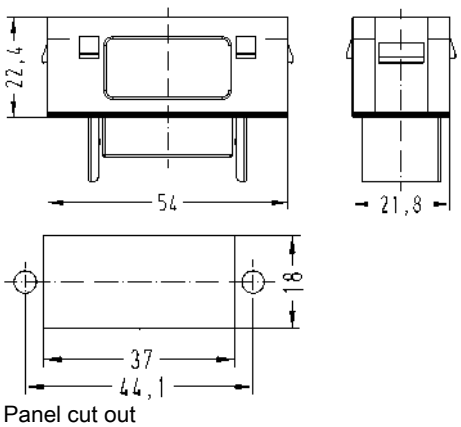
## Specifications and approvals

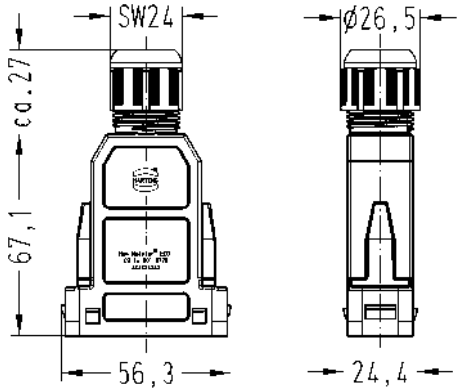
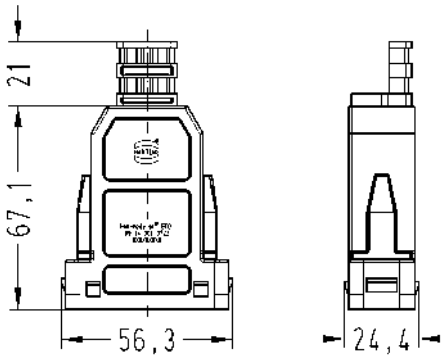
EN 60664-1
IEC 61984

CE

Snap-in latches

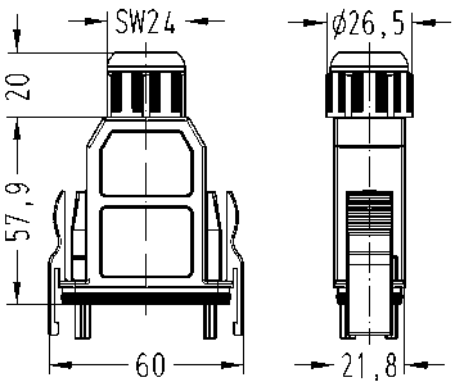
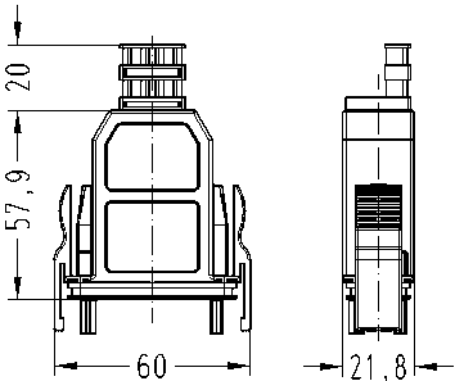
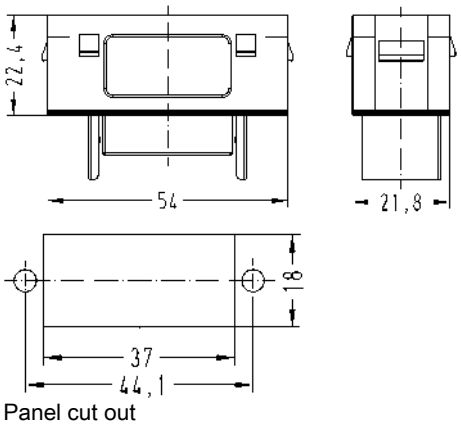


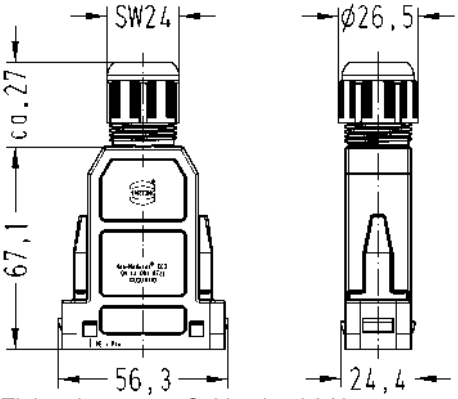
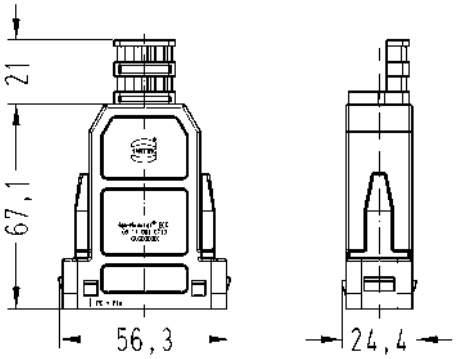
| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular® ECO,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65,<br>IP65<br> | 1x Integrated | 6 ... 13 | 09 14 001 0420 | <br>Tightening torque Cable gland 3 Nm |
| Han-Modular® ECO,<br>Hood,<br>Top entry,<br>IP20,<br>IP20<br> | 1x | 3 ... 14.5 | 09 14 001 0422 |  |
| Han-Modular® ECO,<br>Bulkhead mounted housing,<br>IP65<br> | | | 09 14 001 0320 | <br>Panel cut out |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular® ECO,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65,<br>IP65<br> | 1x Integrated | 6 ... 13 | 09 14 001 0720 | <br>Tightening torque Cable gland 3 Nm |
| Han-Modular® ECO,<br>Cable to cable housing,<br>Top entry,<br>IP20,<br>IP20<br> | 1x | 3 ... 14.5 | 09 14 001 0722 |  |
| Han-Modular®,<br>Coding element,<br>Pack contents:<br>8 pieces per frame<br> | | | 09 14 000 9929 | |

Snap-in latches



| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular® ECO,<br>Hood,<br>With PE identification (pin 1 = PE),<br>With integrated cable gland,<br>Top entry,<br>IP65,<br>IP65<br> | 1x Integrated | 6 ... 13 | 09 14 001 0421 | <br>Tightening torque Cable gland 3 Nm |
| Han-Modular® ECO,<br>Hood,<br>With PE identification (pin 1 = PE),<br>Top entry,<br>IP20,<br>IP20<br> | 1x | 3 ... 14.5 | 09 14 001 0423 |  |
| Han-Modular® ECO,<br>Bulkhead mounted housing,<br>With PE identification (pin 1 = PE),<br>IP65<br> | | | 09 14 001 0321 | <br>Panel cut out |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular® ECO,<br>Cable to cable housing,<br>With PE identification (pin 1 = PE),<br>With integrated cable gland,<br>Top entry,<br>IP65,<br>IP65<br> | 1x Integrated | 6 ... 13 | 09 14 001 0721 | <br>Tightening torque Cable gland 3 Nm |
| Han-Modular® ECO,<br>Cable to cable housing,<br>With PE identification (pin 1 = PE),<br>Top entry,<br>IP20,<br>IP20<br> | 1x | 3 ... 14.5 | 09 14 001 0723 |  |
| Han-Modular®,<br>Coding element,<br>Pack contents:<br>8 pieces per frame<br> | | | 09 14 000 9929 | |

# Han-Modular® Flexbox



## Features

- Fast, easy and secure assembly
- Flexible building block system
- Suitable for Han-Modular® modules
- Over 100 modules available

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP54 |
| Material (hood/housing) | Polyamide (PA), Fibre-glass reinforced |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Colour (seal) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 61984
EN 45545-1 R22: HL1, HL2

## Details

### Safety note

The modules listed in the table below are excluded from being used in the Han-Modular® Flexbox.

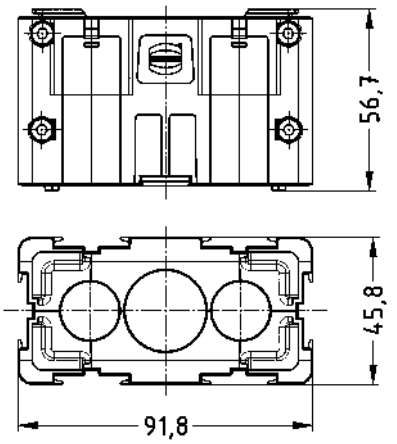
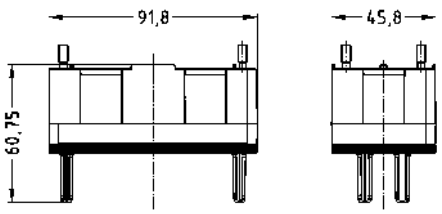
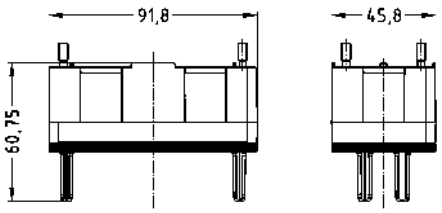
| Module | Part no. |
|---|---|
| Han® 100A module (axial screw) | 09 14 002 265X / 09 14 002 275X |
| Han® 70A module (axial screw) | 09 14 002 264X / 09 14 002 274X |
| Han® 70A Hybrid module | 09 14 005 264X / 09 14 005 274X |
| Han® HV module ("double") | 09 14 002 302X / 09 14 002 312X |
| Han® HV Single module | 09 14 002 3025 / 09 14 002 3125 |
| Han® Megabit module | 09 14 008 30XX / 09 14 008 31XX |
| Han-Smart® Ethernet-Switch module | 09 80 113 0400 |

The following module is excluded from any use ≥ 1000 V in the Han-Modular® Flexbox:

| Module | Part no. |
|---|---|
| Han® 300 A module | 09 14 001 3004 / 09 14 001 3104 |

# Han-Modular® Flexbox



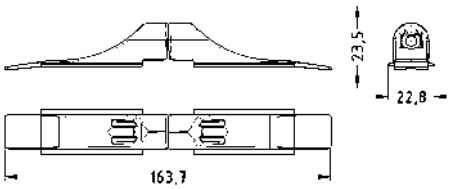
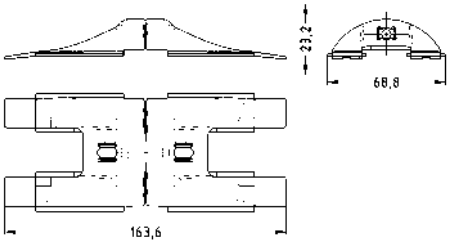
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular® Flexbox,<br>Hood,<br>Top entry,<br>IP54<br> | 3x<br>4x | 5 ... 24<br>4 ... 16 | 09 14 000 8013<br>09 14 000 8014 |  |
| Han-Modular® Flexbox,<br>Carrier hood,<br>for 4 modules,<br>a ... d,<br>IP54<br> | | | 09 14 004 8001 |  |
| Han-Modular® Flexbox,<br>Carrier hood,<br>for 4 modules,<br>A ... D,<br>IP54<br> | | | 09 14 004 8101 |  |

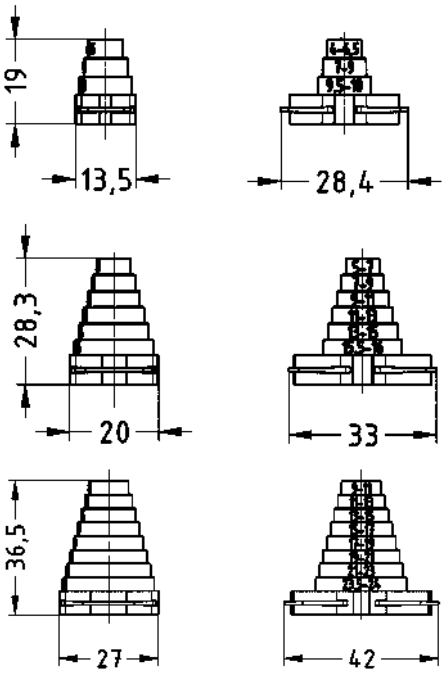
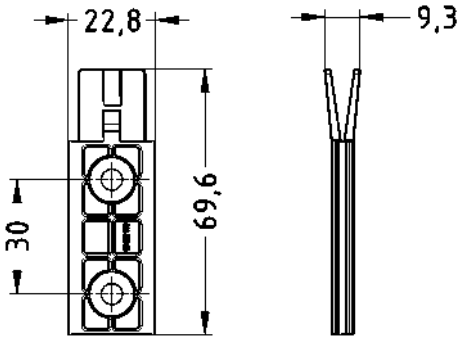
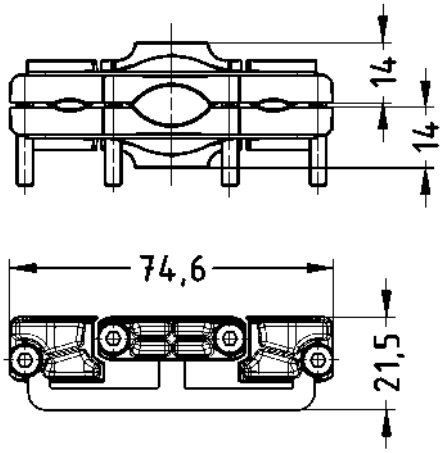
## Technical characteristics

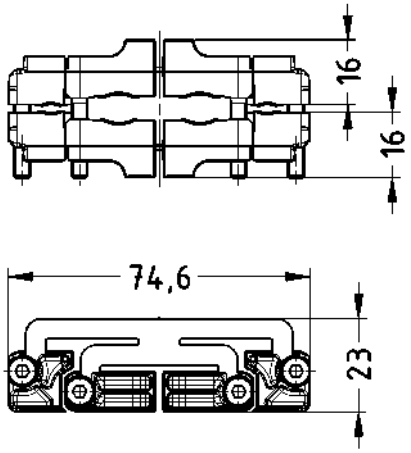
| | |
|---|---|
| Material (seal) | NBR |
| Colour (seal) | RAL 9005 (jet black) |
| Material (locking) | Polyamide (PA), Fibre-glass reinforced |

## Technical characteristics

| | |
|---|---|
| Colour (locking) | RAL 9005 (jet black) |
| Material (accessories) | Polyamide (PA), Fibre-glass reinforced |
| Colour (accessories) | RAL 9005 (jet black) |
| RoHS | compliant |

| Identification | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Locking element, Single  | | 09 14 000 8021 |   |
| Locking element, Double  | | 09 14 000 8022 |   |

| Identification | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Cable seal  | 4 ... 10<br>5 ... 16<br>9 ... 24 | 09 14 000 8100<br>09 14 000 8200<br>09 14 000 8300 |   |
| Fixing,<br>for the combination of two Flexboxes and for mounting the Flexbox  | | 09 14 000 8020 |   |
| Strain relief,<br>3 cable entries  | | 09 14 000 8033 |   |

| Identification | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Strain relief,<br>4 cable entries  | | 09 14 000 8034 |  |

# Han-Modular® docking frames



## Features

- Blind mating connector system for drawer systems
- Highest flexibility due to a product range of over 100 connector modules
- Direct panel mounting without hoods and housings
- Leading centring system compensates for tolerances of +/- 2 mm
- Compatible with HMC components for 10,000 mating cycles

## Technical characteristics

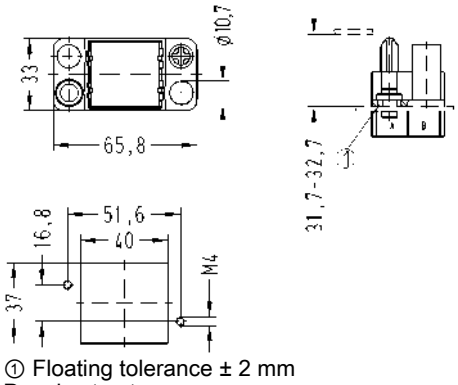
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Degree of protection acc. to IEC 60529 | IP20 |
| Lock-in range | ±4 mm |
| Material (frames) | Polycarbonate (PC) |
| Material (accessories) | Zinc die-cast |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984

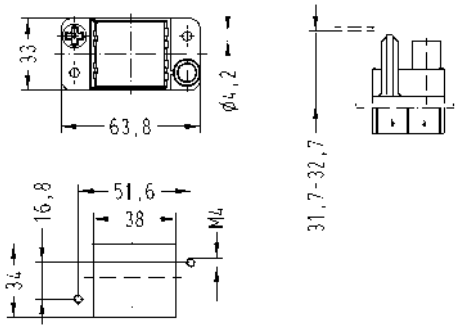
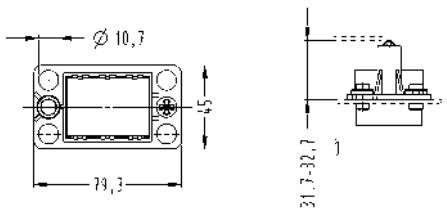
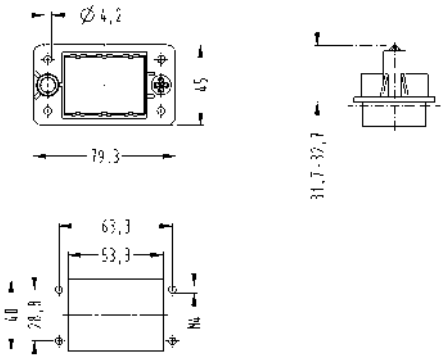
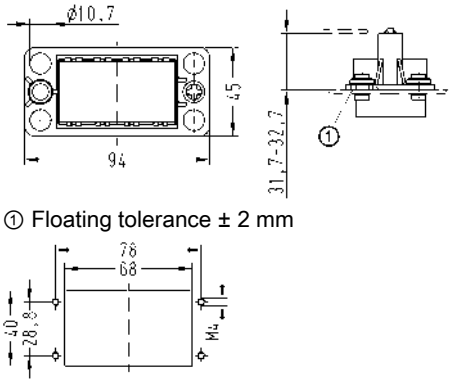
## Details

The docking frame has no PE contact as it is not required in many drawer system applications.

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Docking frame,<br>Float mount,<br>for 2 modules,<br>A ... B,<br>IP20 | 09 14 006 1701 | <br>① Floating tolerance ± 2 mm<br>Panel cut out |

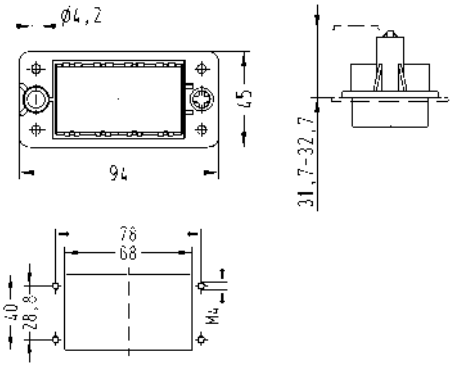
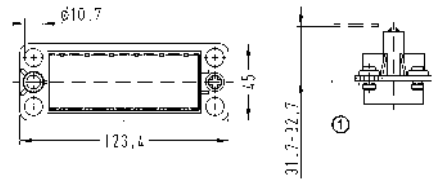
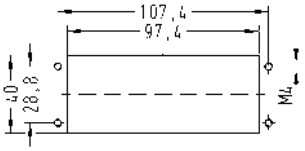
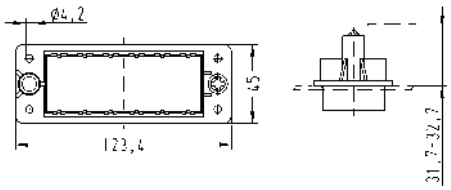
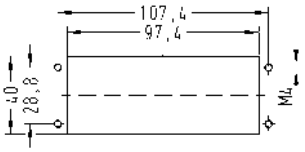
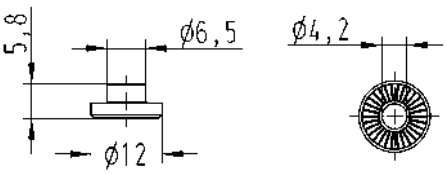


# Han-Modular® docking frames

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Docking frame,<br>Fixed,<br>for 2 modules,<br>a ... b,<br>IP20  | 09 14 006 1711 | <br>Panel cut out |
| Han-Modular®,<br>Docking frame,<br>Float mount,<br>for 3 modules,<br>A ... C,<br>IP20  | 09 14 010 1701 | <br>① Floating tolerance ± 2 mm |
| Han-Modular®,<br>Docking frame,<br>Fixed,<br>for 3 modules,<br>a ... c,<br>IP20  | 09 14 010 1711 | <br>Panel cut out |
| Han-Modular®,<br>Docking frame,<br>Float mount,<br>for 4 modules,<br>A ... D,<br>IP20  | 09 14 016 1701 | <br>① Floating tolerance ± 2 mm<br><br>Panel cut out |

# Han-Modular® docking frames



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Docking frame,<br>Fixed,<br>for 4 modules,<br>a ... d,<br>IP20<br> | 09 14 016 1711 | <br><br>Panel cut out |
| Han-Modular®,<br>Docking frame,<br>Float mount,<br>for 6 modules,<br>A ... F,<br>IP20<br> | 09 14 024 1701 | <br><br>① Floating tolerance ± 2 mm<br><br><br>Panel cut out |
| Han-Modular®,<br>Docking frame,<br>Fixed,<br>for 6 modules,<br>a ... f,<br>IP20<br> | 09 14 024 1711 | <br><br><br><br>Panel cut out |
| Han-Modular®,<br>Float washer<br>To enable the frame to be float mounted using standard M4 fixing screws | 09 14 000 9936 | <br> |

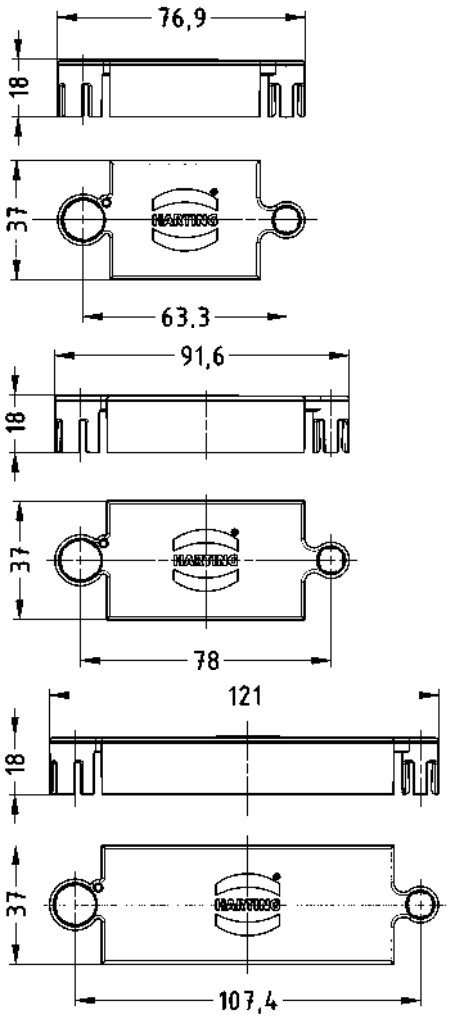
# Han-Modular® docking frames

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP20 |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

DIN EN 45545-2 R22: HL1, HL2, HL3
DIN EN 45545-2 R23: HL1, HL2, HL3

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Dust protection cover,<br>for Han-Modular® plastic docking frame,<br>IP20  | 10 B<br>16 B<br>24 B | 09 14 010 5701<br>09 14 016 5701<br>09 14 024 5701 |  |

# Sliding frame

## Features

- Blind mating connector system for drawer systems with test position
- Direct panel mounting without hoods and housings
- Solid leading guide pins and bushes
- Suitable for many modules of the Han-Modular® product series (Please contact your HARTING salesman for support to find your specific combination.)

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -5 ... +55 °C |
| Mating cycles | ≥500 |
| Lock-in range | ±4 mm |
| Material (frames) | Polycarbonate (PC) |
| Material (accessories) | Zinc die-cast |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

Due the plastic material used in the docking frame without PE, the panel will need to be grounded separately.

## Details





Position unmated
The drawer system and the modules are not mated.



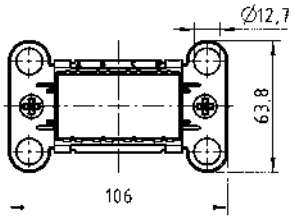
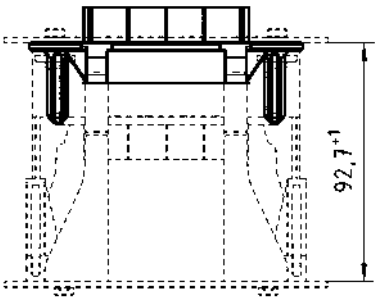
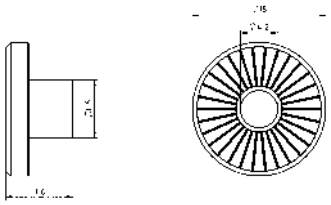
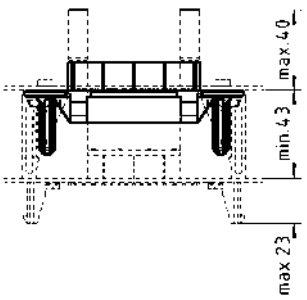
Test position
The drawer system is in the so called test position – the modules are mated.



Working position
The drawer system is pushed completely into the rack – the modules remain mated.

# Sliding frame

Size 16 B

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Sliding frame,<br>with test position,<br>for 4 modules,<br>Float mount,<br>A ... D<br> | 09 14 016 1721 |  |
| Sliding frame,<br>with test position,<br>for 4 modules,<br>Movable side,<br>a ... d<br> | 09 14 016 1731 |  |
| Han-Modular®,<br>Float washer<br>To enable the Sliding Frame to be float mounted using standard M4 fixing screws | 09 14 000 9986 |  |
| Rail guide,<br>for sliding frames for movable side<br> | 09 14 000 9987 |  |

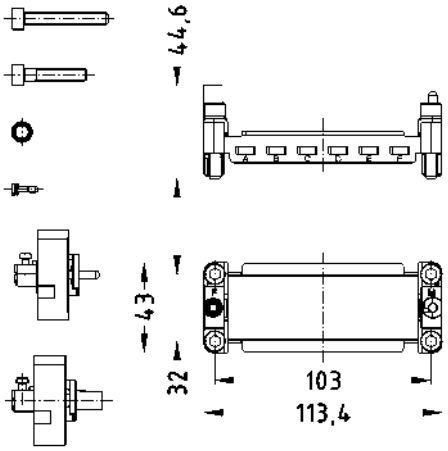
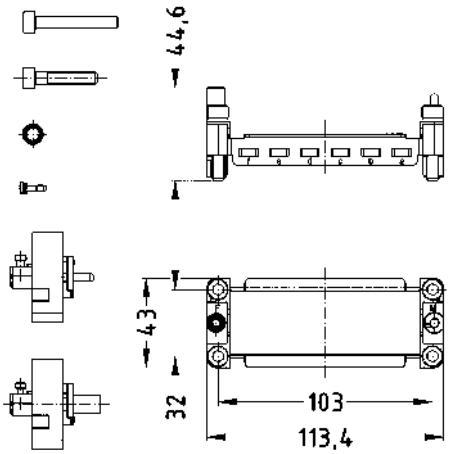
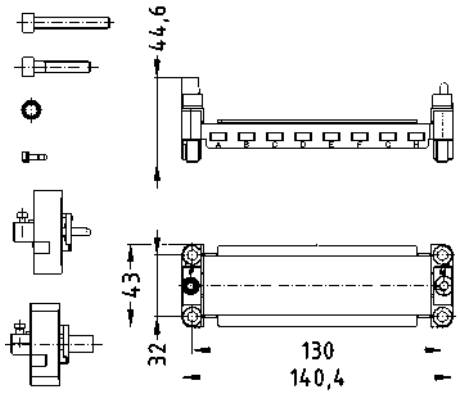
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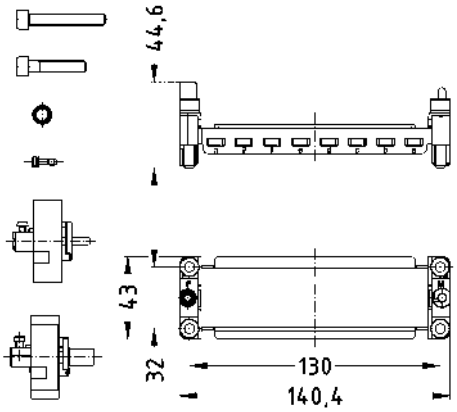
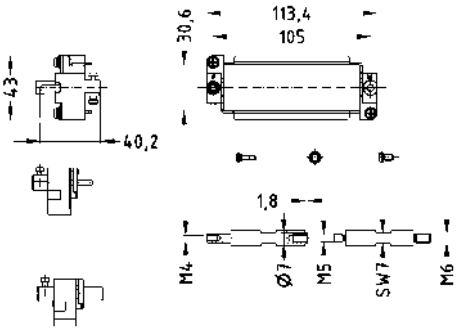
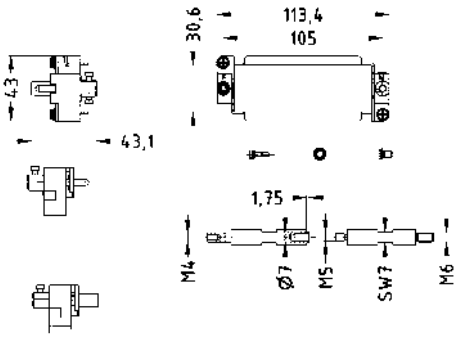
- Hinged frames with additional PE connection for 6 Han-Modular® single modules
- Two leading PE contacts
- Compatible to the hinged frame Han® HPR EasyCon
- Compatible to the hinged frame Han® HPR enlarged

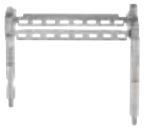
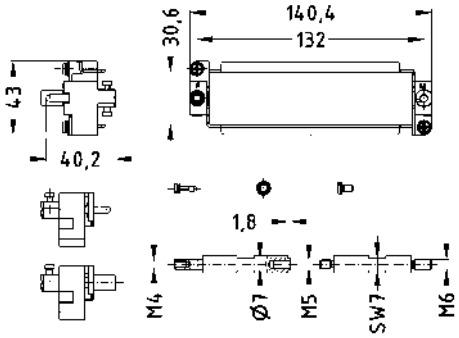
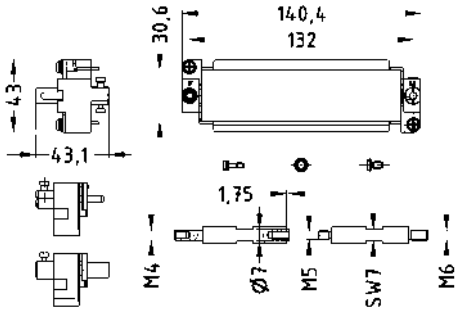
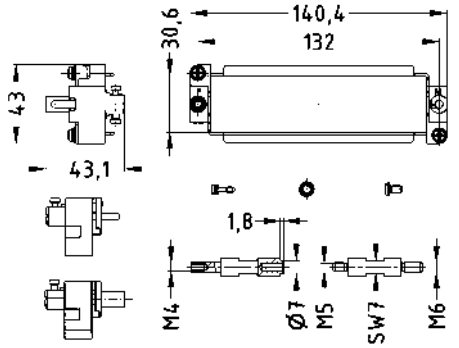
## Technical characteristics

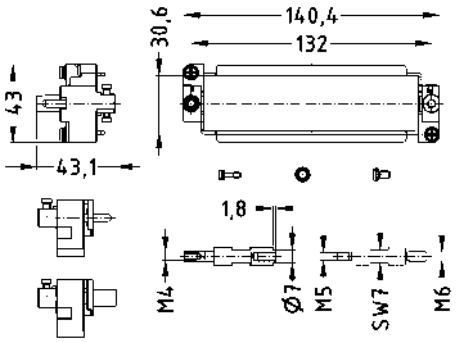
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (accessories) | Stainless steel, Zinc die-cast |
| RoHS | compliant |

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for up to 6 single modules,<br>A ... F,<br>Pack contents:<br>2x M4 screw,<br>2x washer SK S4,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 30,<br>4x washer SK S6 | | 09 11 000 9945 | |
| Han® HPR enlarged,<br>Frame,<br>for up to 6 single modules,<br>a ... f,<br>Pack contents:<br>2x M4 screw,<br>2x washer SK S4,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 30,<br>4x washer SK S6 | | 09 11 000 9946 | |

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for up to 6 single modules,<br>A ... F,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M3 screw,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 30,<br>4x cheese-head screw M6 x 40<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 11 016 9933 |  |
| Han® HPR enlarged,<br>Frame,<br>for up to 6 single modules,<br>a ... f,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M3 screw,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 30,<br>4x cheese-head screw M6 x 40<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 11 016 9934 |  |
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M3 screw,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 30,<br>4x cheese-head screw M6 x 40<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 11 024 9933 |  |

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M3 screw,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 30,<br>4x cheese-head screw M6 x 40<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 11 024 9934 |  |
| Han® HPR EasyCon,<br>Frame,<br>for up to 6 single modules,<br>A ... F,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 40 016 9933 |  |
| Frame,<br>for up to 6 single modules,<br>a ... f,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 40 016 9934 |  |

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 40 024 9933 |  |
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 40 024 9934 |  |
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Low construction,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br><br>ATTENTION! Only to be used with Han® 24 HPR EasyCon Short hoods and housings! | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 40 024 9935 |  |

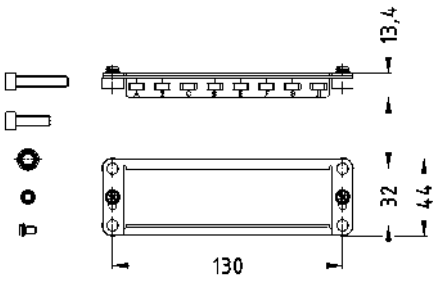
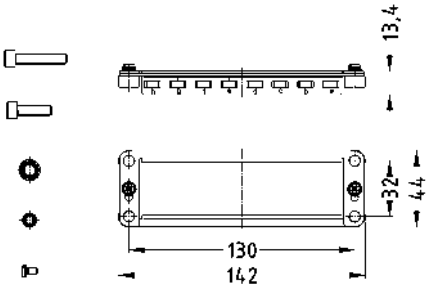
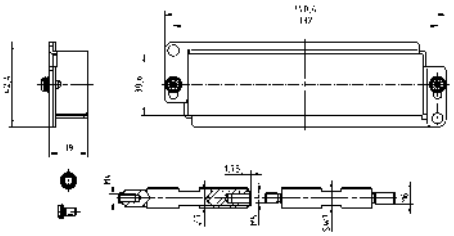
| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Low construction,<br><br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br><br><br><br>ATTENTION! Only to be used with Han® 24 HPR EasyCon Short hoods and housings! | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 40 024 9936 |  |

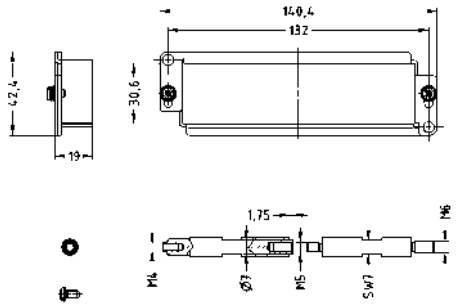
## Technical characteristics

| | |
|---|---|
| Material (accessories) | Stainless steel |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>2x M4 screw,<br>2x washer SK S4,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 30,<br>4x washer SK S6 | 09 11 000 9935 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
|  | | |
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>2x M4 screw,<br>2x washer SK S4,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 30,<br>4x washer SK S6 | 09 11 000 9936 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
|  | | |
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>4x M4 screw,<br>4x washer SK S4 | 09 40 024 9931 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm<br>Tightening torque M4: 1.5 Nm |
|  | | |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>4x M4 screw,<br>4x washer SK S4 | 09 40 024 9932 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm<br>Tightening torque M4: 1.5 Nm |

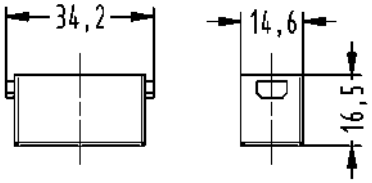
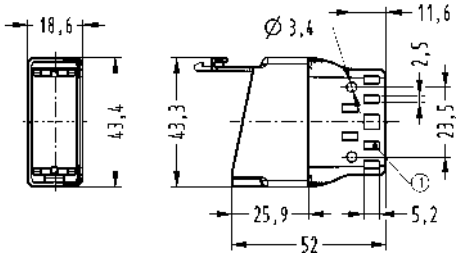
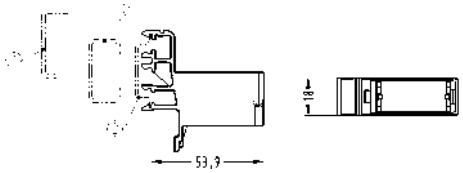
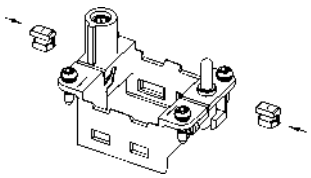


## Technical characteristics

| | |
|---|---|
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (locking) | Polycarbonate (PC) |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Han® Dummy module<br> | 09 14 000 9950 |  |
| Han-Modular®,<br>Module locking system,<br>With strain relief,<br>Pack contents:<br>1 module locking system<br> | 09 14 000 0312 | <br>① For cable ties with max. 5 mm width |
| Han-Modular®,<br>Module locking system,<br>for rail,<br>Pack contents:<br>1 module locking system<br> | 09 14 000 0313 | <br>① G-rail IEC 60715-G32<br>② Rail IEC 60715-35 x 7.5 with 1 mm thickness or -35 x 15 with 1.5 mm thickness<br>③ C-rail IEC 60715-C30 |
| Han-Modular®,<br>Fixing,<br>for Han-Modular® hinged frames,<br>Pack contents:<br>20 pieces per frame<br> | 09 14 000 9960 | <br>to fix the pre-assembled hinged frames |

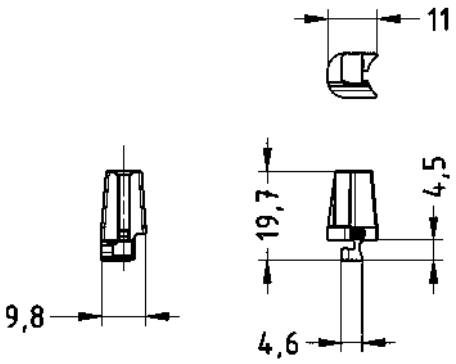


## Features

- Applicable as a guiding element for electrical power and signal modules in the Han-Modular® hinged frame plus
- Considerable time saving assembly compared to conventional guide pins / bushes
- Colour coding with 6 different colours

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Material (accessories) | Polycarbonate (PC) |
| Colour (accessories) | Grey, Red, Blue, Black, Yellow, Green |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

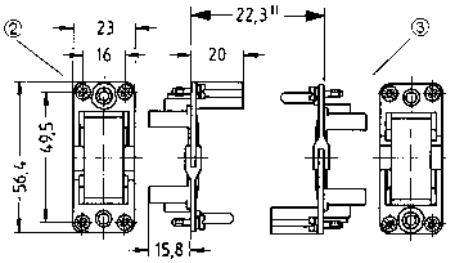
| Identification | | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Guide element,<br>Han-Modular® Guard,<br>for Han-Modular® hinged frames | Black<br>Blue<br>Green<br>Grey<br>Red<br>Yellow | 09 14 000 9993<br>09 14 000 9992<br>09 14 000 9995<br>09 14 000 9990<br>09 14 000 9991<br>09 14 000 9994 |  |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Zinc die-cast |
| RoHS | compliant with exemption |

## Details

PE connection (0.75 ... 2.5 mm²) with cable shoe

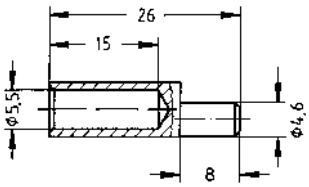
| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Frame,<br>for 1 module,<br>In housing Han® 10 A  | 09 14 000 0304 | <br>① Distance max. 23.5 mm<br>② Hood<br>③ Housing |

## Technical characteristics

| | |
|---|---|
| Material (contacts) | Copper alloy |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Cable shoe,<br>for PE extension<br><br>for hoods/housings high construction only | 16 | 09 14 000 9912 | <br>Please use pressing tools for non-insulated cable shoes following DIN 46230 with 16 mm² range (eg. K25, co. Klauke) |

| Contents | Page |
|---|---|
| Han® HsB ..... | **Han 07.2** |
| Contacts ..... | **Han 07.6** |
| Tools ..... | **Han 07.7** |

## Features

- Suitable for power supply applications
- Crimp termination
- Screw termination with wire protection
- Termination with standard screw driver

## Technical characteristics

| | |
|---|---|
| Number of contacts | 6, 12 |
| Rated current | 35 A |
| Rated voltage conductor-earth | 400 V |
| Rated voltage conductor-conductor | 690 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

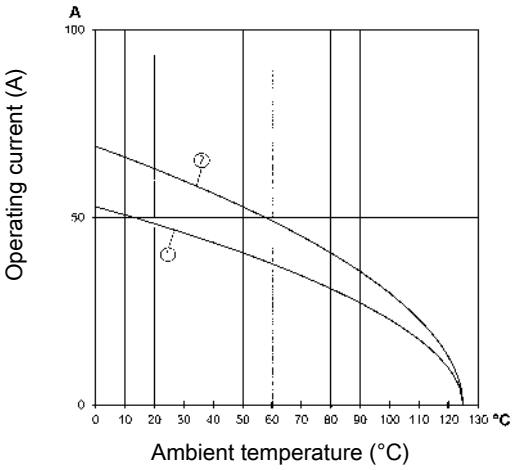
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

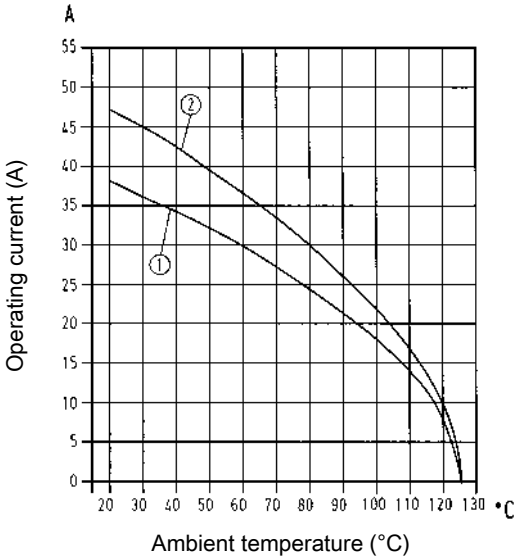
Crimp termination




① Conductor cross-section 6 mm²
② Conductor cross-section 10 mm²

## Derating

Screw termination




① Conductor cross-section 4 mm²
② Conductor cross-section 6 mm²

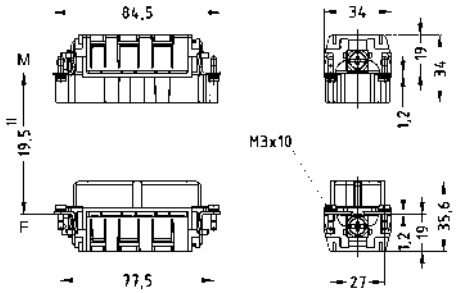
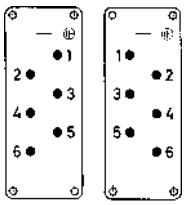
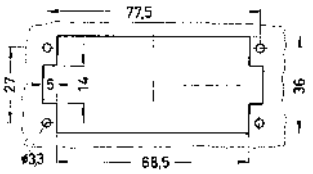
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

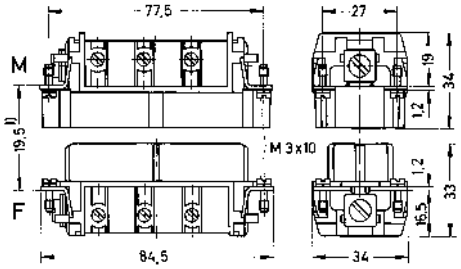
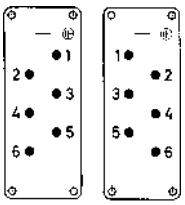
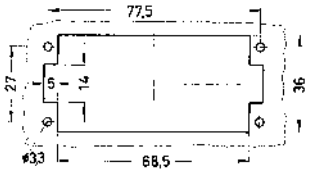
Number of contacts

6+ ⏚

35 A 400/690 V 6 kV 3
35 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HsB, Crimp termination  Please order crimp contacts separately. | 1.5 ... 10 | 09 31 006 3001 | 09 31 006 3101 |   1) distance for contact max. 21 mm   M F Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

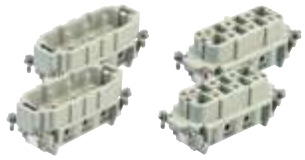
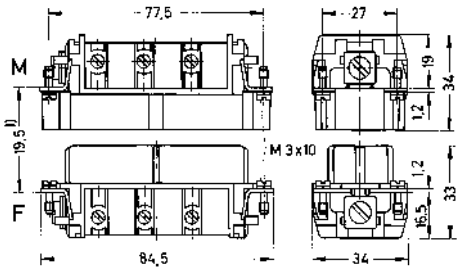
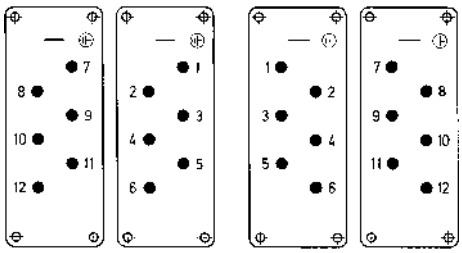
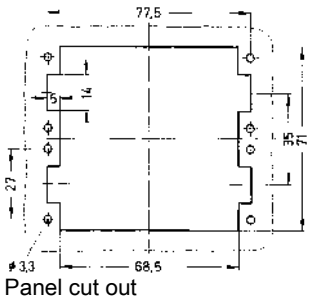
# Han® 6 HsB — Size 16 B

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HsB,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 1.5 ... 6 | 09 31 006 2601 | 09 31 006 2701 | <br><br>1) distance for contact max. 21 mm<br>Tightening torque Clamping screw 1.2 Nm<br><br><br>M F<br>Contact arrangement (view from termination side)<br><br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

12+ ⏚

35 A 400/690 V 6 kV 3
35 A 500 V 6 kV 3

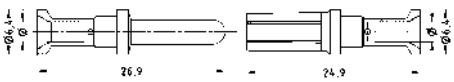
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HsB,<br>Screw termination,<br>With wire protection,<br>1 ... 6<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 1.5 ... 6 | 09 31 006 2601 | 09 31 006 2701 | <br>1) distance for contact max. 21 mm<br>Tightening torque Clamping screw 1.2 Nm |
| Han® HsB,<br>Continuing marking,<br>Screw termination,<br>With wire protection,<br>7 ... 12<br>Contact surface:<br>Silver plated<br><br>You need two inserts for a complete assembly! | 1.5 ... 6 | 09 31 006 2611 | 09 31 006 2711 | <br>M F<br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Material (contacts) | Copper alloy |

## Specifications and approvals

EN 60664-1
IEC 61984

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HsB,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 31 000 6104<br>09 31 000 6105<br>09 31 000 6101<br>09 31 000 6102<br>09 31 000 6103 | 09 31 000 6204<br>09 31 000 6205<br>09 31 000 6201<br>09 31 000 6202<br>09 31 000 6203 | <br>26.9 24.9<br>Wire gauge / ø / Stripping length<br>1.5 mm² AWG 16 / 1.78 mm / 9.5 mm<br>2.5 mm² AWG 14 / 2.28 mm / 9.5 mm<br>4 mm² AWG 12 / 2.88 mm / 9.5 mm<br>6 mm² AWG 10 / 3.53 mm / 9.5 mm<br>10 mm² AWG 8 / 4.33 mm / 9.5 mm |

## Details

The professional tool for big cross-sections.

## Details

The professional tool for crimping Han® HsB contacts.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>Han® C: 4 ... 10 mm²,<br>Pack contents:<br>incl. locator | 4 ... 10 | 09 99 000 0377 |  |
| Crimping tool,<br>Han® HsB: 1.5 ... 4 mm²,<br>Pack contents:<br>incl. locator | 1.5 ... 4 | 09 99 000 0986 |  |
| Locator,<br>for part number 09 99 000 0377,<br>Han® HsB: 4 ... 10 mm² | | 09 99 000 0985 |  |
| Removal tool,<br>Han® HsB | | 09 99 000 0987 | |

# Han® AV

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Han D® AV ..... **Han 08.4**

Han D® AV distributor ..... **Han 08.9**

Han E® AV ..... **Han 08.11**

Han® ES AV ..... **Han 08.20**

Accessories ..... **Han 08.25**

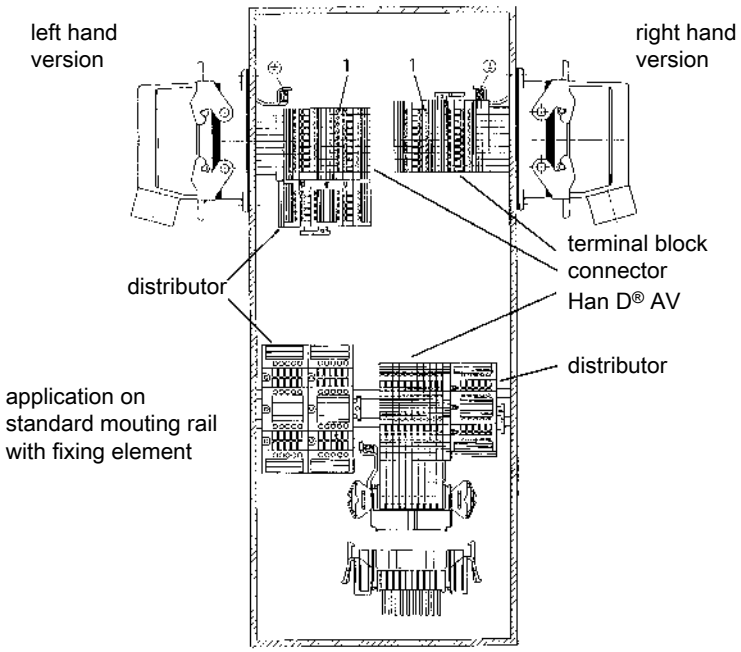
## Arrangement in switch cabinet

Terminal block connector in left or right hand version; therefore identical pre-assembled interface cables can be used on both sides.

For application inside of a switch cabinet, on standard mounting rails in conjunction with Han Snap®

Mount the distributor on a standard mounting rail or on the terminal block connector Han D® AV!

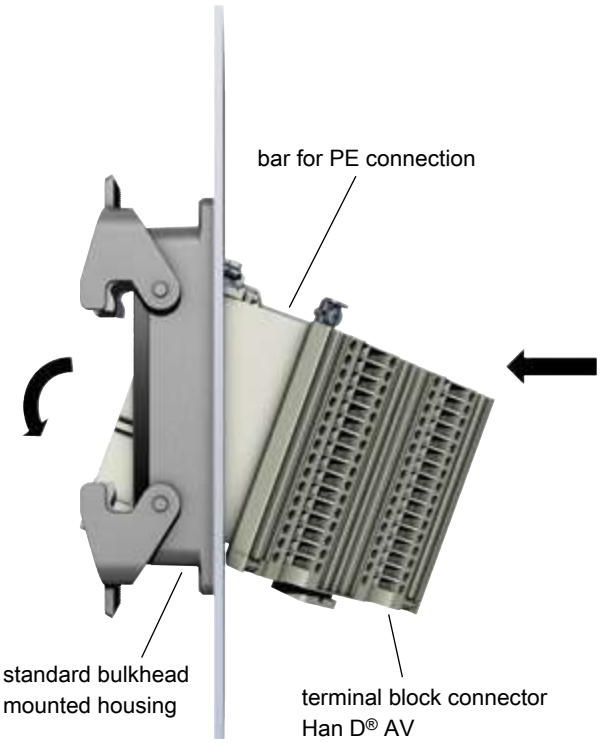
The terminal block connectors can be supplied for left or right hand applications so that the PE terminal as well as the terminal for contact no. 1 will be accessible from the “top” in both types of installation.




## Assembly of terminal block connector

A seperate pre-assembly is possible: Therefore, the distributor must be thread from the inside of the switch cabinet into the standard bulkhead mounted housing.

Note:
On one side of the distributor is a bar for PE connection. Insert the distributor – slightly inclined, the side without the PE conductor leading – from the rear into the bulkhead mounted housing!




## Identification

The individual terminals have the same identification as on the mating face. In addition each circuit may be separately labelled with identification strips fitted in the adjacent slots.

## Counterparts

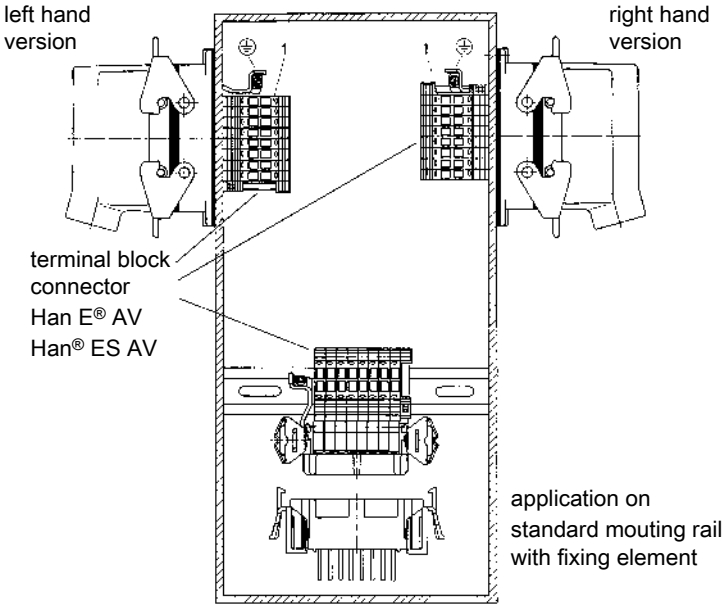
For suitable mating inserts of serie Han D® with crimp termination please refer to the chapter 02.

## Arrangement in switch cabinet

Terminal block connector in left or right hand version; therefore identical pre-assembled interface cables can be used on both sides.

For application inside of a switch cabinet, on standard mounting rails in conjunction with Han Snap®

The terminal block connectors can be supplied for left or right hand applications so that the PE terminal as well as the terminal for contact no. 1 will be accessible from the “top” in both types of installation.

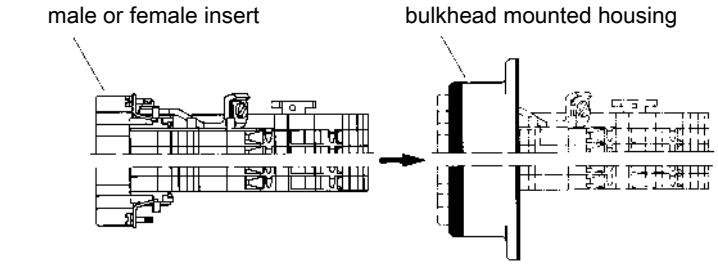


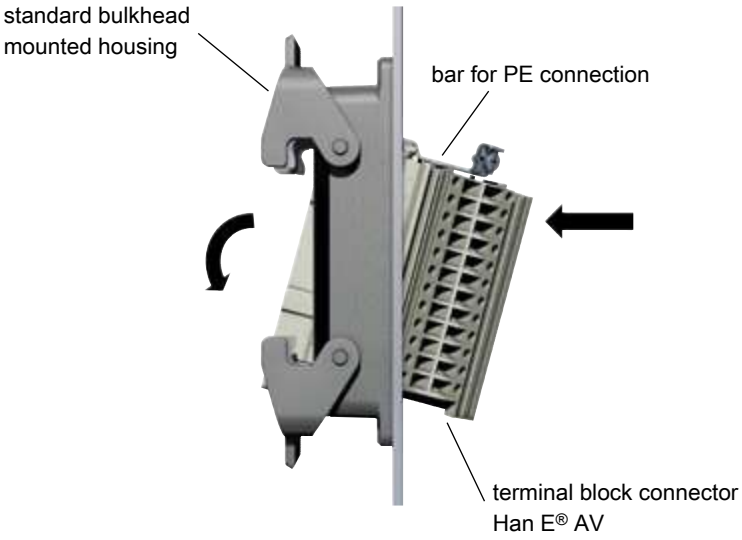

## Assembly of terminal block connector

The teminal block connector is inserted into the standard bulkhead mounted housing and fastened – like any standard contact insert – with four fixing screws.

A seperate pre-assembly is possible with Han E® AV and Han® ES AV, in the variants with 16 and 24 poles.
Therefore, the distributor must be thread from the inside of the switch cabinet into the standard bulkhead mounted housing.

Note:
On one side of the distributor is a bar for PE connection. Insert the distributor – slightly inclined, the side without the PE conductor leading – from the rear into the bulkhead mounted housing!




## Identification

The individual terminals have the same identification as on the mating face. In addition each circuit may be separately labelled with identification strips fitted in the adjacent slots.

## Counterparts

For suitable mating inserts of series Han E® and Han® ES with screw, cage-clamp or crimp termination please refer to the chapter 03.

## Features

- for left or right hand applications available
- PE and connecting terminal for contact no.1 are at the top in both types of installation
- Mountable in standard bulkhead mounted housings and on standard rails by using of fixing elements
- Screw termination with wire protection

## Technical characteristics

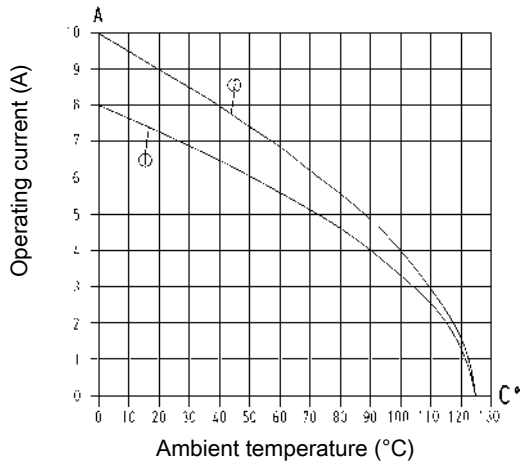
| | |
|---|---|
| Number of contacts | 40, 64 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤4 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Derating

### Current carrying capacity

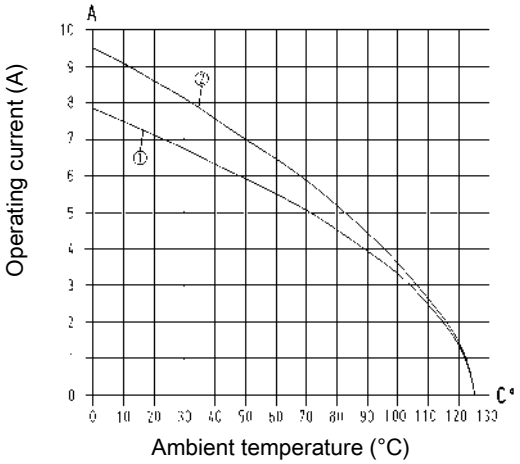
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 40 D AV Conductor cross-section 0.75 mm²
② Han® 40 D AV Conductor cross-section 1.5 mm²

## Derating




① Han® 64 D AV Conductor cross-section 0.75 mm²
② Han® 64 D AV Conductor cross-section 1.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Stripping length 8 ... 11 mm

Tightening torque 0.5 Nm

**Hoods/Housings** see chapter Han 31

### Identification

The individual terminals have the same identification as on the mating face. In addition each circuit may be separately labelled with identification strips fitted in the adjacent slots.

### Identification strips

Multi contour (MK) the following identification strips may be used

- HARTING – 09 21 000 9971
- Murrplastik – KPX 5/10-5
- Weidmüller – DEK 5
- Phoenix – 4 K – DST 5
- Phoenix – DS 5
- Phoenix – ZB 5
- WAGO – WSB 5

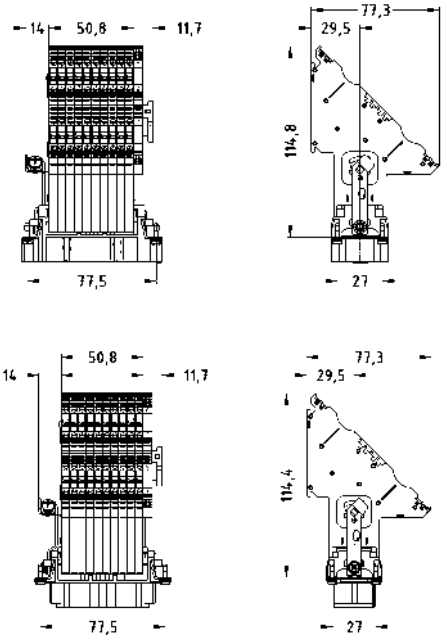
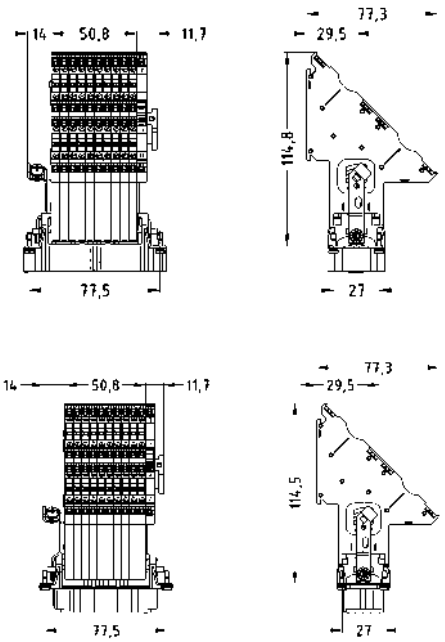
Single contour (SK) the following identification strips may be used

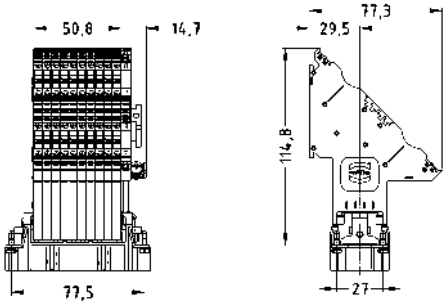
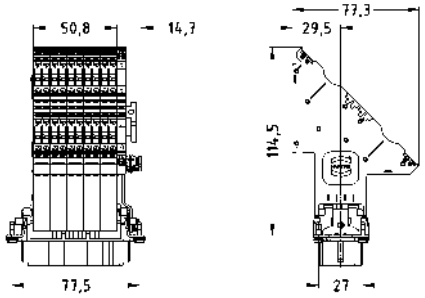
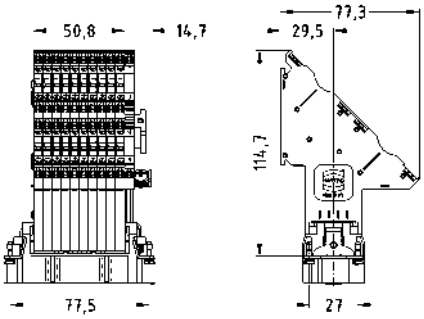
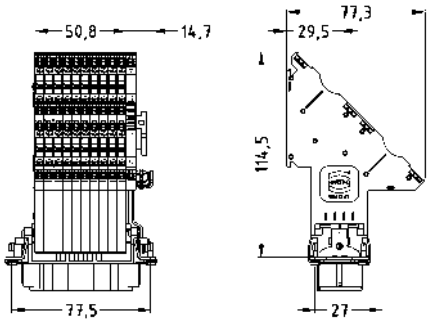
- Murrplastik – KWI 5/10
- Murrplastik – KWI 5/10-5
- Murrplastik – KWI 8.6-5
- Wieland – 9705 A 5/10
- WAGO – Mini - WSB

Number of contacts

40+ ⏚

10 A 250 V 4 kV 3

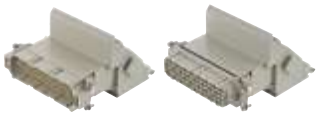
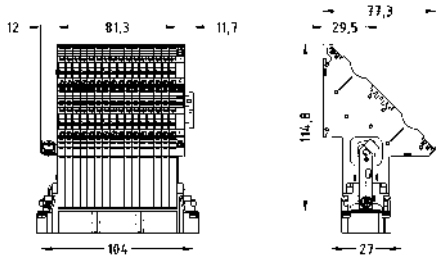
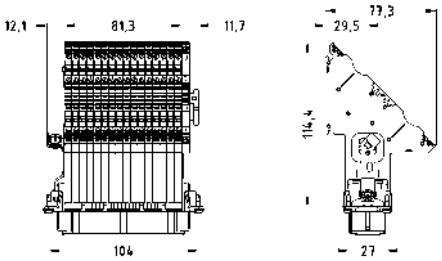
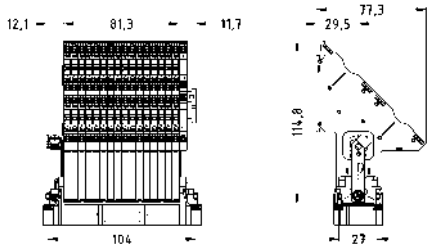
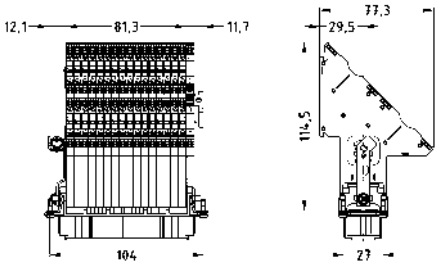
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D® AV,<br>Terminal block connector,<br>Left hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 040 4601 | 09 21 040 4701 |  |
| Han D® AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 040 4602 | 09 21 040 4702 |  |

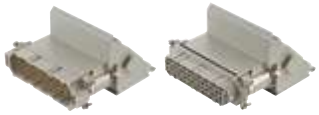
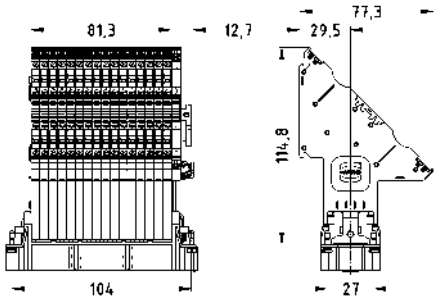
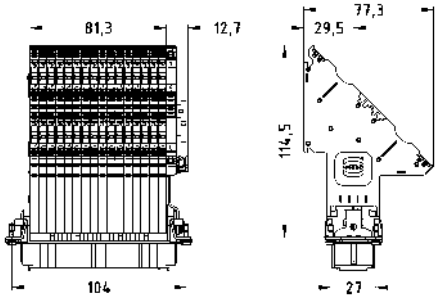
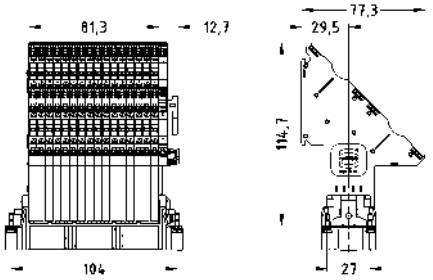
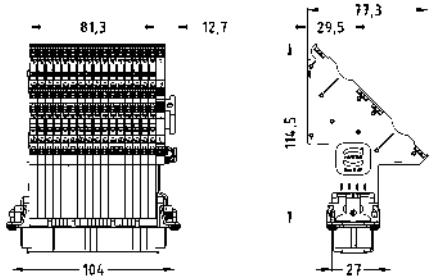
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D® AV,<br>Terminal block connector,<br>Right hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 040 4611 | 09 21 040 4711 | <br> |
| Han D® AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 040 4612 | 09 21 040 4712 | <br> |

Number of contacts

64+ ⏚

10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D® AV,<br>Terminal block connector,<br>Left hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 064 4601 | 09 21 064 4701 | <br> |
| Han D® AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 064 4602 | 09 21 064 4702 | <br> |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D® AV,<br>Terminal block connector,<br>Right hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 064 4611 | 09 21 064 4711 | <br> |
| Han D® AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 21 064 4612 | 09 21 064 4712 | <br> |

# Han D® AV distributor



## Features

- Easy mounting direct adjacent to terminal block connector Han D® AV
- By using of fixing elements mountable on standard rails
- Screw termination with wire protection

## Technical characteristics

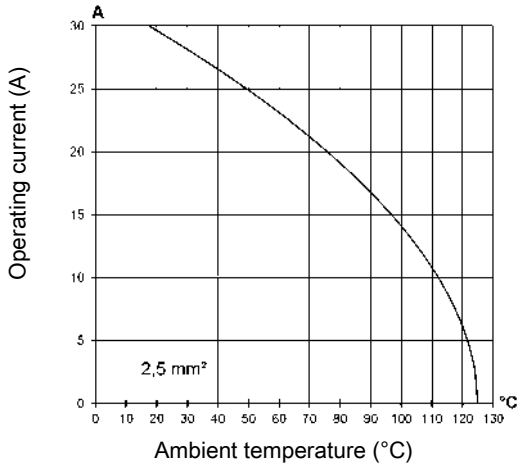
| | |
|---|---|
| Rated current | 16 A |
| Rated voltage conductor-earth | 400 V |
| Rated voltage conductor-conductor | 690 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | not compliant, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

## Details

Stripping length 8 ... 11 mm

Tightening torque 0.5 Nm

### Identification

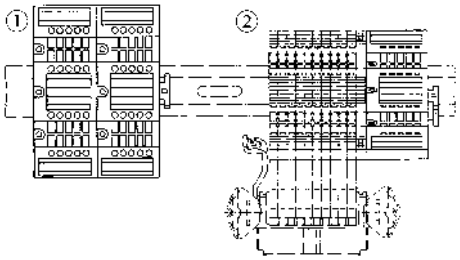
The individual terminals have the same identification as on the mating face. In addition each circuit may be separately labelled with identification strips fitted in the adjacent slots.

### Identification strips

Multi contour (MK) the following identification strips may be used

- HARTING – 09 21 000 9971
- Murrplastik – KPX 5/10-5
- Phoenix – 4 K – DST 5
- Phoenix – ZB 5
- Phoenix – DS 5

### Mounting example



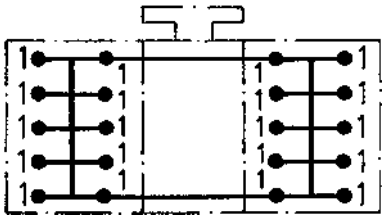
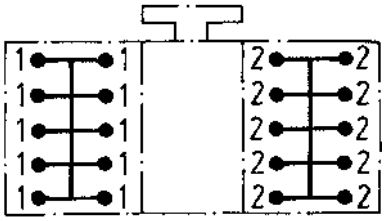
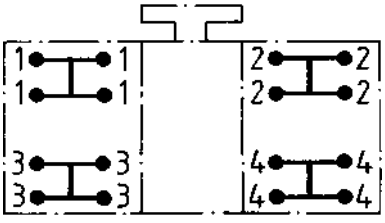
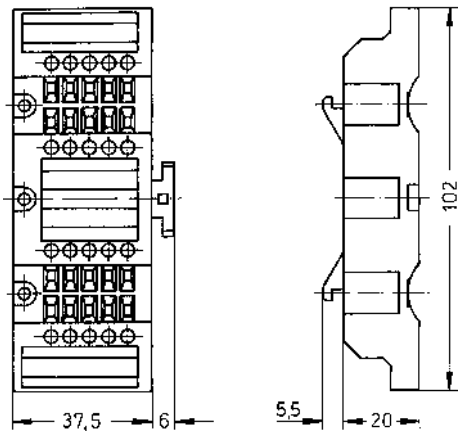

① Distributor On standard rail
② Distributor With teminal block connector Han D® AV

# Han D® AV distributor

16 A 400/690 V 6 kV 3





| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han D® AV,<br>Distributor,<br>20 termination points,<br>Screw termination,<br>Contact surface:<br>Tin plated<br>Optionally mountable to terminal block connectors | 0.2 ... 2.5 | 09 42 020 0111 |  |
| Han D® AV,<br>Distributor,<br>2 x10 termination points,<br>Screw termination,<br>Contact surface:<br>Tin plated<br>Optionally mountable to terminal block connectors | 0.2 ... 2.5 | 09 42 020 0121 |  |
| Han D® AV,<br>Distributor,<br>4x 4 termination points,<br>Screw termination,<br>Contact surface:<br>Tin plated<br>Optionally mountable to terminal block connectors | 0.2 ... 2.5 | 09 42 020 0131 | <br> |

## Features

- for left or right hand applications available
- PE and connecting terminal for contact no.1 are at the top in both types of installation
- Mountable in standard bulkhead mounted housings and on standard rails by using of fixing elements
- Screw termination with wire protection

## Technical characteristics

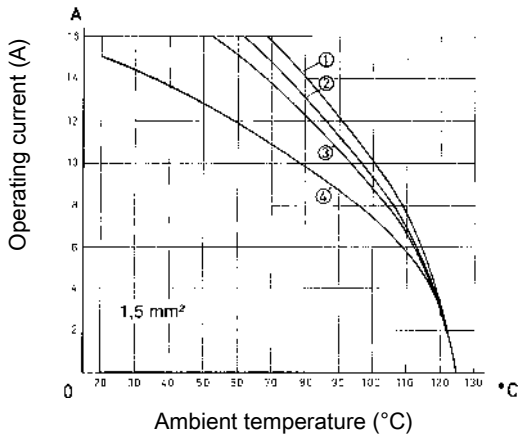
| | |
|---|---|
| Number of contacts | 6, 10, 16, 24 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤4 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

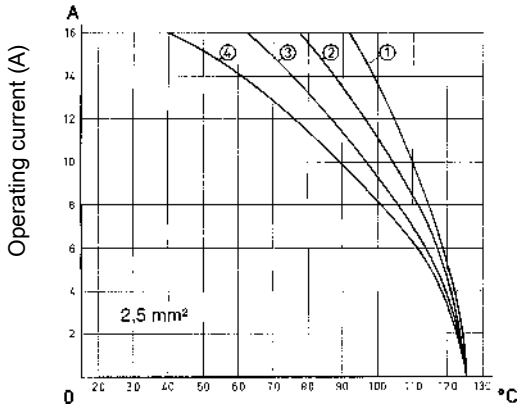
Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Han® 6 E AV
② Han® 10 E AV
③ Han® 16 E AV
④ Han® 24 E AV

## Derating




Ambient temperature (°C)

① Han® 6 E AV
② Han® 10 E AV
③ Han® 16 E AV
④ Han® 24 E AV

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Stripping length 8 ... 11 mm

Tightening torque 0.5 Nm

### Identification

The individual terminals have the same identification as on the mating face. In addition each circuit may be separately labelled with identification strips fitted in the adjacent slots.

### Identification strips

Multi contour (MK) the following identification strips may be used

- HARTING 6 x 10 – 09 33 000 9971
- Murrplastik – KPX 6 / 10
- Weidmüller – DEK 6.5
- Phoenix – 4 K – DST 6

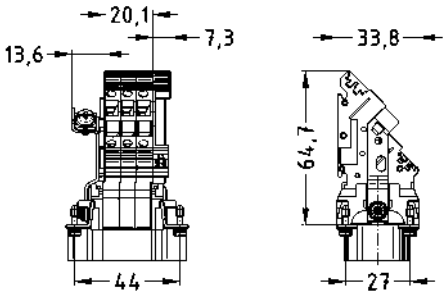
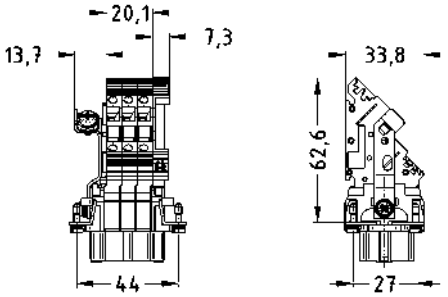
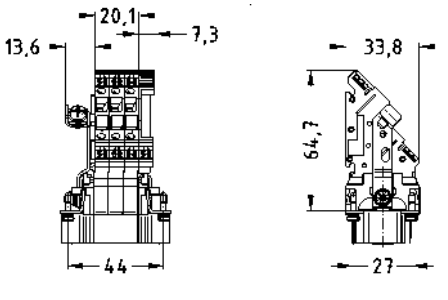
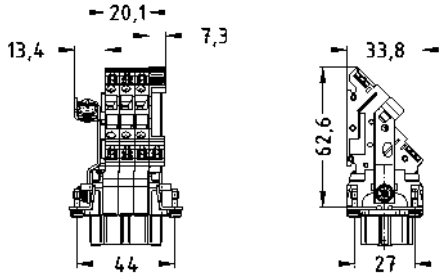
Single contour (SK) the following identification strips may be used

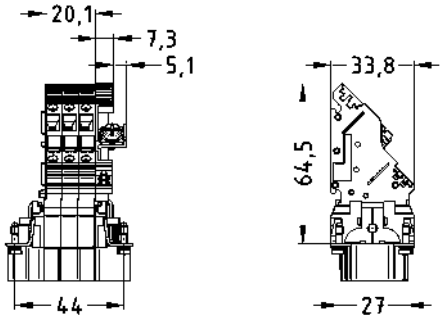
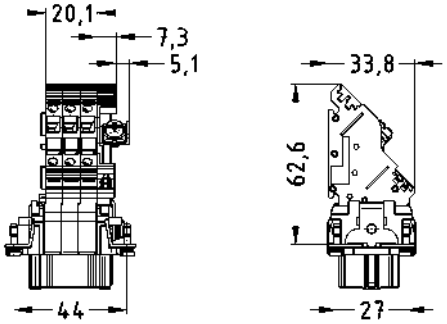
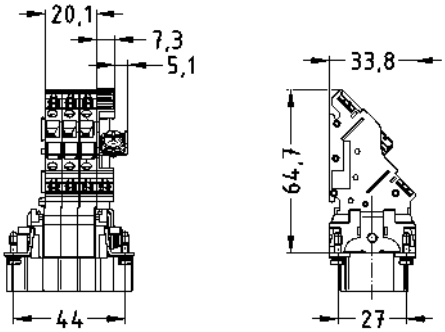
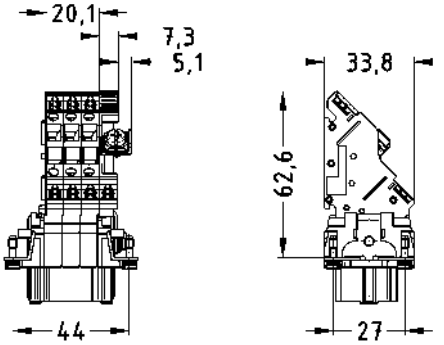
- Murrplastik – KWI 6/10
- Wieland – 9705 A/6.7

Number of contacts

6+ ⏚

16 A 500 V 6 kV 3

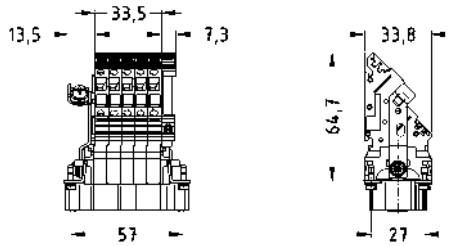
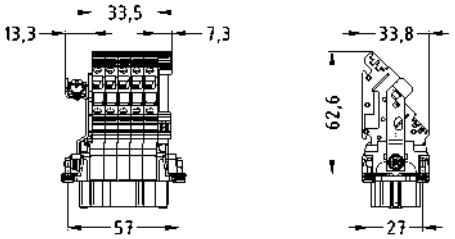
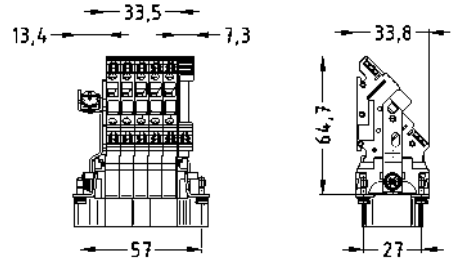
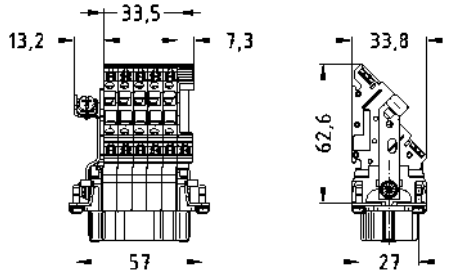
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 006 4625 | 09 33 006 4725 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 006 4626 | 09 33 006 4726 | <br> |

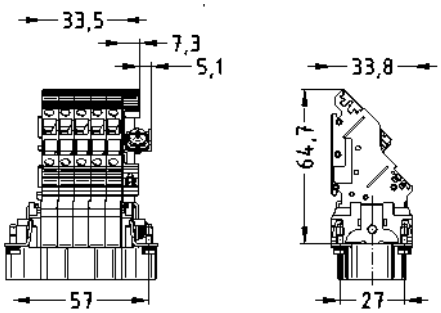
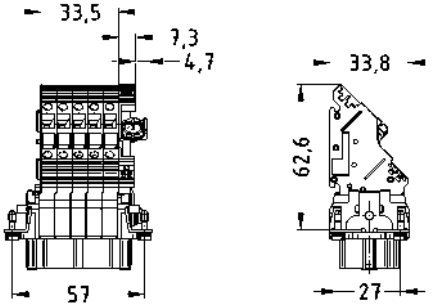
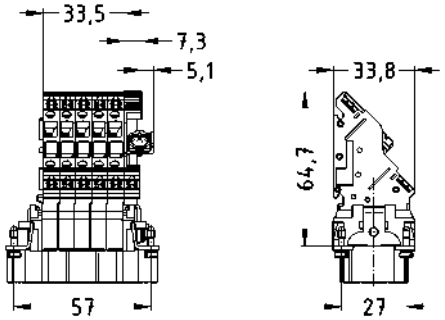
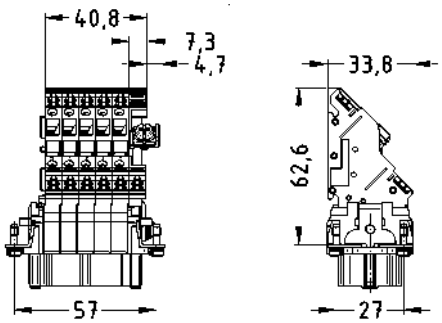
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 006 4635 | 09 33 006 4735 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 006 4636 | 09 33 006 4736 | <br> |

Number of contacts

10+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated  | 0.2 ... 2.5 | 09 33 010 4625 | 09 33 010 4725 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated  | 0.2 ... 2.5 | 09 33 010 4626 | 09 33 010 4726 | <br> |

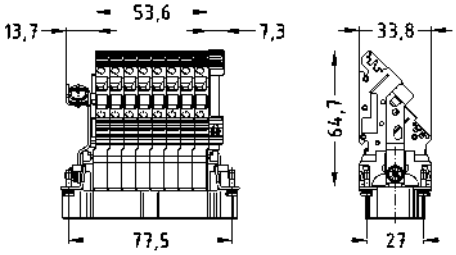
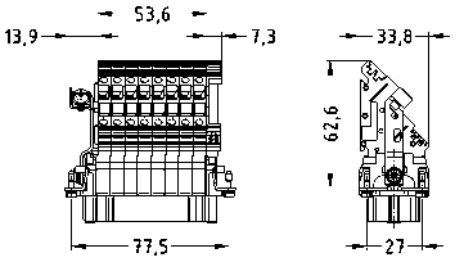
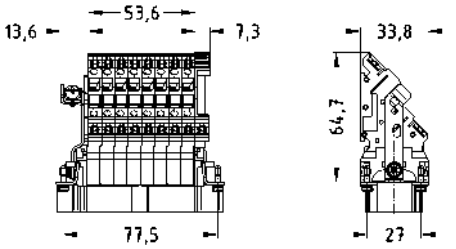
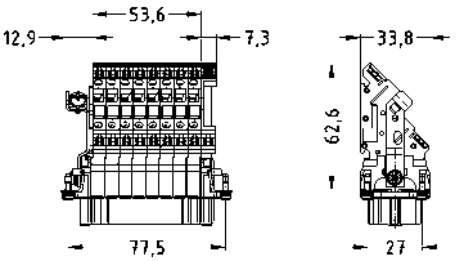
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 010 4635 | 09 33 010 4735 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 010 4636 | 09 33 010 4736 | <br> |

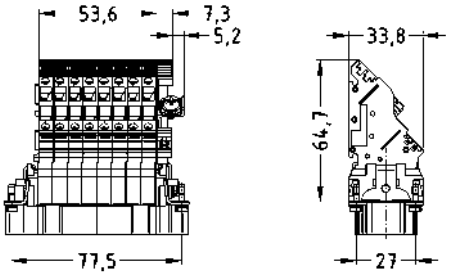
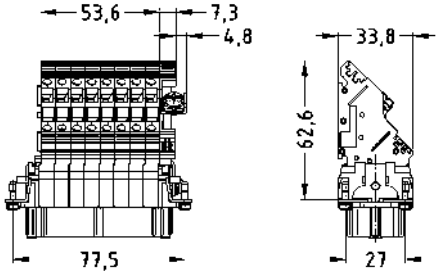
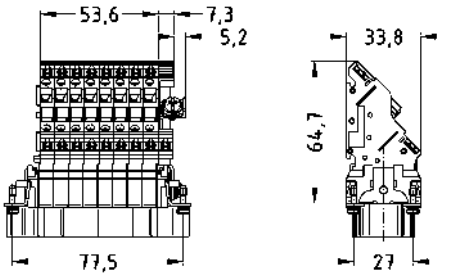
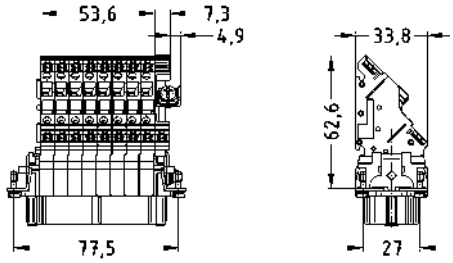
Number of contacts

# 16+ ⏚

16 A 500 V 6 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 016 4625 | 09 33 016 4725 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 016 4626 | 09 33 016 4726 | <br> |

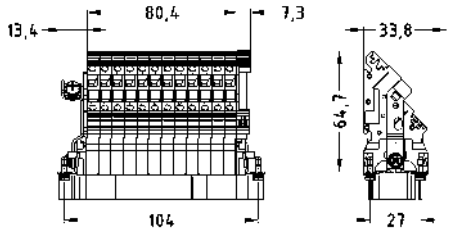
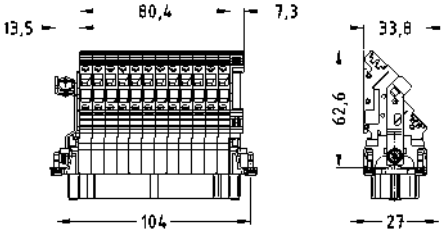
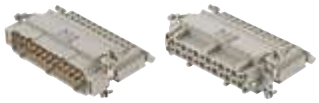
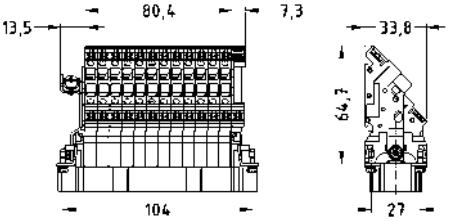
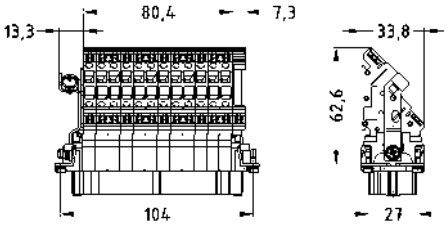
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 016 4635 | 09 33 016 4735 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 016 4636 | 09 33 016 4736 | <br> |

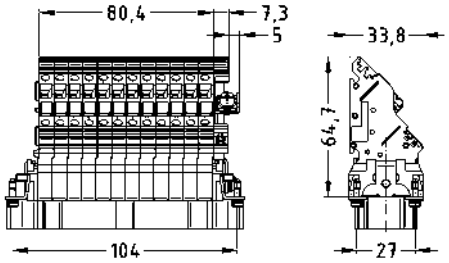
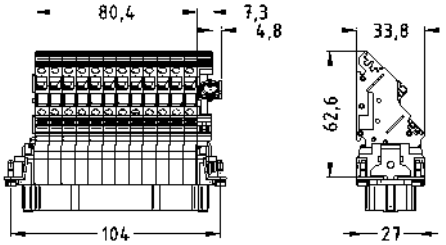
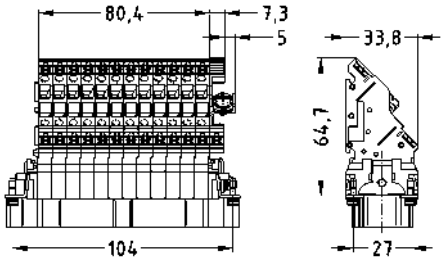
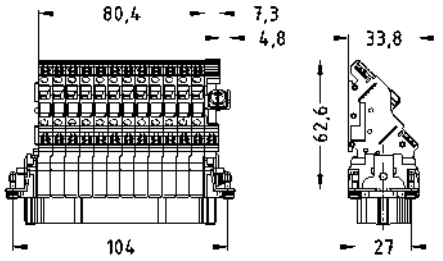
Number of contacts

# 24+ ⏚

16 A 500 V 6 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 024 4625 | 09 33 024 4725 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 024 4626 | 09 33 024 4726 | <br> |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Multi contour (MK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 024 4635 | 09 33 024 4735 | <br> |
| Han E® AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 0.2 ... 2.5 | 09 33 024 4636 | 09 33 024 4736 | <br> |

## Features

- for left or right hand applications available
- PE and connecting terminal for contact no.1 are at the top in both types of installation
- Mountable in standard bulkhead mounted housings and on standard rails by using of fixing elements
- Reliable cage clamp termination

## Technical characteristics

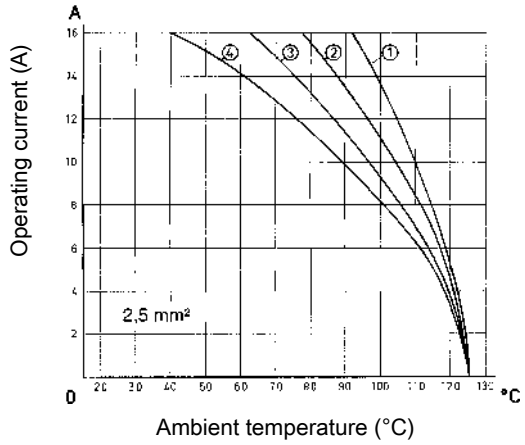
| | |
|---|---|
| Number of contacts | 6, 10, 16, 24 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated current acc. to UL | 12 A |
| Rated current acc. to CSA | 12 A |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤4 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

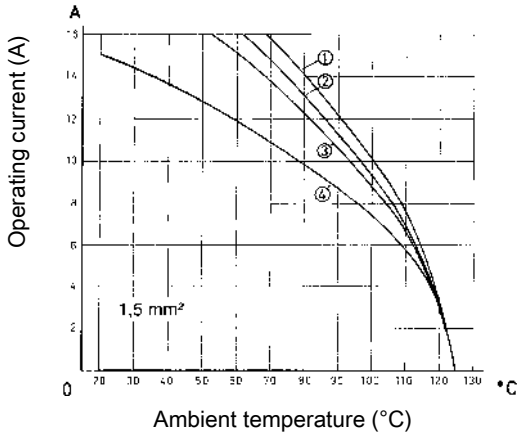
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 6 ES AV
② Han® 10 ES AV
③ Han® 16 ES AV
④ Han® 24 ES AV

## Derating




① Han® 6 ES AV
② Han® 10 ES AV
③ Han® 16 ES AV
④ Han® 24 ES AV

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Stripping length 8 ... 11 mm

### Identification

The individual terminals have the same identification as on the mating face. In addition each circuit may be separately labelled with identification strips fitted in the adjacent slots.

### Identification strips

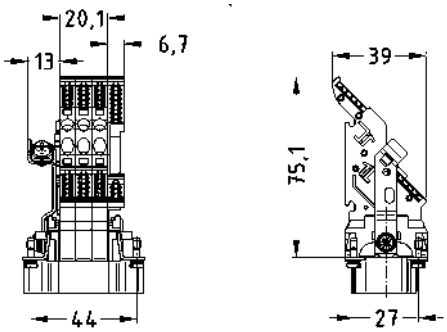
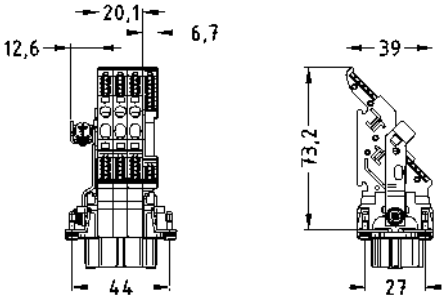
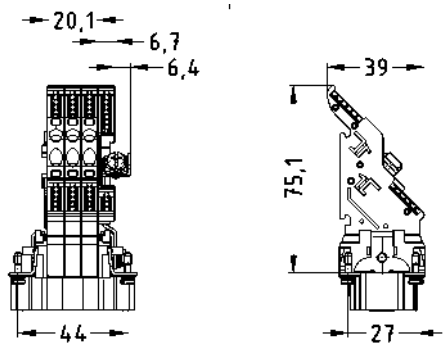
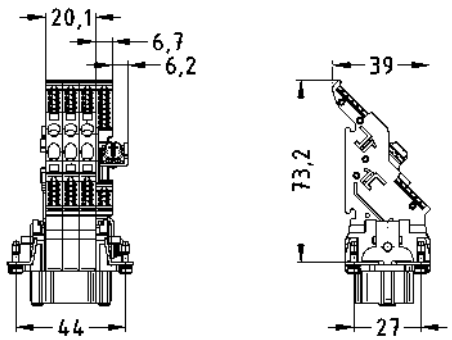
Single contour (SK) the following identification strips may be used

- HARTING – 09 33 000 9973 (6 x 15)
- Murrplastik – KWI 6/15
- Wieland – 9705 A/6.7

Number of contacts

6+ ⏚

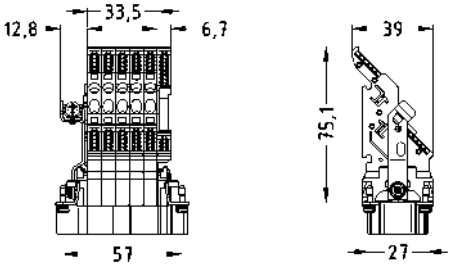
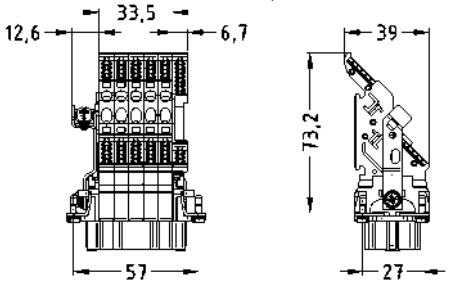
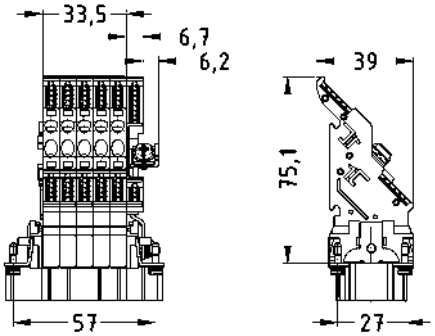
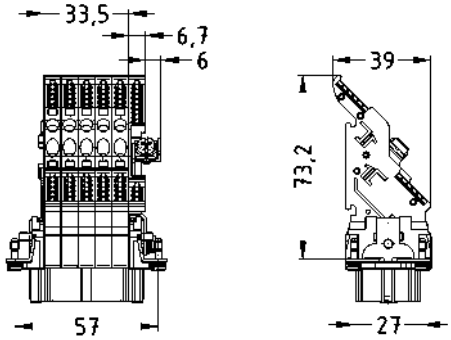
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 006 4629 | 09 33 006 4729 | <br> |
| Han® ES AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 006 4639 | 09 33 006 4739 | <br> |

Number of contacts

10+ ⏚

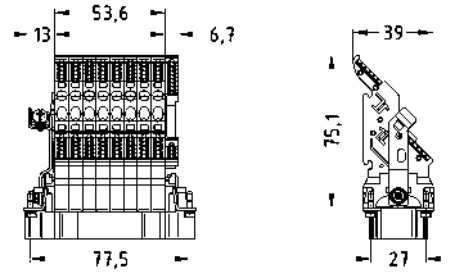
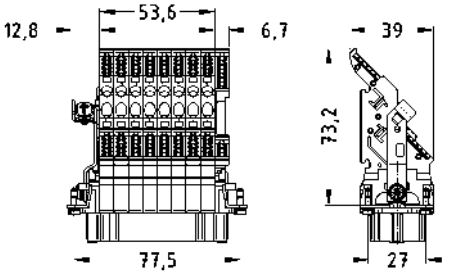
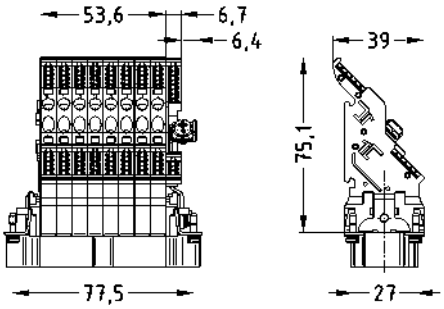
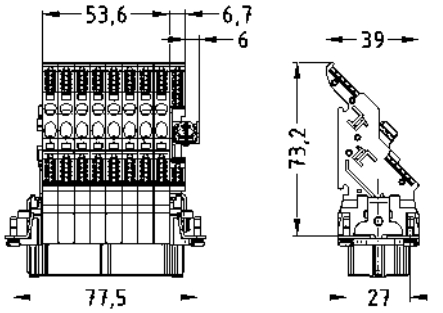
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated  | 0.14 ... 2.5 | 09 33 010 4629 | 09 33 010 4729 | <br> |
| Han® ES AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated  | 0.14 ... 2.5 | 09 33 010 4639 | 09 33 010 4739 | <br> |

Number of contacts

16+ ⏚

16 A 500 V 6 kV 3

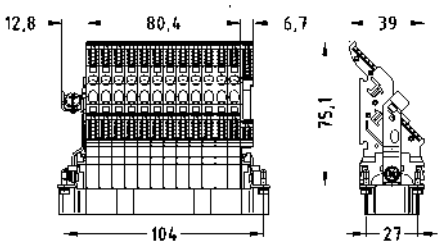
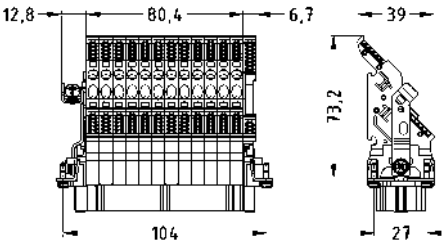
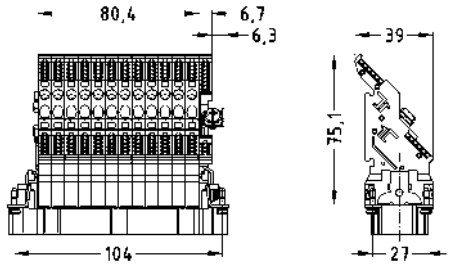
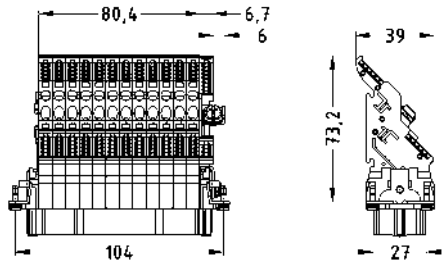
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 016 4629 | 09 33 016 4729 | <br> |
| Han® ES AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 016 4639 | 09 33 016 4739 | <br> |

Number of contacts

# 24+ ⏚

16 A 500 V 6 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES AV,<br>Terminal block connector,<br>Left hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 024 4629 | 09 33 024 4729 | <br> |
| Han® ES AV,<br>Terminal block connector,<br>Right hand version,<br>Single contour (SK),<br>Cage-clamp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 2.5 | 09 33 024 4639 | 09 33 024 4739 | <br> |

## Technical characteristics

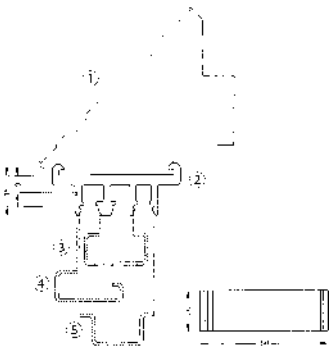
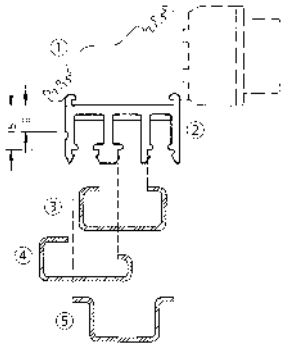
| | |
|---|---|
| RoHS | compliant |

## Details

There are moulded slots at the rear of the terminal block connectors and distributors to accept the fixing elements. When used these elements, for example, can be used to secure the connectors inside the switch cabinets on standard rails.

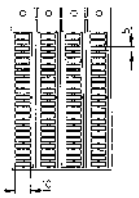
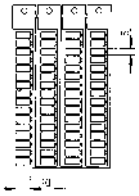
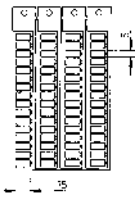
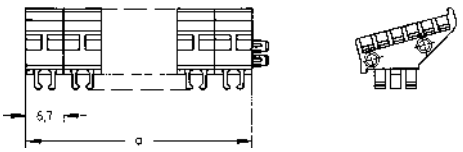
## Details

**For mounting**
Terminal block connector Han E® AV / Han® ES AV
Han® 6 E AV, Han® 6 ES AV = 1 fixing element
Han® 10/16/24 E AV, Han® 10/16/24 ES AV = 2 fixing elements
Terminal block connector Han D® AV
Han® 40/64 D AV = 2 fixing elements
Distributor = 1 fixing element

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han D® AV,<br>Han D® AV Distributor,<br>Fixing element  | 09 33 000 9928 | <br>① Terminal block connector Han D® AV<br>② Fixing element<br>③ C-rail IEC 60715-C30<br>④ G-rail IEC 60715-G32<br>⑤ Rail IEC 60715-35 x 7.5 or -35 x 15 |
| Han E® AV,<br>Han® ES AV,<br>Fixing element  | 09 33 000 9929 | <br>① Terminal block connector Han E® AV<br>② Fixing element<br>③ C-rail IEC 60715-C30<br>④ G-rail IEC 60715-G32<br>⑤ Rail IEC 60715-35 x 7.5 or -35 x 15 |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han D® AV,<br>Identification strip,<br>Multi contour (MK),<br>Pack contents:<br>88 pieces in one block  | 09 21 000 9971 |  |
| Han E® AV,<br>Identification strip,<br>Multi contour (MK),<br>Pack contents:<br>64 pieces in one block  | 09 33 000 9971 |  |
| Han® ES AV,<br>Identification strip,<br>Single contour (SK),<br>Pack contents:<br>64 pieces in one block  | 09 33 000 9973 |  |
| Adapter,<br>To fit identification strips,<br>Single contour (SK),<br>Fixing on terminal block connector  | 09 33 000 9964<br>09 33 000 9965<br>09 33 000 9966<br>09 33 000 9967 | <br>09 33 000 9964 Han® 6 E AV a = 26.8 mm<br>09 33 000 9965 Han® 10 E AV a = 40.2 mm<br>09 33 000 9966 Han® 16 E AV a = 60.3 mm<br>09 33 000 9967 Han® 24 E AV a = 87.4 mm |

| Contents | Page |
|---|---|
| Latching parts | **Han 11.3** |
| Plastic panel mounting | **Han 11.5** |
| Metal panel mounting | **Han 11.6** |
| Insert mounting | **Han 11.7** |
| Insert mounting with carrier element | **Han 11.8** |
| Shell housing | **Han 11.10** |
| Accessories | **Han 11.15** |

Note:
A connector mounted with Han-Snap® elements does not offer finger safe protection to the relevant standards. In this case protection against electric shock must be provided by the installation methods of the user. The fixing of the PE terminal must be conducted on equal side of the connector insert to avoid ground interruptions.

- The Han-Snap® system is ideal for connectors within closed electrical operating environments.
  These can be rooms, cabinets or termination boxes.

- The Han-Snap® components are an innovative design which offer the following advantages and characteristics:
  - reduction of material and assembly costs;
  - fast and easy installation;
  - preassembly of Han connectors;
  - secure and rigid mounting of Han connectors;
  - frequent use of latching systems is possible (up to several thousand cycles).

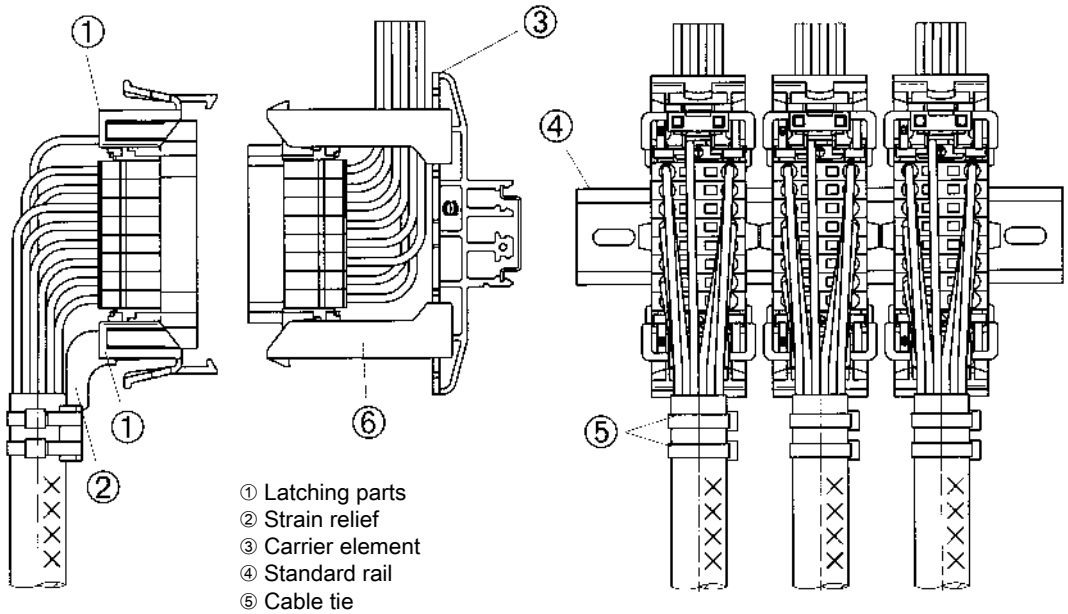
- The Han-Snap® elements are compatible with the standard inserts and terminal block connectors of the following series (named series Han B as follows)
  - Han D®, 40 and 64 pins
  - Han DD®
  - Han E®
  - Han® EE
  - Han® EEE
  - Han® ES
  - Han Hv E®
  - Han® Hv ES
  - Han® HsB
  - Han-Com® (except Han® K 4/4)
  - Han-Modular®

- With the Han-Snap® adapter the following standard inserts are compatible (named series Han A as follows):
  - Han D®, 15 and 25 pins
  - Han A®, 10 and 16 pins

- The Han-Snap® elements are a mechanical system for the mounting assembly and security of Han connectors.
  Normally the elements are assembled to the connector insert using the standard insert fixing screws.
  If coding is required the standard fixing screws may be replaced by either code pins or guide pins and bushes.

- On free connectors the wires or cables can be secured to the strain relief element with standard cable ties of 5 mm width maximum.

## Han-Snap® on standard rail




① Latching parts
② Strain relief
③ Carrier element
④ Standard rail
⑤ Cable tie
⑥ Insert mounting



## Features

- Compact design saves space
- Practical and easy handling
- Reduction of material and assembly costs

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP20 |
| Retention force | 200 N Without guiding, 300 N With guiding |
| Material (accessories) | Polycarbonate (PC) |
| Colour (accessories) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock

## Details

Inserts can be mounted on the panel mounting part and the latching part with the standard insert mounting screws.

High mechanical security of the fixings.

No functional impairment is caused by slight over tightening of the fixing screws.

Alternatively, Han® coding elements (code pins or guide pins and bushes) may be used.

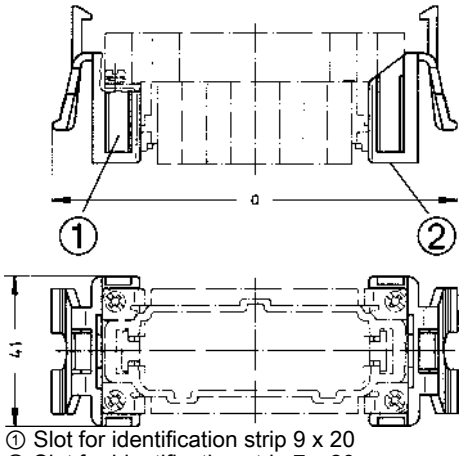
Label 9 x 20 mm may be fitted in both sides of each latching element. Label 7 x 20 mm may be fitted to the top of the latching part without the strain relief element.

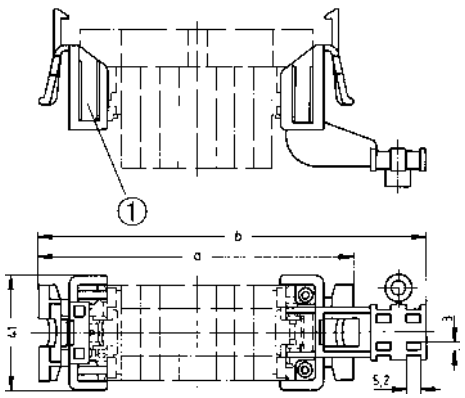
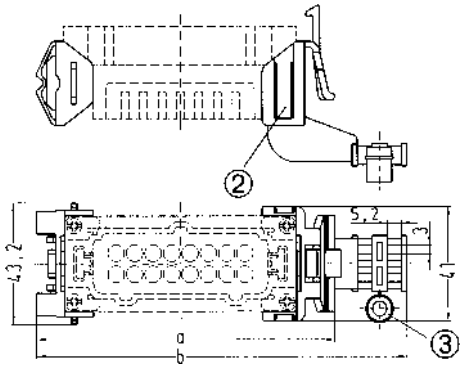
Up to 2 cable ties with max. 5 mm width can be used on the strain relief.

Please note: The strain relief element should be assembled to the latching part at the end of the insert opposite to the ground screw.

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®, Latching parts, IP20<br>Pack contents: 2 latching parts | 09 33 000 9987 | ① Slot for identification strip 9 x 20<br>② Slot for identification strip 7 x 20<br>6 B: a= 78.5<br>10 B: a= 91.5<br>16 B: a= 112.5<br>24 B: a= 138.5 |





| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Latching parts,<br>With strain relief,<br>IP20<br>Pack contents:<br>1 latching part with strain relief,<br>1 latching part<br> | 09 33 000 9991 | <br>① Slot for identification strip 9 x 20<br>6 B: a=78,5; b=105<br>10 B: a=91,5; b=118<br>16 B: a=112,5; b=138,5<br>24 B: a=138,5; b=165 |
| Han-Snap®,<br>Latching parts,<br>With strain relief,<br>and panel mounting parts,<br>IP20<br>Pack contents:<br>1 latching part with strain relief,<br>1 panel mounting part<br> | 09 33 000 9990 | <br>② Slot for identification strip 9 x 20<br>③ Distance bush<br>6 B: a=75; b=101<br>10 B: a=88; b=114<br>16 B: a=108.5; b=134.5<br>24 B: a=135; b=161 |

# Plastic panel mounting





## Features

- Snap element for sheet-metal cut out
- Compact design saves space
- Practical and easy handling
- Reduction of material and assembly costs

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Retention force | ≥250 N in the sheet-metal cut out |
| Material (accessories) | Polycarbonate (PC) |
| Colour (accessories) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock

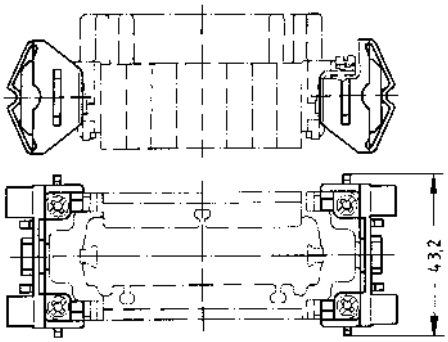
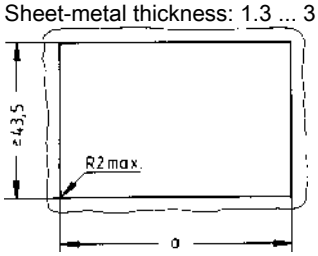
## Details

Connector inserts and terminal block connectors can be fixed on elements for panel mounting with standard insert mounting screws.

High mechanical security of the fixings. No functional impairment is caused by slight over tightening of the fixing screws.

Alternatively, Han® coding elements (code pins or guide pins and bushes) may be used.

Connector assembly into the panel (sheet-metal) cut out or two parallel mounted rails is possible from mating or termination side.

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Panel mounting parts,<br>Pack contents:<br>2 plastic panel mounting parts sufficient for one insert or terminal block connector<br><br>Size 10 A / 16 A by using the corresponding adapter! | 09 33 000 9985 | <br><br>Panel cut out<br>Sheet-metal thickness: 1.3 ... 3 mm<br><br><br>6 B: $a^{+0.5}$= 65<br>10 B: $a^{+0.5}$= 78<br>16 B: $a^{+0.5}$= 98<br>24 B: $a^{+0.5}$= 125<br>10 A: $a^{+0.5}$= 81,5<br>16 A: $a^{+0.5}$= 98 |

# Metal panel mounting



## Features

- Snap element for sheet-metal cut out
- Compact design saves space
- Practical and easy handling
- Reduction of material and assembly costs

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Material (accessories) | Zinc die-cast |
| RoHS | compliant |

## Specifications and approvals

IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock

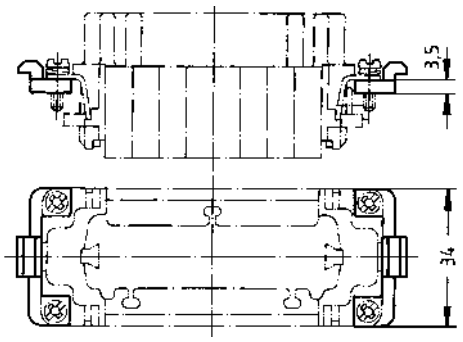
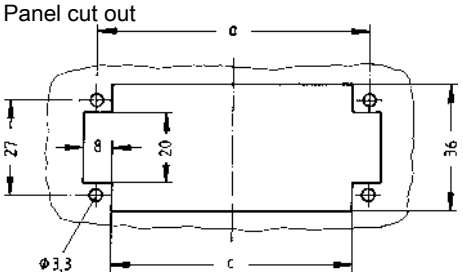
## Details

Connector inserts and terminal block connectors can be fixed on elements for panel mounting with standard insert mounting screws.

High mechanical security of the fixings.

Alternatively, Han® coding elements (code pins or guide pins and bushes) may be used.

Connector assembly into the panel (sheet-metal) cut out or two parallel mounted rails is possible from mating or termination side.

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Panel mounting parts,<br>Pack contents:<br>2 metallic panel mounting parts sufficient for one insert or terminal block connector<br> | 09 33 000 9984 | <br><br>Panel cut out<br><br><br>6 B: a=44; c=36<br>10 B: a=57; c=49<br>16 B: a=77.5; c=69.5<br>24 B: a=104; c=96 |

# Insert mounting





## Features

- Insert is mounted with carrier element
- A practical solution to fix the insert directly on a standard rail
- Insert can be assembled to Han-Snap® element with screw-driver
- Compact design saves space

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Retention force | ≥300 N On rail (tension), ≥1.000 N On rail (pressure) |
| Material (accessories) | Polycarbonate (PC) |
| Colour (accessories) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock

## Details

The insert mounting locks directly on standard rail 35 x 15 or 35 x 7.5 mm.

Inserts can be assembled on the insert mounting with the standard insert fixing screws.

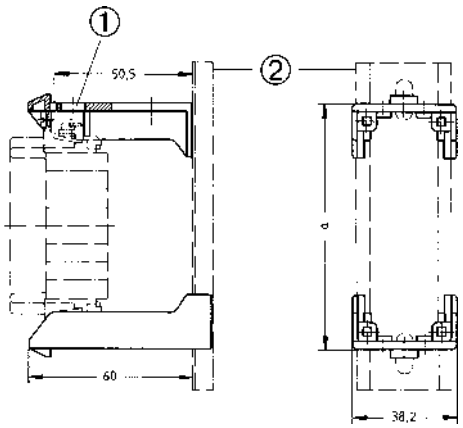
High mechanical security of the fixings.

No functional impairment is caused by slight over tightening of the fixing screws.

Alternatively, Han® coding elements (code pins or guide pins and bushes) may be used.

The following labels may be fitted alternatively to the insert mounting parts for circuit identification purposes:

Label 7 x 20 mm or 9 x 20 mm

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Insert mounting,<br>Pack contents:<br>2 insert mounting parts<br><br>Size 10 A / 16 A by using the corresponding adapter! | 09 33 000 9980 | <br>① Slot for identification strip<br>② Rail IEC 60715-35 x 7.5 or -35 x 15<br>6 B: a= 57<br>10 B: a= 70 / 10 A: a= 74<br>16 B / 16 A: a= 90.5<br>24 B: a= 117 |

# Insert mounting with carrier element



## Features

- Insert is mounted with carrier element
- A practical solution to fix the insert directly on a standard rail
- Insert can be assembled to Han-Snap® element with screw-driver
- Compact design saves space

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Retention force | ≥450 N On rail |
| Material (accessories) | Polycarbonate (PC) |
| Colour (accessories) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock

## Details

The carrier element is the basic element to mount the inserts in the cross direction on standard rails, for example:

- Caprail, 35 x 7.5 or 35 x 15 acc. to DIN EN 60 715
- C-rail, C 30 acc. to DIN EN 60 715
- G-rail, G 32 acc. to DIN EN 60 715

Where vibration is likely to be encountered, use the 35 x 15 mounting rails. When using the large carrier element, the 35 x 15 mounting rails are recommended to give greater stability.

Insert mounting type 6/10 is suitable for inserts of sizes Han 6 B and Han 10 B.

Insert mounting type 6/24 is suitable for all insert sizes: Han 6 B / 10 B / 16 B / 24 B, Han 16 A with the corresponding adapter.

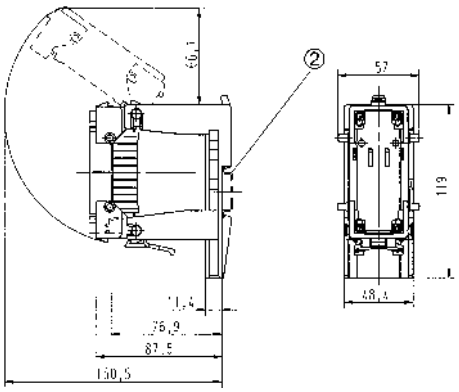
Inserts can be assembled to the insert mountings with the standard insert mounting screws.

High mechanical security of the fixings. No functional impairment is caused by slight over tightening of the fixing screws.

Alternatively, Han® coding elements (code pins or guide pins and bushes) may be used.

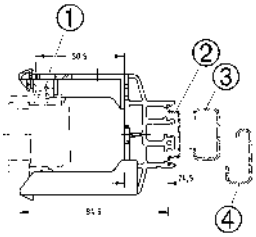
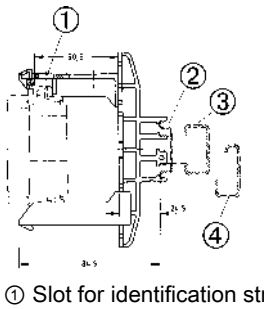
The following labels may be fitted to the insert mounting parts for circuit identification purposes:

Label 7 x 20 mm or 9 x 20 mm

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Insert mounting,<br>Swinging,<br>for standard inserts  | 09 33 000 9801 |  ② Rail IEC 60715-35 x 7.5 or -35 x 15 |

# Insert mounting with carrier element



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Insert mounting,<br>Swinging,<br>for Han-Modular® hinged frames<br> | 09 33 000 9803 | |
| Han-Snap®,<br>Insert mounting,<br>With carrier element,<br>Type 6/10,<br>Pack contents:<br>2 insert mounting parts,<br>1 carrier element<br> | 09 33 000 9988 | <br>① Slot for identification strip<br>② Rail IEC 60715-35 x 7.5 or -35 x 15<br>③ C-rail IEC 60715-C30<br>④ G-rail IEC 60715-G32 |
| Han-Snap®,<br>Insert mounting,<br>With carrier element,<br>Type 6/24,<br>Pack contents:<br>2 insert mounting parts,<br>1 carrier element<br> | 09 33 000 9989 | <br>① Slot for identification strip<br>② Rail IEC 60715-35 x 7.5 or -35 x 15<br>③ C-rail IEC 60715-C30<br>④ G-rail IEC 60715-G32 |

# Shell housing



## Features

- Ideal for use within closed electrical operation enviroments
- Allows use off preassembled cables
- Optimised cost of material and assembly
- Insert can be assembled to Han-Snap® element with screw-driver

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Retention force | ≥300 N locked condition |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock

## Details

2 identical half shells form a shell housing.

Each housing has 3 cable entries, one on top and one at each end. 2 x cable entries can be closed by enclosed blind plugs.

In the area of cable entries there are rectangular openings for mounting of cable ties up to max. 5 mm width.

In the mating area both housing shells are fixed by the standard insert fixing screws.

To release the half shells use screw driver (3.5 x 0.5).

Alternatively, Han® coding elements (code pins or guide pins and bushings) may be used.

High mechanical security of the fixings.

No functional impairment is caused by slight over tightening of the fixing screws. The blind plugs have slots for identification strips.

The following labels can be fitted: label 7 x 20 mm or 9 x 20 mm

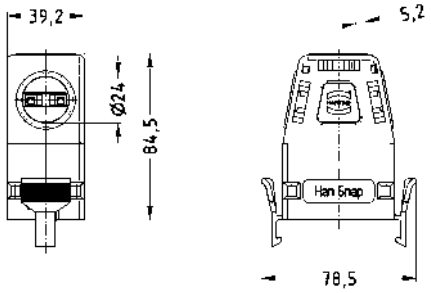
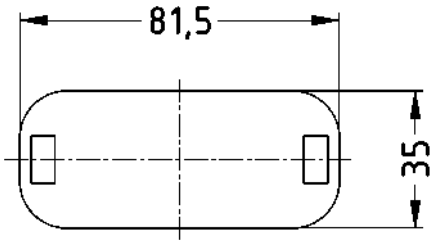
Size 16 A by using the corresponding adapter

Inserts can be assembled to the adapters with the standard insert fixing screws.

With the included screws the adapter can be fixed to the selected Han-Snap® element.

Snap-in latches

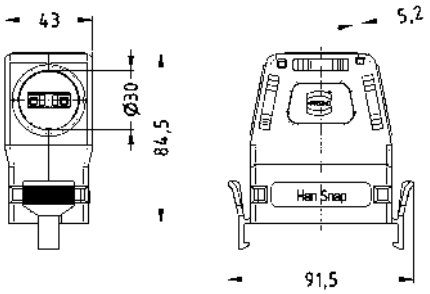
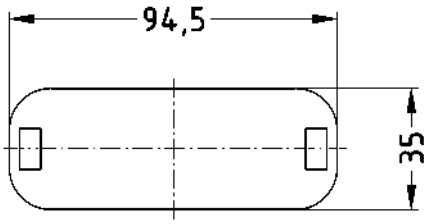


| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Shell housing,<br>Top/side entry,<br>Pack contents:<br>2 half shells with blind plugs  | 09 33 006 0401 |   |
| Han-Snap®,<br>Protection cover,<br>Thermoplastic  | 09 33 006 5401 |   |

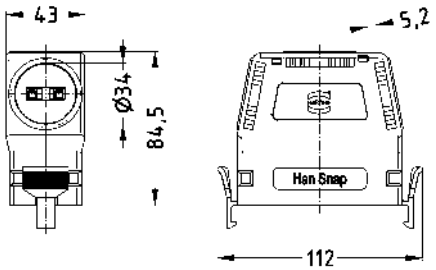
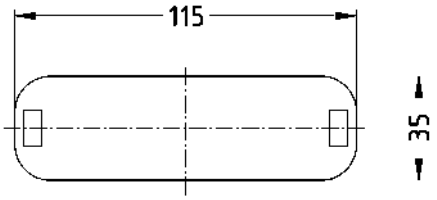
# Shell housing

Size 10 B

Snap-in latches

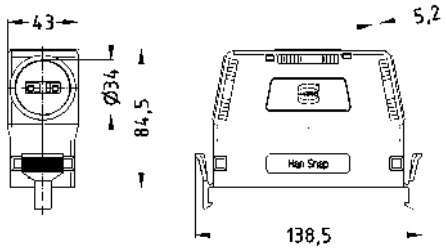
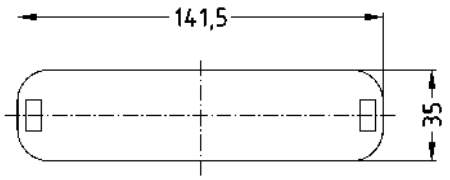
| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Shell housing,<br>Top/side entry,<br>Pack contents:<br>2 half shells with blind plugs  | 09 33 010 0401 |   |
| Han-Snap®,<br>Protection cover,<br>Thermoplastic  | 09 33 010 5401 |   |

Snap-in latches

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Shell housing,<br>Top/side entry,<br>Pack contents:<br>2 half shells with blind plugs<br><br>Size 16 A by using the corresponding adapter! | 09 33 016 0401 |  |
| Han-Snap®,<br>Protection cover,<br>Thermoplastic<br> | 09 33 016 5401 |  |

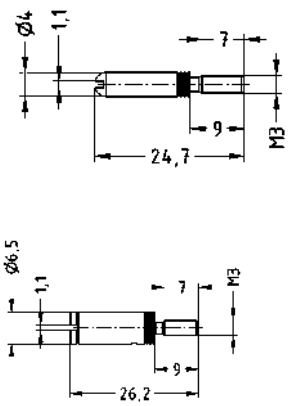
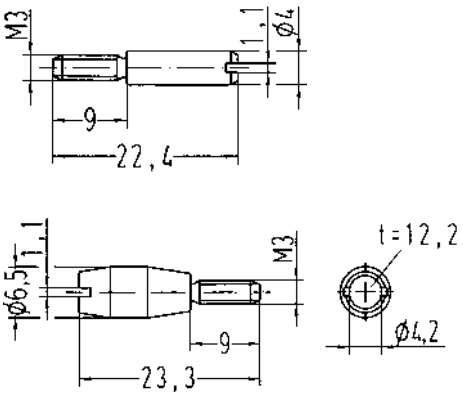
Snap-in latches



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Snap®,<br>Shell housing,<br>Top/side entry,<br>Pack contents:<br>2 half shells with blind plugs  | 09 33 024 0401 |   |
| Han-Snap®,<br>Protection cover,<br>Thermoplastic  | 09 33 024 5401 |   |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption |

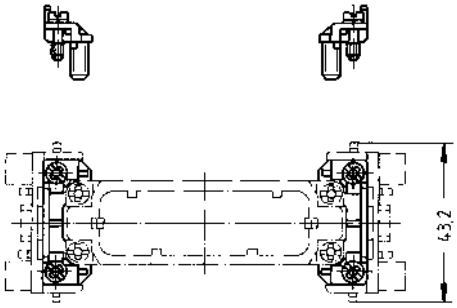
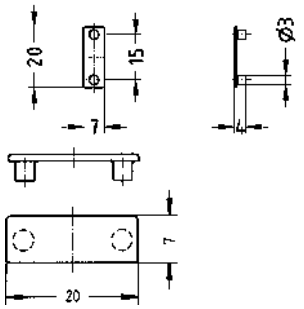
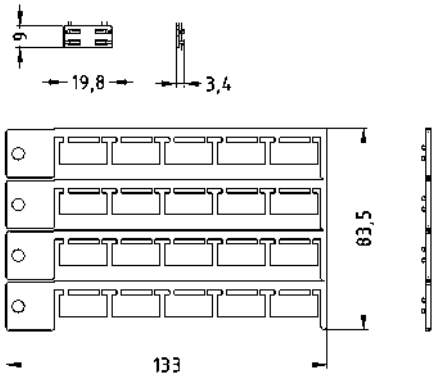
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Coding,<br>With guide pins/bushes,<br>for application “insert with screw adapter” with/ without grip frame<br> | 09 33 000 9808 | 09 33 000 9809 |  |
| Han-Snap®,<br>Coding,<br>Only for swinging insert mountings<br> | 09 33 000 9956 | 09 33 000 9957 |  |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Polycarbonate (PC) |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | RAL 7032 (pebble grey) |
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han A®,<br>Adapter,<br>Pack contents:<br>2 adapters,<br>4 fixing screws  | 09 20 000 9933 |   |
| Han-Snap®,<br>Identification strip  | 09 33 000 9981 |   |
| Han-Snap®,<br>Identification strip,<br>Pack contents:<br>20 pieces in one block  | 09 33 000 9982 |   |

| Contents | Page |
|---|---|
| Sockets | **Han 12.2** |
| Frames | **Han 12.6** |
| Data connectors | **Han 12.10** |
| Wires | **Han 12.15** |
| Gender changer | **Han 12.18** |
| Accessories | **Han 12.19** |

## Features

- Sockets for the European and international market
- Modular assembly
- Sockets to mount or snap into mounting plates
- Application with socket and data connector (RJ45, USB)
- Compact design for easy installation in single or double frame
- Suitable for data module in HIFF-size
- Screening shield to optimise EMC protection

## Technical characteristics

| | |
|---|---|
| Mounting depth | 62 mm, 30 mm, 20 mm, 43 mm |
| Supply voltage | 250 V AC, 125 V AC, 240 V AC |
| Nominal frequency | 50 Hz, 60 Hz |
| Nominal current | 16 A, 15 A, 13 A, 5 A, 10 A |
| Material (hood/housing) | Thermoplastic |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

CE

## Details

for detailed technical characteristics see following pages

# Sockets



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Han-Port®,<br>Socket,<br>With LED display,<br>Termination at the rear,<br>Screw termination,<br>Germany (VDE),<br>62 mm / 250 V AC / 50 Hz / 16 A | 6 | 39 50 001 0001 |  |
| Han-Port®,<br>Socket,<br>for assembly in front of main switch,<br>Termination at the rear,<br>Screw termination,<br>Germany (VDE),<br>62 mm / 250 V AC / 50 Hz / 16 A | 6 | 39 50 001 0002 |  |
| Han-Port®,<br>Socket,<br>Finger safe,<br>Screw termination,<br>USA,<br>Japan,<br>30 mm / 125 V AC / 60 Hz / 15 A | 2.5 | 39 50 001 0004 |  |
| Han-Port®,<br>Socket,<br>With LED display,<br>Termination at the rear,<br>Screw termination,<br>France (UTE),<br>62 mm / 250 V AC / 50 Hz / 16 A | 6 | 39 50 001 0005 |  |
| Han-Port®,<br>Socket,<br>Finger safe,<br>Screw termination,<br>Great Britain (BS),<br>30 mm / 250 V AC / 60 Hz, 50 Hz / 13 A | 4 | 39 50 001 0006 |  |
| Han-Port®,<br>Socket,<br>Double,<br>Finger safe,<br>Screw termination,<br>Italy (CEI 23-16),<br>20 mm / 250 V AC / 50 Hz / 16 A | 2.5 | 39 50 001 0007 |  |

# Sockets



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Han-Port®,<br>Socket,<br>Screw termination,<br>Australia,<br>China,<br>20 mm / 240 V AC / 60 Hz, 50 Hz / 15 A | 4 | 39 50 001 0009 |  |
| Han-Port®,<br>Socket,<br>Screw termination,<br>India (IS),<br>20 mm / 240 V AC / 50 Hz / 6 A | 4 | 39 50 001 0321 |  |
| Han-Port®,<br>Socket,<br>Screw termination,<br>Brazil,<br>30 mm / 250 V AC / 60 Hz / 10 A | 2.5 | 39 50 001 0331 |  |
| Han-Port®,<br>Socket,<br>Screw termination,<br>Israel,<br>30 mm / 250 V AC / 50 Hz / 16 A | 2.5 | 39 50 001 0333 |  |
| Han-Port®,<br>Socket,<br>Spring clamp termination,<br>Switzerland,<br>30 mm / 250 V AC / 50 Hz / 10 A | 1.5 | 39 50 001 0012 |  |
| Han-Port®,<br>Socket,<br>Spring clamp termination,<br>Denmark,<br>20 mm / 250 V AC / 50 Hz / 13 A | 2.5 | 39 50 001 0017 |  |

# Sockets



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Han-Port®,<br>Socket,<br>2 cut-outs for HIFF data module,<br>Finger safe,<br>Screw termination,<br>Great Britain (BS),<br>30 mm / 250 V AC / 60 Hz, 50 Hz / 13 A | 4 | 39 50 001 0452 |  |
| Han-Port®,<br>Socket,<br>2 cut-outs for HIFF data module,<br>Screw termination,<br>China,<br>43 mm / 250 V AC / 50 Hz / 10 A | 4 | 39 50 001 0458 |  |
| Han-Port®,<br>Socket,<br>Screw termination,<br>China,<br>43 mm / 250 V AC / 50 Hz / 10 A<br>1x RJ45 Cat.6 / 1x USB-A 3.0, enclosed separatly | 4 | 39 50 012 0458 |  |
| Han-Port®,<br>Socket,<br>2 cut-outs for HIFF data module,<br>Spring clamp termination,<br>Germany (VDE),<br>43 mm / 250 V AC / 50 Hz / 16 A | 2.5 | 39 50 001 0450 |  |
| Han-Port®,<br>Socket,<br>2 cut-outs for HIFF data module,<br>Spring clamp termination,<br>Switzerland,<br>30 mm / 250 V AC / 50 Hz / 10 A | 1.5 | 39 50 001 0454 |  |
| Han-Port®,<br>Socket,<br>Spring clamp termination,<br>Germany (VDE),<br>43 mm / 250 V AC / 50 Hz / 16 A<br>1x RJ45 Cat.6 / 1x USB-A 3.0, enclosed separatly | 2.5 | 39 50 012 0450 |  |

## Features

- Suitable for rough industrial environments (degree of protection IP65 with closed cover)
- Modular assembly
- Various mounting plates with sockets and data interfaces available

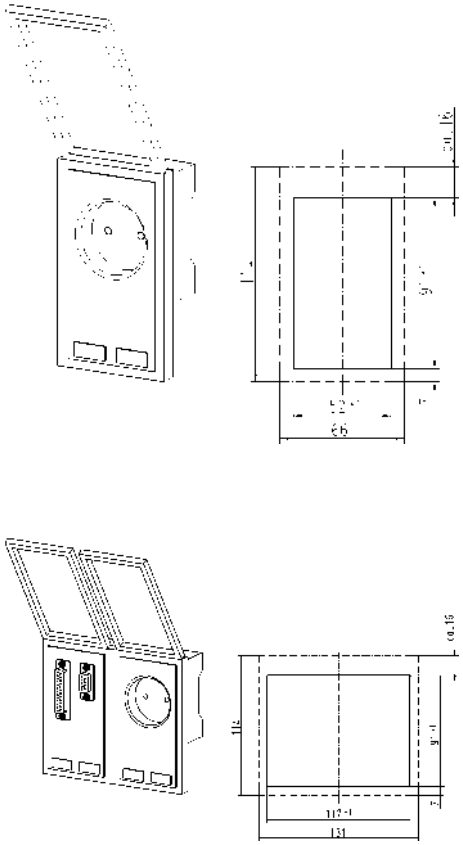
## Technical characteristics

| | |
|---|---|
| Limiting temperature | -10 ... +60 °C |
| Storage temperature | -25 ... +60 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Thermoplastic, Zinc die-cast |
| Surface (hood/housing) | Smoothed surface |
| RoHS | compliant |

## Specifications and approvals

UL 508 NITW2.E472460
CSA-C22.2 No. 14-95 NITW8.E472460

## Details



# Frames



| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Frames,<br>Single,<br>Plastic version, PBT black,<br>Plastic cover, PC transparent,<br>IP65 | 39 50 000 0300 |  |
| Han-Port®,<br>Frames,<br>Double,<br>Plastic version, PBT black,<br>Plastic cover, PC transparent,<br>IP65 | 39 50 000 0400 |  |
| Han-Port®,<br>Frames,<br>Single,<br>Plastic version, PBT black,<br>Plastic cover, ABS metallic silver,<br>IP65 | 39 50 000 0320 |  |
| Han-Port®,<br>Frames,<br>Double,<br>Plastic version, PBT black,<br>Plastic cover, ABS metallic silver,<br>IP65 | 39 50 000 0420 |  |

# Frames



| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Frames,<br>Single,<br>Metal version, nickel plated (electrically conductive),<br>Transparent plastic cover,<br>IP65 | 39 50 000 0100 |  |
| Han-Port®,<br>Frames,<br>Double,<br>Metal version, nickel plated (electrically conductive),<br>Transparent plastic cover,<br>IP65 | 39 50 000 0200 |  |

# Frames



| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Frames,<br>Single,<br>Metal version, nickel plated (electrically conductive),<br>Metal cover, nickel plated,<br>IP65 | 39 50 000 0110 |  |
| Han-Port®,<br>Frames,<br>Double,<br>Metal version, nickel plated (electrically conductive),<br>Metal cover, nickel plated,<br>IP65 | 39 50 000 0210 |  |
| Han-Port®,<br>Frames,<br>Single,<br>Metal version, CPD black,<br>Metal cover, CPD black,<br>IP65 | 39 50 000 0120 |  |

## Features

- Standard interfaces for easy connection of devices
- Modular assembly
- Assembled data connectors to snap into the frame
- Frames with or without shielding plate

## Technical characteristics

| | |
|---|---|
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

UL 508 NRAQ2.E253944
CSA-C22.2 No. 142 NRAQ8.E253944

CE

## Details

**D-Sub**: < 125 V AC / 150 V DC / 3 A
Mounting depth 32 mm
**RJ45**: < 50 V AC/DC / 1 A
Mounting depth 32 mm
**USB**: < 30 V AC/DC / 1 A
Mounting depth 80 mm

# Data connectors



| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>D-Sub 1 (9-pin) female/male gender changer,<br>D-Sub 1 (9-pin) female/male gender changer | 39 50 003 0020 |  |
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>D-Sub 1 (9-pin) female/female gender changer | 39 50 003 0024 |  |
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>D-Sub 1 (9-pin) female/male gender changer,<br>D-Sub 3 (25-pin) female/male gender changer | 39 50 003 0040 |  |
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>D-Sub 3 (25-pin) female/male gender changer | 39 50 003 0074 |  |
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>D-Sub 1 (9-pin) female/female gender changer,<br>D-Sub 1 (9-pin) male/male gender changer | 39 50 003 0111 |  |
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>D-Sub 1 (9-pin) male/male gender changer,<br>D-Sub 1 (9-pin) male/male gender changer,<br>D-Sub 1 (9-pin) male/male gender changer | 39 50 003 0129 |  |

# Data connectors

| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>D-Sub 1 (9-pin) female/male gender changer,<br>D-Sub 3 (25-pin) female/male gender changer | 39 50 003 0170 |  |
| Han-Port®,<br>Data connectors,<br>Without shielding plate,<br>D-Sub 1 (15-pin HD) female/male gender changer | 39 50 003 0220 |  |

| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>USB female/female gender changer, size A according to specification 3.0,<br>USB female/female gender changer, size A according to specification 3.0 | 39 50 002 0093 |  |
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>USB female/female gender changer, size A according to specification 3.0,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>D-Sub 1 (9-pin) male/male gender changer,<br>D-Sub 1 (9-pin) male/male gender changer | 39 50 002 0117 |  |
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e | 39 50 002 0120 |  |
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e | 39 50 002 0122 |  |
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>USB female/female gender changer, size A according to specification 3.0,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e | 39 50 002 0133 |  |
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>USB female/female gender changer, size A according to specification 3.0,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>D-Sub 1 (9-pin) female/male gender changer | 39 50 002 0143 |  |

# Data connectors

| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>USB female/female gender changer, size A according to specification 3.0,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>D-Sub 3 (25-pin) female/male gender changer | 39 50 002 0145 |  |
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>D-Sub 1 (9-pin) female/female gender changer | 39 50 002 0163 |  |
| Han-Port®,<br>Data connectors,<br>With shielding plate,<br>USB female/female gender changer, size A according to specification 3.0,<br>USB female/female gender changer, size A according to specification 3.0,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e | 39 50 004 0097 |  |

# Wires

D-Sub Standard Male With plastic hood
D-Sub Standard Male With plastic hood



## Technical characteristics

| | |
|---|---|
| Number of cores | 9 |
| Connector 1 | D-Sub, Standard, Male, With plastic hood |
| Connector 2 | D-Sub, Standard, Male, With plastic hood, Female |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

## Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| D-Sub,<br>Standard,<br>Copper cable (round),<br>Cable assemblies,<br>Pre-assembled on both sides,<br>Male/male<br> | 2 m<br>5 m | 39 50 903 0010<br>39 50 903 0011 | |
| D-Sub,<br>Standard,<br>Copper cable (round),<br>Cable assemblies,<br>Pre-assembled on both sides,<br>Female/male<br> | 2 m<br>5 m | 39 50 903 0020<br>39 50 903 0021 | |

RJ45 Thermoplastic
RJ45 Thermoplastic



## Technical characteristics

| | |
|---|---|
| Number of cores | 8 |
| Connector 1 | RJ45, Thermoplastic |
| Connector 2 | RJ45, Thermoplastic |
| Transmission characteristics | Cat. 6, Class E up to 250 MHz |
| RoHS | compliant |

## Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| RJ45,<br>Copper cable (round),<br>Cable assemblies,<br>Pre-assembled on both sides<br> | 2 m<br>5 m | 39 50 903 0060<br>39 50 903 0061 | |

# Wires

USB 2.0 Type A Male
USB 2.0 Type A Male



## Technical characteristics

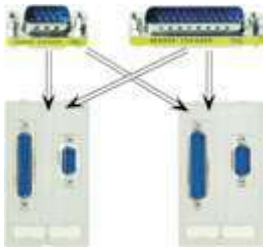
| | |
|---|---|
| Connector 1 | USB 2.0, Type A, Male |
| Connector 2 | USB 2.0, Type A, Male |
| RoHS | compliant |

## Details

Other cable lengths on request!

| Identification | Cable length | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| USB,<br>Copper cable (round),<br>Cable assemblies,<br>Pre-assembled on both sides<br> | 2 m<br>5 m | 39 50 903 0050<br>39 50 903 0051 | |

# Gender changer



## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Gender changer,<br>D-Sub 1,<br>9-pin,<br>Female/female | 39 50 904 0030 |  |
| Han-Port®,<br>Gender changer,<br>D-Sub 1,<br>9-pin,<br>Female/male | 39 50 904 0031 |  |
| Han-Port®,<br>Gender changer,<br>D-Sub 1,<br>9-pin,<br>Male/male | 39 50 904 0032 |  |
| Han-Port®,<br>Gender changer,<br>D-Sub 3,<br>25-pin,<br>Female/female | 39 50 904 0050 |  |
| Han-Port®,<br>Gender changer,<br>USB female/female gender changer, size A according to specification 3.0 | 39 50 904 0020 |  |
| Han-Port®,<br>Gender changer,<br>RJ45 female/female gender changer, 8-pin, metal, Cat. 5e | 39 50 904 0010 |  |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

## Specifications and approvals

UL 508 NRAQ2.E253944
CSA-C22.2 No. 142 NRAQ8.E253944

| Identification | Part number | |
|---|---|---|
| Han-Port®,<br>Identification strip,<br>Pack contents:<br>20 pieces per frame | 39 50 000 0900 |  |
| Han-Port®,<br>Blind plate,<br>With perforated cut-outs for gender changer RJ45, USB and D-Sub 3 | 39 50 000 0851 |  |
| Han-Port®,<br>Blind plate,<br>Free space for self assembly of connectors or switches: 45 x 75 mm | 39 50 000 0890 |  |

# Han® Q

| Contents | Page |
|---|---|
| Han® Q 2/0 Crimp | **Han 13.2** |
| Han® Q 2/0 Crimp High Voltage | **Han 13.4** |
| Han® Q 2/0 Axial screw | **Han 13.6** |
| Han® Q 2/0 Axial screw High Voltage | **Han 13.8** |
| Han® Q 3/0 Crimp | **Han 13.10** |
| Han® Q 3/4 Crimp | **Han 13.12** |
| Han® Q 4/0 Crimp | **Han 13.15** |
| Han® Q 4/2 Crimp | **Han 13.17** |
| Han® Q 4/2 Axial screw | **Han 13.20** |
| Han® Q 5/0 Quick Lock | **Han 13.22** |
| Han® Q 5/0 Crimp | **Han 13.24** |
| Han® Q 7/0 Crimp | **Han 13.27** |
| Han® Q 8/0 Quick Lock | **Han 13.29** |
| Han® Q 8/0 Crimp | **Han 13.31** |
| Han® Q 12/0 Crimp/Quick Lock | **Han 13.34** |
| Han® Q 17/0 Crimp | **Han 13.37** |
| Han® Q High Density Crimp | **Han 13.39** |
| Han® Q Data RJ45 | **Han 13.41** |
| Plastic hoods/housings | **Han 13.43** |
| Metal hoods / housings | **Han 13.47** |
| EMC hoods/housings | **Han 13.50** |
| Accessories | **Han 13.53** |

## Features

- High current rated compact designed connector
- Mating compatible to the axial screw version
- Suitable for Han® C crimp contacts
- Allows a cost optimised production of high quantities
- Finger safe male and female contacts
- 16 coding options

## Technical characteristics

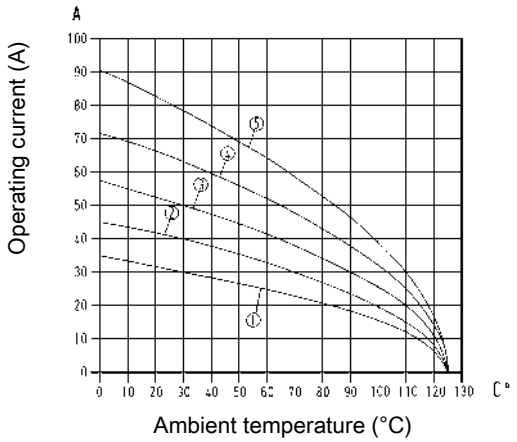
| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 40 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 1.5 mm²
② Conductor cross-section 2.5 mm²
③ Conductor cross-section 4 mm²
④ Conductor cross-section 6 mm²
⑤ Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

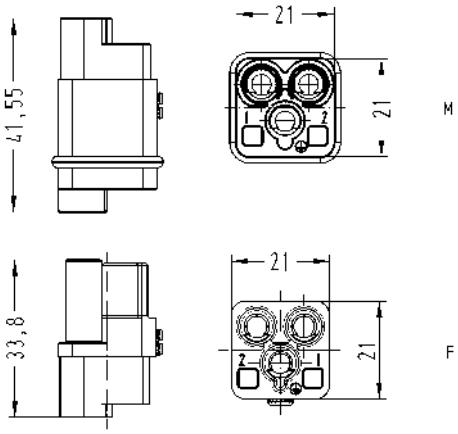
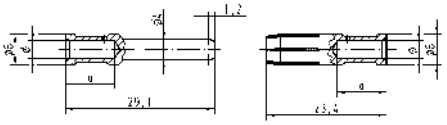
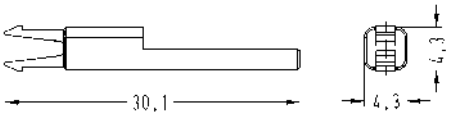
# Han® Q 2/0 Crimp

Size 3 A

Number of contacts

2+ ⏚

40 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>2/0,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 10 | 09 12 002 3051 | 09 12 002 3151 | <br>Contact arrangement (view from termination side) |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108<br>09 32 000 6109 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208<br>09 32 000 6209 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 — 1.75 mm — 9.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 9.5 mm<br>4 mm² AWG 12 — 2.85 mm — 9.5 mm<br>6 mm² AWG 10 — 3.5 mm — 9.5 mm<br>10 mm² AWG 8 — 4.3 mm — 12 mm |
| Coding element<br> | | 09 12 000 9922 | |  |

# Han® Q 2/0 Crimp High Voltage



## Features

- High current rated compact designed connector
- Mating compatible to the axial screw version
- Suitable for Han® C crimp contacts
- Allows a cost optimised production of high quantities
- Finger safe male and female contacts
- 16 coding options
- for high voltages, please use heat shrink tube (included in delivery range)

## Technical characteristics

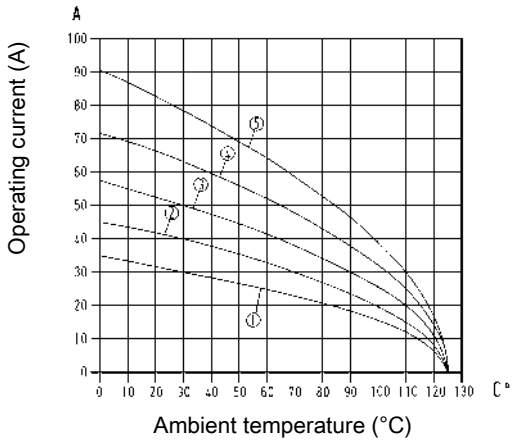
| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 40 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 1.5 mm²
② Conductor cross-section 2.5 mm²
③ Conductor cross-section 4 mm²
④ Conductor cross-section 6 mm²
⑤ Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

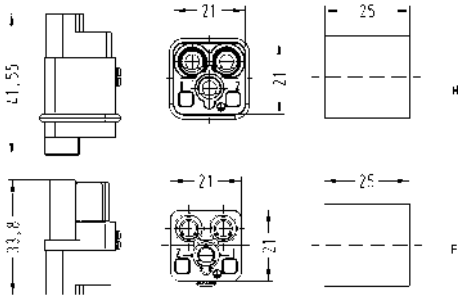
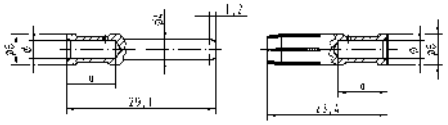
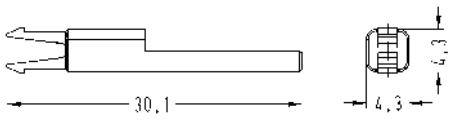
# Han® Q 2/0 Crimp High Voltage

Size 3 A

Number of contacts

2+ ⏚

40 A 830 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>2/0 High Voltage,<br>Crimp termination,<br>Pack contents:<br>With heat shrink tube<br><br>Please order crimp contacts separately. | 1.5 ... 10 | 09 12 002 3052 | 09 12 002 3152 | <br>Contact arrangement (view from termination side) |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108<br>09 32 000 6109 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208<br>09 32 000 6209 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 / 1.75 mm / 9.5 mm<br>2.5 mm² AWG 14 / 2.25 mm / 9.5 mm<br>4 mm² AWG 12 / 2.85 mm / 9.5 mm<br>6 mm² AWG 10 / 3.5 mm / 9.5 mm<br>10 mm² AWG 8 / 4.3 mm / 12 mm |
| Coding element<br> | | 09 12 000 9922 | |  |

# Han® Q 2/0 Axial screw



## Features

- High current rated compact designed connector
- Mating compatible to the crimp version
- Finger safe male and female contacts
- 16 coding options
- No special tools required for axial-screw termination

## Technical characteristics

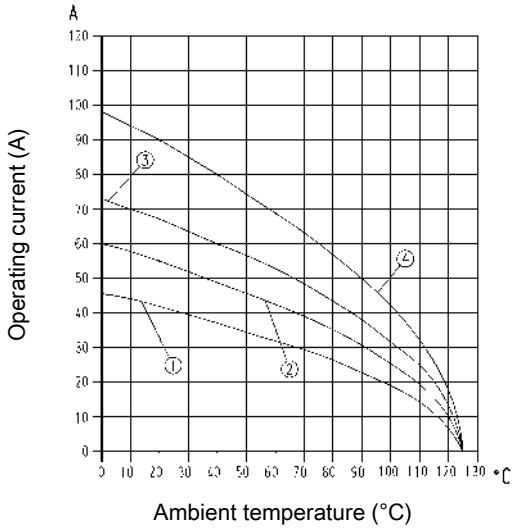
| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 40 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 400 V |
| Rated voltage acc. to CSA | 400 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

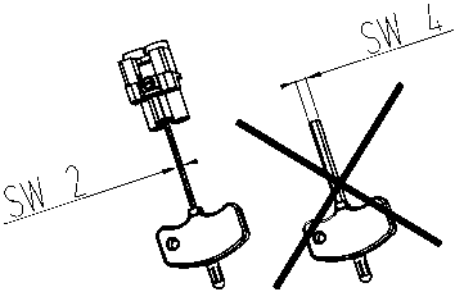



① Conductor cross-section 2.5 mm²
② Conductor cross-section 4 mm²
③ Conductor cross-section 6 mm²
④ Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details




for termination please use only hexagonal screw driver with A/F 2
If PE contact is not used: Please screw the PE contact maximal on both sides clockwise with a hexagonal screwdriver A/F 2.

# Han® Q 2/0 Axial screw

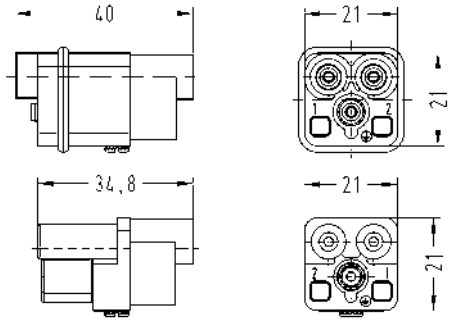
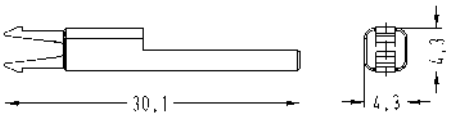
Size 3 A



Number of contacts

2+ ⏚

40 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>2/0,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 1.5 ... 2.5<br>2.5 ... 6<br>4 ... 10 | 09 12 002 2655<br>09 12 002 2653<br>09 12 002 2651 | 09 12 002 2755<br>09 12 002 2753<br>09 12 002 2751 | <br>Stripping length 8 ... 9 mm<br>Tightening torque 1.8 Nm |
| Coding element<br> | | 09 12 000 9922 | |  |

# Han® Q 2/0 Axial screw High Voltage



## Features

- High current rated compact designed connector
- Mating compatible to the crimp version
- Finger safe male and female contacts
- 16 coding options
- No special tools required for axial-screw termination
- for high voltages, please use heat shrink tube (included in delivery range)

## Technical characteristics

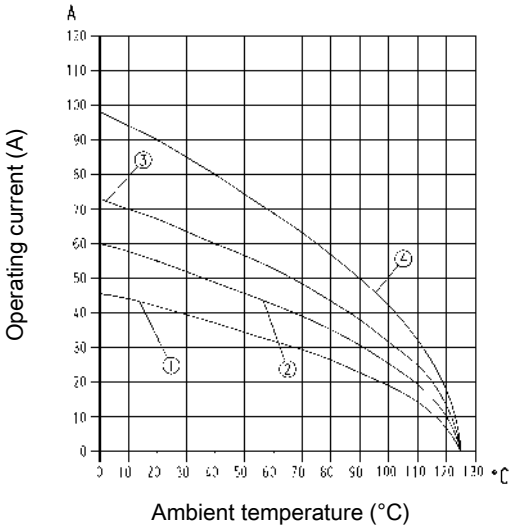
| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 40 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

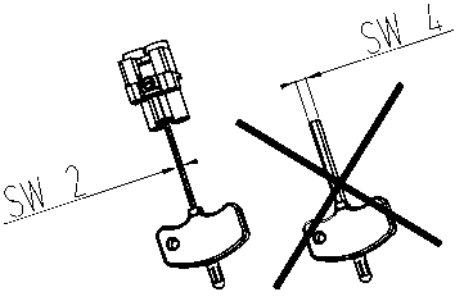



① Conductor cross-section 2.5 mm²
② Conductor cross-section 4 mm²
③ Conductor cross-section 6 mm²
④ Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details




for termination please use only hexagonal screw driver with A/F 2
If PE contact is not used: Please screw the PE contact maximal on both sides clockwise with a hexagonal screwdriver A/F 2.

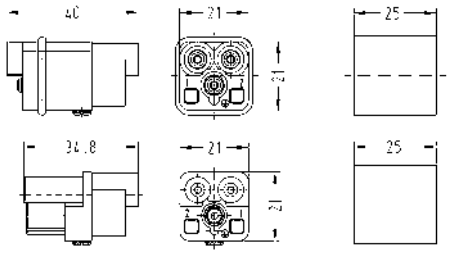
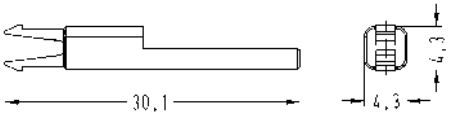
# Han® Q 2/0 Axial screw High Voltage

Size 3 A

Number of contacts

2+ ⏚

40 A 830 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>2/0 High Voltage,<br>Axial screw termination,<br>Pack contents:<br>With heat shrink tube<br>Contact surface:<br>Silver plated<br> | 1.5 ... 2.5<br>2.5 ... 6<br>4 ... 10 | 09 12 002 2656<br>09 12 002 2654<br>09 12 002 2652 | 09 12 002 2756<br>09 12 002 2754<br>09 12 002 2752 | <br>Stripping length 8 ... 9 mm<br>Tightening torque 1.8 Nm |
| Coding element<br> | | 09 12 000 9922 | |  |

## Features

- High current rated compact designed connector
- 4 coding options
- Suitable for Han® C crimp contacts
- Finger safe male and female contacts
- Leading PE crimp contact

## Technical characteristics

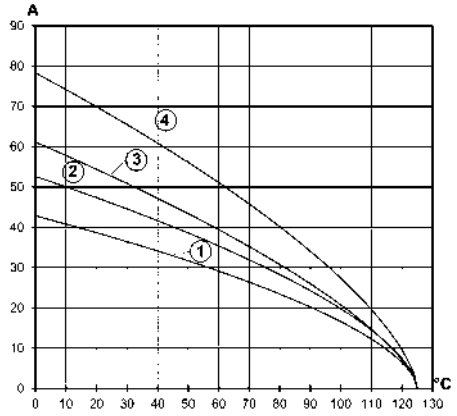
| | |
|---|---|
| Number of contacts | 3 |
| Rated current | 40 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 2.5 mm²
② Conductor cross-section 4 mm²
③ Conductor cross-section 6 mm²
④ Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

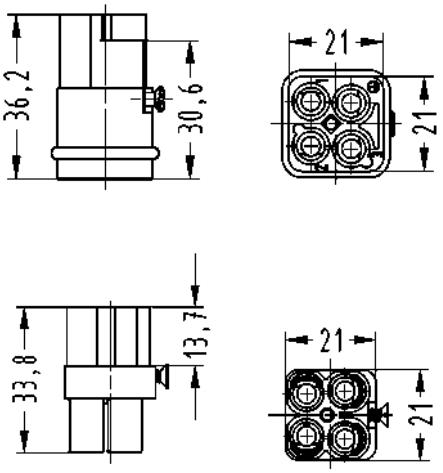
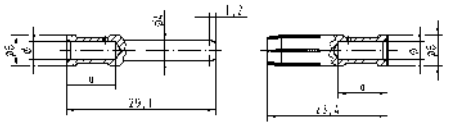
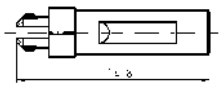
# Han® Q 3/0 Crimp

Size 3 A

Number of contacts

3+ ⏚

40 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>3/0,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 10 | 09 12 003 3051 | 09 12 003 3151 |  |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108<br>09 32 000 6109 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208<br>09 32 000 6209 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 — 1.75 mm — 9.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 9.5 mm<br>4 mm² AWG 12 — 2.85 mm — 9.5 mm<br>6 mm² AWG 10 — 3.5 mm — 9.5 mm<br>10 mm² AWG 8 — 4.3 mm — 12 mm |
| Coding element,<br>Pack contents:<br>20 pieces per frame<br> | | 09 12 000 9924 | |  |

## Features

- Han® C power contacts
- Han D® signal contacts
- Finger safe male and female contacts
- Leading PE crimp contact
- Suitable for standard plastic hoods/housings or metal hoods/housings with additional PE terminating contact on the hoods/housings from the Han-Compact® series

## Technical characteristics

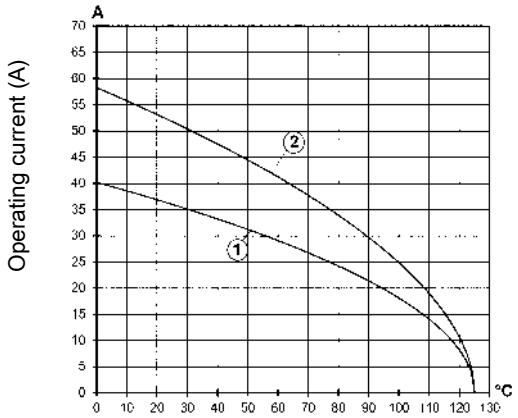
| | |
|---|---|
| Number of contacts | 3 |
| Additional contacts | + 4 additional signal contacts |
| Rated current | 40 A |
| Rated voltage conductor-earth | 400 V |
| Rated voltage conductor-conductor | 690 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 250 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 2.5 mm²
② Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

## Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

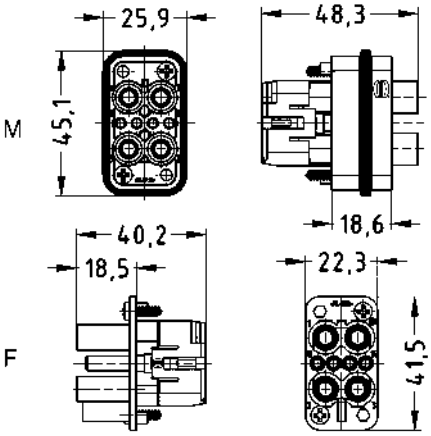
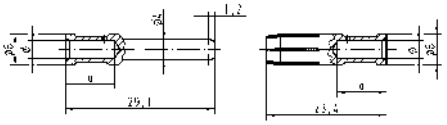
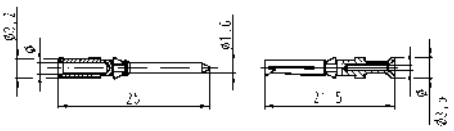
**Remarks on the crimp technique**

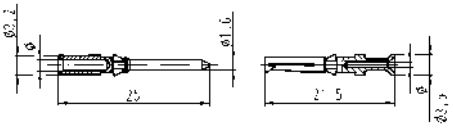
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

3+ ⏚

40 A 400/690 V 6 kV 3
10 A 250 V 4 kV 3
+ 4 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>3/4,<br>Crimp termination<br><br>Please order crimp contacts separately. | | 09 12 007 3041 | 09 12 007 3141 |  |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 — 1.75 mm — 9.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 9.5 mm<br>4 mm² AWG 12 — 2.85 mm — 9.5 mm<br>6 mm² AWG 10 — 3.5 mm — 9.5 mm<br>10 mm² AWG 8 — 4.3 mm — 12 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0.75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han® Q 4/0 Crimp



## Features

- High current rated compact designed connector
- 4 coding options
- Suitable for Han® C crimp contacts
- Finger safe male and female contacts

## Technical characteristics

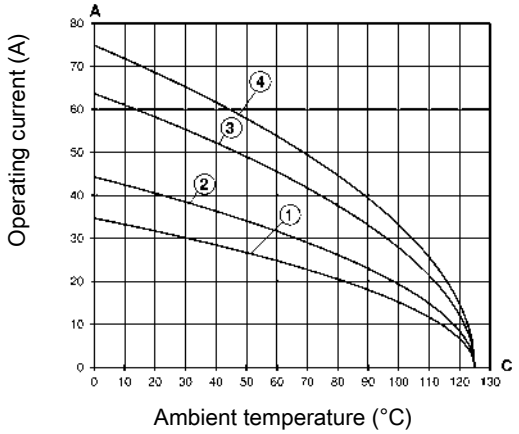
| | |
|---|---|
| Number of contacts | 4 |
| Rated current | 40 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 2.5 mm²
② Conductor cross-section 4 mm²
③ Conductor cross-section 6 mm²
④ Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

Attention! Only for thermoplastic hoods/housings!

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

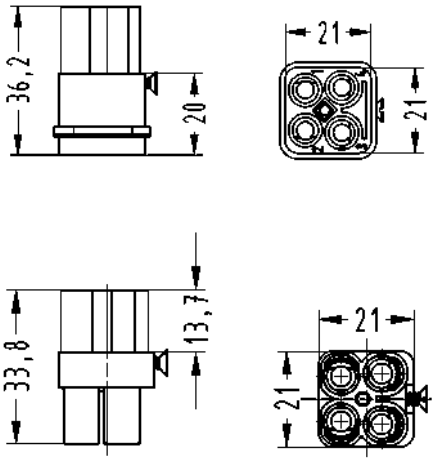
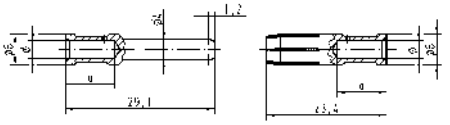
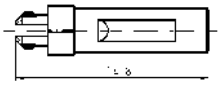
# Han® Q 4/0 Crimp

Size 3 A

Number of contacts

## 4

40 A 830 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>4/0,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 10 | 09 12 004 3051 | 09 12 004 3151 |  |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108<br>09 32 000 6109 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208<br>09 32 000 6209 | <br>Conductor cross-section / ø / Stripping length<br>1.5 mm² AWG 16 / 1.75 mm / 9.5 mm<br>2.5 mm² AWG 14 / 2.25 mm / 9.5 mm<br>4 mm² AWG 12 / 2.85 mm / 9.5 mm<br>6 mm² AWG 10 / 3.5 mm / 9.5 mm<br>10 mm² AWG 8 / 4.3 mm / 12 mm |
| Coding element,<br>Pack contents:<br>20 pieces per frame<br> | | 09 12 000 9924 | |  |

# Han® Q 4/2 Crimp



## Features

- Han® C power contacts
- Han D® signal contacts
- Finger safe male and female contacts
- Leading PE crimp contact
- Suitable for standard plastic hoods/housings or metal hoods/housings with additional PE terminating contact on the hoods/housings from the Han-Compact® series
- Mating compatible to the axial screw version

## Technical characteristics

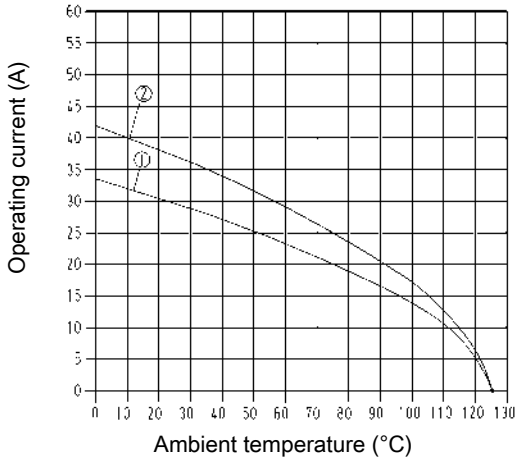
| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + 2 additional signal contacts |
| Rated current | 40 A |
| Rated voltage conductor-earth | 400 V |
| Rated voltage conductor-conductor | 690 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 250 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 250 V |
| Rated voltage acc. to CSA | 600 V |
| Rated voltage acc. to CSA (signal) | 250 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Contact resistance, signal area | <3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 2.5 mm²
② Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

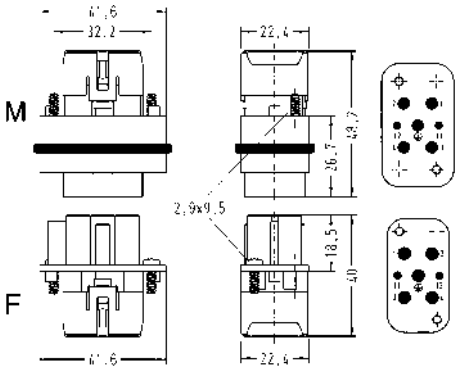
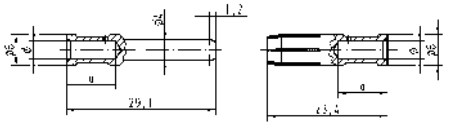
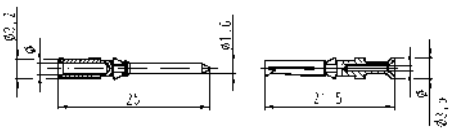
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

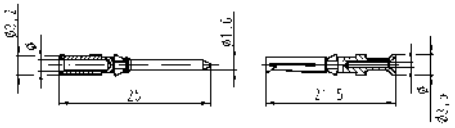
4+ ⏚

40 A 400/690 V 6 kV 3
10 A 250 V 4 kV 3
+ 2 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>4/2,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 6,<br>0.14 ... 2.5<br>Signal | 09 12 006 3041 | 09 12 006 3141 | <br>Contact arrangement (view from termination side) |
| Han® C,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 1.5<br>2.5<br>4<br>6 | 09 32 000 6104<br>09 32 000 6105<br>09 32 000 6107<br>09 32 000 6108 | 09 32 000 6204<br>09 32 000 6205<br>09 32 000 6207<br>09 32 000 6208 |  |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 1.5 mm² | AWG 16 | 1.75 mm | 9.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 9.5 mm |
| 4 mm² | AWG 12 | 2.85 mm | 9.5 mm |
| 6 mm² | AWG 10 | 3.5 mm | 9.5 mm |
| 10 mm² | AWG 8 | 4.3 mm | 12 mm |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han® Q 4/2 Axial screw



## Features

- Compact design saves space
- No special tools required
- Mating compatible to the crimp version
- Suitable for standard plastic hoods/housings or metal hoods/housings with additional PE terminating contact on the hoods/housings from the Han-Compact® series
- With or without Han-Quick Lock® signal contacts

## Technical characteristics

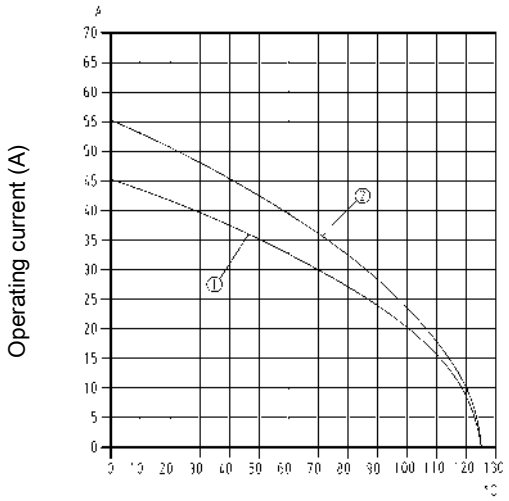
| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + 2 additional signal contacts |
| Rated current | 40 A |
| Rated voltage conductor-earth | 400 V |
| Rated voltage conductor-conductor | 690 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 250 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Contact resistance, signal area | <3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

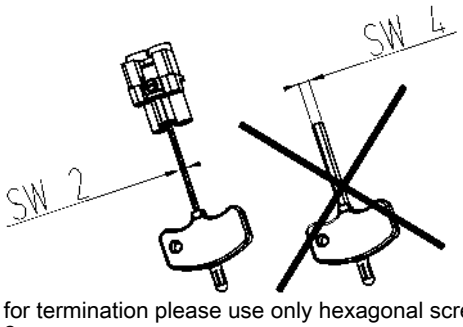



① Conductor cross-section 4 mm²
② Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details




for termination please use only hexagonal screw driver with A/F 2
If PE contact is not used: Please screw the PE contact maximal on both sides clockwise with a hexagonal screwdriver A/F 2.

# Han® Q 4/2 Axial screw

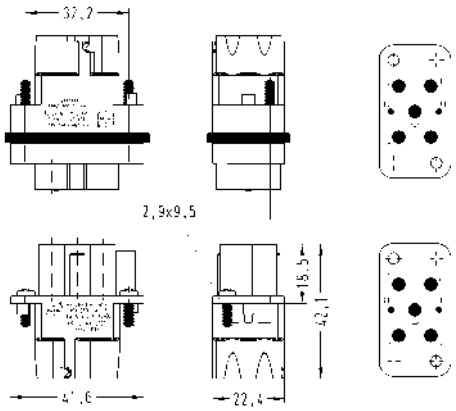
Size Han-Compact®

Number of contacts

4+ ⏚

40 A 400/690 V 6 kV 3
10 A 250 V 4 kV 3
+ 2 additional signal contacts



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>4/2,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br><br>With Han-Quick Lock® signal contacts | 2.5 ... 6,<br>0.25 ... 1.5<br>Signal<br>4 ... 10,<br>0.25 ... 1.5<br>Signal | 09 12 006 2662<br>09 12 006 2663 | 09 12 006 2762<br>09 12 006 2763 | <br><br>Stripping length Power contacts 8 mm<br>Stripping length Signal contacts 10 mm<br>Tightening torque 1.8 Nm |
| Han® Q,<br>4/2,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br>Without signal contacts | 2.5 ... 6<br>4 ... 10 | 09 12 006 2665<br>09 12 006 2666 | 09 12 006 2765<br>09 12 006 2766 | |

# Han® Q 5/0 Quick Lock



## Features

- Innovative Han-Quick Lock® termination with reduced wiring times
- No special tools required
- Mating compatible to the crimp version
- Vibration and shock resistant

## Technical characteristics

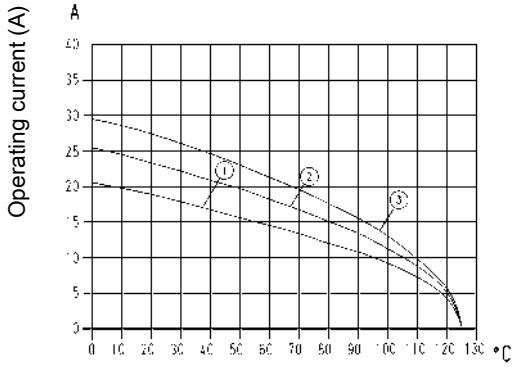
| | |
|---|---|
| Number of contacts | 5 |
| Rated current | 16 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 1 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

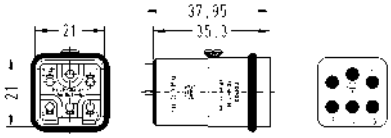
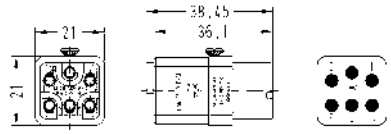
# Han® Q 5/0 Quick Lock

Size 3 A

Number of contacts

5+ ⏚

16 A 230/400 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>5/0,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide | 0.5 ... 2.5 | 09 12 005 2633 | 09 12 005 2733 | M<br><br>F<br><br>Stripping length 10 mm |
| Han® Q,<br>5/0,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Black slide | 0.25 ... 1.5 | 09 12 005 2634 | 09 12 005 2734 | |

## Features

- Compact design saves space
- Suitable for Han E® crimp contacts
- 32 coding options without loss of contacts

## Technical characteristics

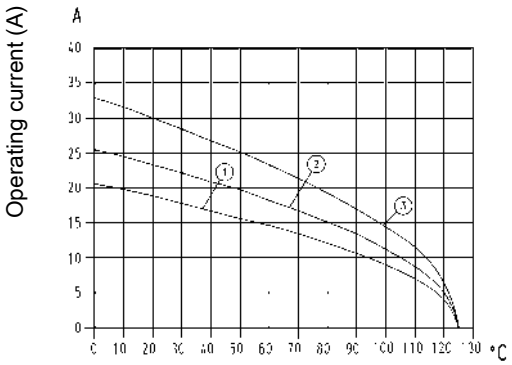
| | |
|---|---|
| Number of contacts | 5 |
| Rated current | 16 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Polyamide (PA) |
| Colour (accessories) | Red |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 1 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

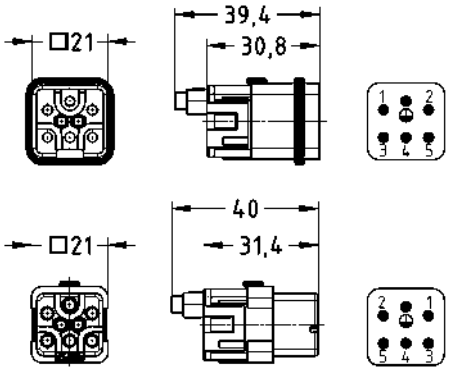
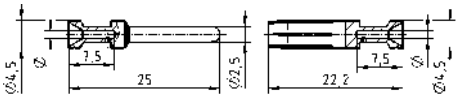
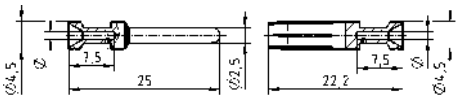
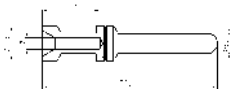
# Han® Q 5/0 Crimp

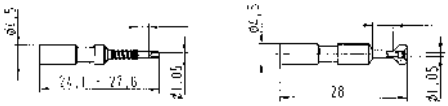
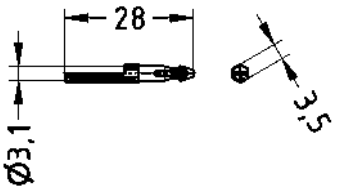
Size 3 A

Number of contacts

5+ ⏚

16 A 230/400 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>5/0,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Please order coding pins separately. | 0.14 ... 2.5 | 09 12 005 3004 | 09 12 005 3104 | <br>Contact arrangement (view from mating side) |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223 |  |
| Han E®,<br>Crimp contact,<br>Relay contact,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 1<br>1.5<br>2.5 | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111 | | <br>Conductor cross-section / ø / Stripping length<br>0.75-1 mm² AWG 18 — 1.45 mm — 7.5 mm<br>1.5 mm² AWG 16 — 1.75 mm — 7.5 mm<br>2.5 mm² AWG 14 — 2.25 mm — 7.5 mm |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| FO contact,<br>for 1 mm plastic fibre  | | 20 10 001 3311 | 20 10 001 3321 |  Crimp zone |
| Coding element,<br>Pack contents:<br>20 pieces per frame  | | 09 12 000 9927 | 09 12 000 9927 |   |

## Features

- Compact design saves space
- Suitable for Han D® crimp contacts
- 6 coding options

## Technical characteristics

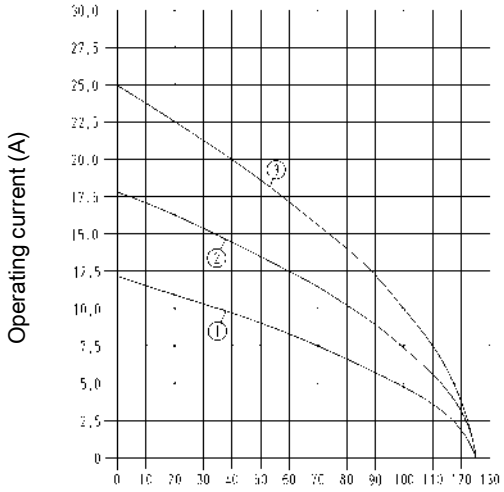
| | |
|---|---|
| Number of contacts | 7 |
| Rated current | 10 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 0.75 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

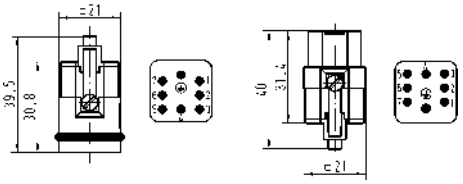
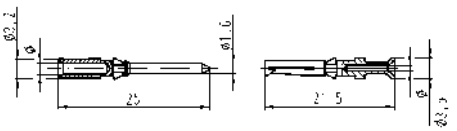
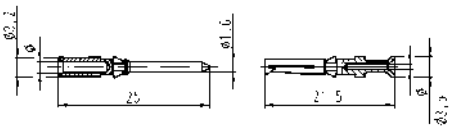
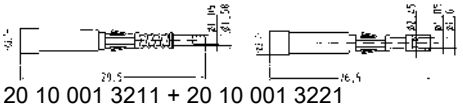
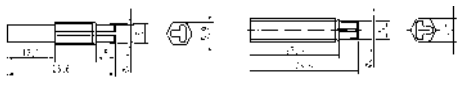
# Han® Q 7/0 Crimp

Size 3 A

Number of contacts

7+ ⏚

10 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>7/0,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 12 007 3001 | 09 12 007 3101 | <br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |
| Coding element<br> | | 09 12 000 9901 | 09 12 000 9902 |  |

# Han® Q 8/0 Quick Lock



## Features

- Innovative Han-Quick Lock® termination with reduced wiring times
- No special tools required
- Mating compatible to the crimp version
- Suitable for standard plastic hoods/housings or metal hoods/housings with additional PE terminating contact on the hoods/housings from the Han-Compact® series
- Leading PE crimp contact

## Technical characteristics

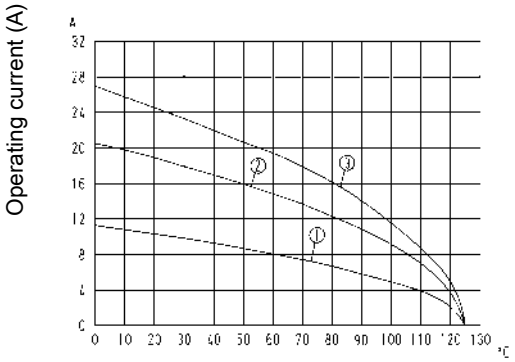
| | |
|---|---|
| Number of contacts | 8 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 0.5 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

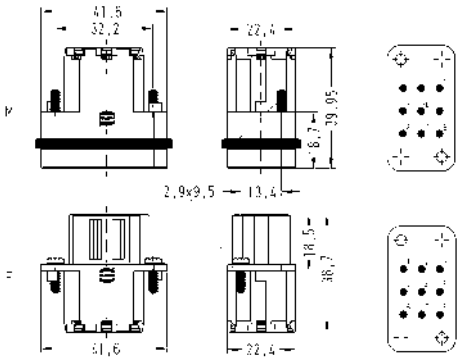
# Han® Q 8/0 Quick Lock

## Size Han-Compact®

Number of contacts

8+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>8/0,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Blue slide | 0.5 ... 2.5 | 09 12 008 2633 | 09 12 008 2733 | <br>Stripping length 10 mm |
| Han® Q,<br>8/0,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br><br>Black slide | 0.25 ... 1.5 | 09 12 008 2634 | 09 12 008 2734 | |

# Han® Q 8/0 Crimp



## Features

- Compact design saves space
- Suitable for Han E® crimp contacts
- Leading PE crimp contact
- ISO 23570 / DESINA conform product

## Technical characteristics

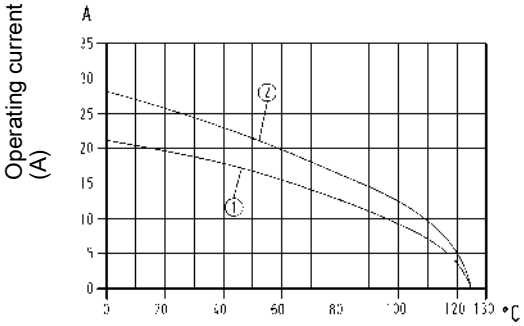
| | |
|---|---|
| Number of contacts | 8 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 1.5 mm²
② Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

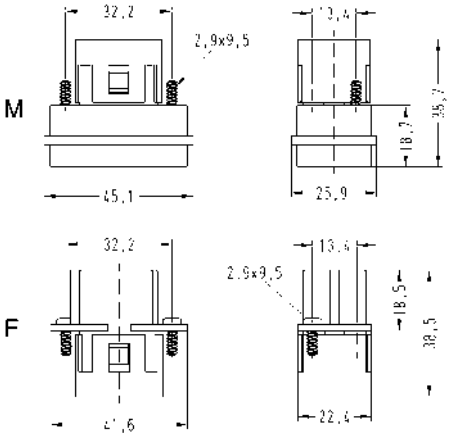
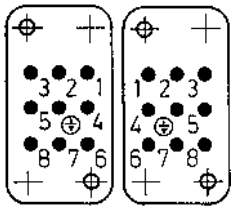
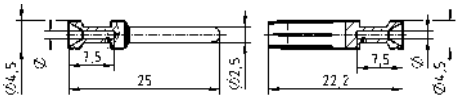
**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

Number of contacts

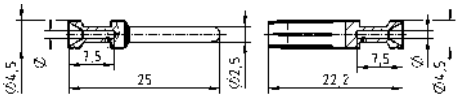
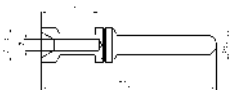
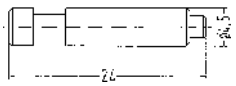
8+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>8/0,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 12 008 3001 | 09 12 008 3101 | <br><br>Contact arrangement (view from termination side) |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | 09 33 000 6227<br>09 33 000 6220<br>09 33 000 6214<br>09 33 000 6205<br>09 33 000 6204<br>09 33 000 6202<br>09 33 000 6206<br>09 33 000 6207 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Stripping length 7.5 mm |
| Han E®,<br>Crimp contact,<br>Relay contact,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 1<br>1.5<br>2.5 | 09 33 000 6109<br>09 33 000 6110<br>09 33 000 6111 | |  |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3311 | 20 10 001 3321 | <br>Crimp zone |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br>for crimp inserts only<br>With loss of one contact | | | 09 33 000 9954 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.75-1 mm² | AWG 18 | 1.45 mm | 7.5 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 7.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 7.5 mm |

# Han® Q 12/0 Crimp/Quick Lock

## Features

- Suitable for Han D® crimp contacts
- PE contact with Han-Quick Lock® termination
- 16 coding options without loss of contacts

## Technical characteristics

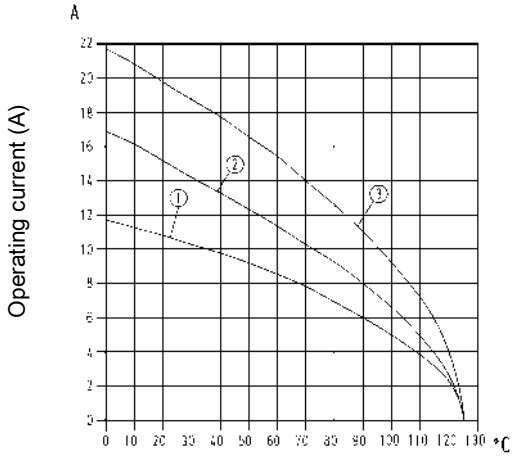
| | |
|---|---|
| Number of contacts | 12 |
| Rated current | 10 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 0.75 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

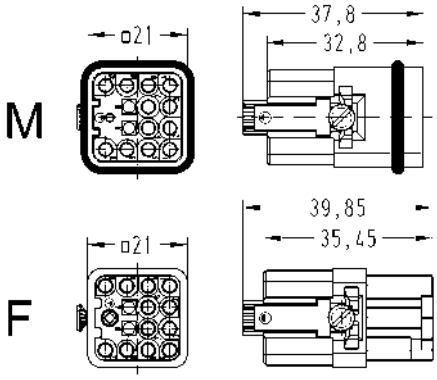
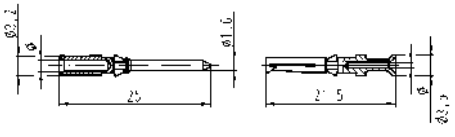
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® Q 12/0 Crimp/Quick Lock — Size 3 A

Number of contacts

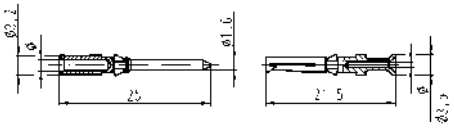
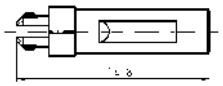
12+ ⏚

10 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>12/0,<br>With Han-Quick Lock® PE contact,<br>Crimp termination<br><br>Blue slide<br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 12 012 3001 | 09 12 012 3101 | <br>With Han-Quick Lock® PE contact :<br>Conductor cross-section Blue slide 0.5 ... 2.5<br>Conductor cross-section Black slide 0.25 ... 1.5 |
| Han® Q,<br>12/0,<br>With Han-Quick Lock® PE contact,<br>Crimp termination<br><br>Black slide<br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 12 012 3004 | 09 12 012 3104 | |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han® Q 12/0 Crimp/Quick Lock — Size 3 A

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |
| Coding element,<br>Pack contents:<br>20 pieces per frame<br> | | 09 12 000 9924 | |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

## Features

- Compact design saves space
- Suitable for Han D® crimp contacts
- Leading PE crimp contact

## Technical characteristics

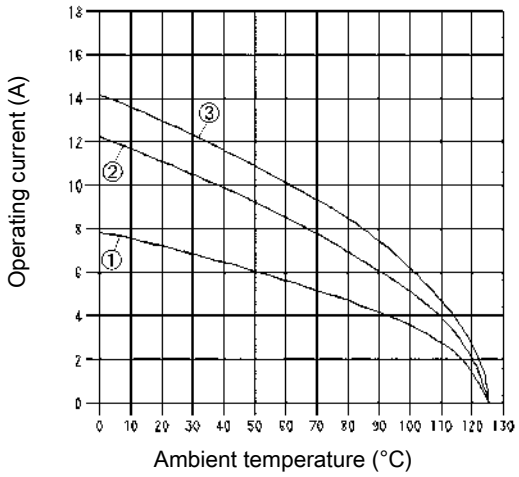
| | |
|---|---|
| Number of contacts | 17 |
| Rated current | 10 A |
| Rated voltage | 160 V |
| Rated impulse voltage | 2.5 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 250 V |
| Rated voltage acc. to CSA | 250 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 0.5 mm²
② Conductor cross-section 1 mm²
③ Conductor cross-section 1.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

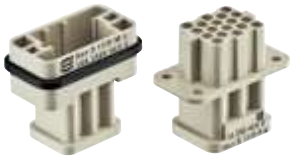
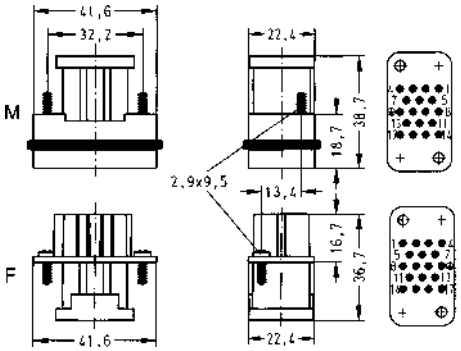
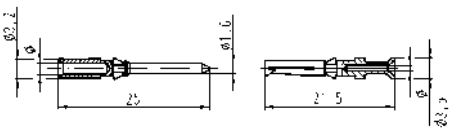
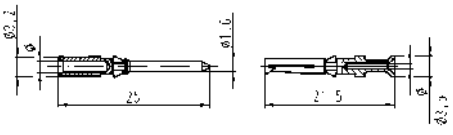
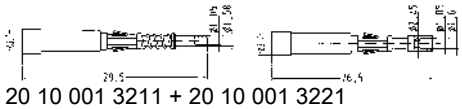
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

17+ ⏚

10 A 160 V 2.5 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>17/0,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 12 017 3001 | 09 12 017 3101 | <br>Contact arrangement (view from termination side) |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6104<br>09 15 000 6103<br>09 15 000 6105<br>09 15 000 6102<br>09 15 000 6101<br>09 15 000 6106 | 09 15 000 6204<br>09 15 000 6203<br>09 15 000 6205<br>09 15 000 6202<br>09 15 000 6201<br>09 15 000 6206 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| FO contact,<br>for 1 mm plastic fibre<br> | | 20 10 001 3211 | 20 10 001 3221 | <br>20 10 001 3211 + 20 10 001 3221 |

## Features

- Easy handling of signal connectors in industrial environment
- High density of contacts
- Suitable for standard D-Sub crimp contacts
- One preleading contact

## Technical characteristics

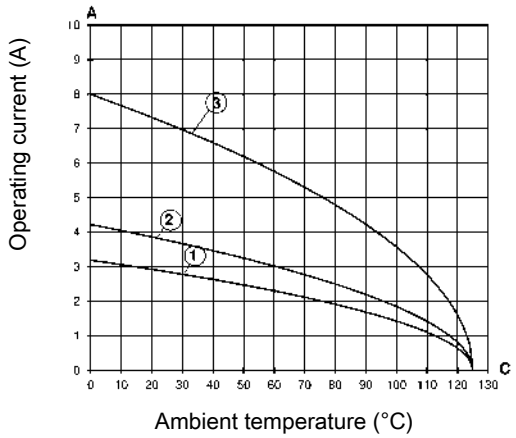
| | |
|---|---|
| Number of contacts | 21 |
| Rated current | 6.5 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage | 50 V AC, 120 V DC |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Stamped contacts Conductor cross-section 0.14 mm²
② Stamped contacts Conductor cross-section 0.25 mm²
③ Turned contacts Conductor cross-section 0.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

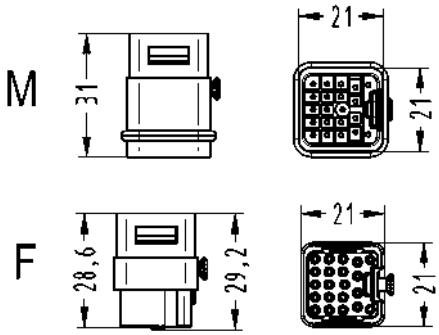
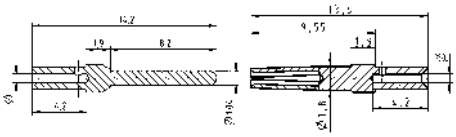
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

# 21

6.5 A 50 V 0.8 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>High Density,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.09 ... 0.56 | 09 12 021 3001 | 09 12 021 3101 |  |
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.09 ... 0.25<br>0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 7176<br>09 67 000 5576<br>09 67 000 8576<br>09 67 000 8176 | 09 67 000 7476<br>09 67 000 7276<br>09 67 000 5476<br>09 67 000 8476<br>09 67 000 8276 |  |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

| Conductor cross-section | max. insulation diameter | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 1.02 mm | 2.5 mm + 0.5 |
| 0.25-0.52 mm² | 1.52 mm | 2.5 mm + 0.5 |

# Han® Q Data RJ45

## Features

- Combination connector: Ethernet connector based on RJ45 with up to 10 signal D-Sub contacts, crimp termination
- Turned D-Sub contacts of performance level 1
- Compact design saves space
- High density of contacts

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Rated current | 5 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

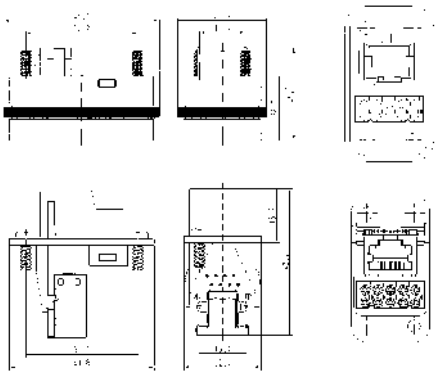
## Specifications and approvals

EN 60664-1
IEC 61984

Number of contacts

# 8

5 A 50 V 0.8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q,<br>Data RJ45,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.13 ... 0.52 | 09 12 011 3001 | 09 12 011 3111 |  |
| D-Sub,<br>Standard,<br>Crimp contact<br> | 0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 5576<br>09 67 000 8576 | 09 67 000 5476<br>09 67 000 8476 | |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 0.09-0.25 mm² | 0.64 mm | 4 mm |
| 0.13-0.33 mm² | 0.88 mm | 4 mm |
| 0.25-0.52 mm² | 1.13 mm | 4 mm |
| 0.33-0.82 mm² | 1.34 mm | 4 mm |
| for stranded wire according IEC 60228 Class 5 | | |

## Features

- Hoods/housings for industrial applications
- Compact design saves space

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Polyamide (PA) |
| Colour (locking) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant with exemption, compliant |

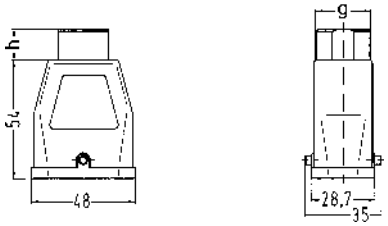
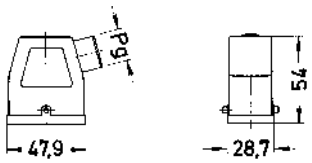
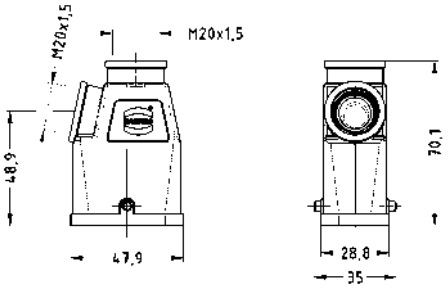
## Specifications and approvals

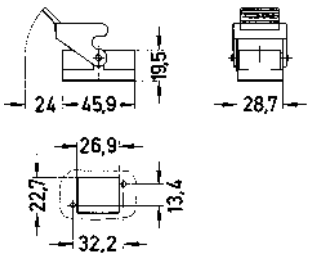
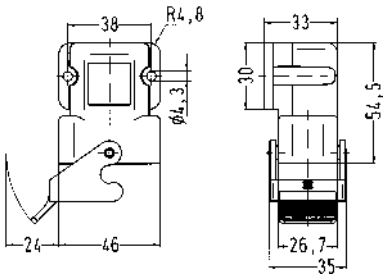
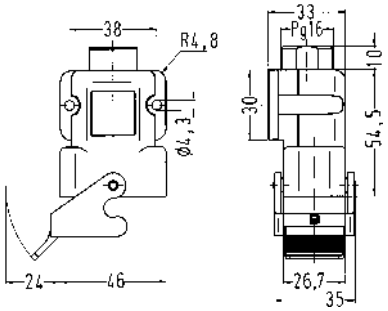
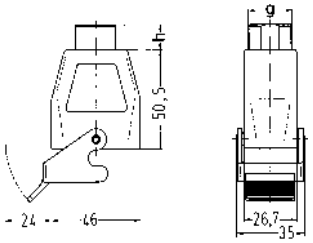
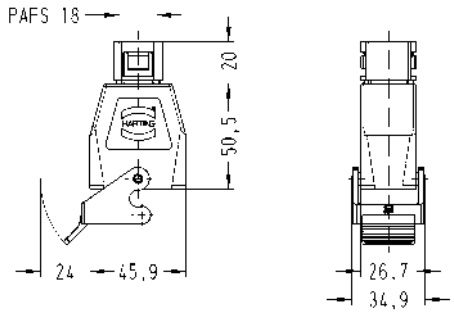
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

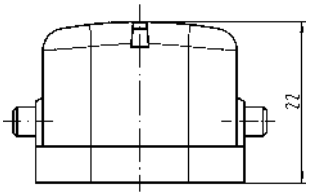
CE

Hoods/housings for industrial applications
Single locking lever



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>Top entry,<br>IP65<br> | 1x M25<br>1x Pg 16<br>1x Pg 21 | 19 12 008 0429<br>09 12 008 0427<br>09 12 008 0429 |  |
| Han-Compact®,<br>Hood,<br>for flexible conduits Adaptaflex PAFS18,<br>Top entry,<br>IP65<br> | 1x PAFS 18 | 09 12 008 0428 | |
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>Side entry,<br>IP65<br> | 1x Pg 16 | 09 12 008 0527 |  |
| Han-Compact®,<br>Hood,<br>Top/side entry,<br>IP65<br> | 2x M20 | 19 12 008 0425 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Compact®,<br>Bulkhead mounted housing,<br>Straight,<br>IP65  | | 09 12 008 0327 |   |
| Han-Compact®,<br>Bulkhead mounted housing,<br>Angled,<br>IP65  | | 09 12 008 0902 |   |
| Han-Compact®,<br>Surface mounted housing,<br>for Han-Compact® half cable gland,<br>Angled entry,<br>IP65  | 1x Pg 16 | 09 12 008 0901 |   |
| Han-Compact®,<br>Cable to cable housing,<br>for Han-Compact® half cable gland,<br>Top entry,<br>IP65  | 1x M25<br>1x Pg 16 | 19 12 008 0729<br>09 12 008 0727 |   |
| Han-Compact®,<br>Cable to cable housing,<br>for flexible conduits Adaptaflex PAFS18,<br>Top entry,<br>IP65  | 1x PAFS 18 | 09 12 008 0728 |   |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Compact®,<br>Protection cover,<br>for bulkhead mounted housings,<br>Thermoplastic,<br>IP65<br><br>for mounted male insert | | 09 12 008 5407 |  |
| Han-Compact®,<br>Protection cover,<br>for bulkhead mounted housings,<br>Thermoplastic,<br>IP65<br><br>for mounted female insert | | 09 12 008 5408 | |

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated, Chromated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| RoHS | compliant |

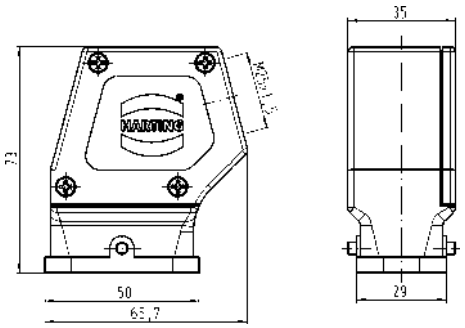
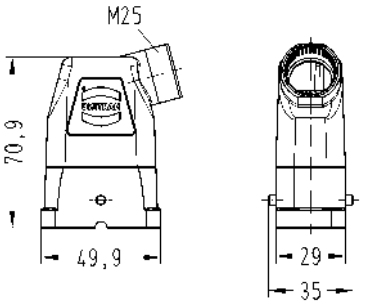
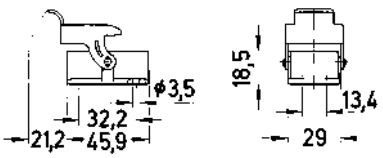
## Specifications and approvals

UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 ECBT8.E235076
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

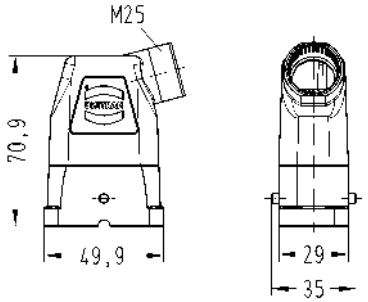
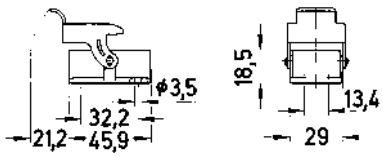
CE

Hoods/housings for industrial applications
Single locking lever



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Top entry,<br>IP65<br> | 1x M25 | 19 12 708 0411 | |
| Han-Compact®,<br>Hood,<br>for standard cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Side entry,<br>IP65<br> | 1x M25 | 19 12 008 0526 |  |
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Side entry,<br>IP65<br> | 1x M25 | 19 12 708 0511 |  |
| Han-Compact®,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 12 708 0301 |  |

Hoods/housings for industrial applications
Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Top entry,<br>IP65<br> | 1x M25 | 19 12 008 0411 | |
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Side entry,<br>IP65<br> | 1x M25 | 19 12 008 0511 |  |
| Han-Compact®,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 12 008 0301 |  |

## Features

- Hoods/Housings for higher EMC requirements
- Separate PE connection option
- High degree of flexibility due to two-part assembly

## Technical characteristics

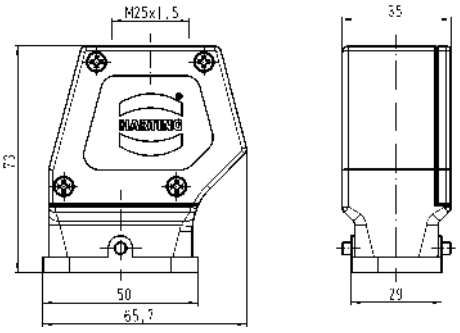
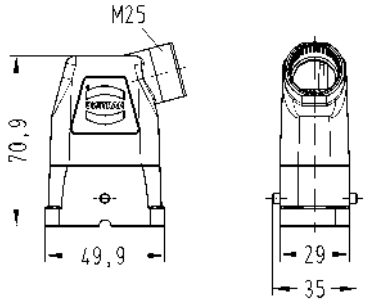
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Nickel plated |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| RoHS | compliant, compliant with exemption |

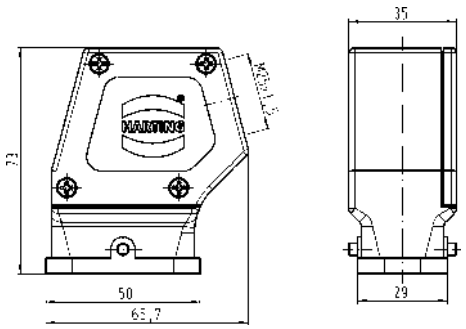
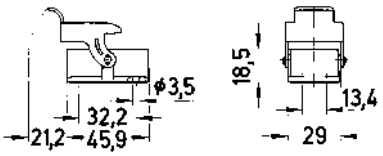
## Specifications and approvals

UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 ECBT8.E235076
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

CE

Hoods/Housings for higher EMC requirements
Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Top entry,<br>IP65<br> | 1x M25 | 19 12 008 0412 | |
| Han-Compact®,<br>Hood,<br>for standard cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Top entry,<br>IP65<br> | 1x M25 | 19 12 008 0428 |  |
| Han-Compact®,<br>Hood,<br>for Han-Compact® half cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Side entry,<br>IP65<br> | 1x M25 | 19 12 008 0512 |  |

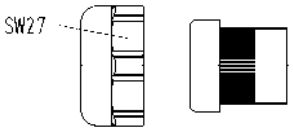
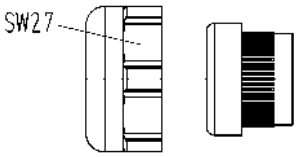
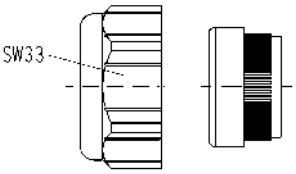
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Compact®,<br>Hood,<br>for standard cable gland,<br>With separate PE terminating point,<br>for all inserts of size Han-Compact®,<br>Side entry,<br>IP65<br> | 1x M25 | 19 12 008 0528 |  |
| Han-Compact®,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 12 008 0303 |  |

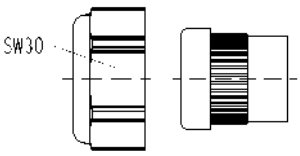
## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +100 °C |
| Degree of protection acc. to IEC 60529 | IP65 |

## Technical characteristics

| | |
|---|---|
| Material (cable glands) | Thermoplastic |
| Colour (accessories) | Black |
| RoHS | compliant, compliant with exemption |

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Compact®, Cable gland, for hoods, for cable to cable housing, Pg 16, IP65  | Pg 16<br>Pg 16<br>Pg 16 | 6.5 ... 9.5<br>9 ... 13<br>11.5 ... 15.5 | 09 00 000 5047<br>09 00 000 5156<br>09 00 000 5059 |   |
| Han-Compact®, Cable gland, for surface mounted housings, Pg 16, IP65  | Pg 16<br>Pg 16 | 6.5 ... 9.5<br>11.5 ... 15.5 | 09 00 000 5057<br>09 00 000 5058 |   |
| Han-Compact®, Cable gland, for hoods, for cable to cable housing, Pg 21, IP65  | Pg 21<br>Pg 21 | 14 ... 18<br>17 ... 20.5 | 09 00 000 5157<br>09 00 000 5158 |   |

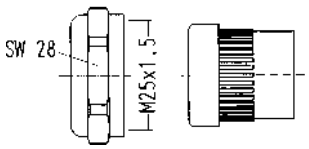
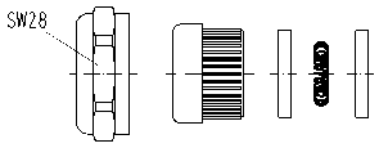
| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Compact®,<br>Cable gland,<br>for hoods,<br>for cable to cable housing,<br>M25,<br>IP65<br> | M25<br>M25<br>M25 | 6.5 ... 9.5<br>10.5 ... 14<br>14 ... 17 | 19 12 000 5156<br>19 12 000 5157<br>19 12 000 5158 |  |

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +130 °C |
| Degree of protection acc. to IEC 60529 | IP65 |

## Technical characteristics

| | |
|---|---|
| Material (cable glands) | Metal |
| RoHS | compliant with exemption |

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Compact®, Cable gland, for hoods, IP65  | M25<br>M25 | 10.5 ... 14<br>14 ... 17 | 19 12 000 5057<br>19 12 000 5058 |   |
| Han-Compact®, Cable gland, EMC version, for hoods  | M25<br>M25<br>M25 | 10.5 ... 14<br>10.5 ... 14<br>14 ... 17 | 19 62 000 5056<br>19 62 000 5057<br>19 62 000 5058 |   |

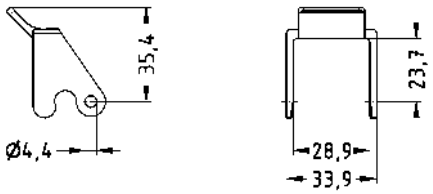
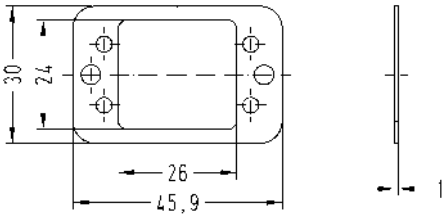
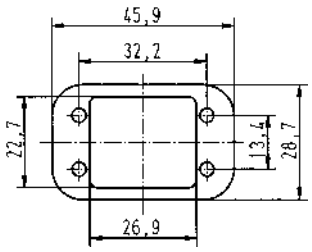
| | Cable | Shielding | SW |
|---|---|---|---|
| 19 62 000 5056 | 10.5 .. **14** mm | 9 .. 13 mm | 28 |
| 19 62 000 5057 | 10.5 .. **14** mm | 6 .. 11 mm | 28 |
| 19 62 000 5058 | 14 ... **17** mm | 9 ... 13 mm | 28 |

## Technical characteristics

| | |
|---|---|
| Material (seal) | NBR |
| Colour (seal) | Black |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic |
| Colour (accessories) | Black |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Locking levers, Han® Q 8/0, Black  | Han-Compact® | 09 00 000 5244 |   |
| Flange gasket, for bulkhead mounted plastic housings, angled, for surface mounted housings  | Han-Compact® | 09 12 000 9911 |   |
| Flange gasket, for bulkhead mounted plastic housings, straight  | Han-Compact® | 09 12 000 9912 |   |

# Han® HC-Modular



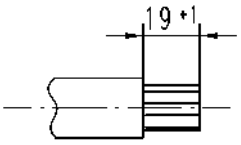
| Contents | Page |
|---|---|
| Han® K 3/0 | **Han 14.4** |
| Han® K 3/2 | **Han 14.6** |
| Hoods/Housings for Han® K 3/0, Han® K 3/2 | **Han 14.8** |
| Han® HC Modular 250 | **Han 14.11** |
| Hoods/Housings for Han® HC Modular 250 | **Han 14.13** |
| Han® HC Modular 350 | **Han 14.24** |
| Hoods/Housings for Han® HC Modular 350 | **Han 14.29** |
| Han® M hoods/housings for Han® HC Modular 350 | **Han 14.47** |
| Han® HC Modular 650 | **Han 14.50** |
| Hoods/Housings for Han® HC Modular 650 | **Han 14.53** |
| Han® 24 HPR EasyCon | **Han 14.60** |
| Han® 24 HPR EasyCon - Accessories | **Han 14.70** |
| Han® 48 HPR | **Han 14.72** |

## Assembly instructions



Remarks on the axial screw termination see chapter 00

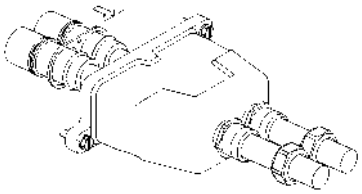
Step 1: The outer diameter of the cable must not exceed 19.5 mm.
Strip the cable by 19 mm.




Insert the cable through hood.



Step 2: Press the Han HC contact on the cable strand and apply tightening torque according table 1 by using a tightening torques tool. Take care that all cable strands fit completely inside the contact termination cavity. During assembling adhere the cable and the contact to minimise axial movement or twisting.



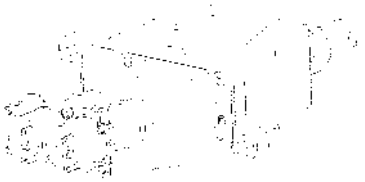
Step 3: Move the perforated plate across the HC contacts.

Step 4: Fit frame onto the hexagon shape of the HC contact. Coding can be arranged by turning the contact within 60° steps. Bolt the frame together with perforated plate.



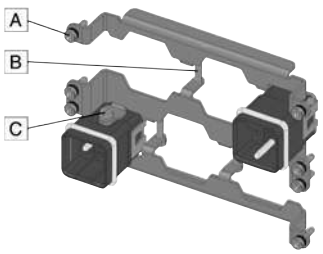
Step 5: Push back the packet inside the good.

Step 6: Tighten the four M3 (tightening torque 0.5 Nm) screws and the cable gland according manufacturer recommendation.



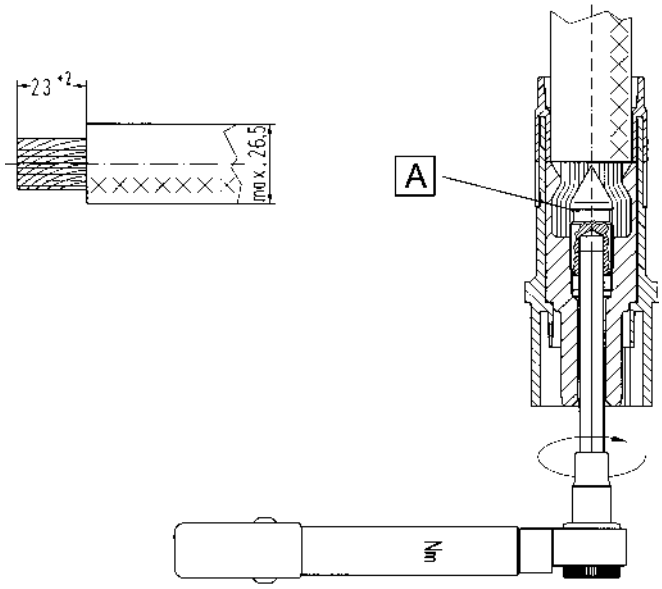


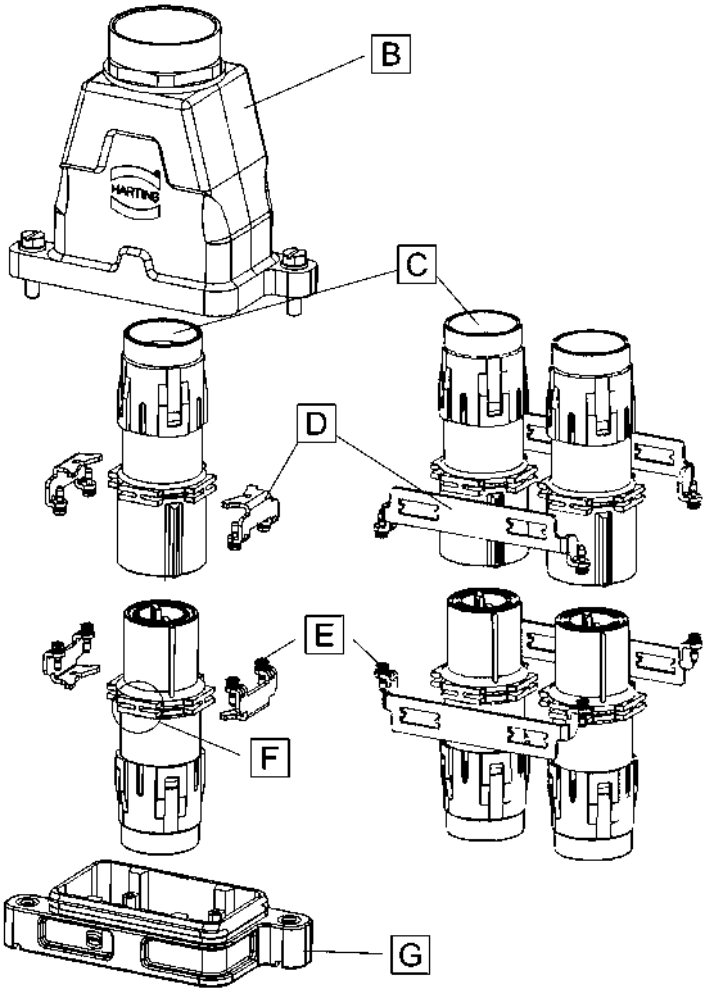
During the assembly of the frame for 4 poles the following tightening torques have to be taken into consideration:
A = 0.5 Nm
B = 1.5 Nm
C = 0.25 Nm



## Assembly instructions






1. Strip cable to 23+2 mm.

2. Push conductor through the cable gland and the housing. Push the stripped end of the conductor into the termination entry of the module until the insulation touches the contact.

3. To tighten the axial screw, a hexagonal wrench size 8 is needed. Insert the hexagonal wrench on the mating side of the contact. At the same time, push the conductor over the axial screw.The locking screw has to be tightened with the recommended tightening torque that is determined by the conductor's cross section.

4. Once the modules are terminated, they are mounted into the housing by using two metal frames (tightening torque of the fixing screws = 0.5 Nm). The modules have 4 pegs formed by 2 parallel ribs (each peg shapes like a "H"). Each rib takes 1 pole frame, where the lateral link has to go into the relief of the frame. The 2 pole frames have 2 cutouts on the wall which get fitted to the "H"-shaped pegs (see figure). The heads of the screws have to face the mating direction of the module. Coding can be established by rotating the contact by 90 degrees. Therefore it is important that the corresponding modules are assembled in the correct position otherwise mating is not possible.

5. After assembling the modules in the housing, the tightening torque of the locking screw can be checked and corrected if necessary.

6. After final assembly of the contacts, the user should ensure that the cable is adequately strain reliefed to protect the contact from radial stress.

A - Axial screw, B - Hood, C - Termination entry, D - Frame, E - Fixing screws, F - parallel ribs with H-shape, G - Housings bulkhead mounting,

## Features

- The ideal connector for transmission of high currents requiring little space
- The vertical and angled versions offer solutions for almost all applications
- The angled versions offer a space-saving 90° cable wiring

## Technical characteristics

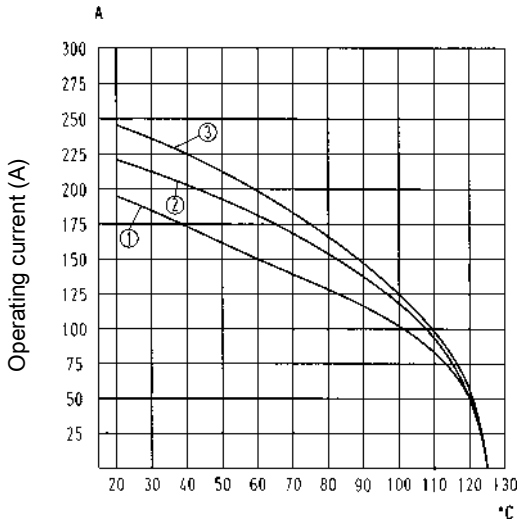
| | |
|---|---|
| Number of contacts | 3 |
| Rated current | 200 A |
| Rated voltage conductor-earth | 1150 V |
| Rated voltage conductor-conductor | 2000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current acc. to UL | 200 A |
| Rated current acc. to CSA | 160 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 35 mm²
② Conductor cross-section 50 mm²
③ Conductor cross-section 70 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

ATTENTION! Only to be used with special Han® 24 HPR hoods and housings!

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

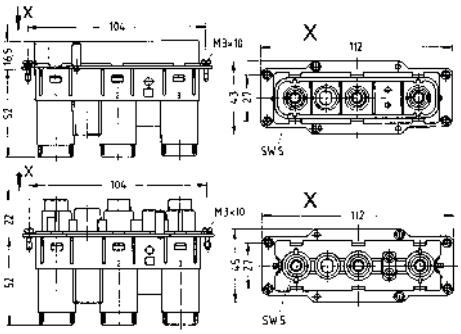
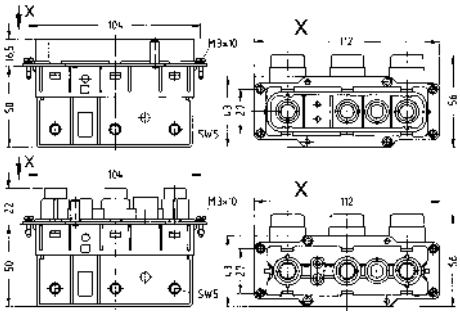
**Hex key (A/F 5)** see chapter Han 90

Number of contacts

3

200 A 1.150/2.000 V 8 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 3/0,<br>Straight,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 35 ... 70 | 09 38 005 2621 | 09 38 005 2721 | <br>Distance for contact max. 21 mm<br>Stripping length 22 mm<br>Tightening torque 8 Nm @ 35 mm², 9 Nm @ 50 mm², 10 Nm @ 70 mm² |
| Han-Com®,<br>Han® K 3/0,<br>Angled,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 35 ... 70 | 09 38 005 2622 | 09 38 005 2722 | <br>Distance for contact max. 21 mm<br>Stripping length 22 mm<br>Tightening torque 8 Nm @ 35 mm², 9 Nm @ 50 mm², 10 Nm @ 70 mm² |

## Features

- The ideal connector for transmission of high currents requiring little space
- The vertical and angled versions offer solutions for almost all applications
- The angled versions offer a space-saving 90° cable wiring

## Technical characteristics

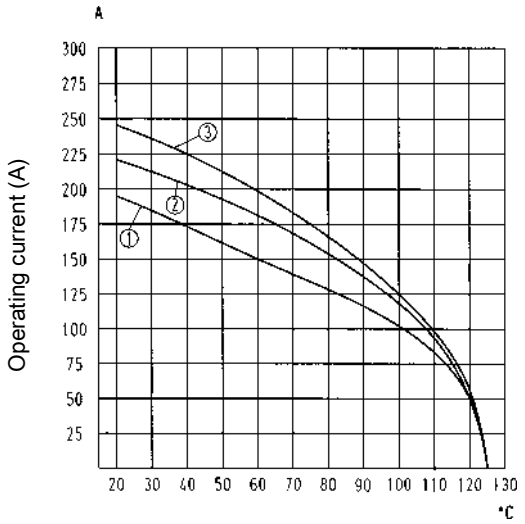
| | |
|---|---|
| Number of contacts | 3 |
| Additional contacts | + 2 additional signal contacts |
| Rated current | 200 A |
| Rated voltage conductor-earth | 1150 V |
| Rated voltage conductor-conductor | 2000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 16 A |
| Rated voltage (signal) | 400 V |
| Rated impulse voltage (signal) | 6 kV |
| Pollution degree (signal) | 3 |
| Rated current acc. to UL | 200 A |
| Rated current acc. to UL (signal) | 16 A |
| Rated current acc. to CSA | 160 A |
| Rated current acc. to CSA (signal) | 16 A |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to UL (signal) | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Rated voltage acc. to CSA (signal) | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤0.2 mΩ |
| Contact resistance, signal area | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 35 mm²
② Conductor cross-section 50 mm²
③ Conductor cross-section 70 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

ATTENTION! Only to be used with special Han® 24 HPR hoods and housings!

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

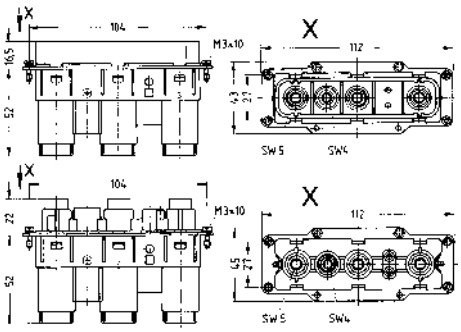
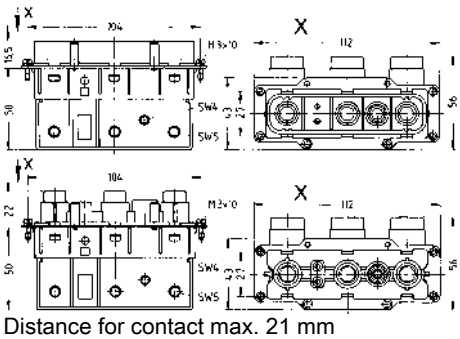
**Hex key (A/F 5)** see chapter Han 90

**Hex key (A/F 4) for PE contact** see chapter Han 90

Number of contacts

3+ ⏚

200 A 1.150/2.000 V 8 kV 3
16 A 400 V 6 kV 3
+ 2 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Com®,<br>Han® K 3/2,<br>Straight,<br>Axial screw termination / screw termination,<br>Contact surface:<br>Silver plated<br> | 35 ... 70,<br>0.5 ... 2.5<br>Signal,<br>16 ... 35 PE | 09 38 005 2601 | 09 38 005 2701 | <br>Distance for contact max. 21 mm<br>Stripping length 22 mm<br>Tightening torque 8 Nm @ 35 mm², 9 Nm @ 50 mm², 10 Nm @ 70 mm²<br>Signal contacts: Stripping length 7 mm,<br>Tightening torque 0.5 Nm<br>PE contact: Stripping length 14 mm, Tightening torque 6 Nm |
| Han-Com®,<br>Han® K 3/2,<br>Angled,<br>Axial screw termination / screw termination,<br>Contact surface:<br>Silver plated<br> | 35 ... 70,<br>0.5 ... 2.5<br>Signal,<br>16 ... 35 PE | 09 38 005 2602 | 09 38 005 2702 | <br>Distance for contact max. 21 mm<br>Stripping length 22 mm<br>Tightening torque 8 Nm @ 35 mm², 9 Nm @ 50 mm², 10 Nm @ 70 mm²<br>Signal contacts: Stripping length 7 mm,<br>Tightening torque 0.5 Nm<br>PE contact: Stripping length 14 mm, Tightening torque 6 Nm |

# Hoods/Housings for Han® K 3/0, Han® K 3/2



## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Screw locking M6
- Field of application: for external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded
- Distinguishing feature: colour-coded black, internal seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 4 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast, Corrosion resistant |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| RoHS | compliant, compliant with exemption |

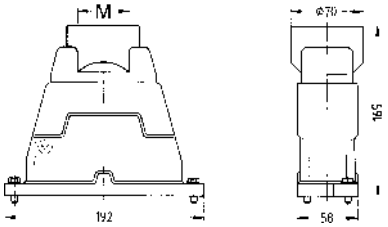
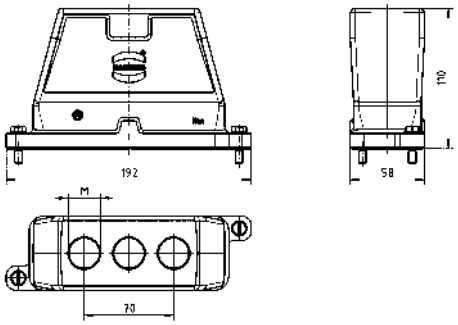
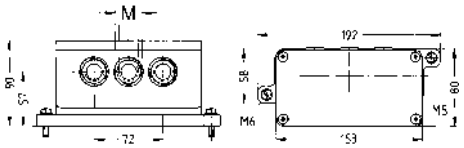
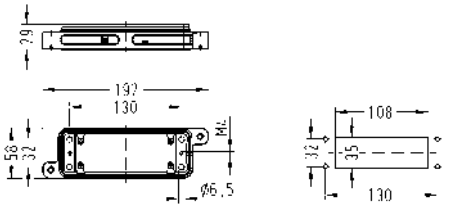
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

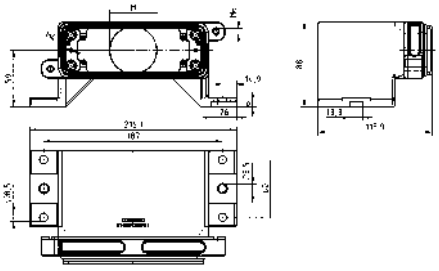
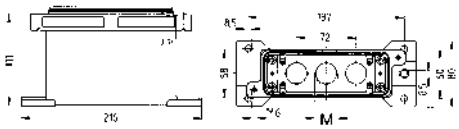
CE

# Hoods/Housings for Han® K 3/0, Han® K 3/2 Size 24 B

Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Special type,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M63 | 19 40 024 0420 |  |
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25<br>3x M25, 1x M20 | 19 40 024 0461<br>19 40 024 0471 |  |
| Han® HPR,<br>Hood,<br>Special type,<br>Angled entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25 | 19 40 024 0631 | <br>X |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 0311 |  |

# Hoods/Housings for Han® K 3/0, Han® K 3/2 Size 24 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M50<br>3x M25<br>3x M25, 1x M20 | 19 40 024 0914<br>19 40 024 0931<br>19 40 024 0971 |  |
| Han® HPR,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25<br>3x M25, 1x M20 | 19 40 024 1231<br>19 40 024 1271 |  |

# Han® HC Modular 250

## Features

- Contacts for fine stranded wire
- Low mating forces
- Suitable for HPR® hoods and housings

## Technical characteristics

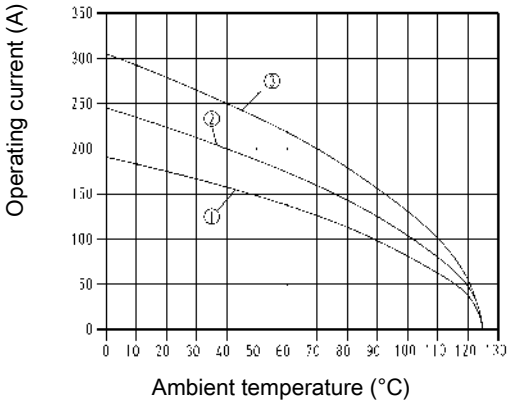
| | |
|---|---|
| Rated current | 250 A |
| Rated voltage | 2000 V |
| Rated impulse voltage | 12 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤18 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 35 mm²
② Conductor cross-section 50 mm²
③ Conductor cross-section 70 mm²
4 contacts in Han® 24 HPR

## Specifications and approvals

EN 60664-1
IEC 61984
EN 50124-1
DNV GL

## Details

**Removal tool** 09 99 000 0332 see chapter Han 90

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

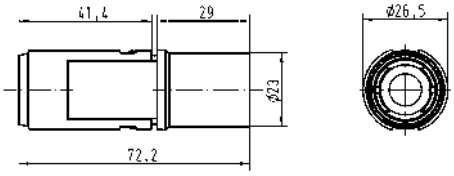
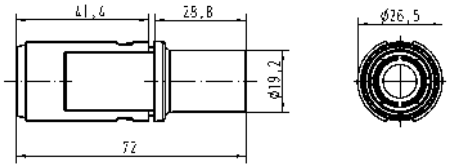
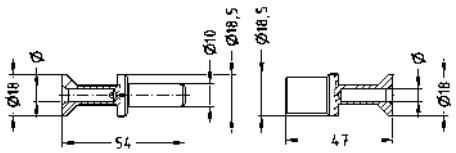
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

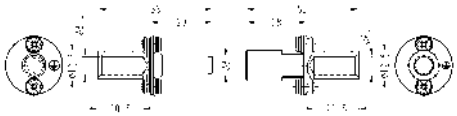
# Han® HC Modular 250

250 A 2.000 V 12 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HC Modular, 250, Crimp termination  Please order crimp contacts separately. | 10 ... 70 | 09 11 001 3021 | 09 11 001 3121 |     |
| TC 250, Crimp contact, Contact surface: Silver plated  | 10<br>16<br>25<br>35<br>50<br>70 | 09 11 000 6184<br>09 11 000 6185<br>09 11 000 6126<br>09 11 000 6127<br>09 11 000 6128<br>09 11 000 6129 | 09 11 000 6284<br>09 11 000 6285<br>09 11 000 6226<br>09 11 000 6227<br>09 11 000 6228<br>09 11 000 6229 |   |

| Conductor cross-section | Tool identification | Stripping length A | Ø |
|---|---|---|---|
| 10 mm² | 6 | 22 mm | 4.3 mm |
| 16 mm² | 8 | 22 mm | 5.5 mm |
| 25 mm² | 10 | 22 mm | 7 mm |
| 35 mm² | 12 | 22 mm | 8.45 mm |
| 50 mm² | 14 | 22 mm | 10.25 mm |
| 70 mm² | 16 | 22 mm | 11.75 mm |
| for stranded wire according to IEC 60 228 Class 5 | | | |

Crimp zone acc. to DIN 46235

| | | | | |
|---|---|---|---|---|
| TC 250, PE contact, Crimp termination, Contact surface: Silver plated  | 16<br>35 | 09 11 000 6190<br>09 11 000 6104 | 09 11 000 6290<br>09 11 000 6204 |  |

# Hoods/Housings for Han® HC Modular 250



## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Screw locking M6
- Field of application: for external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 4 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast, Corrosion resistant |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| Material (accessories) | Metal, Aluminium die-cast, Stainless steel, Aluminium |
| RoHS | compliant |

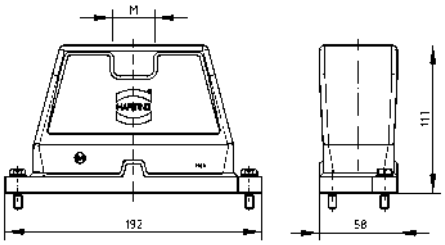
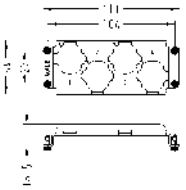
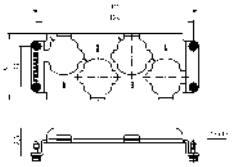
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

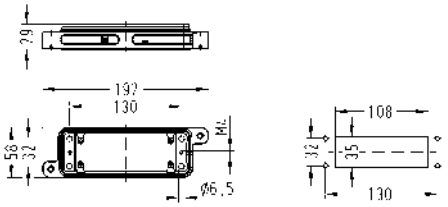
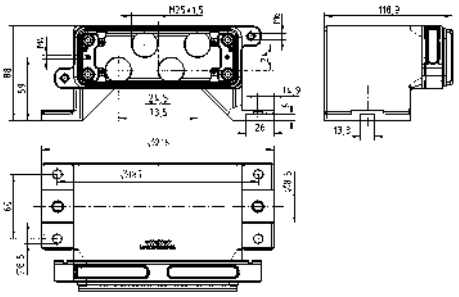
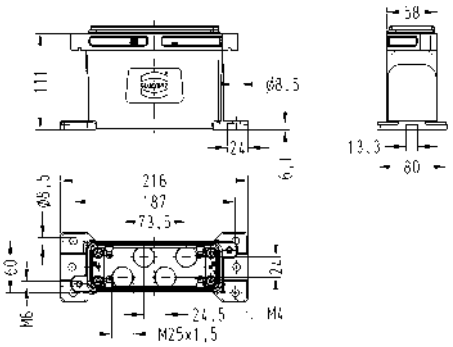
CE

Hoods/housings for harsh outdoor environments
Screw locking

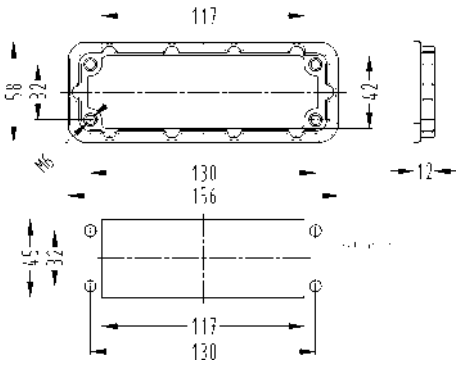
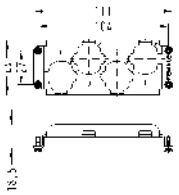
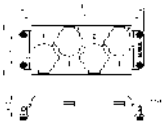


| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 4x M20<br>4x M25 | 19 40 024 0473<br>19 40 024 0474 |  |
| Han® HPR,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 250<br> | | 09 11 000 9925 | <br>Tightening torque Fixing screws M3: 0.5 Nm |
| Han® HPR,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 250<br> | | 09 11 000 9942 | <br>Tightening torque Fixing screws M3: 0.5 Nm |

Hoods/housings for harsh outdoor environments
Screw locking

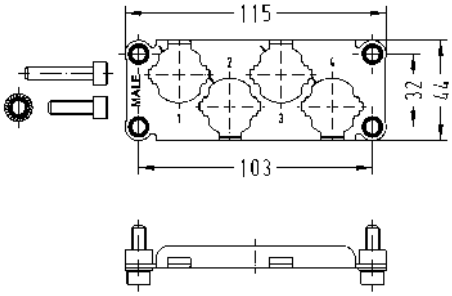
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 024 0311 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 4x M25 | 19 40 024 0941 |  |
| Han® HPR,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | 4x M25 | 19 40 024 1242 |  |

# Hoods/Housings for Han® HC Modular 250 Size 24 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Mounting frames, Han® HPR, Thread M6  | | 09 40 000 9955 |   |
| Han® HPR, Frame, for female inserts, 4x Han® HC Modular 250  | | 09 11 000 9926 |  Tightening torque Fixing screws M3: 0.5 Nm |
| Han® HPR, Frame, for male inserts, 4x Han® HC Modular 250  | | 09 11 000 9941 |  Tightening torque Fixing screws M3: 0.5 Nm |

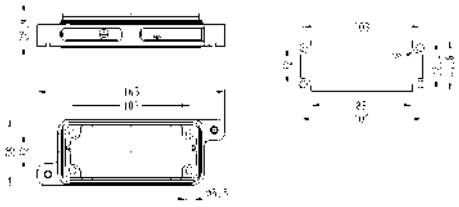
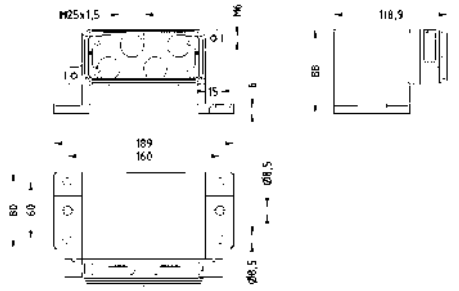
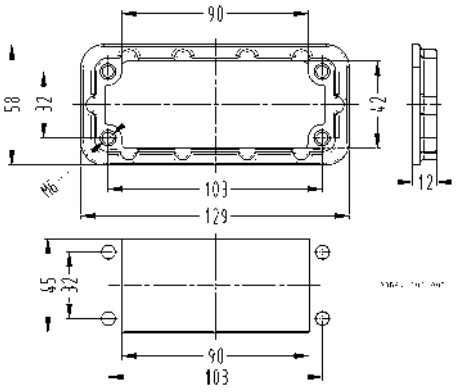
# Hoods/Housings for Han® HC Modular 250 enlarged Size 16 B

Hoods/housings for harsh outdoor environments
Screw locking

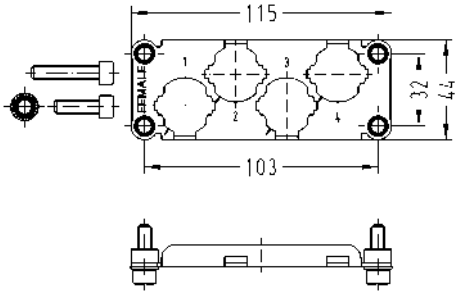
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 2x M40<br>4x M25 | 19 40 016 0471<br>19 40 016 0478 | |
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x washer SK S6<br> | | 09 11 000 9937 | <br>Tightening torque Fixing screws M6: 10 Nm |

# Hoods/Housings for Han® HC Modular 250 enlarged Size 16 B

Hoods/housings for harsh outdoor environments
Screw locking

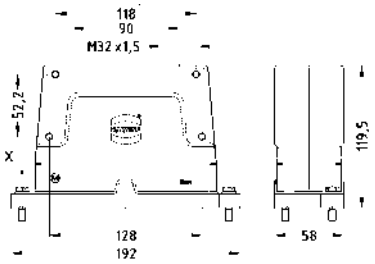
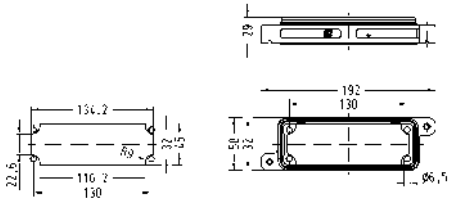
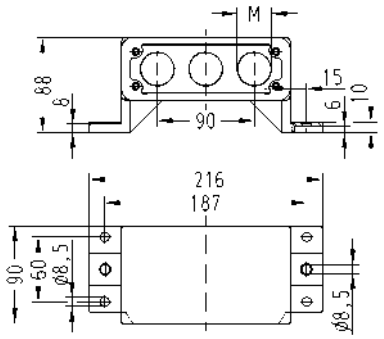
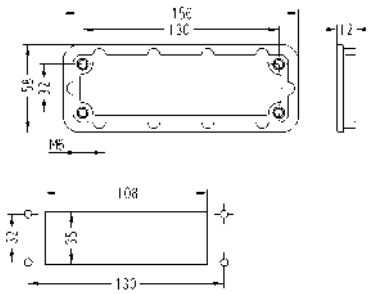
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 016 0368 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 4x M25 | 19 40 016 0978 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | 09 40 000 9956 |  |

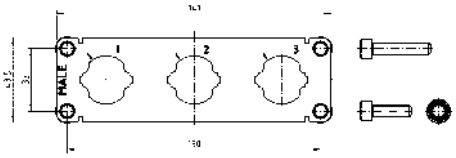
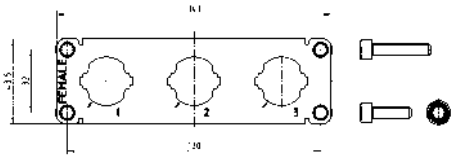
# Hoods/Housings for Han® HC Modular 250 enlarged Size 16 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 30,<br>4x washer SK S6<br> | | 09 11 000 9938 | <br>Tightening torque Fixing screws M6: 10 Nm |

Hoods/housings for harsh outdoor environments
Screw locking

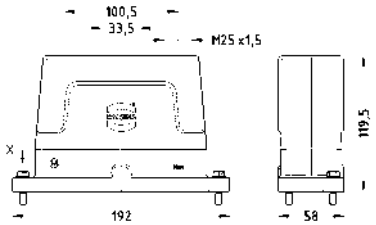
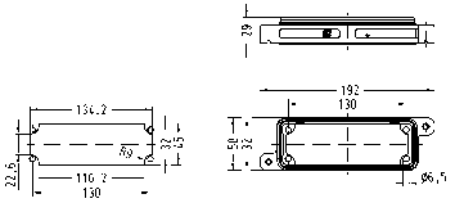
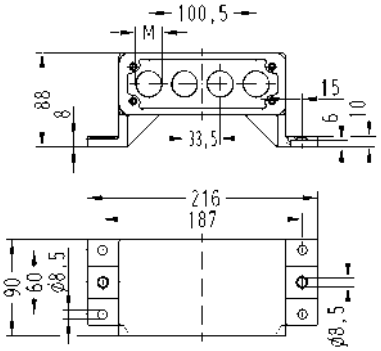
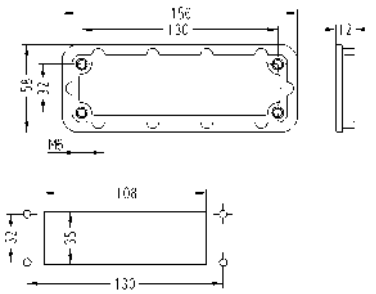


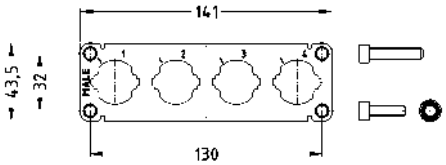
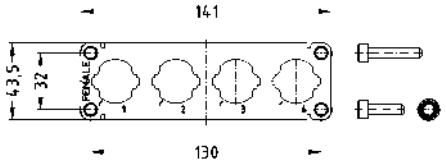
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M32 | 19 40 024 0468 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 0368 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>Bulkhead mounted housing 09 40 024 0368 not included, please order separately | 3x M32 | 19 40 024 0968 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | 09 40 000 9904 | <br>Panel cut out |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6<br> | | 09 11 000 9931 | <br>Tightening torque Fixing screw M6: 10 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6<br> | | 09 11 000 9932 | <br>Tightening torque Fixing screw M6: 10 Nm |

# Hoods/Housings for Han® HC Modular 250 enlarged Size 24 B

Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 4x M25 | 19 40 024 0478 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 0368 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>Bulkhead mounted housing 09 40 024 0368 not included, please order separately | 4x M25 | 19 40 024 0978 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | 09 40 000 9904 | <br>Panel cut out |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6<br> | | 09 11 000 9927 | <br>Tightening torque Fixing screws M6: 10 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6<br> | | 09 11 000 9928 | <br>Tightening torque Fixing screws M6: 10 Nm |

## Features

- Contacts for fine stranded wire
- Low mating forces
- Suitable for HPR® hoods and housings
- UL approvals for axial-screw and screw termination

## Technical characteristics

| | |
|---|---|
| Rated current | 350 A |
| Rated voltage | 2000 V |
| Rated impulse voltage | 12 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ, ≤0.2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤22 mm, ≤19.5 mm |
| Material (insert) | Polycarbonate (PC), Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

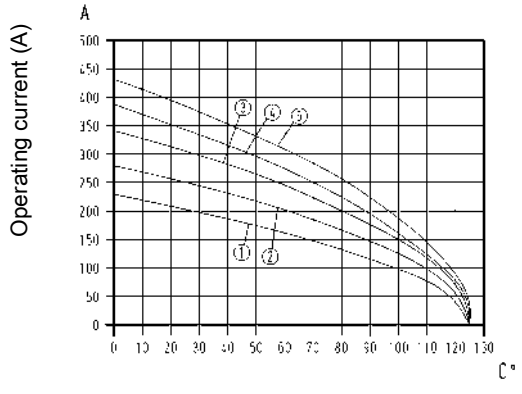
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Crimp termination

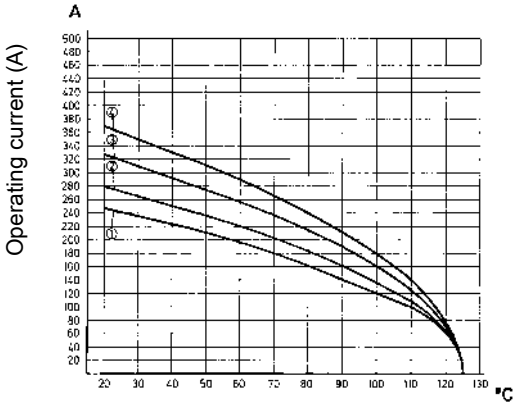



Ambient temperature (°C)

① Conductor cross-section 35 mm²
② Conductor cross-section 50 mm²
③ Conductor cross-section 70 mm²
④ Conductor cross-section 95 mm²
⑤ Conductor cross-section 120 mm²
Three contacts in Han® 24 HPR

## Derating

Axial screw termination
Screw termination




Ambient temperature (°C)

① Conductor cross-section 50 mm²
② Conductor cross-section 70 mm²
③ Conductor cross-section 95 mm²
④ Conductor cross-section 120 mm²
Three contacts in Han® 24 HPR

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
UL 1977 ECBT2.E235076

## Details

Electrical data up to 350 A 4000 V 18 kV 3 by using a hexagonal adapter and the HARTING cable gland, in order to realise the clearance and creepage distance.

Contact resistance crimp contact: ≤ 0.3 mOhm

Contact resistance screw contact: ≤ 0.2 mOhm

Contact resistance axial screw contact: ≤ 0.2 mOhm

**Remarks on the axial screw technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

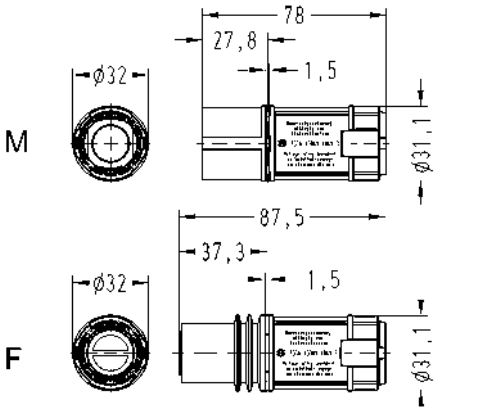
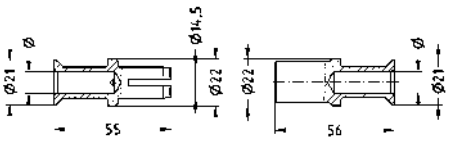
**Hex key (A/F 5)** see chapter Han 90

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

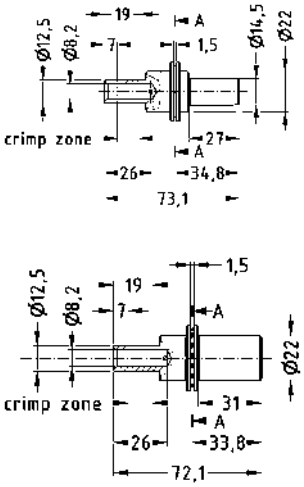
350 A 2.000 V 12 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HC Modular, 350, Crimp termination  Please order crimp contacts separately. | 25 ... 120 | 09 11 001 3001 | 09 11 001 3101 |   max. wire outer diameter 22 mm |
| TC 350, Crimp contact, Contact surface: Silver plated  | 25 | 09 11 000 6139 | 09 11 000 6239 |   |
| | 35 | 09 11 000 6140 | 09 11 000 6240 | |
| | 50 | 09 11 000 6141 | 09 11 000 6241 | |
| | 70 | 09 11 000 6142 | 09 11 000 6242 | |
| | 95 | 09 11 000 6143 | 09 11 000 6243 | |
| | 120 | 09 11 000 6144 | 09 11 000 6244 | |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 25 mm² | 7 | 26 mm |
| 35 mm² | 8.2 | 26 mm |
| 50 mm² | 10 | 28 mm |
| 70 mm² | 11.5 | 28 mm |
| 95 mm² | 13.5 | 30 mm |
| 70 mm² | 15.5 | 24 mm |

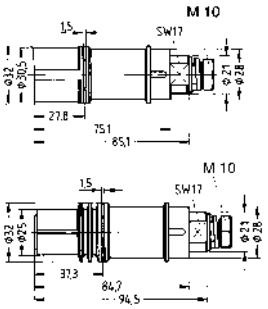
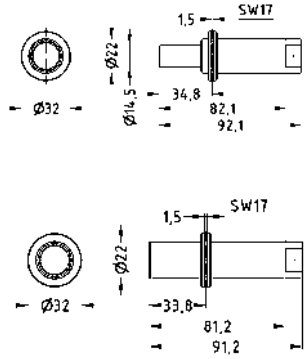
for stranded wire according to IEC 60 228 Class 5

for stranded wire according to IEC 60228 Class 5
Crimp zone acc. to DIN 46235

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| TC 350,<br>PE contact,<br>Crimp termination,<br>Contact surface:<br>Silver plated<br> | 35 | 09 11 000 6172 | 09 11 000 6272 |  |

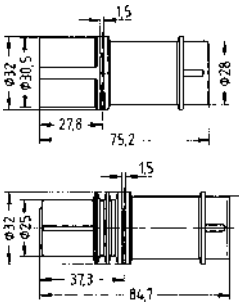
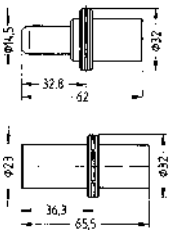
350 A 2.000 V 12 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HC Modular, 350,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 120 | 09 11 001 2655 | 09 11 001 2755 | <br>Tightening torque 14 Nm<br>Cable shoe ≤ 120 mm²<br>Please ensure to hold up the contact with a wrench size 17 to apply the tightening torque |
| TC 350,<br>PE contact,<br>Screw termination,<br>Contact surface:<br>Silver plated<br> | 120 | 09 11 000 6158 | 09 11 000 6258 | <br>Tightening torque 14 Nm<br>Cable shoe ≤ 120 mm²<br>Please ensure to hold up the contact with a wrench size 17 to apply the tightening torque |

350 A 2.000 V 12 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HC Modular, 350,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 35 ... 70<br>95 ... 120 | 09 11 001 2651<br>09 11 001 2652 | 09 11 001 2751<br>09 11 001 2752 | <br><br>Tightening torque<br>mm² 35 50 70 95 120<br>Nm 8 10 12 14 16<br>max. wire outer diameter 19.5 mm<br>Stripping length 19...20 mm |
| TC 350,<br>PE contact,<br>Axial screw termination,<br>Contact surface:<br>Silver plated<br> | 35 ... 70 | 09 11 000 6156 | 09 11 000 6256 | <br><br>Tightening torque<br>mm² 35 50 70<br>Nm 8 10 12<br>Stripping length 19...20 mm |

# Hoods/Housings for Han® HC Modular 350



## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Screw locking M6
- Field of application: for external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded
- Distinguishing feature: colour-coded black, internal seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 4 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast, Corrosion resistant |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| Material (accessories) | Aluminium die-cast, Metal |
| RoHS | compliant, compliant with exemption |

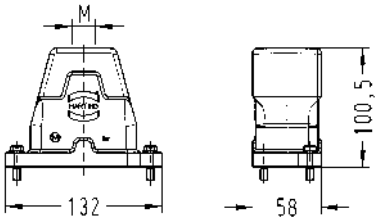
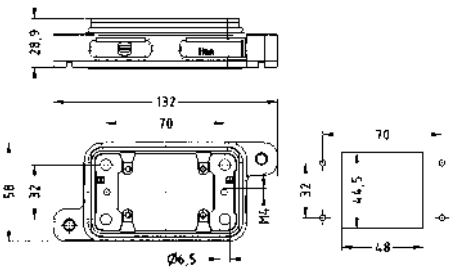
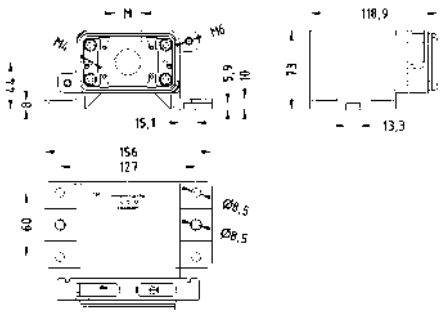
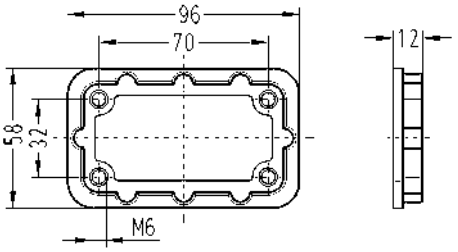
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

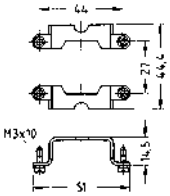
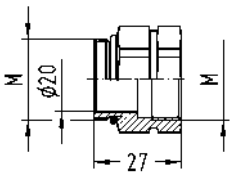
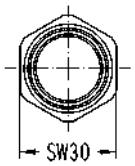
CE

# Hoods/Housings for Han® HC Modular 350 Size 6 B

Hoods/housings for harsh outdoor environments
Screw locking

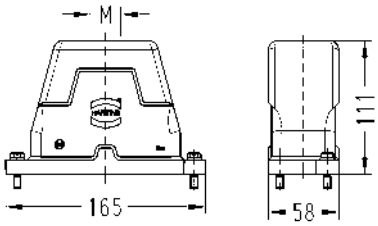
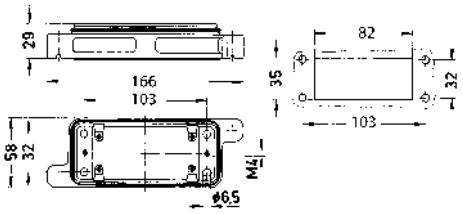
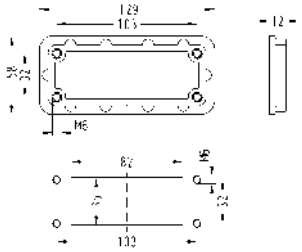
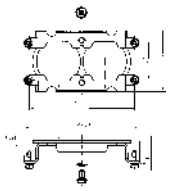
| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M25<br>1x M32 | | 19 40 006 0411<br>19 40 006 0412 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | | 09 40 006 0311 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M25<br>1x M40 | | 19 40 006 0911<br>19 40 006 0913 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | | 09 40 000 9901 |  |

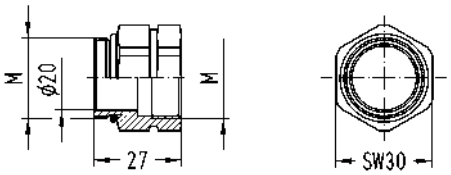
# Hoods/Housings for Han® HC Modular 350 Size 6 B

| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>1x Han® HC Modular 350<br> | | | 09 11 000 9951 | <br>Tightening torque Fixing screws M3: 0.5 Nm |
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M25<br>M32 | 19 36 000 5134<br>19 36 000 5135 | <br> |

Hoods/housings for harsh outdoor environments
Screw locking

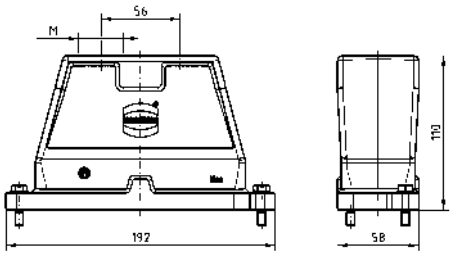
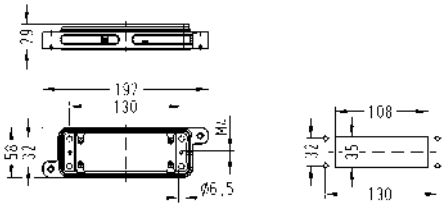
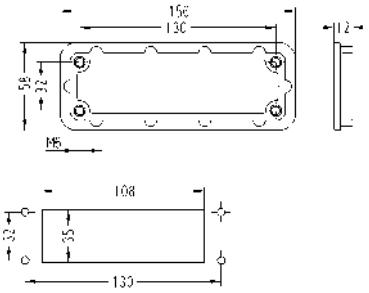
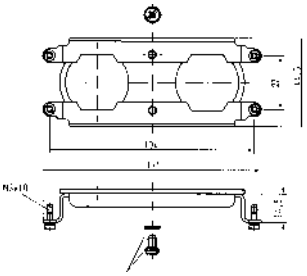


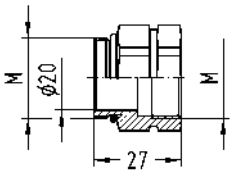
| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 2x M25 | | 19 40 016 0431 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | | 09 40 016 0311 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | | 09 40 000 9903 | <br>Panel cut out |
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>2x Han® HC Modular 350<br> | | | 09 11 000 9952 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |

| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M25 | 19 36 000 5134 |  |

Hoods/housings for harsh outdoor environments
Screw locking

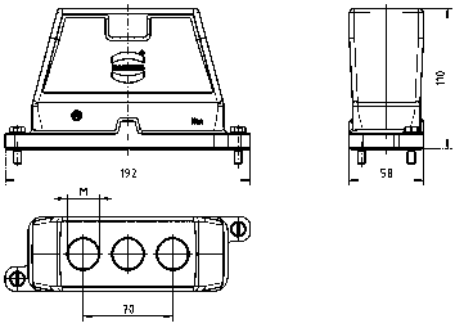
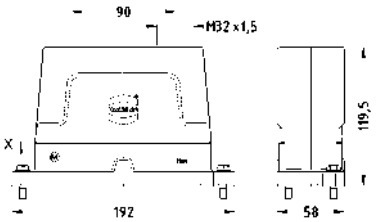
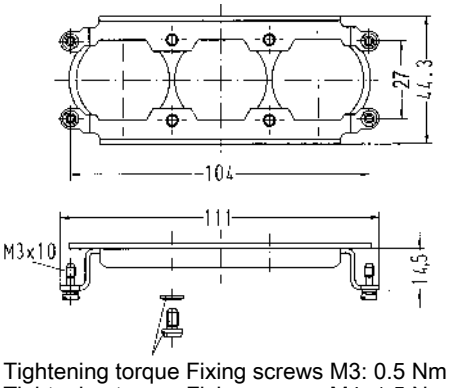


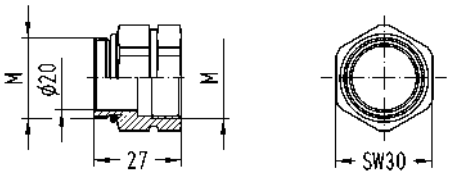
| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 2x M32 | | 19 40 024 0432 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | | 09 40 024 0311 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | | 09 40 000 9904 | <br>Panel cut out |
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>2x Han® HC Modular 350<br> | | | 09 11 000 9956 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |

| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M32 | 19 36 000 5135 |  |

Hoods/housings for harsh outdoor environments
Screw locking

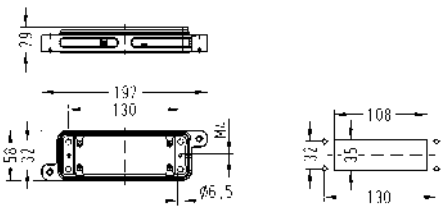
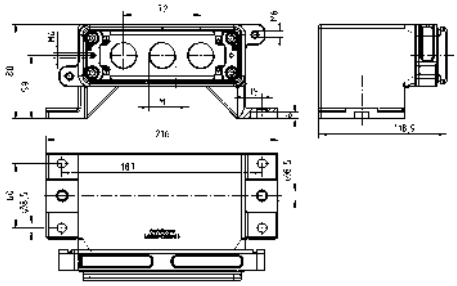
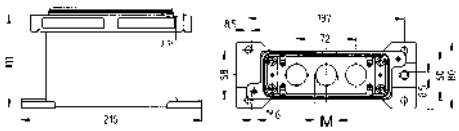
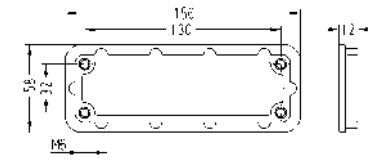
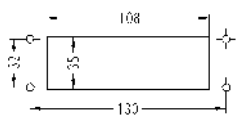


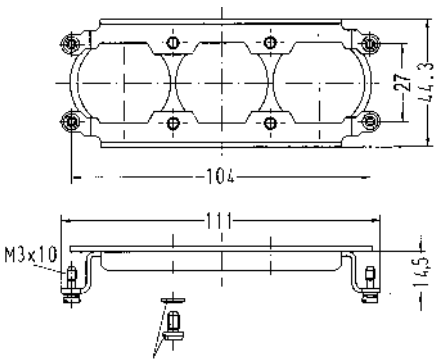
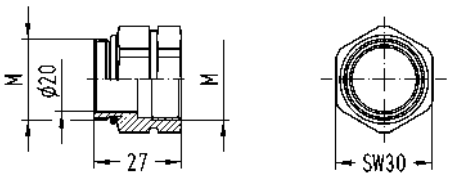
| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25 | | 19 40 024 0461 |  |
| Han® HPR,<br>Hood,<br>Top entry,<br>High construction,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M32 | | 19 40 024 0467 |  |
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>3x Han® HC Modular 350<br> | | | 09 11 000 9963 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |

| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M25<br>M32 | 19 36 000 5134<br>19 36 000 5135 |  |

Hoods/housings for harsh outdoor environments
Screw locking

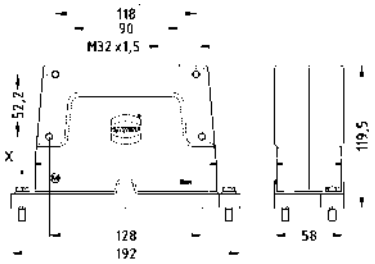
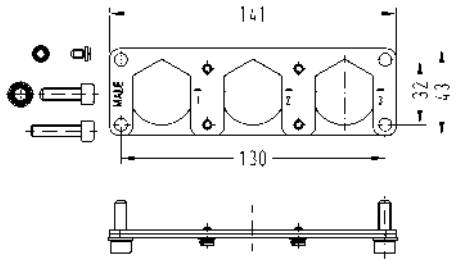
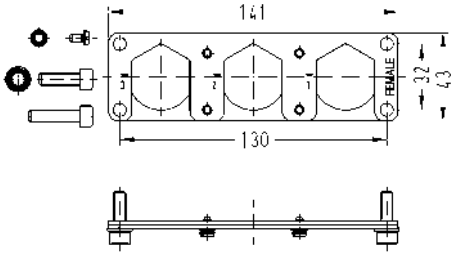
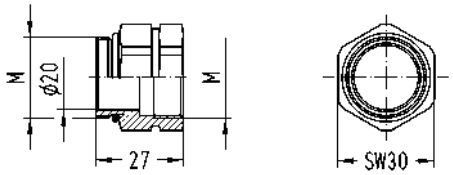


| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | | 09 40 024 0311 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25 | | 19 40 024 0931 |  |
| Han® HPR,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25 | | 19 40 024 1231 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | | 09 40 000 9904 | <br><br>Panel cut out |

| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>3x Han® HC Modular 350<br> | | | 09 11 000 9963 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M25 | 19 36 000 5134 |  |

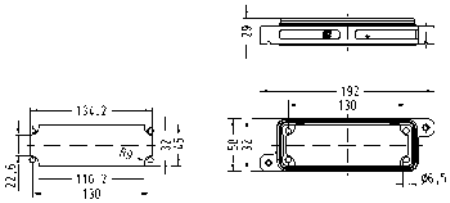
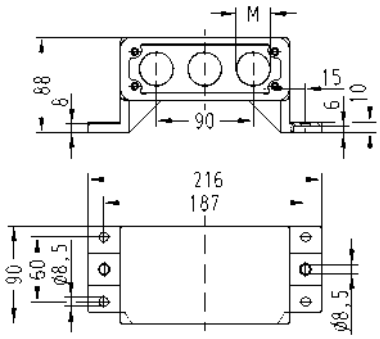
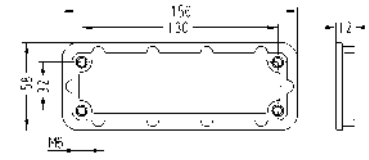
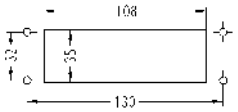
Hoods/housings for harsh outdoor environments
Screw locking

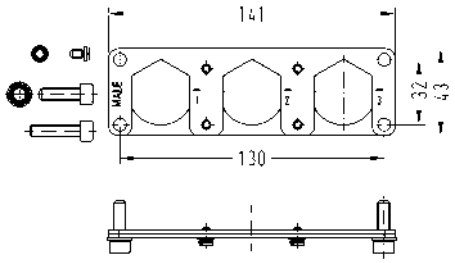
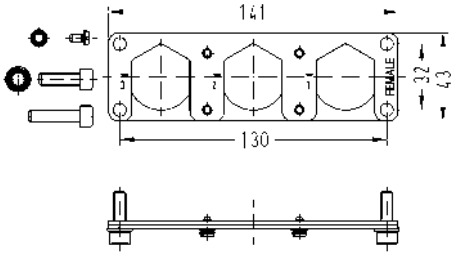


| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M32 | | 19 40 024 0468 |  |
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | | 09 11 000 9957 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | | 09 11 000 9958 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M32 | 19 36 000 5135 |  |

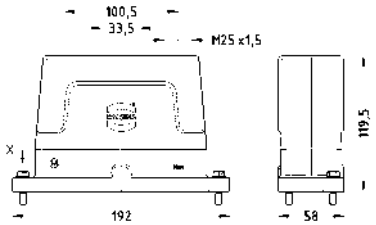
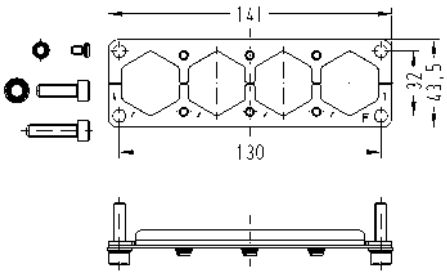
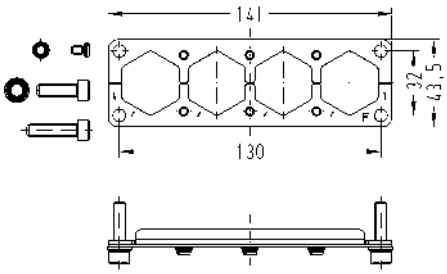
Hoods/housings for harsh outdoor environments
Screw locking



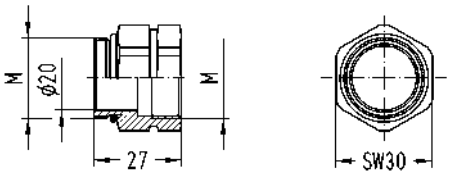
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 0368 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>Bulkhead mounted housing 09 40 024 0368 not included, please order separately | 3x M32 | 19 40 024 0968 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | 09 40 000 9904 | <br><br>Panel cut out |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | 09 11 000 9957 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | 09 11 000 9958 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |

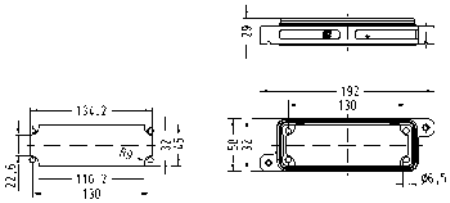
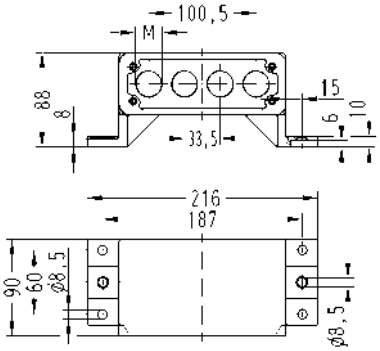
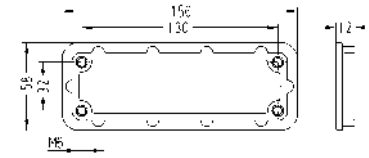
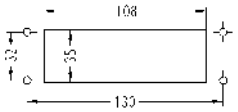
Hoods/housings for harsh outdoor environments
Screw locking

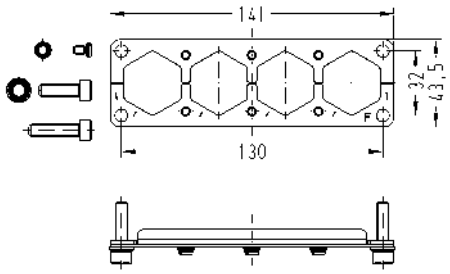
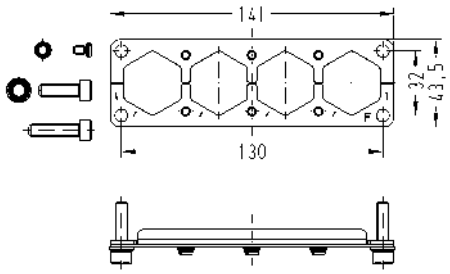
| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 4x M25 | | 19 40 024 0478 |  |
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x heat shrink tube<br> | | | 09 11 000 9964 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x heat shrink tube<br> | | | 09 11 000 9965 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |

# Hoods/Housings for Han® HC Modular 350 enlarged Size 24 B

| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M25 | 19 36 000 5134 |  |

Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 0368 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>Bulkhead mounted housing 09 40 024 0368 not included, please order separately | 4x M25 | 19 40 024 0978 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | 09 40 000 9904 | <br><br>Panel cut out |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x heat shrink tube<br> | | 09 11 000 9964 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x heat shrink tube<br> | | 09 11 000 9965 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |

# Han® M hoods/housings for Han® HC Modular 350

## Features

- Hoods/housings for rough environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Locking lever made of high-quality stainless steel

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | FPM |
| Material (locking) | Stainless steel |
| Material (accessories) | Metal |
| RoHS | compliant |

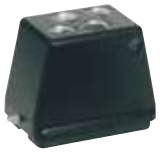
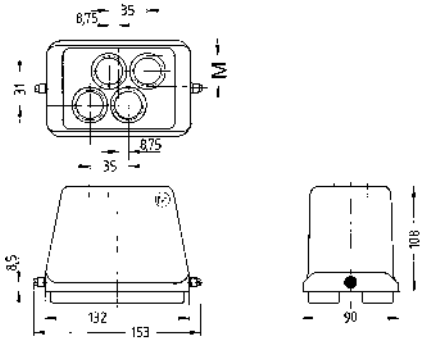
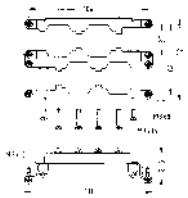
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

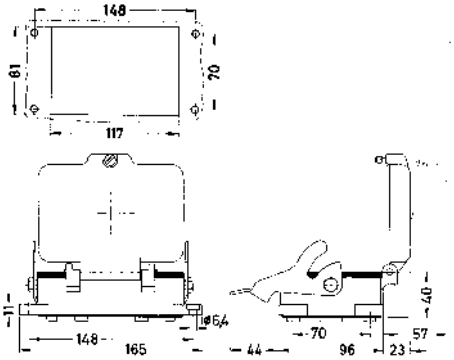
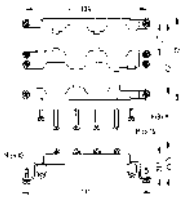
Hoods/housings for rough environments
Single locking lever



| Identification | Cable entry | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65<br> | 4x M25 | 19 37 048 0401 |  |
| Han® M,<br>Frame,<br>for male inserts,<br>for female inserts,<br>4x HC 350 contacts + 2x Han® Q 5/0 in a hood<br> | | 09 11 000 9954 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque Fixing screws Han® Q 5/0: 0.25 Nm<br>Tightening torque Cross-tying screws 1.5 Nm |

# Han® M hoods/housings for Han® HC Modular 350 Size 48 B

Hoods/housings for rough environments
Single locking lever

| Identification | Part number Low construc-tion | Drawing (dimensions in mm) |
|---|---|---|
| Han® M,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | 09 37 048 0301 |  |
| Han® M,<br>Frame,<br>for male inserts,<br>for female inserts,<br>4x HC 350 contacts + 2x Han® Q 5/0 in a bulkhead mounted housing<br> | 09 11 000 9955 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque Fixing screws Han® Q 5/0: 0.25 Nm<br>Tightening torque Cross-tying screws 1.5 Nm |

## Features

- Contacts for fine stranded wire
- Low mating forces
- Suitable for HPR® hoods and housings
- UL approvals for axial-screw and screw termination

## Technical characteristics

| | |
|---|---|
| Rated current | 650 A |
| Rated voltage | 4000 V |
| Rated impulse voltage | 18 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ, ≤0.2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤27 mm, ≤32 mm @ 240 mm², ≤26.5 mm |
| Material (insert) | Polycarbonate (PC), Polyamide (PA) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

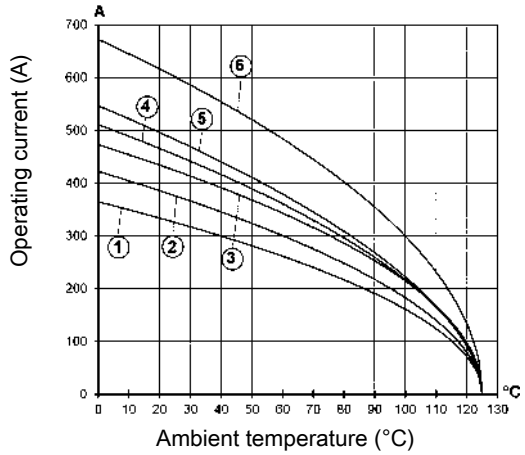
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

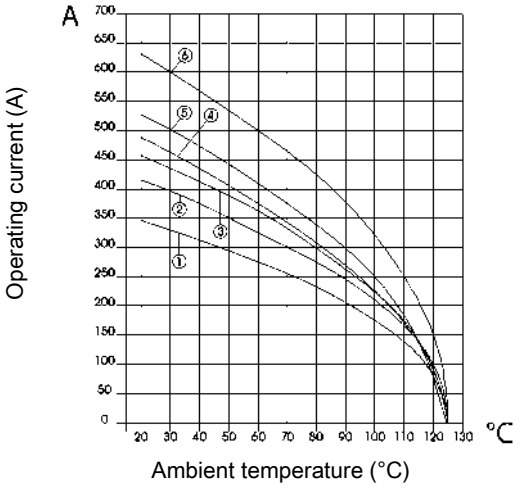
Crimp termination




Conductor cross-section
① 70 mm² ② 95 mm²
③ 120 mm² ④ 150 mm²
⑤ 185 mm² ⑥ 240 mm²
Three contacts in Han® 24 HPR

## Derating

Screw termination / axial screw termination




Conductor cross-section
① 70 mm² ② 95 mm²
③ 120 mm² ④ 150 mm²
⑤ 185 mm² ⑥ 240 mm²
Three contacts in Han® 24 HPR

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
UL 1977 ECBT2.E235076

## Details

Contact resistance crimp contact: ≤ 0.3 mOhm

Contact resistance screw contact: ≤ 0.2 mOhm

Contact resistance axial screw contact: ≤ 0.2 mOhm

**Remarks on the axial screw technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Hex key (A/F 8)** see chapter Han 90

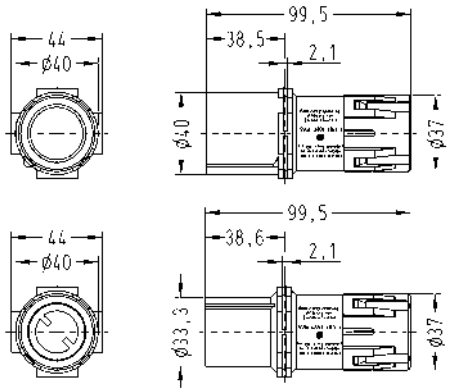
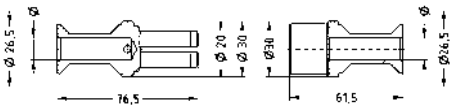
For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

650 A 4.000 V 18 kV 3



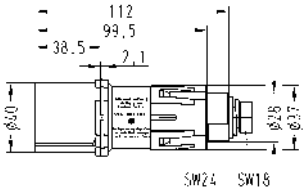
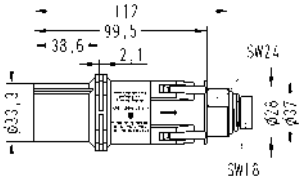
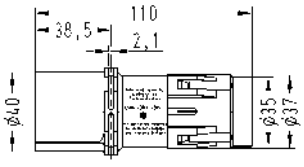
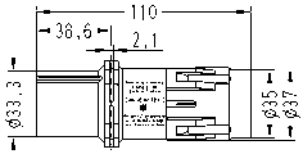
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HC Modular, 650, Crimp termination  Please order crimp contacts separately. | 70 ... 240 | 09 11 001 3012 | 09 11 001 3112 |   max. wire outer diameter 70...185 mm²: 27 mm max. wire outer diameter 240 mm²: 32 mm |
| TC 650, Crimp contact, Contact surface: Silver plated  | 50<br>70<br>95<br>120<br>150<br>185<br>240 | 09 11 000 6561<br>09 11 000 6161<br>09 11 000 6162<br>09 11 000 6163<br>09 11 000 6164<br>09 11 000 6165<br>09 11 000 6168 | <br>09 11 000 6261<br>09 11 000 6262<br>09 11 000 6263<br>09 11 000 6264<br>09 11 000 6265<br>09 11 000 6268 |   |

| Conductor cross-section | ø | Stripping length |
|---|---|---|
| 70 mm² | 11.5 | 42 mm |
| 90 mm² | 13.5 | 42 mm |
| 120 mm² | 15.5 | 42 mm |
| 150 mm² | 17 | 42 mm |
| 185 mm² | 19 | 42 mm |
| 240 mm² | 21.5 | 46 mm |
| for stranded wire according to IEC 60 228 Class 5 | | |

Crimp zone acc. to DIN 46235

650 A 4.000 V 18 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HC Modular, 650, Screw termination, Contact surface: Silver plated  | 240 | 09 11 001 2675 | 09 11 001 2775 |     Tightening torque 16 ... 18 Nm<br>Cable shoe ≤ 240 mm²<br>Please ensure to hold up the contact with a wrench size 24 to apply the tightening torque |
| Han® HC Modular, 650, Axial screw termination, Contact surface: Silver plated  | 70 ... 120<br>150 ... 185 | 09 11 001 2671<br>09 11 001 2672 | 09 11 001 2771<br>09 11 001 2772 |     Tightening torque<br>mm² 70 95 120 150 185<br>Nm 12 14 16 17 18<br>Stripping length 23 ... 25 mm<br>max. wire outer diameter 26.5 mm |

# Hoods/Housings for Han® HC Modular 650

## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Screw locking M6
- Field of application: for external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded
- Distinguishing feature: colour-coded black, internal seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 4 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast, Corrosion resistant |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| Material (accessories) | Metal, Aluminium die-cast |
| RoHS | compliant with exemption, compliant |

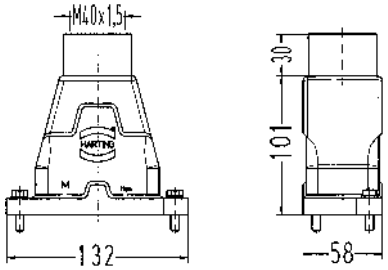
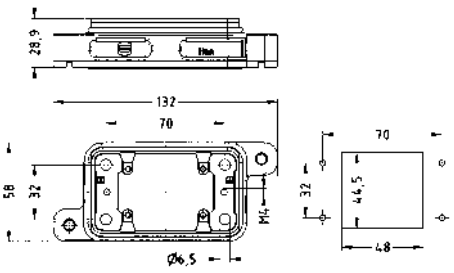
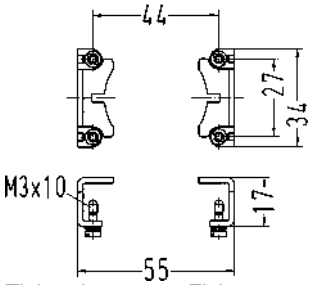
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

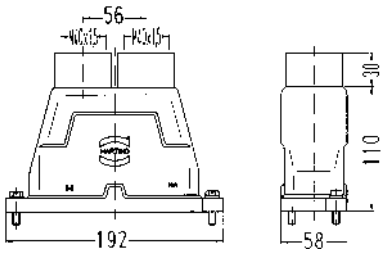
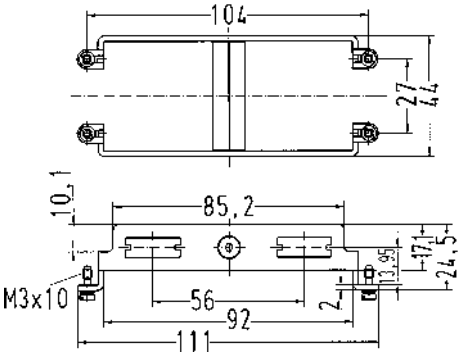
# Hoods/Housings for Han® HC Modular 650 Size 6 B

Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>With adapter,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M40 | 19 40 006 0418 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 006 0311 |  |
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>1x Han® HC Modular 650<br> | | 09 11 000 9971 | <br>Tightening torque Fixing screws M3: 0.5 Nm |

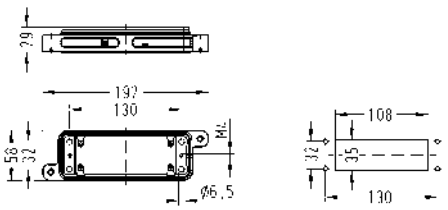
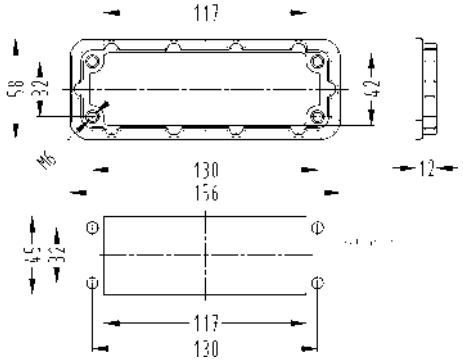
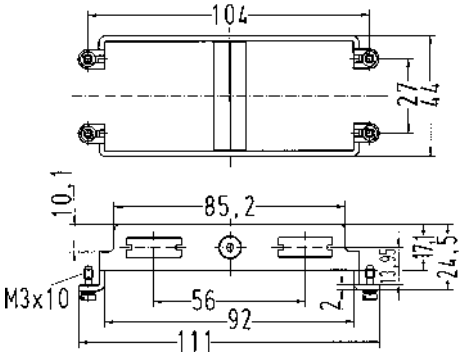
Hoods/housings for harsh outdoor environments
Screw locking



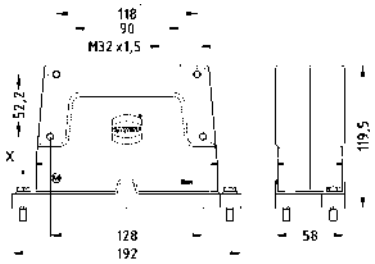
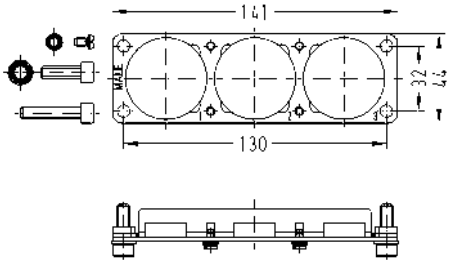
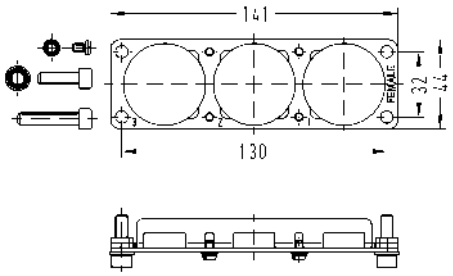
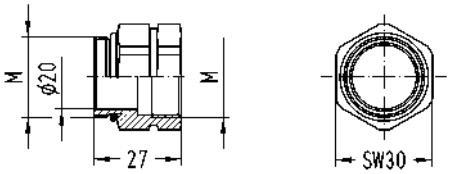
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>With adapter,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 2x M40 | 19 40 024 0438 |  |
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>2x Han® HC Modular 650<br> | | 09 11 000 9972 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque M4: 1.5 Nm |

Hoods/housings for harsh outdoor environments
Screw locking



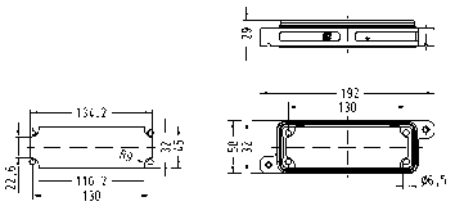
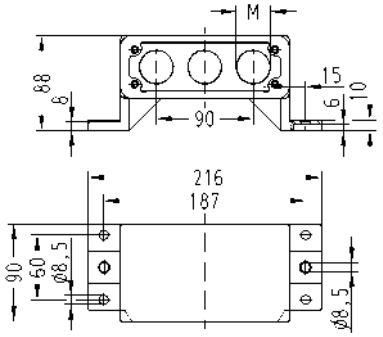
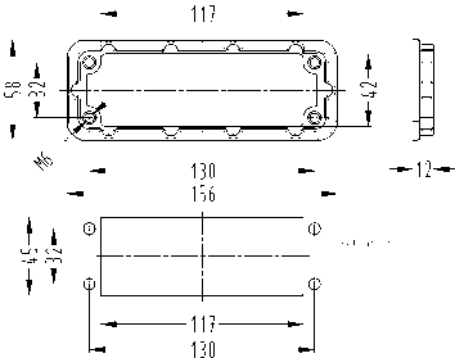
| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 09 40 024 0311 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6  | 09 40 000 9955 |  |
| Han® HPR,<br>Frame,<br>for male inserts,<br>for female inserts,<br>2x Han® HC Modular 650  | 09 11 000 9972 | <br>Tightening torque Fixing screws M3: 0.5 Nm<br>Tightening torque M4: 1.5 Nm |

Hoods/housings for harsh outdoor environments
Screw locking

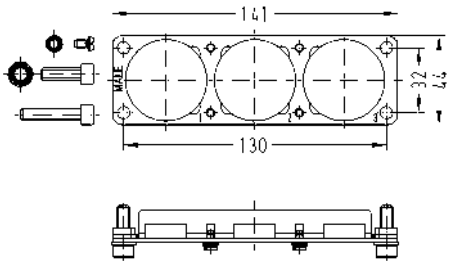
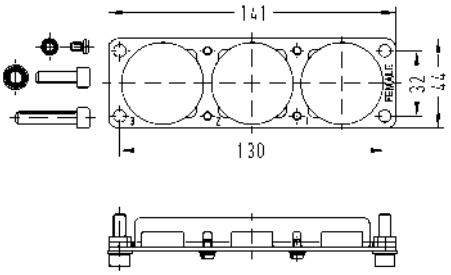
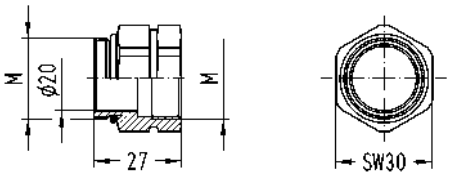
| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M32 | | 19 40 024 0468 |  |
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | | 09 11 000 9973 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | | 09 11 000 9974 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M32 | 19 36 000 5135 |  |

Hoods/housings for harsh outdoor environments
Screw locking



| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | | 09 40 024 0368 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>Bulkhead mounted housing<br>09 40 024 0368 not included,<br>please order separately | 3x M32 | | 19 40 024 0968 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6<br> | | | 09 40 000 9955 |  |

# Hoods/Housings for Han® HC Modular 650 enlarged Size 24 B

| Identification | Cable entry | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | | 09 11 000 9973 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | | 09 11 000 9974 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Hexagonal adapter,<br>With O-ring<br><br>to reach the electrical data up to 4000 V 18 kV 3 | | M32 | 19 36 000 5135 |  |

# Han® 24 HPR EasyCon

## Features

- Hoods/Housings for higher EMC requirements
- Easy assembly due to split hood and surface mounted housing
- Many assembly possibilities due to separate assembly panels
- External termination of PE termination on hood and surface mounted housing
- Ideal motor/drive connector for transportation sector
- Secure and a visible connection of screening braid of shielded cables

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Tightening torque (screw locking) | 4 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast, Corrosion resistant |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| Material (accessories) | Stainless steel, Metal, Zinc die-cast, Aluminium die-cast |
| RoHS | compliant |

## Specifications and approvals

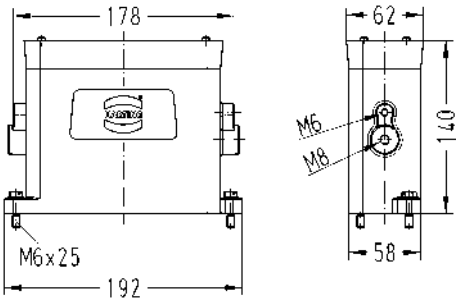
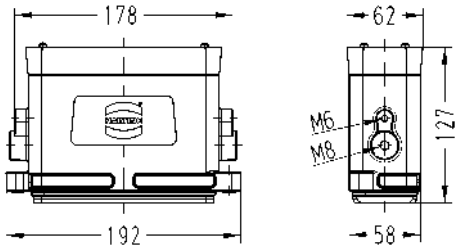
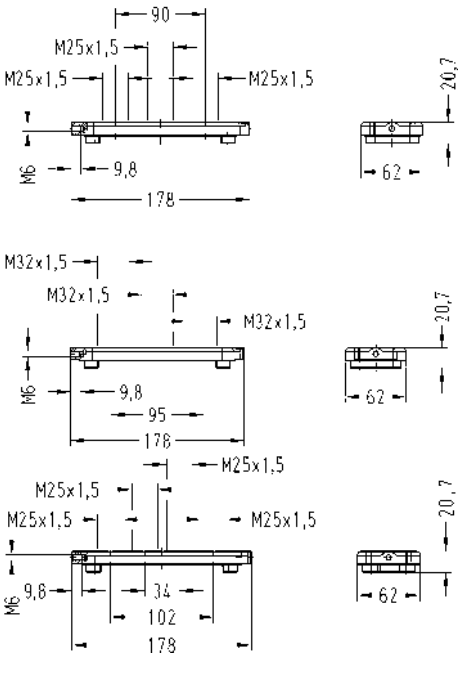
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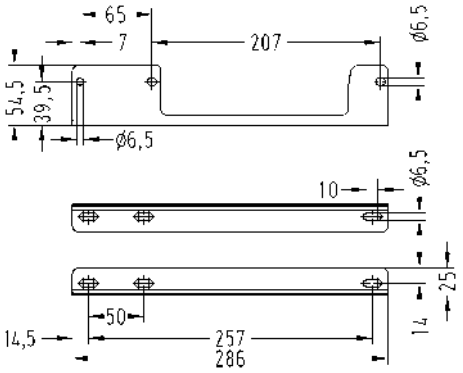
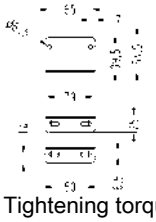
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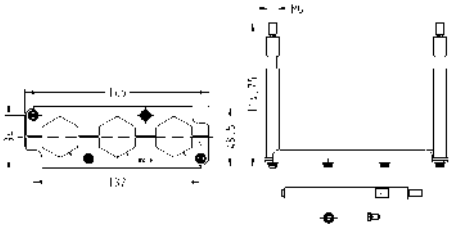
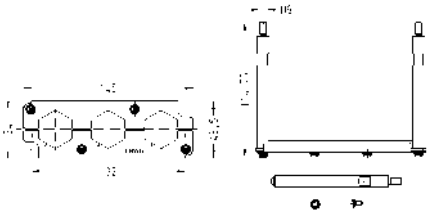
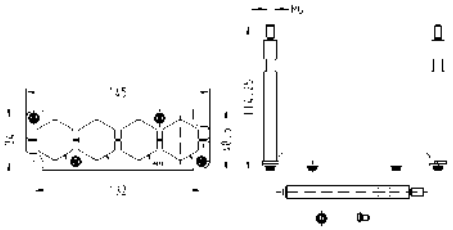
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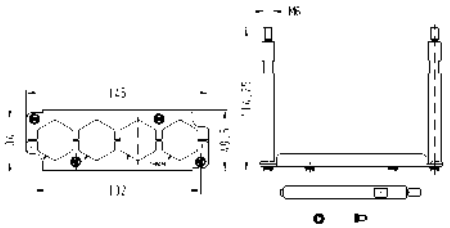
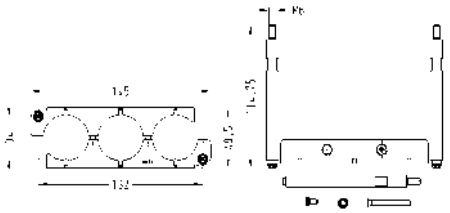
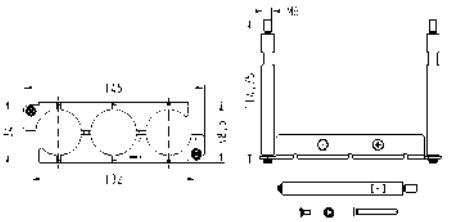
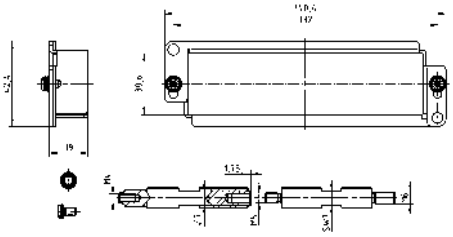
**Insertion / Removal tool** 09 99 000 0334 for shielding clamps see chapter Han 90

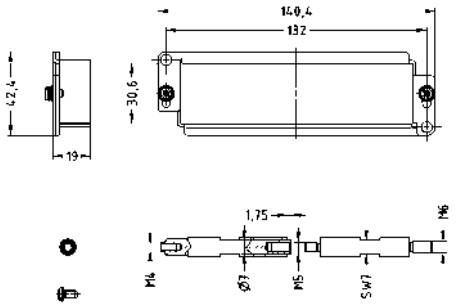
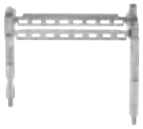
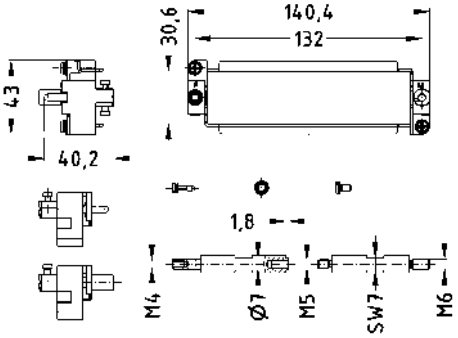
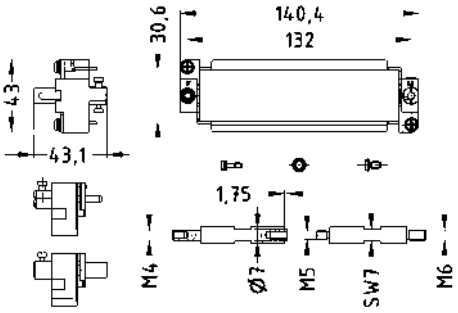
Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR EasyCon,<br>Hood,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | | 09 40 024 0451 | <br>Tightening torque Cover locking 6 Nm<br>Tightening torque External PE 15 Nm |
| Han® HPR EasyCon,<br>Surface mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | | 09 40 024 0951 | <br>Tightening torque Cover locking 6 Nm<br>Tightening torque External PE 15 Nm |
| Han® HPR EasyCon,<br>Mounting cover,<br>for surface mounted housings,<br>for hoods,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25<br>3x M32<br>4x M25 | | 19 40 024 9901<br>19 40 024 9903<br>19 40 024 9902 |  |

| Identification | Cable entry | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR EasyCon,<br>Mounting panel,<br>Long version,<br>for hoods,<br>for surface mounted housings,<br>Pack contents:<br>6x M6 screw,<br>6x washer SK S6<br> | | | 09 40 000 9925 | <br>Tightening torque Fixing screws M6: 6 Nm |
| Han® HPR EasyCon,<br>Mounting panel,<br>Short version,<br>for hoods,<br>for surface mounted housings,<br>Pack contents:<br>4x M6 screw,<br>4x washer SK S6<br> | | | 09 40 000 9926 | <br>Tightening torque Fixing screws M6: 6 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 250,<br>Pack contents:<br>2x distance bolt (SW 7),<br>2x M4 screw,<br>2x washer SK S4<br> | | | 09 40 024 9901 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 250,<br>Pack contents:<br>2x distance bolt (SW 7),<br>2x M4 screw,<br>2x washer SK S4<br> | | | 09 40 024 9902 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |

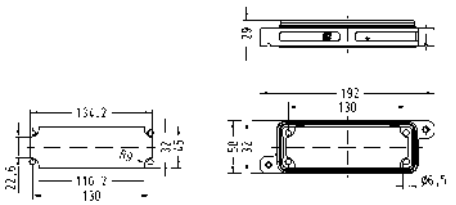
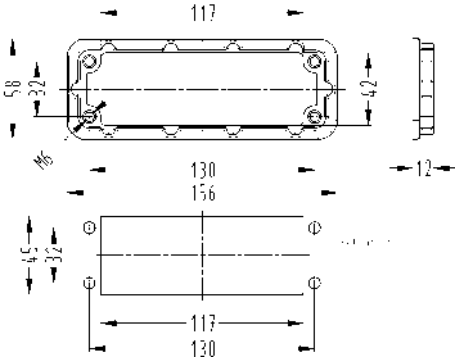
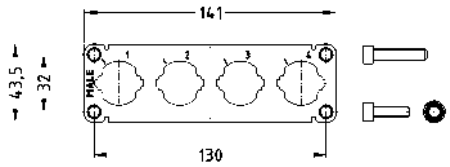
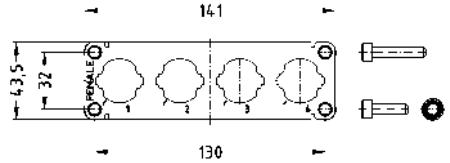
| Identification | Cable entry | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR EasyCon,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>2x distance bolt (SW 7),<br>2x M4 screw,<br>2x washer SK S4<br> | | | 09 40 024 9903 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>2x distance bolt (SW 7),<br>2x M4 screw,<br>2x washer SK S4<br> | | | 09 40 024 9904 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>2x distance bolt (A/F 7),<br>4x M4 screw,<br>4x washer SK S4<br> | | | 09 40 024 9911 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>2x distance bolt (A/F 7),<br>4x M4 screw,<br>4x washer SK S4<br> | | | 09 40 024 9912 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>2x distance bolt (A/F 7),<br>4x M4 screw,<br>4x washer SK S4,<br>4x heat shrink tube<br> | | | 09 40 024 9913 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |

| Identification | Cable entry | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR EasyCon,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>2x distance bolt (A/F 7),<br>4x M4 screw,<br>4x washer SK S4,<br>4x heat shrink tube<br> | | | 09 40 024 9914 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>2x distance bolt (A/F 7),<br>2x M4 screw,<br>2x washer SK S4,<br>2x M4 countersunk screw<br> | | | 09 40 024 9921 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm<br>Tightening torque M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>2x distance bolt (A/F 7),<br>2x M4 screw,<br>2x washer SK S4,<br>2x M4 countersunk screw<br> | | | 09 40 024 9922 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm<br>Tightening torque M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>4x M4 screw,<br>4x washer SK S4<br> | | | 09 40 024 9931 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm<br>Tightening torque M4: 1.5 Nm |

| Identification | Cable entry | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>4x M4 screw,<br>4x washer SK S4<br> | | | 09 40 024 9932 | <br>Tightening torque Distance bolt 6 Nm<br>Tightening torque Fixing screws M4: 1.5 Nm<br>Tightening torque M4: 1.5 Nm |
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br> | | 4 ... 10 PE terminal power side,<br>1 ... 2.5 PE terminal signal side | 09 40 024 9933 |  |
| Han® HPR EasyCon,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M4/M5 distance bolts (A/F 7),<br>2x M5/M6 distance bolts (A/F 7),<br>2x M3 screw,<br>2x M4 screw,<br>2x washer SK S4<br> | | 4 ... 10 PE terminal power side,<br>1 ... 2.5 PE terminal signal side | 09 40 024 9934 |  |

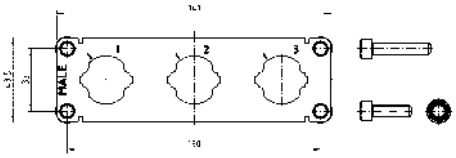
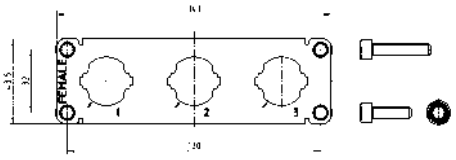
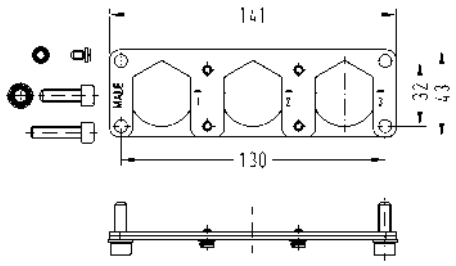
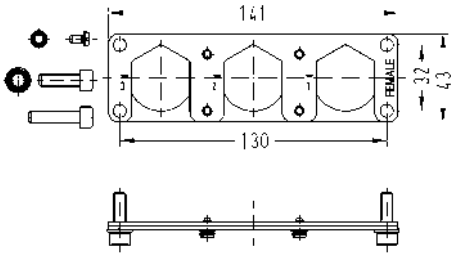
Hoods/housings for harsh outdoor environments
Screw locking

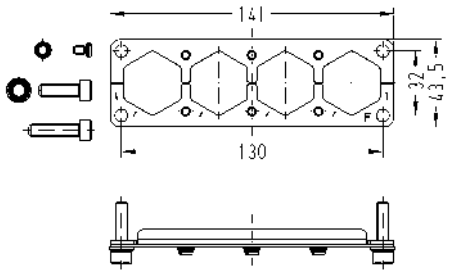
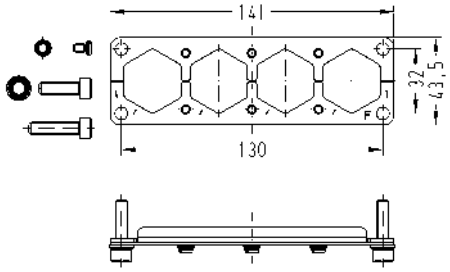
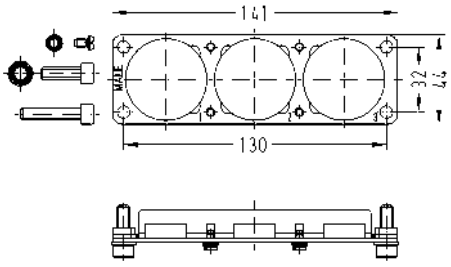
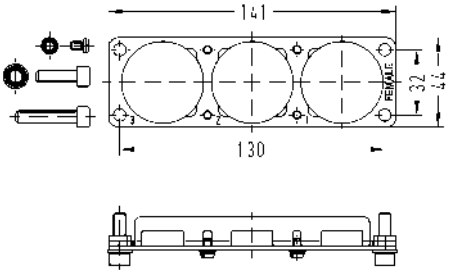


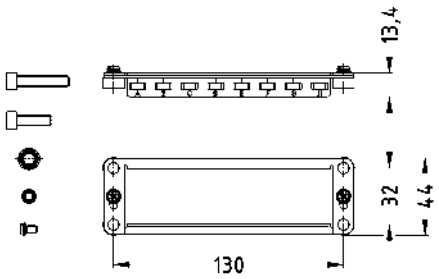
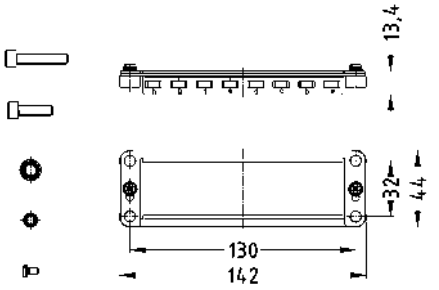
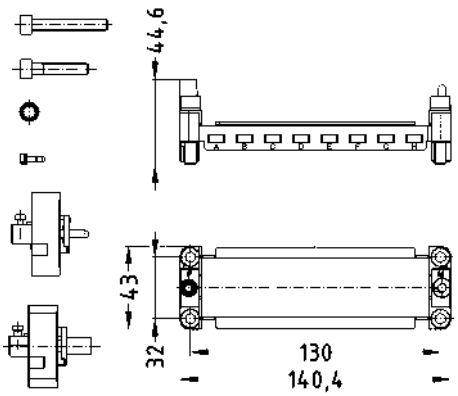
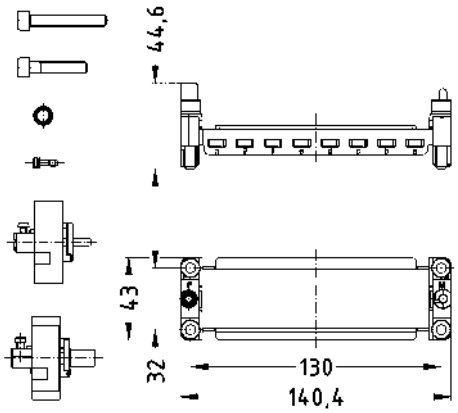
| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 024 0368 |  |
| Mounting frames,<br>Han® HPR,<br>Thread M6  | | 09 40 000 9955 |  |
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6  | | 09 11 000 9927 | <br>Tightening torque Fixing screws M6: 10 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6  | | 09 11 000 9928 | <br>Tightening torque Fixing screws M6: 10 Nm |

# Han® 24 HPR EasyCon - enlarged

Size 24 B

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6<br> | | 09 11 000 9931 | <br>Tightening torque Fixing screw M6: 10 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 250,<br>Pack contents:<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x washer SK S6<br> | | 09 11 000 9932 | <br>Tightening torque Fixing screw M6: 10 Nm |
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | 09 11 000 9957 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | 09 11 000 9958 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x heat shrink tube<br> | | 09 11 000 9964 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>4x Han® HC Modular 350,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25,<br>4x heat shrink tube<br> | | 09 11 000 9965 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for male inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | 09 11 000 9973 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for female inserts,<br>3x Han® HC Modular 650,<br>Pack contents:<br>4x M4 screw,<br>4x washer SK S4,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 25<br> | | 09 11 000 9974 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>2x M4 screw,<br>2x washer SK S4,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 30,<br>4x washer SK S6<br> | | 09 11 000 9935 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>2x M4 screw,<br>2x washer SK S4,<br>4x cheese-head screw M6 x 20,<br>4x cheese-head screw M6 x 30,<br>4x washer SK S6<br> | | 09 11 000 9936 | <br>Tightening torque Fixing screws M6: 10 Nm<br>Tightening torque Screws M4: 1.5 Nm |
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>A … H,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M3 screw,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 30,<br>4x cheese-head screw M6 x 40<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 11 024 9933 |  |
| Han® HPR enlarged,<br>Frame,<br>for up to 8 single modules,<br>a … h,<br>Pack contents:<br>1x male PE adapter,<br>1x female PE adapter,<br>2x M3 screw,<br>4x washer SK S6,<br>4x cheese-head screw M6 x 30,<br>4x cheese-head screw M6 x 40<br> | 4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side | 09 11 024 9934 |  |

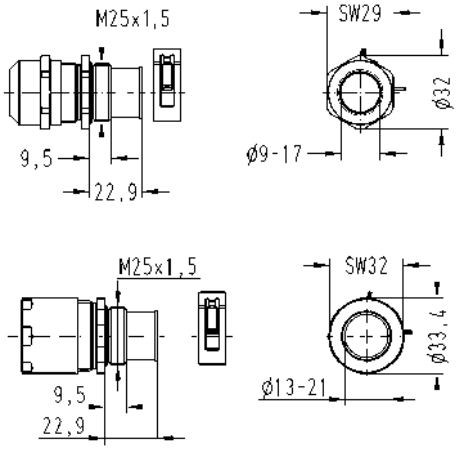
# Han® 24 HPR EasyCon - Accessories

## Features

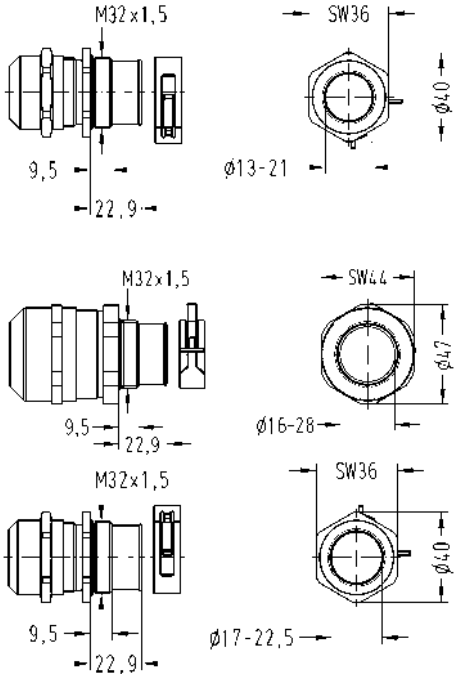
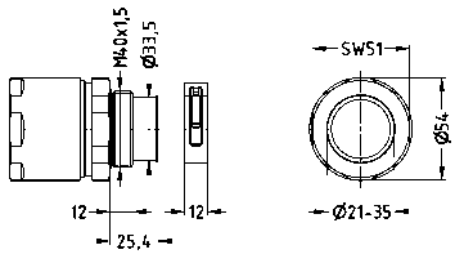
- Secure and a visible connection of screening braid of shielded cables

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +100 °C |
| Degree of protection acc. to IEC 60529 | IP65 / IP68 |
| Material (seal) | EPDM |
| Material (cable glands) | Brass |
| Material (clamping ring) | Polyamide (PA) |
| Surface (accessories) | Nickel plated |
| RoHS | compliant with exemption, compliant |

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR EasyCon,<br>Cable gland,<br>EMC version,<br>10 Nm,<br>IP65 / IP68  | M25<br>M25 | 9 ... 17<br>13 ... 21 | 19 00 000 5013<br>19 00 000 5019 |   |

# Han® 24 HPR EasyCon - Accessories

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HPR EasyCon,<br>Cable gland,<br>EMC version,<br>20 Nm,<br>IP65 / IP68<br> | M32<br>M32<br>M32 | 13 ... 21<br>16 ... 28<br>17 ... 22.5 | 19 00 000 5014<br>19 00 000 5022<br>19 00 000 5015 |  |
| Han® HPR EasyCon,<br>Cable gland,<br>EMC version,<br>IP65 / IP68<br> | M25<br>M40<br>M40<br>M50 | 17 ... 22.5<br>16 ... 28<br>21 ... 35<br>21 ... 35 | 19 00 000 5025<br>19 00 000 5031<br>19 00 000 5032<br>19 00 000 5034 |  |

# Han® 48 HPR



## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Vibration resistant acc. to IEC 61373 category 1B (Category 2 possible with usage of M6 distance bolts)

## Technical characteristics

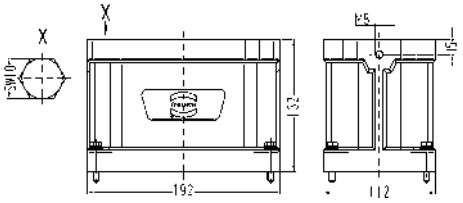
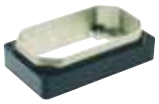
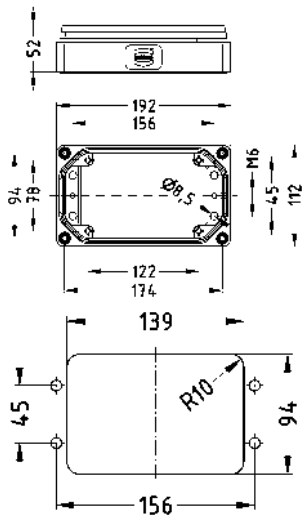
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 4 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Material (hood/housing) | Aluminium die-cast, Corrosion resistant |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| Material (accessories) | Aluminium, Metal |
| RoHS | compliant |

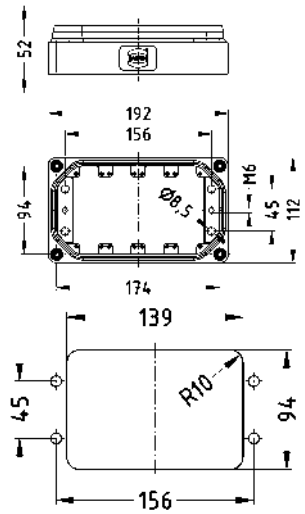
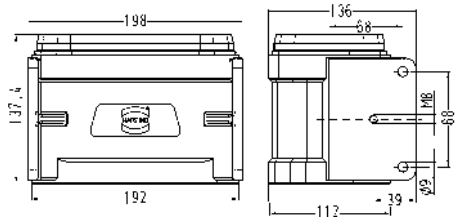
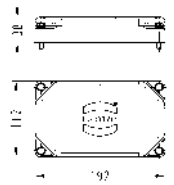
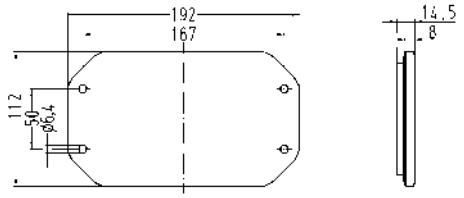
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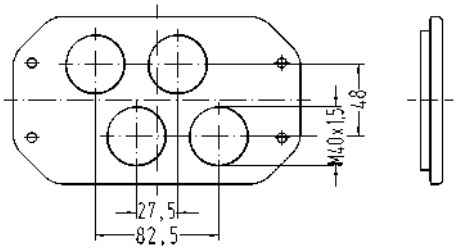
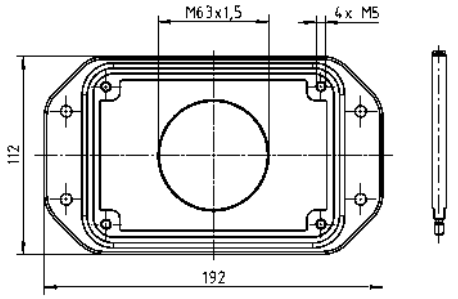
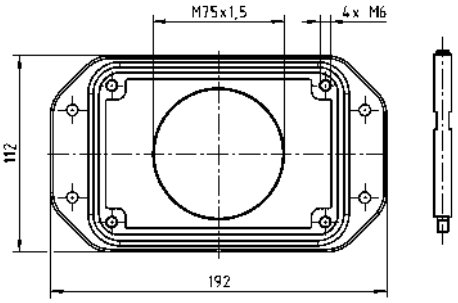
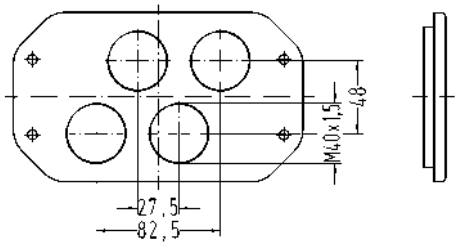
IEC 61373 Category 1 Class B
DNV GL

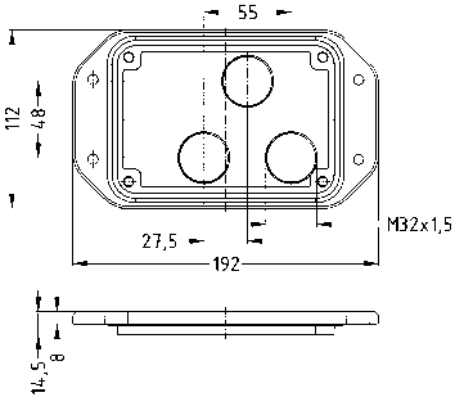
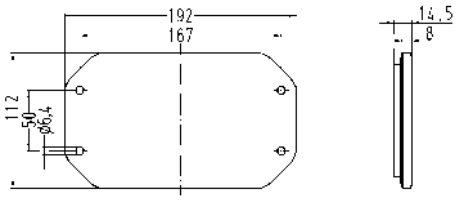
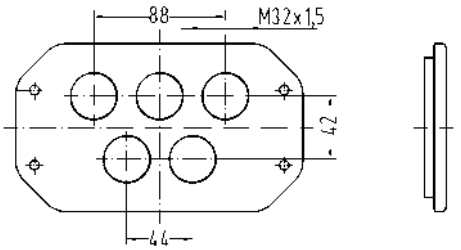
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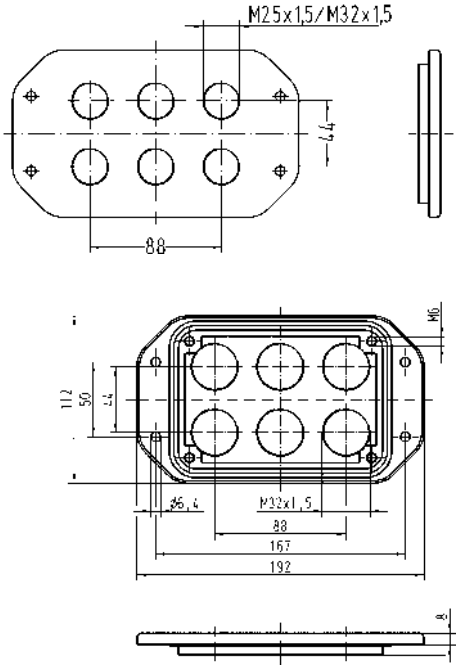
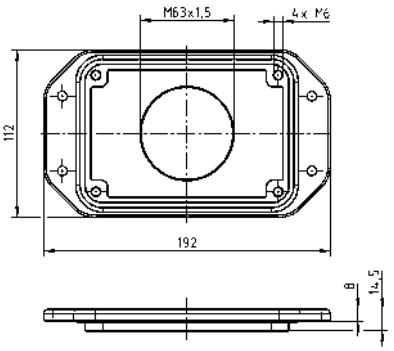
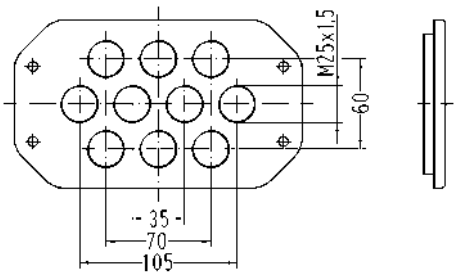
Hoods/housings for harsh outdoor environments
Screw locking

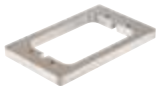
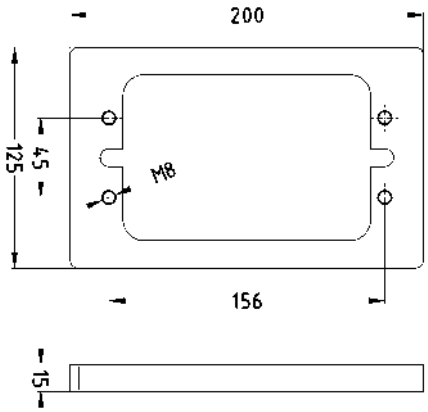
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 048 0451 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 048 0311 | <br>Panel cut out |

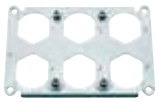
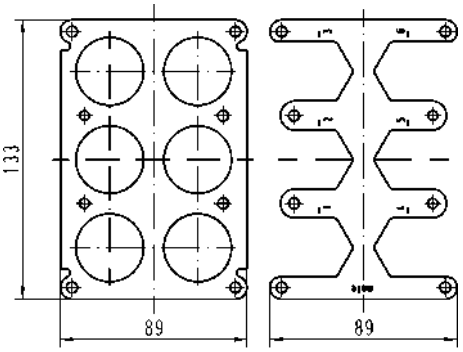
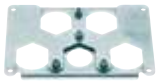
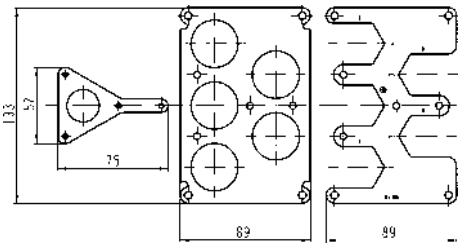
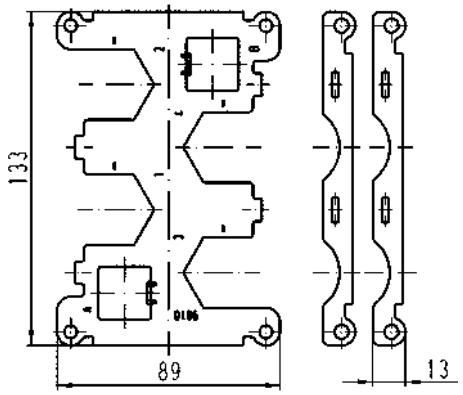
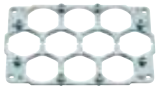
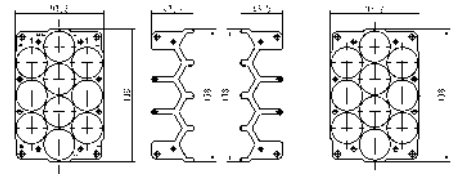
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>for 4 standard inserts - size 16 B,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 048 0331 | <br>Panel cut out |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 048 0951 |  |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 048 5401 |  |
| Han® HPR,<br>Mounting cover,<br>Distance bolt M5,<br>Without cable entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers<br> | | 09 40 048 9803 |  |

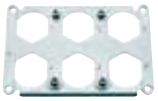
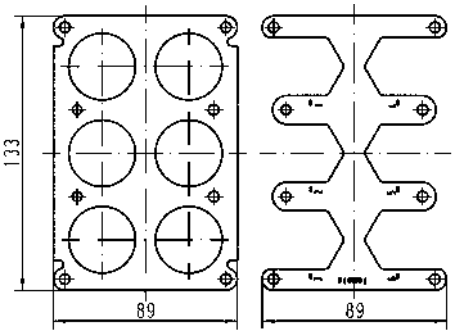
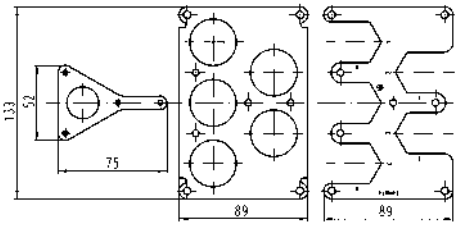
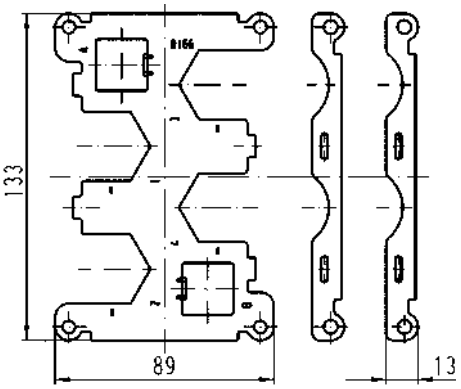
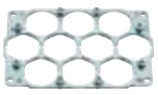
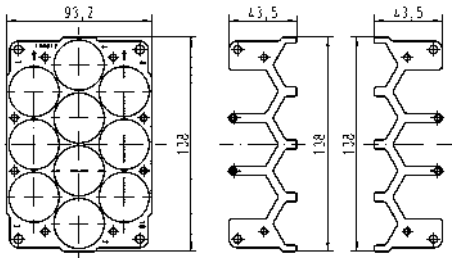
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Mounting cover,<br>Distance bolt M5,<br>for male inserts,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers<br> | 4x M40 | 19 40 048 9801 |  |
| Han® HPR,<br>Mounting cover,<br>Distance bolt M5,<br>One entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers<br> | 1x M63<br>1x M75 | 19 40 048 9826<br>19 40 048 9825 | <br> |
| Han® HPR,<br>Mounting cover,<br>Distance bolt M5,<br>for female inserts,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers<br> | 4x M40 | 19 40 048 9901 |  |

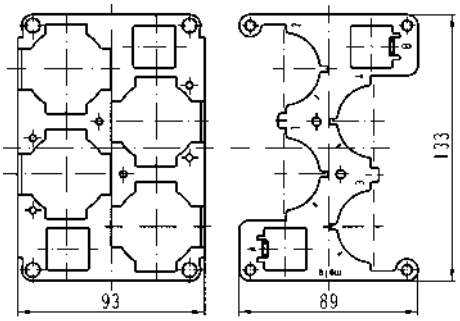
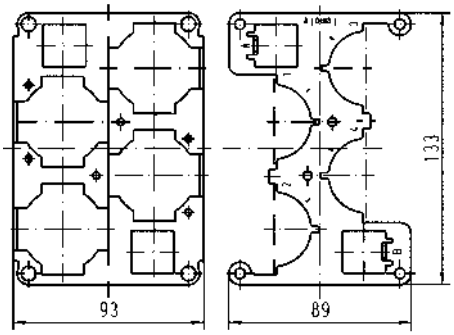
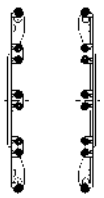
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Mounting cover,<br>Distance bolt M5,<br>3 cable entries,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers  | 3x M32 | 19 40 048 9902 |  |
| Han® HPR,<br>Mounting cover,<br>Distance bolt M6,<br>Without cable entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers  | | 09 40 048 9801 |  |
| Han® HPR,<br>Mounting cover,<br>Distance bolt M6,<br>5 cable entries,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers  | 5x M32 | 19 40 048 9812 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Mounting cover,<br>Distance bolt M6,<br>6 cable entries,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers<br> | 6x M25<br>6x M32 | 19 40 048 9820<br>19 40 048 9822 |  |
| Han® HPR,<br>Mounting cover,<br>Distance bolt M6,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers<br> | 1x M63 | 19 40 048 9824 |  |
| Han® HPR,<br>Mounting cover,<br>Distance bolt M6,<br>10 cable entries,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>4 distance pieces,<br>4x M6 screw,<br>4 washers<br> | 10x M25 | 19 40 048 9860 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Mounting frames, Han® HPR, Thread M8  | | 09 40 000 9965 |   |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Frame,<br>for male inserts,<br>6x Han® HC Modular 350  | 09 40 048 9806 | |   |
| Han® HPR,<br>Frame,<br>for male inserts,<br>5x Han® HC Modular 350 + 1x Han® HC Modular 350 PE  | 09 40 048 9809 | |   |
| Han® HPR,<br>Frame,<br>for male inserts,<br>4x HC 350 contacts + 2x Han® Q 5/0  | 09 40 048 9810 | |   |
| Han® HPR,<br>Frame,<br>for male inserts,<br>10x Han® HC Modular 350  | 09 40 048 9860 | |  |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Frame,<br>for female inserts,<br>6x Han® HC Modular 350  | | 09 40 048 9906 |  |
| Han® HPR,<br>Frame,<br>for female inserts,<br>5x Han® HC Modular 350 + 1x Han® HC Modular 350 PE  | | 09 40 048 9909 |  |
| Han® HPR,<br>Frame,<br>for female inserts,<br>4x HC 350 contacts + 2x Han® Q 5/0  | | 09 40 048 9910 |  |
| Han® HPR,<br>Frame,<br>for female inserts,<br>10x Han® HC Modular 350  | | 09 40 048 9960 |  |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Frame,<br>for male inserts,<br>4x HC 650 contacts + 2x Han® Q 5/0<br> | 09 40 048 9811 | |  |
| Han® HPR,<br>Frame,<br>for female inserts,<br>4x HC 650 contacts + 2x Han® Q 5/0<br> | | 09 40 048 9911 |  |
| Han® HPR,<br>Frame,<br>for 4 standard inserts - size 16 B<br><br>Suitable for hoods and surface mounted housings in conjunction with cover 09 40 048 9803/19 40 048 9801/19 40 048 9901 only | 09 40 048 9912 | 09 40 048 9912 |  |

# Han® HMC



| Contents | Page |
|---|---|
| Han-Modular® hinged frames | **Han 16.3** |
| Han E® module | **Han 16.8** |
| Han® EE module | **Han 16.10** |
| Han E® Protected module | **Han 16.12** |
| Han® EEE module | **Han 16.14** |
| Han DD® module | **Han 16.16** |
| Han DD® double module | **Han 16.18** |
| Han® DDD module | **Han 16.20** |
| Han® High Density module | **Han 16.22** |
| Han® 40 A module | **Han 16.24** |
| Han® C module | **Han 16.26** |
| Han® CC Protected module | **Han 16.28** |
| Han® CD module | **Han 16.30** |
| Han® Gigabit module | **Han 16.32** |
| Han® Megabit module | **Han 16.35** |
| Han D® HMC | **Han 16.38** |
| Han DD® HMC | **Han 16.41** |
| Han E® HMC | **Han 16.46** |
| Han® ES Press HMC | **Han 16.51** |
| Han® EEE HMC | **Han 16.56** |
| Contacts | **Han 16.59** |
| Hoods/Housings | **Han 16.63** |
| Docking frame | **Han 16.73** |

## Features

This series Han® HMC (High Mating Cycles) is a connector series specifically aiming at industrial applications for 10,000 mating cycles.

Benefits:

- High mechanical robustness
- Simple and easy understandable design
- Optimized concept for signal and power transmission
- Low mating and unmating forces
- High contact density

## General Description

Han® B HMC hoods with high performance locking pin





Han D® and Han E® crimp contacts with specific HMC gold coating and a constant contact force

Ground contacts of crimp inserts with long lasting HMC contact spring





Han® B housings with Han-Easy Lock® HMC locking lever

# Han-Modular® hinged frames

## Features

- Modules can be assembled/removed without tools
- Easy handling
- Two leading PE contacts
- Very robust mechanical characteristics

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles with other HMC components | ≥10000 |
| Material (frames) | Zinc die-cast |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

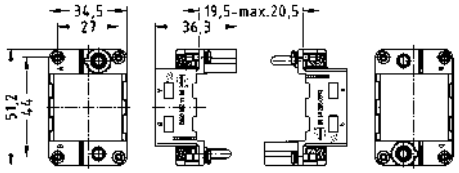
## Details

Both different markings must be used for one connector!

**Locking element** 09 14 000 9960 see accessories in chapter Han 06

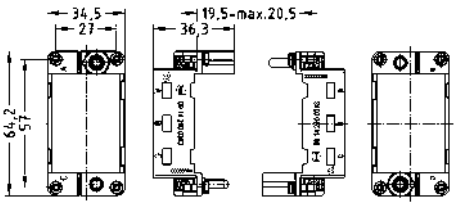
# Han-Modular® hinged frames

Size 6 B

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®, Hinged frame, HMC version, for 2 modules, A ... B  | 09 14 206 0303 |   |
| Han-Modular®, Hinged frame, HMC version, for 2 modules, a ... b  | 09 14 206 0313 | |

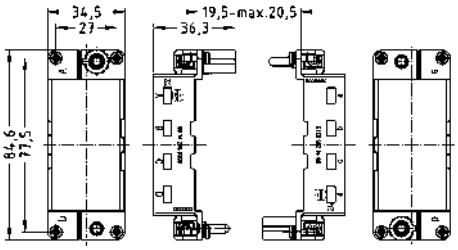
# Han-Modular® hinged frames

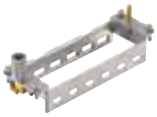
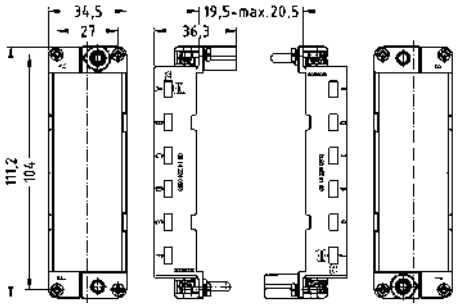
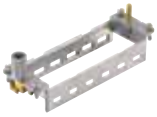
Size 10 B

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Hinged frame,<br>HMC version,<br>for 3 modules,<br>A ... C<br> | 09 14 210 0303 |  |
| Han-Modular®,<br>Hinged frame,<br>HMC version,<br>for 3 modules,<br>a ... c<br> | 09 14 210 0313 | |

# Han-Modular® hinged frames

Size 16 B

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®, Hinged frame, HMC version, for 4 modules, A ... D  | 09 14 216 0303 |   |
| Han-Modular®, Hinged frame, HMC version, for 4 modules, a ... d  | 09 14 216 0313 | |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®, Hinged frame, HMC version, for 6 modules, A ... F  | 09 14 224 0303 |   |
| Han-Modular®, Hinged frame, HMC version, for 6 modules, a ... f  | 09 14 224 0313 | |

## Features

- Standard module for power up to 16 A

## Technical characteristics

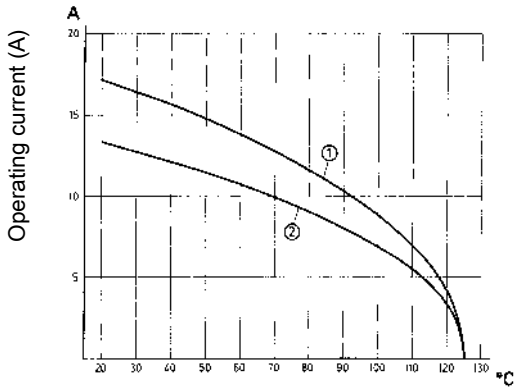
| | |
|---|---|
| Number of contacts | 6 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

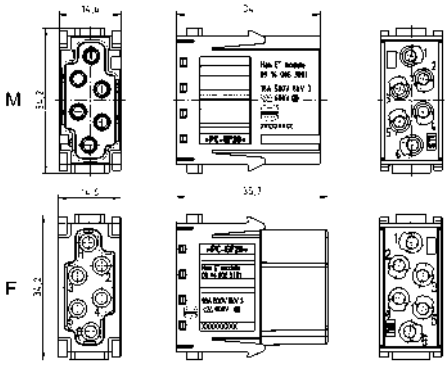
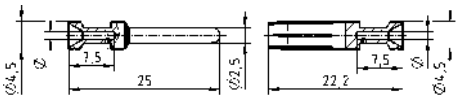
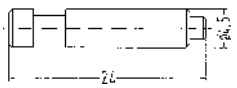
**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

Number of contacts

# 6

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han E® module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 006 3001 | 09 14 006 3101 | <br>Contact arrangement (view from termination side) |
| Han E® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 200 6117<br>09 33 200 6122<br>09 33 200 6115<br>09 33 200 6118<br>09 33 200 6116<br>09 33 200 6123<br>09 33 200 6119 | 09 33 200 6217<br>09 33 200 6222<br>09 33 200 6215<br>09 33 200 6218<br>09 33 200 6216<br>09 33 200 6223<br>09 33 200 6221 | <br>Stripping length 7.5 mm |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br>for crimp inserts only<br>With loss of one contact | | | 09 33 000 9954 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

## Features

- High packing density

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Rated current | 16 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

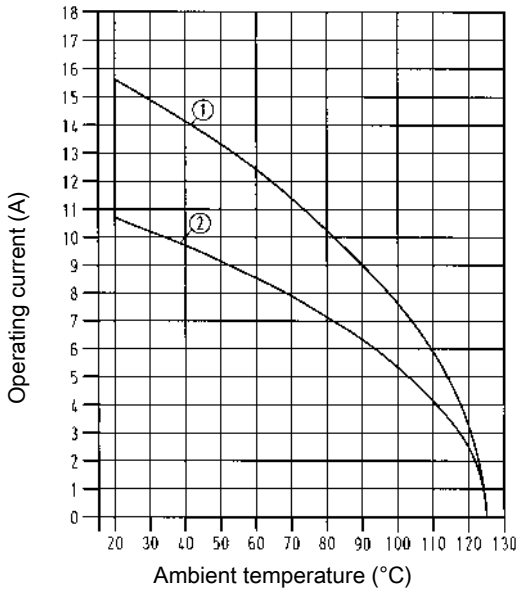
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Crimp termination




① 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

### Remarks on the crimp technique

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

### Coding pin

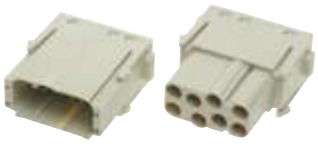
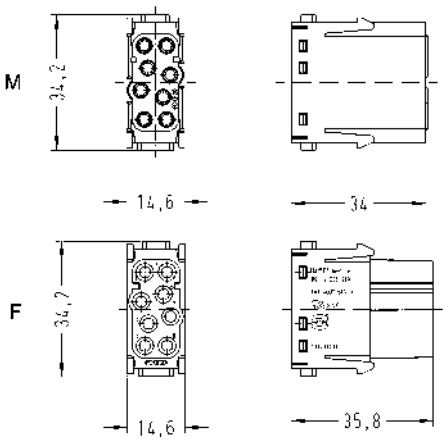
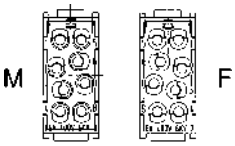
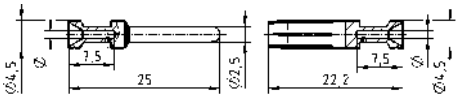
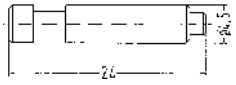
Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

# Han® EE module

Number of contacts

## 8

16 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® EE module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 008 3001 | 09 14 008 3101 | <br><br>Contact arrangement (view from termination side)<br>Stripping length 7.5 mm |
| Han E® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 200 6117<br>09 33 200 6122<br>09 33 200 6115<br>09 33 200 6118<br>09 33 200 6116<br>09 33 200 6123<br>09 33 200 6119 | 09 33 200 6217<br>09 33 200 6222<br>09 33 200 6215<br>09 33 200 6218<br>09 33 200 6216<br>09 33 200 6223<br>09 33 200 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br>for crimp inserts only<br>With loss of one contact | | | 09 33 000 9954 |  |

## Features

- Suitable for Han E® crimp contacts
- Designed for a high working voltage up to 830 V
- Finger safe male and female contacts

## Technical characteristics

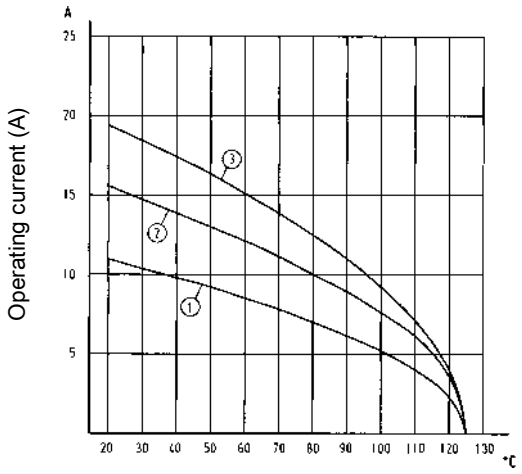
| | |
|---|---|
| Number of contacts | 6 |
| Rated current | 16 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

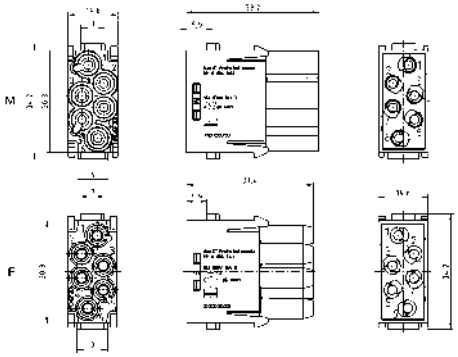
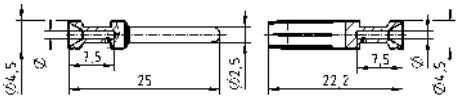
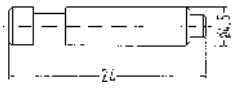
# Han E® Protected module



Number of contacts

**6**

16 A 830 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han E® Protected module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 006 3041 | 09 14 006 3141 | <br>Contact arrangement (view from termination side) |
| Han E® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 200 6117<br>09 33 200 6122<br>09 33 200 6115<br>09 33 200 6118<br>09 33 200 6116<br>09 33 200 6123<br>09 33 200 6119 | 09 33 200 6217<br>09 33 200 6222<br>09 33 200 6215<br>09 33 200 6218<br>09 33 200 6216<br>09 33 200 6223<br>09 33 200 6221 | <br>Stripping length 7.5 mm |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br>for crimp inserts only<br>With loss of one contact | | | 09 33 000 9954 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

## Features

- Suitable for Han E® crimp contacts
- Higher density of crimping contacts
- Standard module for power up to 16 A
- Also suitable as a reliable signal connector

## Technical characteristics

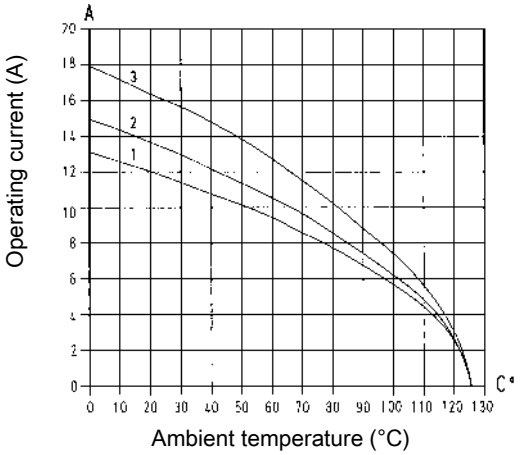
| | |
|---|---|
| Number of contacts | 20 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 2.5 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

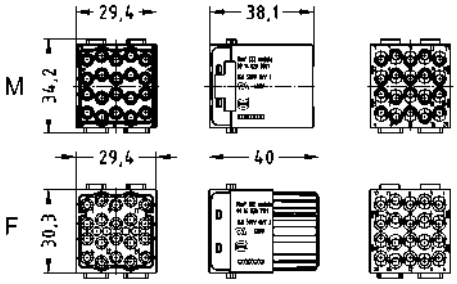
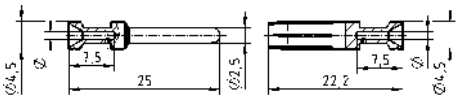
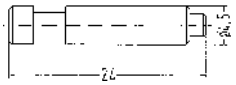
# Han® EEE module



Number of contacts

## 20

16 A  500 V  6 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® EEE module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 020 3001 | 09 14 020 3101 | <br>Contact arrangement (view from termination side) |
| Han E® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 200 6117<br>09 33 200 6122<br>09 33 200 6115<br>09 33 200 6118<br>09 33 200 6116<br>09 33 200 6123<br>09 33 200 6119 | 09 33 200 6217<br>09 33 200 6222<br>09 33 200 6215<br>09 33 200 6218<br>09 33 200 6216<br>09 33 200 6223<br>09 33 200 6221 | <br>Conductor cross-section / Identification<br>0.14-0.37 mm² AWG 26-22 — no groove<br>0.5 mm² AWG 20 — no groove<br>0.75 mm² AWG 18 — 1 groove*<br>1 mm² AWG 18 — 1 groove<br>1.5 mm² AWG 16 — 2 groove<br>2.5 mm² AWG 14 — 3 groove<br>3 mm² AWG 12 — wide groove<br>4 mm² AWG 12 — no groove<br>* on the back crimp collar<br>Stripping length 7.5 mm |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br>for crimp inserts only<br>With loss of one contact | | | 09 33 000 9954 |  |

## Features

- Standard module for signal up to 10 A

## Technical characteristics

| | |
|---|---|
| Number of contacts | 12 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

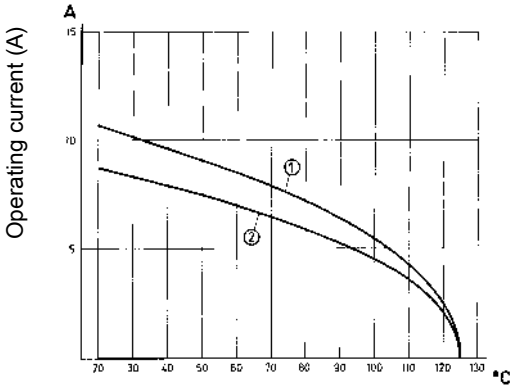
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

Crimp termination




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

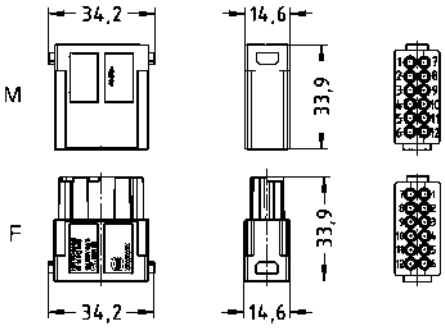
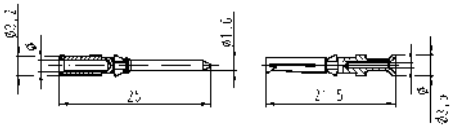
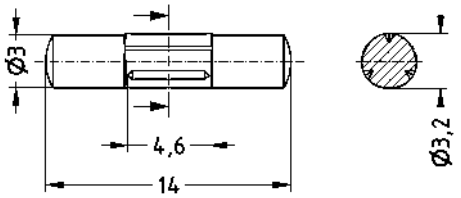
**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

Number of contacts

# 12

10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®, Han DD® module, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 14 012 3002 | 09 14 012 3102 |   Contact arrangement (view from termination side) |
| Han D® HMC, Crimp contact, Contact surface: HMC gold plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 200 6124<br>09 15 200 6123<br>09 15 200 6125<br>09 15 200 6122<br>09 15 200 6121<br>09 15 200 6126 | 09 15 200 6224<br>09 15 200 6223<br>09 15 200 6225<br>09 15 200 6222<br>09 15 200 6221<br>09 15 200 6226 |   |
| Han D®, Han DD®, Han® DDD, Coding pin  Only for crimp termination With loss of one contact | | | 09 33 000 9915 |   |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

## Features

- 36 Han D® contacts up to 400 V
- Suitable for transmitting power (10 A) and signals in one module
- e.g. for three phase AC motors including feedback for all six axes of a robot

## Technical characteristics

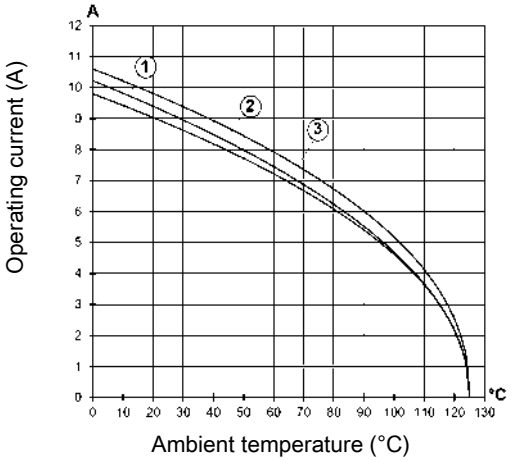
| | |
|---|---|
| Number of contacts | 36 |
| Rated current | 10 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 3 modules Conductor cross-section 1 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

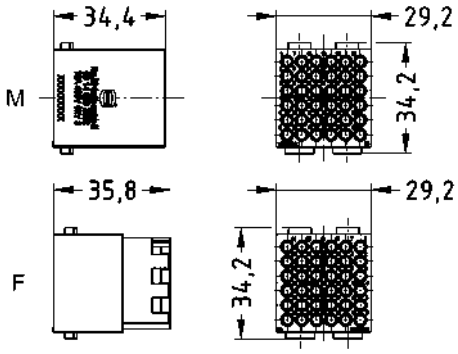
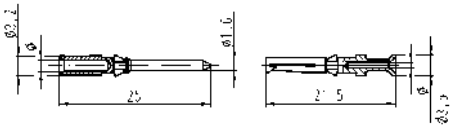
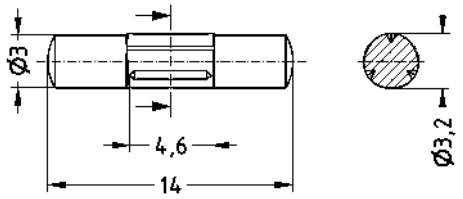
# Han DD® double module



Number of contacts

## 36

10 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han DD® module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 14 036 3002 | 09 14 036 3102 | <br>Contact arrangement (view from termination side) |
| Han D® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 200 6124<br>09 15 200 6123<br>09 15 200 6125<br>09 15 200 6122<br>09 15 200 6121<br>09 15 200 6126 | 09 15 200 6224<br>09 15 200 6223<br>09 15 200 6225<br>09 15 200 6222<br>09 15 200 6221<br>09 15 200 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 — 0.9 mm — 8 mm<br>0.5 mm² AWG 20 — 1.1 mm — 8 mm<br>0.75 mm² AWG 18 — 1.3 mm — 8 mm<br>1 mm² AWG 18 — 1.45 mm — 8 mm<br>1.5 mm² AWG 16 — 1.75 mm — 8 mm<br>2.5 mm² AWG 14 — 2.25 mm — 6 mm |
| Han D®,<br>Han DD®,<br>Han® DDD,<br>Coding pin<br><br>Only for crimp termination<br>With loss of one contact | | | 09 33 000 9915 |  |

## Features

- Suitable for Han D® crimp contacts
- High packing density

## Technical characteristics

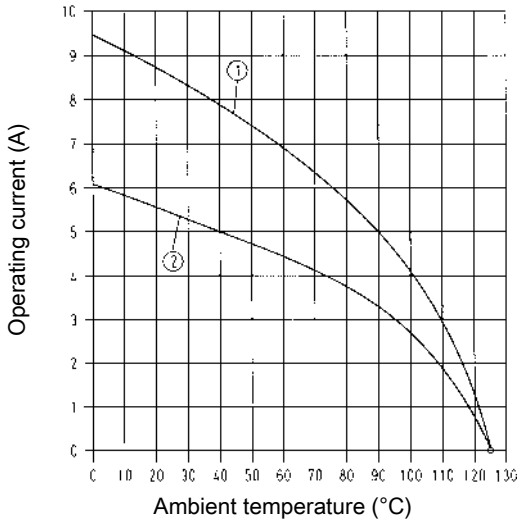
| | |
|---|---|
| Number of contacts | 17 |
| Rated current | 10 A |
| Rated voltage | 160 V |
| Rated impulse voltage | 2.5 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 250 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

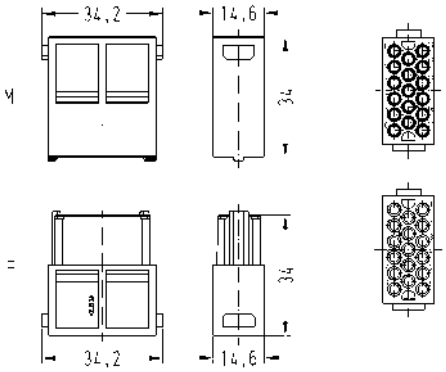
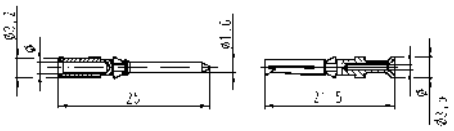
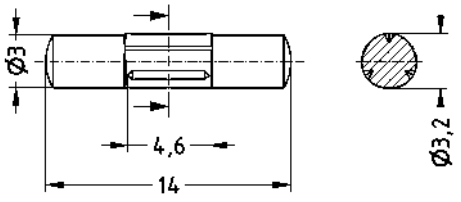
# Han® DDD module



Number of contacts

## 17

10 A  160 V  2.5 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® DDD module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 14 017 3001 | 09 14 017 3101 | <br>Contact arrangement (view from termination side) |
| Han D® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 200 6124<br>09 15 200 6123<br>09 15 200 6125<br>09 15 200 6122<br>09 15 200 6121<br>09 15 200 6126 | 09 15 200 6224<br>09 15 200 6223<br>09 15 200 6225<br>09 15 200 6222<br>09 15 200 6221<br>09 15 200 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |
| Han D®,<br>Han DD®,<br>Han® DDD,<br>Coding pin<br><br>Only for crimp termination<br>With loss of one contact | | | 09 33 000 9915 |  |

## Features

- Suitable for standard D-Sub crimp contacts
- High packing density

## Technical characteristics

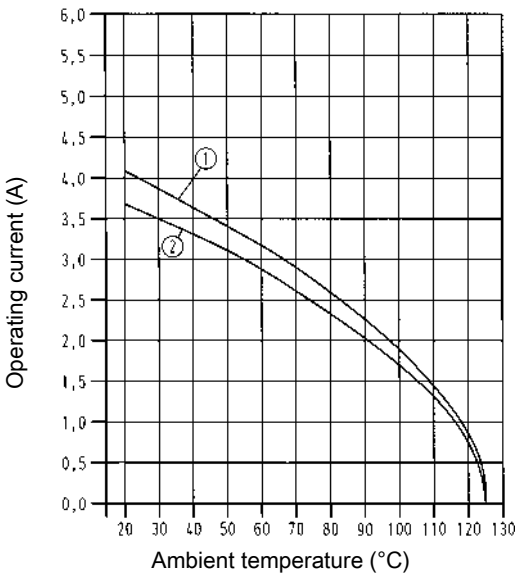
| | |
|---|---|
| Number of contacts | 25 |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 30 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules; turned contacts Conductor cross-section 0.5 mm²
② 24 B hoods/housings with 6 modules; stamped contacts Conductor cross-section 0.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

## Details

Guide pins and bushes are recommended (see chapter Han 80).

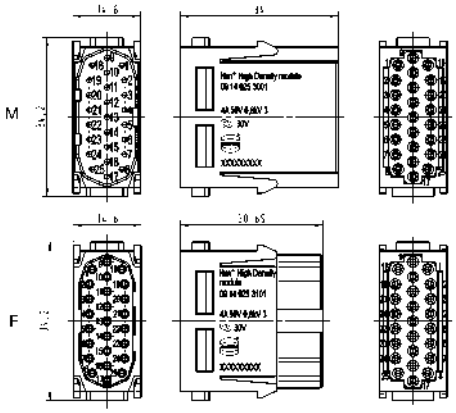
# Han® High Density module



Number of contacts

## 25

4 A  50 V  0.8 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® High Density module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 14 025 3001 | 09 14 025 3101 | <br>Contact arrangement (view from termination side) |
| D-Sub,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 0.08 ... 0.21<br>0.13 ... 0.33<br>0.33 ... 0.52 | 09 67 000 7570<br>09 67 000 5570<br>09 67 000 8570 | 09 67 000 7470<br>09 67 000 5470<br>09 67 000 8470 | 導体断面積 / ø / ストリップ長さ<br>0.08 - 0.21 mm² / AWG 28-24 / 4 mm<br>0.13 - 0-33 mm² / AWG 26-22 / 4 mm<br>0.33 - 0.52 mm² / AWG 22-20 / 4 mm |

## Technical characteristics

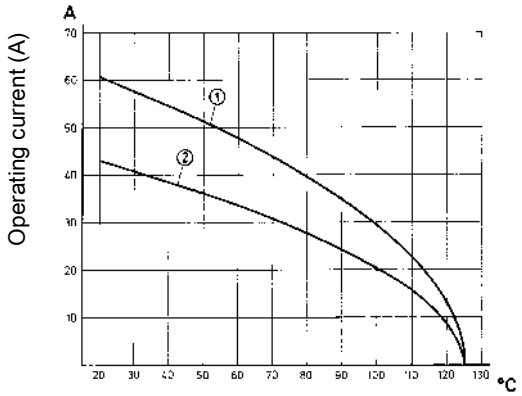
| | |
|---|---|
| Number of contacts | 2 |
| Rated current | 40 A |
| Rated voltage | 1000 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 10 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

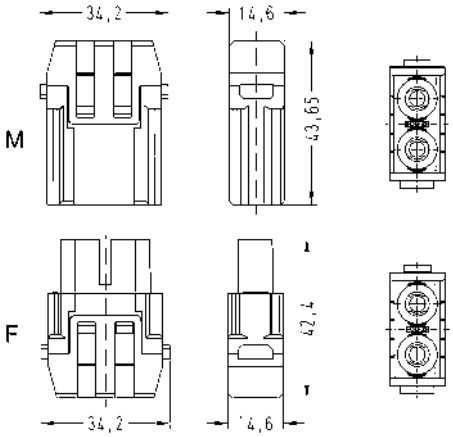
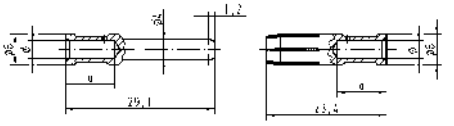
# Han® 40 A module



Number of contacts

## 2

40 A 1.000 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® 40 A module,<br>Crimp termination,<br>UL: 600 V<br><br>Please order crimp contacts separately. | 1.5 ... 10 | 09 14 002 3002 | 09 14 002 3102 | <br>Contact arrangement (view from termination side) |
| Han® C HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 200 6114<br>09 32 200 6115<br>09 32 200 6119<br>09 32 200 6118<br>09 32 200 6117 | 09 32 200 6224<br>09 32 200 6225<br>09 32 200 6229<br>09 32 200 6228<br>09 32 200 6227 | <br>Wire gauge / ø / Stripping length<br>1.5 mm² AWG 16 1.75 mm 9.5 mm<br>2.5 mm² AWG 14 2.25 mm 9.5 mm<br>4 mm² AWG 12 2.85 mm 9.5 mm<br>6 mm² AWG 10 3.5 mm 9.5 mm<br>10 mm² AWG 8 4.3 mm 15 mm |

## Technical characteristics

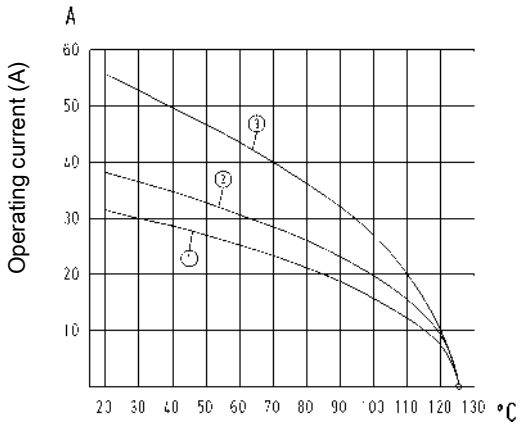
| | |
|---|---|
| Number of contacts | 3 |
| Rated current | 40 A |
| Rated voltage | 690 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current acc. to UL | 40 A |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 10 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

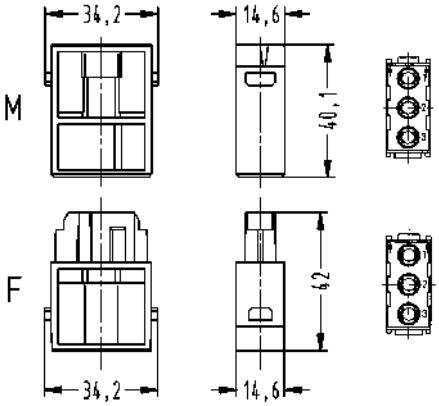
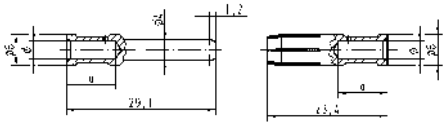
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® C module

Number of contacts

## 3

40 A 690 V 8 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® C module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 6 | 09 14 003 3001 | 09 14 003 3101 | <br>Contact arrangement (view from termination side) |
| Han® C HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 200 6114<br>09 32 200 6115<br>09 32 200 6119<br>09 32 200 6118<br>09 32 200 6117 | 09 32 200 6224<br>09 32 200 6225<br>09 32 200 6229<br>09 32 200 6228<br>09 32 200 6227 | <br>Wire gauge / ø / Stripping length<br>1.5 mm² AWG 16 1.75 mm 9.5 mm<br>2.5 mm² AWG 14 2.25 mm 9.5 mm<br>4 mm² AWG 12 2.85 mm 9.5 mm<br>6 mm² AWG 10 3.5 mm 9.5 mm<br>10 mm² AWG 8 4.3 mm 15 mm |

# Han® CC Protected module

## Features

- Suitable for Han® C crimp contacts
- Designed for a high working voltage up to 830 V
- Finger safe male and female contacts
- High density of contacts

## Technical characteristics

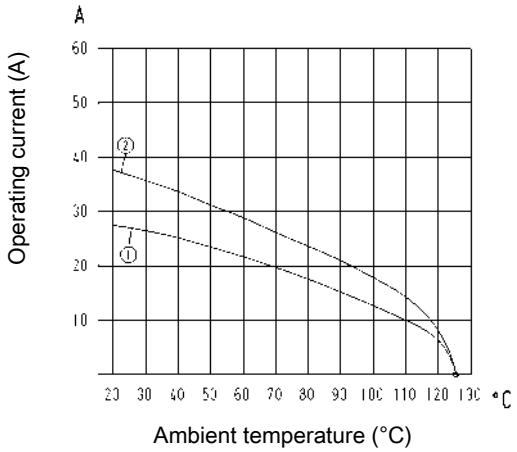
| | |
|---|---|
| Number of contacts | 4 |
| Rated current | 40 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

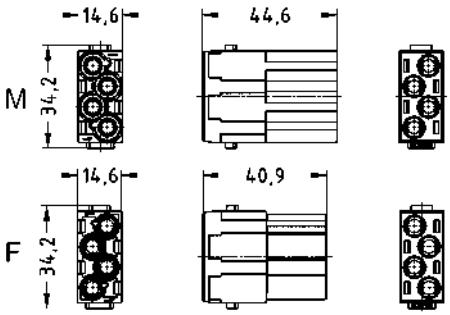
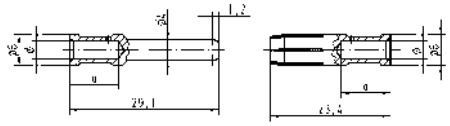
# Han® CC Protected module



Number of contacts

**4**

40 A  830 V  8 kV  3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® CC Protected module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 1.5 ... 6 | 09 14 004 3041 | 09 14 004 3141 | <br>Contact arrangement (view from termination side) |
| Han® C HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 200 6114<br>09 32 200 6115<br>09 32 200 6119<br>09 32 200 6118<br>09 32 200 6117 | 09 32 200 6224<br>09 32 200 6225<br>09 32 200 6229<br>09 32 200 6228<br>09 32 200 6227 | <br>Wire gauge / ø / Stripping length<br>1.5 mm² AWG 16 1.75 mm 9.5 mm<br>2.5 mm² AWG 14 2.25 mm 9.5 mm<br>4 mm² AWG 12 2.85 mm 9.5 mm<br>6 mm² AWG 10 3.5 mm 9.5 mm<br>10 mm² AWG 8 4.3 mm 15 mm |

# Han® CD module

## Features

- 3 contacts (40 A) for power circuits and 4 contacts (10 A) for signal circuits
- Ideal as motor drive connector
- Finger safe male and female contacts

## Technical characteristics

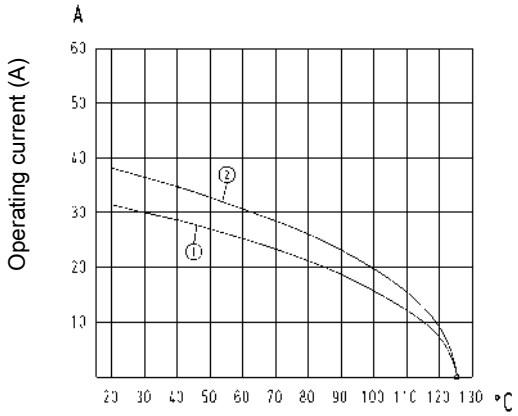
| | |
|---|---|
| Number of contacts | 3 |
| Additional contacts | + 4 additional signal contacts |
| Rated current | 40 A |
| Rated voltage | 830 V |
| Rated impulse voltage | 8 kV |
| Pollution degree | 3 |
| Rated current (signal) | 10 A |
| Rated voltage (signal) | 830 V |
| Rated impulse voltage (signal) | 8 kV |
| Pollution degree (signal) | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ, ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Wire outer diameter | ≤5 mm |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

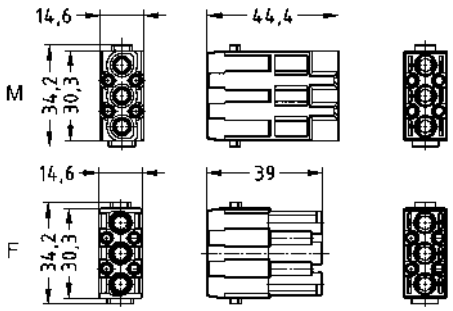
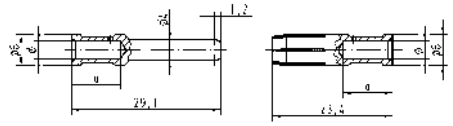
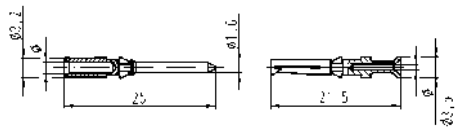
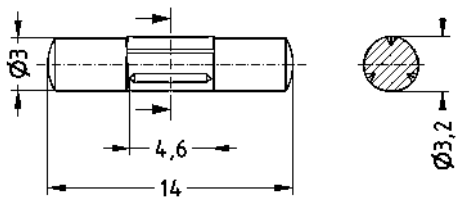
Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

# Han® CD module

Number of contacts

## 3

40 A 830 V 8 kV 3
10 A 830 V 8 kV 3
+ 4 additional signal contacts

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Han® CD module,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 6 | 09 14 007 3001 | 09 14 007 3101 | <br>Contact arrangement (view from termination side) |
| Han® C HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 200 6114<br>09 32 200 6115<br>09 32 200 6119<br>09 32 200 6118<br>09 32 200 6117 | 09 32 200 6224<br>09 32 200 6225<br>09 32 200 6229<br>09 32 200 6228<br>09 32 200 6227 | <br>Wire gauge / ø / Stripping length<br>1.5 mm² AWG 16 1.75 mm 9.5 mm<br>2.5 mm² AWG 14 2.25 mm 9.5 mm<br>4 mm² AWG 12 2.85 mm 9.5 mm<br>6 mm² AWG 10 3.5 mm 9.5 mm<br>10 mm² AWG 8 4.3 mm 15 mm |
| Han D® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 200 6124<br>09 15 200 6123<br>09 15 200 6125<br>09 15 200 6122<br>09 15 200 6121<br>09 15 200 6126 | 09 15 200 6224<br>09 15 200 6223<br>09 15 200 6225<br>09 15 200 6222<br>09 15 200 6221<br>09 15 200 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 0.9 mm 8 mm<br>0.5 mm² AWG 20 1.1 mm 8 mm<br>0.75 mm² AWG 18 1.3 mm 8 mm<br>1 mm² AWG 18 1.45 mm 8 mm<br>1.5 mm² AWG 16 1.75 mm 8 mm<br>2.5 mm² AWG 14 2.25 mm 6 mm |
| Han D®,<br>Han DD®,<br>Han® DDD,<br>Coding pin<br><br>Only for crimp termination<br>With loss of one contact | | | 09 33 000 9915 |  |

# Han® Gigabit module

## Features

- Suitable for PoE++

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + shielding |
| Rated current | 5 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage | 50 V AC, 60 V DC |
| Rated voltage acc. to UL | 30 V |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤10 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles with other HMC components | ≥10000 |
| Transmission characteristics | Cat. $6_A$, Class $E_A$ up to 500 MHz, Cat. $7_A$, Class $F_A$ up to 1,000 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

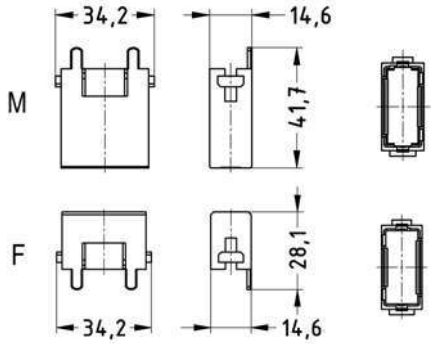
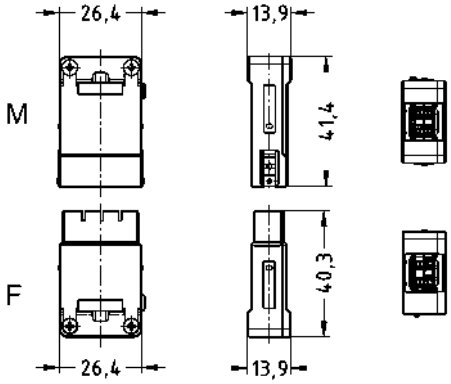
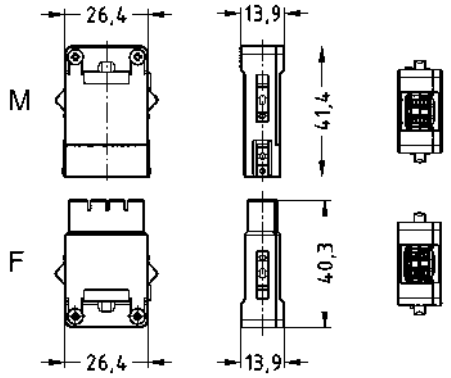
# Han® Gigabit module



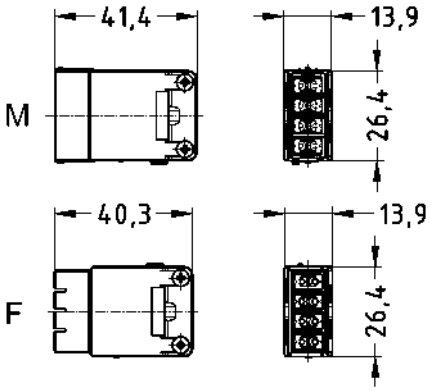
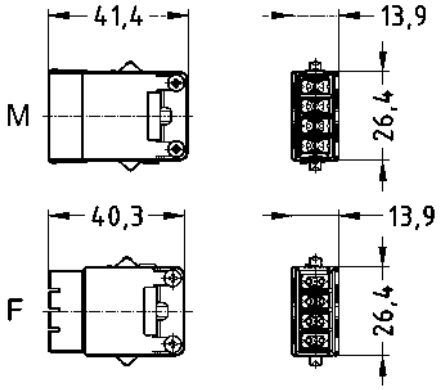
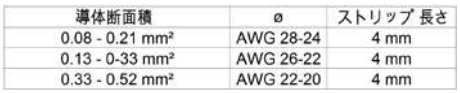
Number of contacts

## 8

5 A 50 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han® Gigabit HMC insert,<br>Crimp termination,<br>Cat. $6_A$<br><br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.09 ... 0.52 | 09 14 208 3011 | 09 14 208 3111 | <br>Cable outer diameter ≤ 14 mm |
| Han® Gigabit HMC insert,<br>Crimp termination,<br>Cat. $6_A$<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.09 ... 0.52 | 09 14 208 3012 | 09 14 208 3112 | <br>Cable outer diameter ≤ 14 mm |

# Han® Gigabit module

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Gigabit HMC insert,<br>Crimp termination,<br>Cat. $7_A$<br><br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.09 ... 0.52 | 09 14 208 3031 | 09 14 208 3131 | <br>Cable outer diameter ≤ 14 mm |
| Han® Gigabit HMC insert,<br>Crimp termination,<br>Cat. $7_A$<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.09 ... 0.52 | 09 14 208 3032 | 09 14 208 3132 | <br>Cable outer diameter ≤ 14 mm |
| D-Sub,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 0.08 ... 0.21<br>0.13 ... 0.33<br>0.33 ... 0.52 | 09 67 000 7570<br>09 67 000 5570<br>09 67 000 8570 | 09 67 000 7470<br>09 67 000 5470<br>09 67 000 8470 |  |

## Technical characteristics

| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + shielding |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 30 V |
| Rated voltage acc. to CSA | 30 V |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles with other HMC components | ≥10000 |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |

## Technical characteristics

| | |
|---|---|
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |



## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

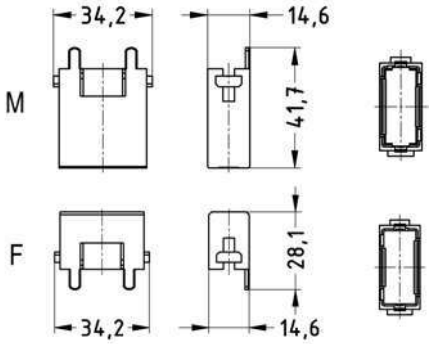
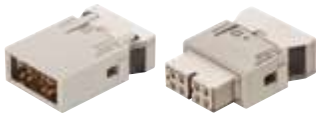
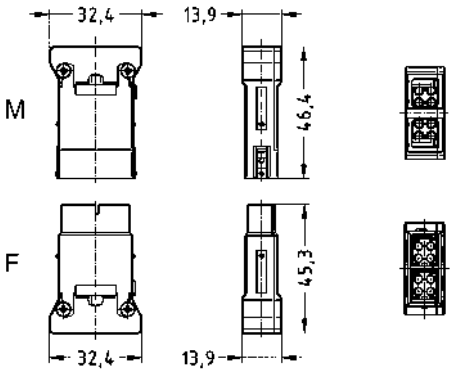
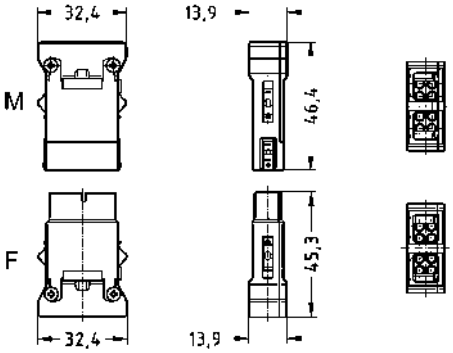
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Han® Megabit module

Number of contacts

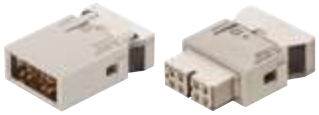
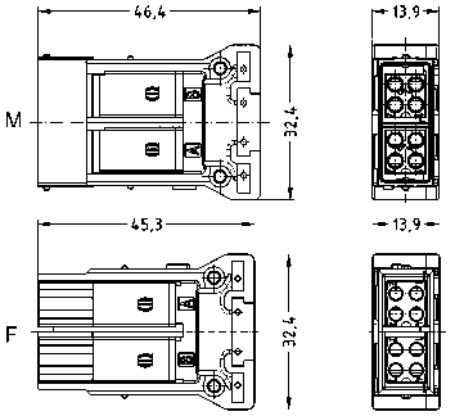
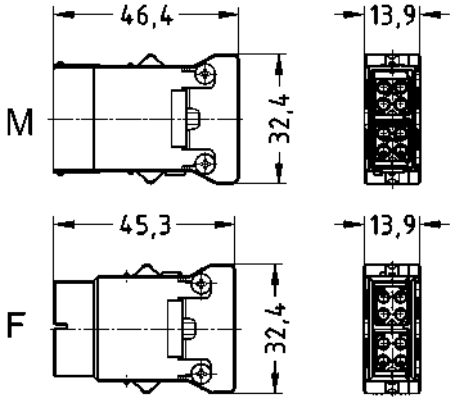
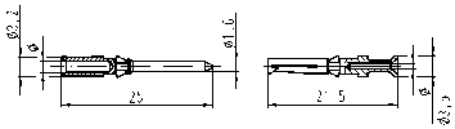
## 8

10 A 50 V 0.8 kV 3
+ shielding

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Modular®,<br>Adapter module,<br>Han® Gigabit module,<br>Han® Shielded module,<br>Han® Megabit module<br> | | 09 14 001 3011 | 09 14 001 3111 |  |
| Han® Megabit HMC insert,<br>2x 4 contacts,<br>2 cable entries,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 208 3016 | 09 14 208 3116 |  |
| Han® Megabit HMC insert,<br>2x 4 contacts,<br>2 cable entries,<br>Crimp termination<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 208 3017 | 09 14 208 3117 |  |

# Han® Megabit module



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Megabit insert,<br>2x 4 contacts,<br>One entry,<br>Crimp termination<br><br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 208 3021 | 09 14 208 3121 |  |
| Han® Megabit insert,<br>2x 4 contacts,<br>One entry,<br>Crimp termination<br><br>With additional shield connection to the hinged frame<br>Please order crimp contacts separately.<br>Please order adapter module separately. | 0.14 ... 2.5 | 09 14 208 3022 | 09 14 208 3122 |  |
| Han D® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 200 6124<br>09 15 200 6123<br>09 15 200 6125<br>09 15 200 6122<br>09 15 200 6121<br>09 15 200 6126 | 09 15 200 6224<br>09 15 200 6223<br>09 15 200 6225<br>09 15 200 6222<br>09 15 200 6221<br>09 15 200 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |

## Features

- High density of contacts
- Time saving rapid termination by use of crimping contacts
- for requirements up to 250 V / 10 A
- for hoods/housings in the Han® B HMC series
- Han D® HMC contacts available with special HMC gold plating for 10,000 mating cycles

## Technical characteristics

| | |
|---|---|
| Number of contacts | 40, 64 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

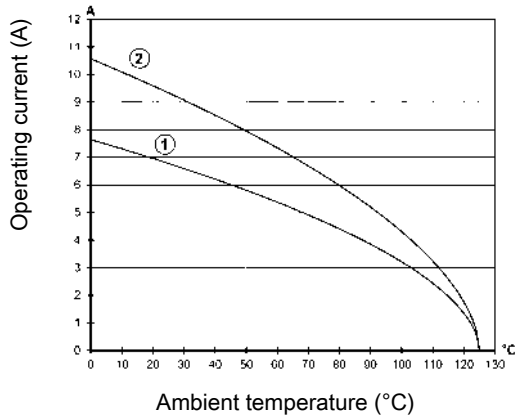
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

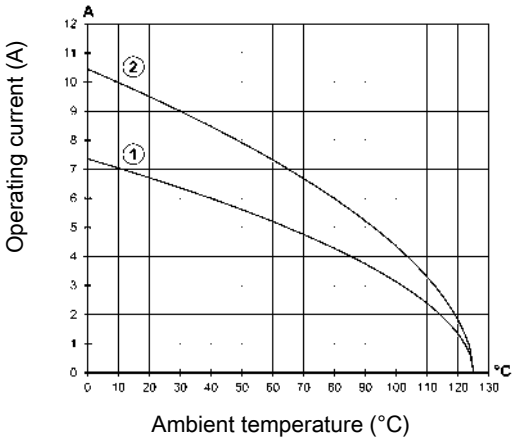
Han® 40 D HMC




① 0.75 mm²
② 1.5 mm²

## Derating

Han® 64 D HMC




① 0.75 mm²
② 1.5 mm²

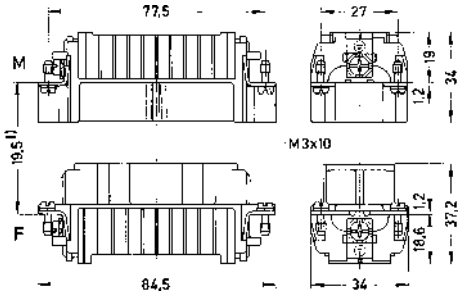
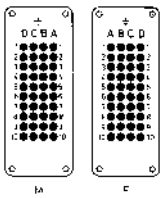
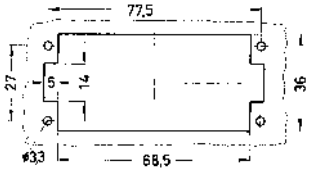
## Specifications and approvals

EN 60664-1
IEC 61984
EN 175301-801
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Number of contacts

40+ ⏚

10 A 250 V 4 kV 3

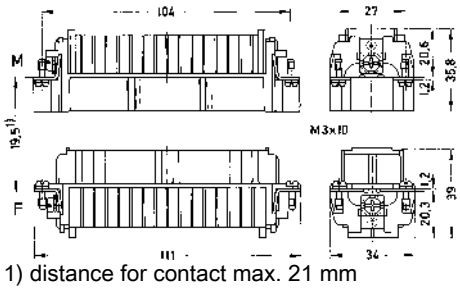
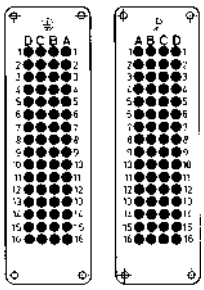
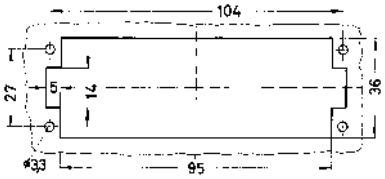
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 21 240 3001 | 09 21 240 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

# 64+ ⏚

10 A 250 V 4 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 21 264 3001 | 09 21 264 3101 |  1) distance for contact max. 21 mm  Contact arrangement (view from termination side)  Panel cut out for use without Hoods/Housings |

## Features

- High density of contacts
- Time saving rapid termination by use of crimping contacts
- for requirements up to 250 V / 10 A
- for hoods/housings in the Han® B HMC series
- Han D® HMC contacts available with special HMC gold plating for 10,000 mating cycles

## Technical characteristics

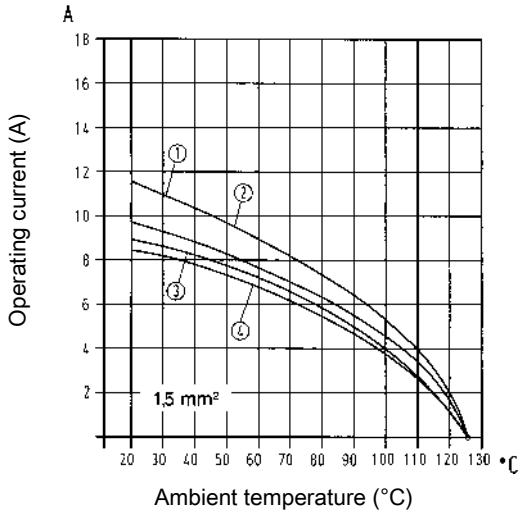
| | |
|---|---|
| Number of contacts | 24, 42, 72, 108 |
| Rated current | 10 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Derating

### Current carrying capacity

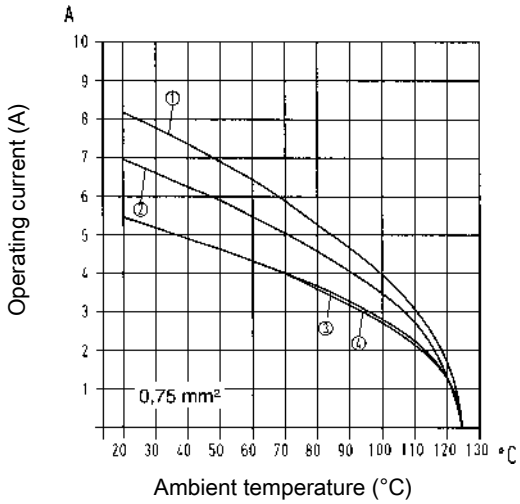
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Han® 24 DD HMC
② Han® 42 DD HMC
③ Han® 72 DD HMC
④ Han® 108 DD HMC

## Derating




① Han® 24 DD HMC
② Han® 42 DD HMC
③ Han® 72 DD HMC
④ Han® 108 DD HMC

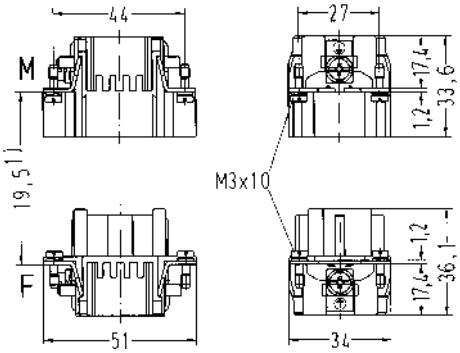
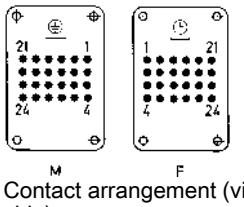
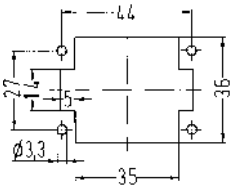
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Number of contacts

# 24+ ⏚

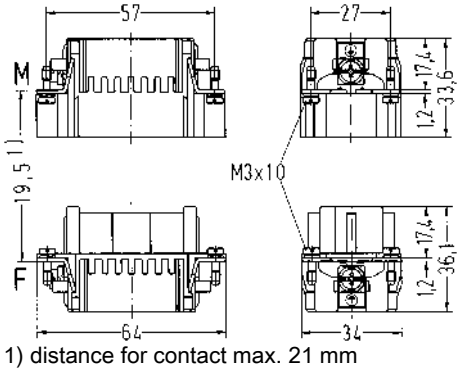
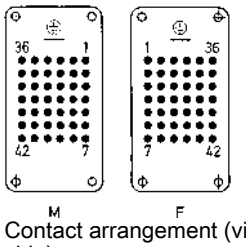
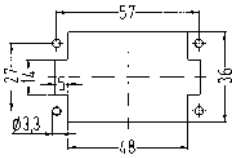
10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD® HMC, Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 224 3001 | 09 16 224 3101 | <br>1) distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out<br>for use without Hoods/Housings |

Number of contacts

# 42+ ⏚

10 A 250 V 4 kV 3

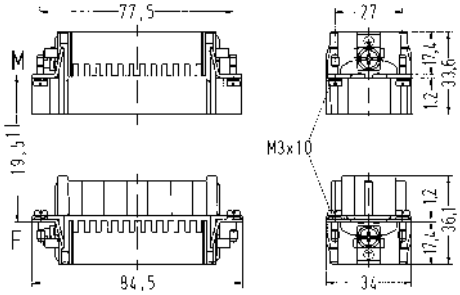
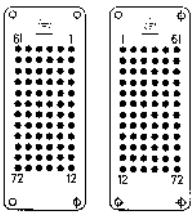
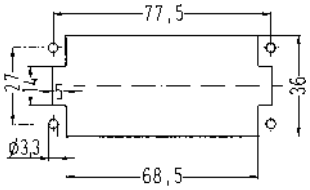
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 242 3001 | 09 16 242 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

# 72+ ⏚

10 A 250 V 4 kV 3

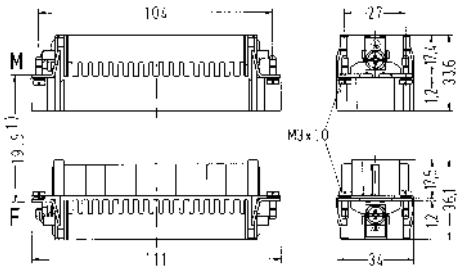
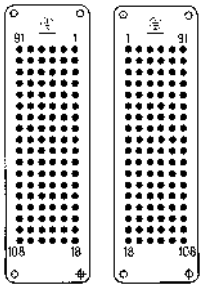
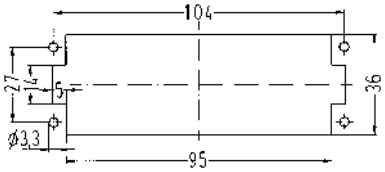


| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 272 3001 | 09 16 272 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out for use without Hoods/Housings |

Number of contacts

# 108+ ⏚

10 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han DD® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 16 208 3001 | 09 16 208 3101 |  1) distance for contact max. 21 mm  Contact arrangement (view from termination side)  Panel cut out for use without Hoods/Housings |

## Features

- Time saving rapid termination by use of crimping contacts
- for hoods/housings in the Han® B HMC series
- Han E® HMC contacts available with special HMC gold plating for 10,000 mating cycles

## Technical characteristics

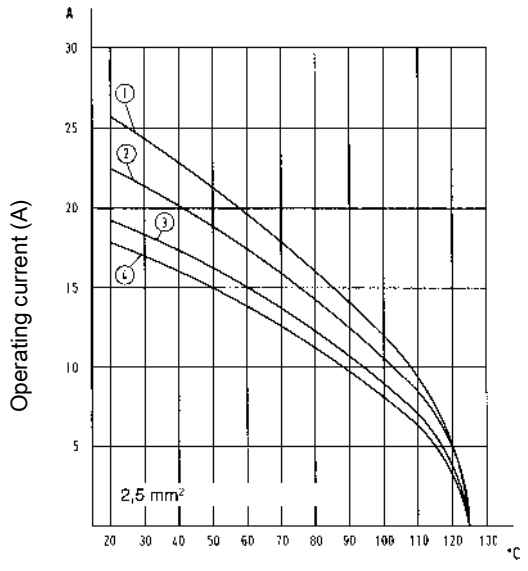
| | |
|---|---|
| Number of contacts | 6, 10, 16, 24 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

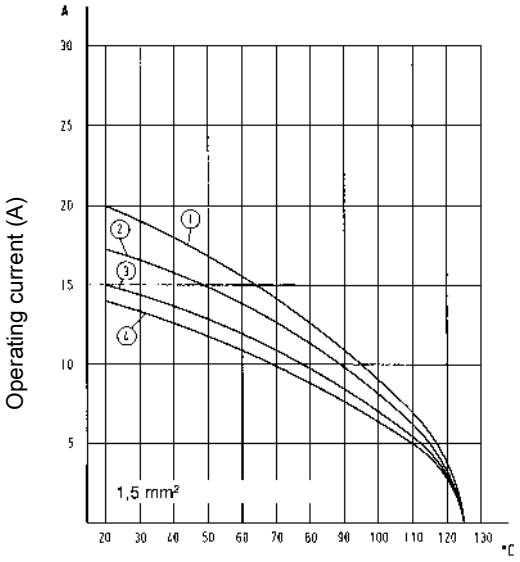
Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Han® 6 E HMC
② Han® 10 E HMC
③ Han® 16 E HMC
④ Han® 24 E HMC

## Derating




Ambient temperature (°C)

① Han® 6 E HMC
② Han® 10 E HMC
③ Han® 16 E HMC
④ Han® 24 E HMC

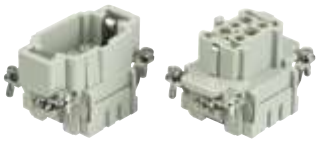
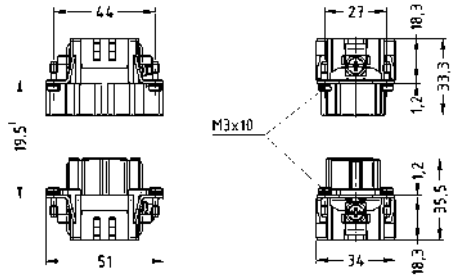
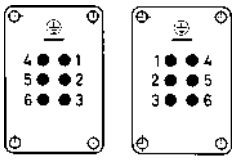
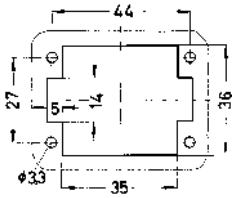
## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

Number of contacts

6+ ⏚

16 A 500 V 6 kV 3

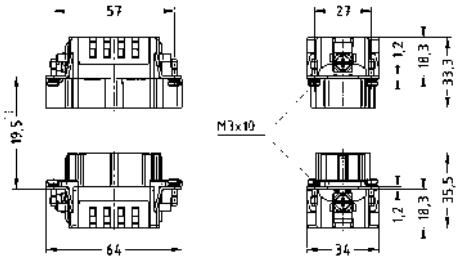
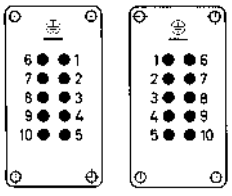
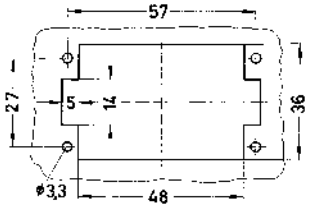
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 33 206 2602 | 09 33 206 2702 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

10+ ⏚

16 A 500 V 6 kV 3

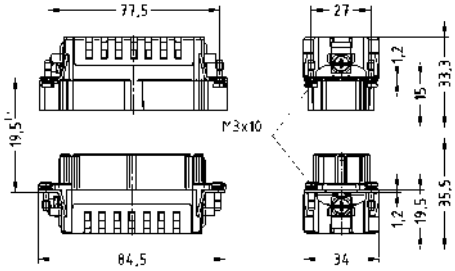
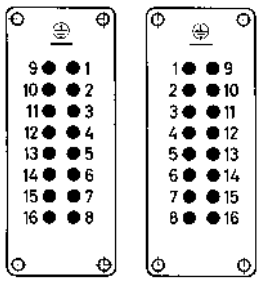
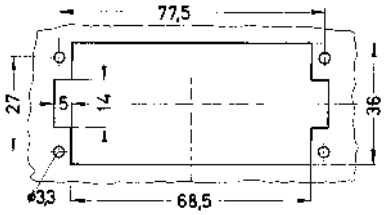


| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 33 210 2602 | 09 33 210 2702 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

16+

16 A 500 V 6 kV 3

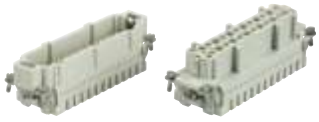
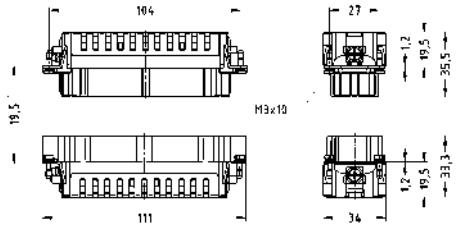
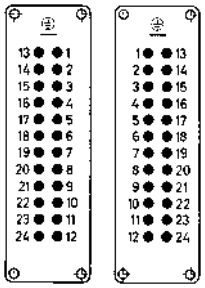
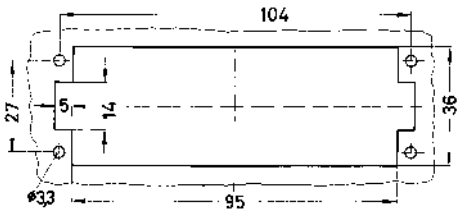
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 33 216 2602 | 09 33 216 2702 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

# 24+ ⏚

16 A 500 V 6 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 33 224 2602 | 09 33 224 2702 |  1) distance for contact max. 21 mm  Contact arrangement (view from termination side)  Panel cut out |

## Features

- Han® ES Press: Easy bridging functionality of contacts by means of plug-in jumpers directly on the connector
- Rapid termination technology without tools for a time saving assembly and for optimal processreliability

## Technical characteristics

| | |
|---|---|
| Number of contacts | 6, 10, 16, 24 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

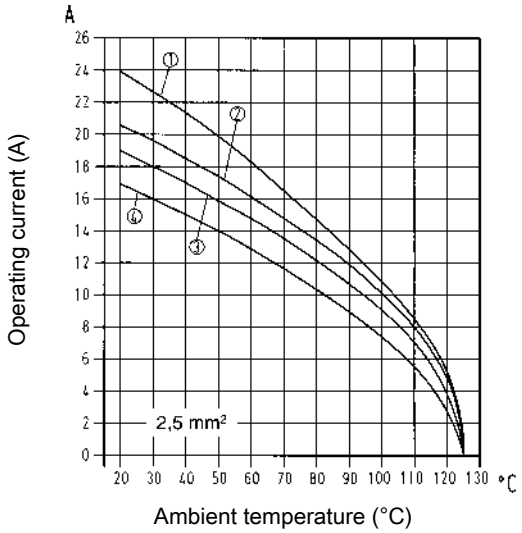
## Derating

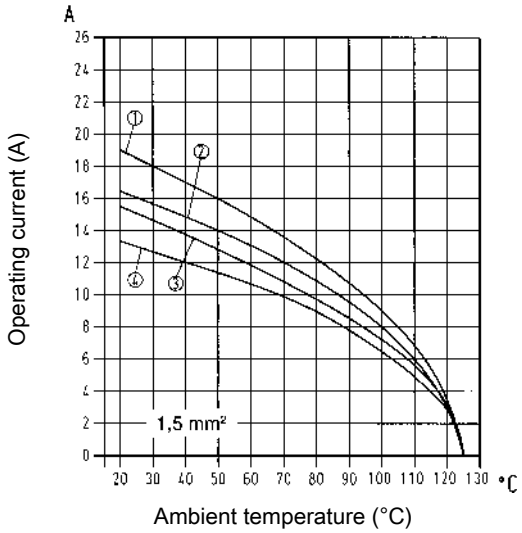
### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

**Han® ES Press**




① Han® 6 ES Press
② Han® 10 ES Press
③ Han® 16 ES Press Han® 32 ES Press
④ Han® 24 ES Press Han® 48 ES Press

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

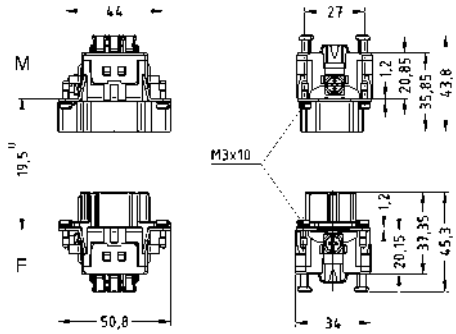
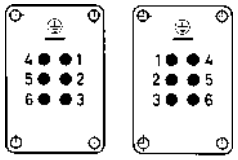
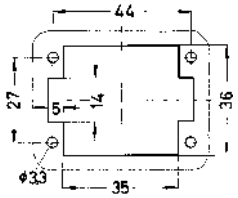
# Han® ES Press HMC

Size 6 B

Number of contacts

6+ ⏚

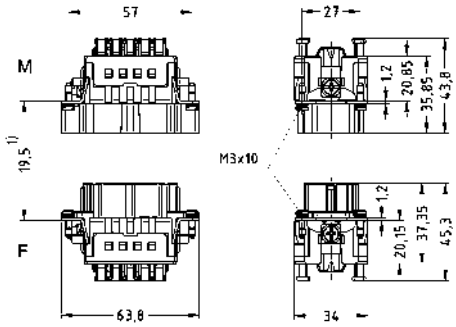
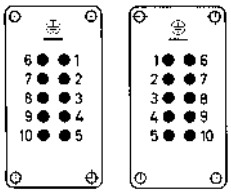
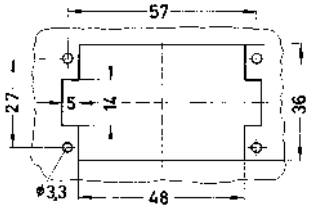
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES Press HMC,<br>Cage-clamp termination,<br>Contact surface:<br>HMC gold plated<br><br>for hoods/housings high construction only<br>Blue slide | 0.14 ... 2.5 | 09 33 206 2648 | 09 33 206 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

10+ ⏚

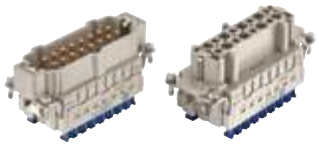
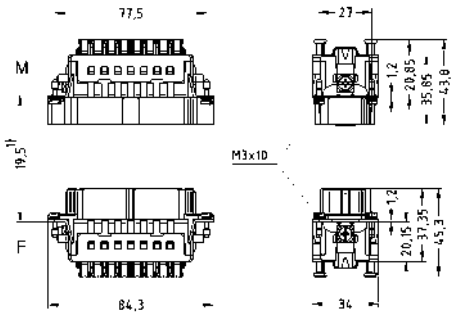
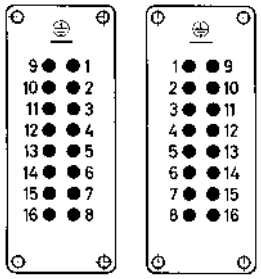
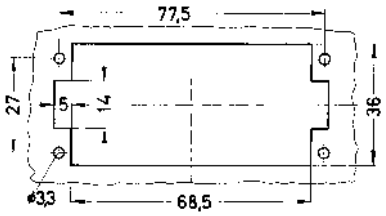
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES Press HMC,<br>Cage-clamp termination,<br>Contact surface:<br>HMC gold plated<br><br>for hoods/housings high construction only<br>Blue slide | 0.14 ... 2.5 | 09 33 210 2648 | 09 33 210 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

16+ ⏚

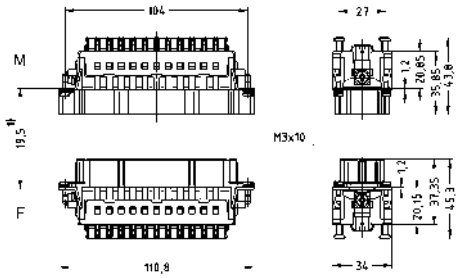
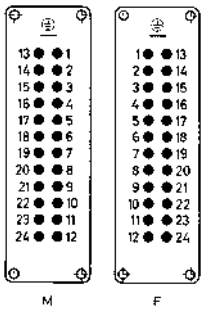
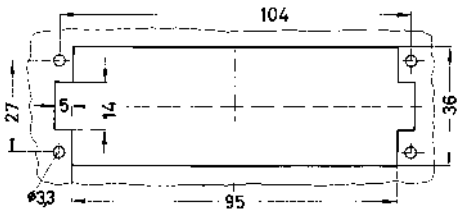
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES Press HMC,<br>Cage-clamp termination,<br>Contact surface:<br>HMC gold plated<br><br>for hoods/housings high construction only<br>Blue slide | 0.14 ... 2.5 | 09 33 216 2648 | 09 33 216 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

Number of contacts

24+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® ES Press HMC,<br>Cage-clamp termination,<br>Contact surface:<br>HMC gold plated<br><br>for hoods/housings high construction only<br>Blue slide | 0.14 ... 2.5 | 09 33 224 2648 | 09 33 224 2748 | <br>Distance for contact max. 21 mm<br><br>Contact arrangement (view from termination side)<br><br>Panel cut out |

# Han® EEE HMC

## Features

- Time saving rapid termination by use of crimping contacts
- Coded insert
- for hoods/housings in the Han® B HMC series
- Han E® HMC contacts available with special HMC gold plating for 10,000 mating cycles

## Technical characteristics

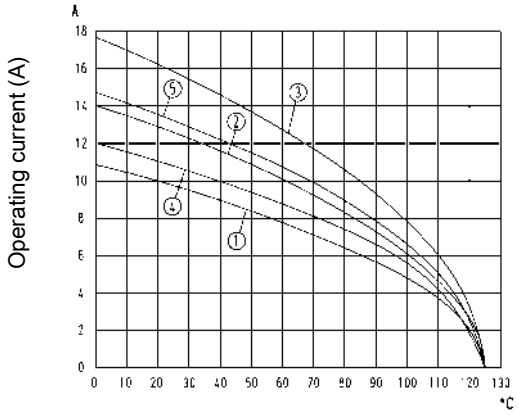
| | |
|---|---|
| Number of contacts | 40, 64 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles with other HMC components | ≥10000 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Han® 64 EEE HMC 1.5 mm²
② Han® 64 EEE HMC 2.5 mm²
③ Han® 64 EEE HMC 4 mm²
④ Han® 40 EEE HMC 1.5 mm²
⑤ Han® 40 EEE HMC 2.5 mm²

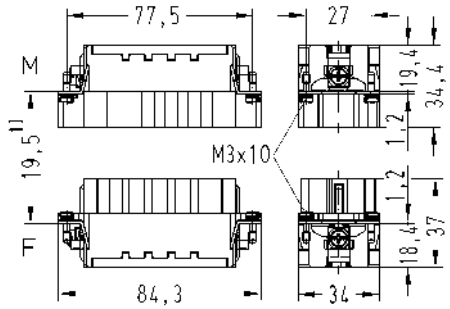
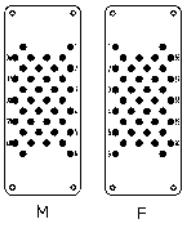
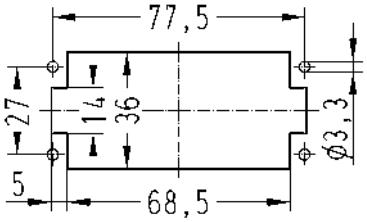
## Specifications and approvals

EN 60664-1
IEC 61984

Number of contacts

40+ ⏚

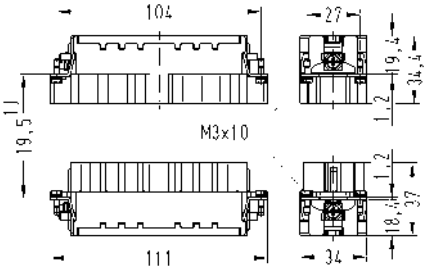
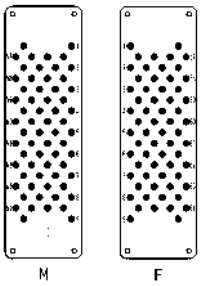
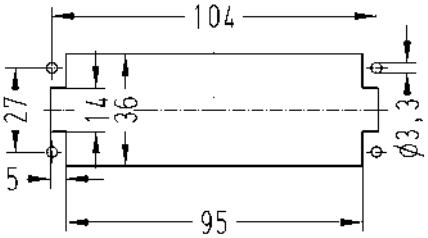
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EEE HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 240 3001 | 09 32 240 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

Number of contacts

# 64+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EEE HMC, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 09 32 264 3001 | 09 32 264 3101 |   1) distance for contact max. 21 mm   Contact arrangement (view from termination side)   Panel cut out |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤3 mΩ |
| Mating cycles with other HMC components | ≥10000 |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

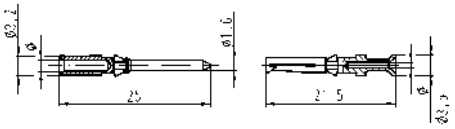
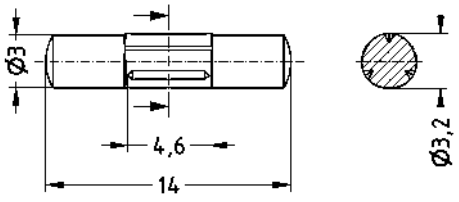
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 200 6124<br>09 15 200 6123<br>09 15 200 6125<br>09 15 200 6122<br>09 15 200 6121<br>09 15 200 6126 | 09 15 200 6224<br>09 15 200 6223<br>09 15 200 6225<br>09 15 200 6222<br>09 15 200 6221<br>09 15 200 6226 |  |
| Han D®,<br>Han DD®,<br>Han® DDD,<br>Coding pin<br><br>Only for crimp termination<br>With loss of one contact | | | 09 33 000 9915 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Mating cycles with other HMC components | ≥10000 |
| Material (contacts) | Copper alloy |
| Material (accessories) | Thermoplastic |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

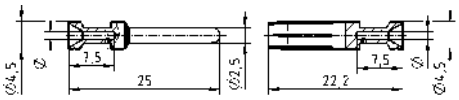
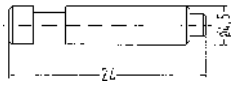
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 200 6117<br>09 33 200 6122<br>09 33 200 6115<br>09 33 200 6118<br>09 33 200 6116<br>09 33 200 6123<br>09 33 200 6119 | 09 33 200 6217<br>09 33 200 6222<br>09 33 200 6215<br>09 33 200 6218<br>09 33 200 6216<br>09 33 200 6223<br>09 33 200 6221 |  |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br>for crimp inserts only<br>With loss of one contact | | | 09 33 000 9954 |  |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |

* on the back crimp collar

Stripping length 7.5 mm

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Mating cycles with other HMC components | ≥10000 |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

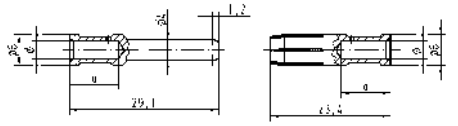
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® C HMC,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated | 1.5<br>2.5<br>4<br>6<br>10 | 09 32 200 6114<br>09 32 200 6115<br>09 32 200 6119<br>09 32 200 6118<br>09 32 200 6117 | 09 32 200 6224<br>09 32 200 6225<br>09 32 200 6229<br>09 32 200 6228<br>09 32 200 6227 |  |

| Wire gauge | | ø | Stripping length |
|---|---|---|---|
| 1.5 mm² | AWG 16 | 1.75 mm | 9.5 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 9.5 mm |
| 4 mm² | AWG 12 | 2.85 mm | 9.5 mm |
| 6 mm² | AWG 10 | 3.5 mm | 9.5 mm |
| 10 mm² | AWG 8 | 4.3 mm | 15 mm |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤10 mΩ |
| Mating cycles with other HMC components | ≥10000 |

## Technical characteristics

| | |
|---|---|
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| D-Sub,<br>Crimp contact,<br>Contact surface:<br>HMC gold plated | 0.08 ... 0.21<br>0.13 ... 0.33<br>0.33 ... 0.52 | 09 67 000 7570<br>09 67 000 5570<br>09 67 000 8570 | 09 67 000 7470<br>09 67 000 5470<br>09 67 000 8470 | 導体断面積 / ø / ストリップ長さ<br>0.08 - 0.21 mm² / AWG 28-24 / 4 mm<br>0.13 - 0-33 mm² / AWG 26-22 / 4 mm<br>0.33 - 0.52 mm² / AWG 22-20 / 4 mm |



## Features

- Metal hoods / housings
- Locking levers: Han-Easy Lock® with special locking reel
- Field of application: for excellent mechanical and electrical protection in demanding environments, for example, in the automobile and mechanical engineering industries also for process and regulation control applications
- Distinguishing feature: hoods/housings colour-coded grey (RAL 7037)

## Technical characteristics

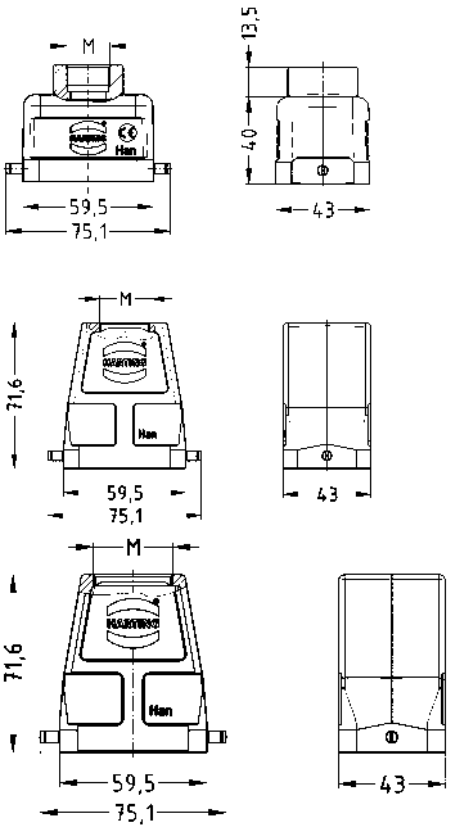
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles with other HMC components | ≥10000 |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel |
| Colour (locking) | RAL 7037 (dust grey) |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

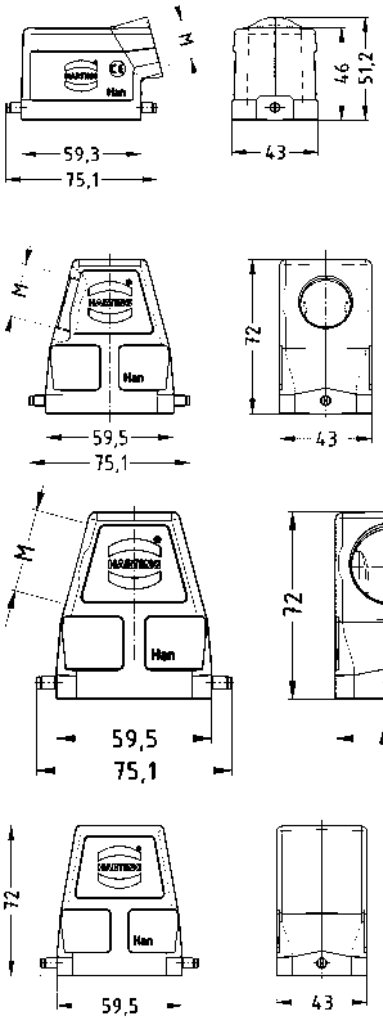
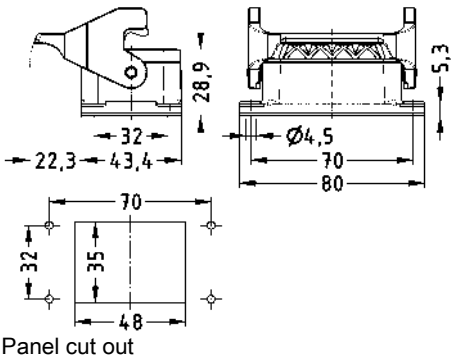
## Specifications and approvals

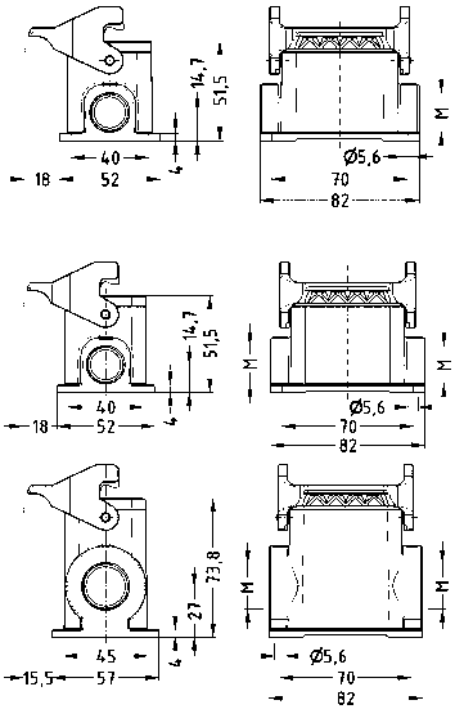
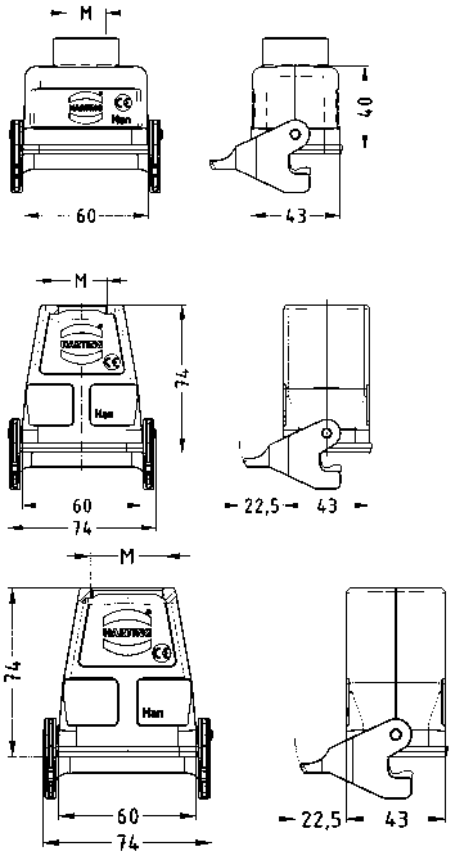
DNV GL

Special hoods and housings for high mating cycles
Single locking lever

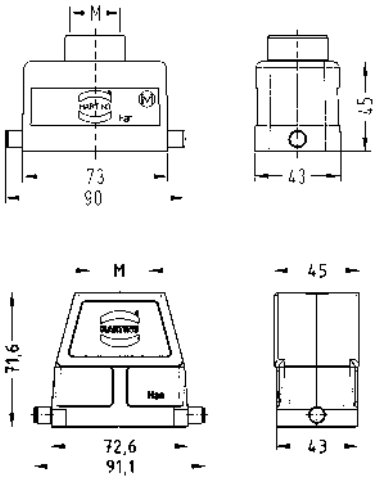
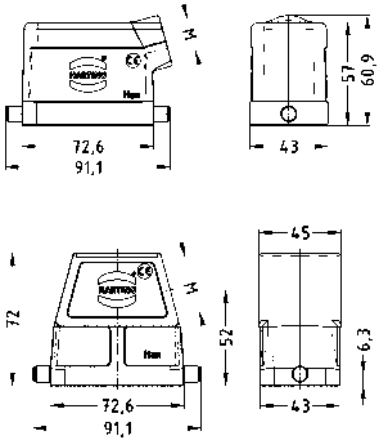
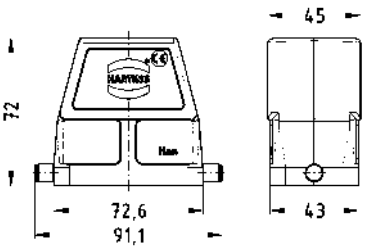


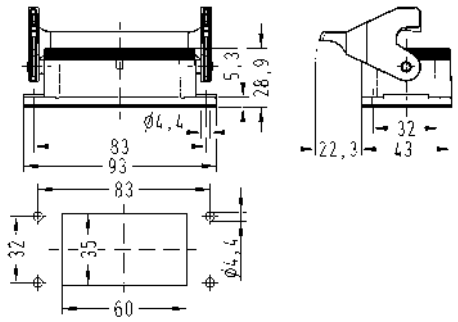
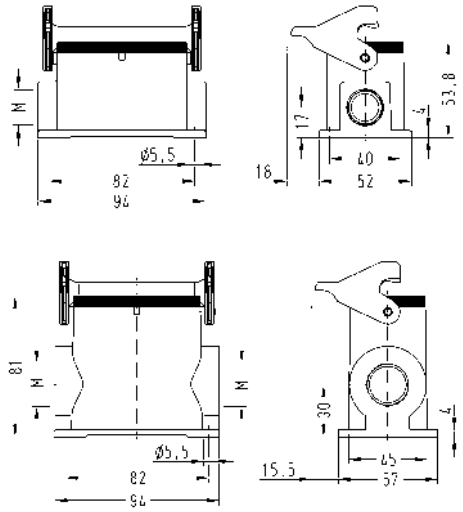
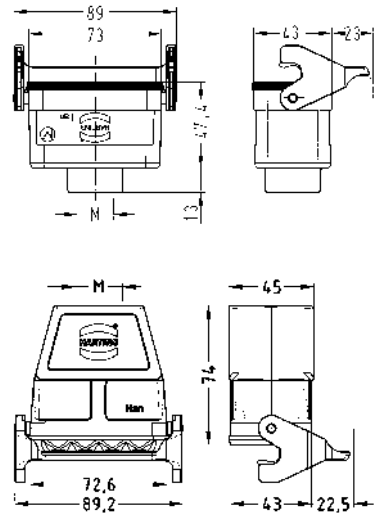
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 30 206 1440 | 19 30 206 0446<br>19 30 206 0447 |  |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 30 206 1540<br>19 30 206 1541 | 19 30 206 0546<br>19 30 206 0547 |  |
| Han® HMC,<br>Hood,<br>IP65<br> | | | 09 30 206 0801 |  |
| Han® HMC,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 206 0301 | | <br>Panel cut out |

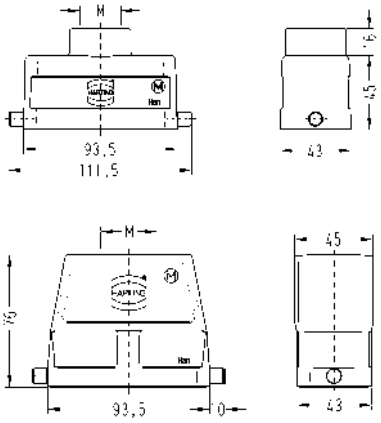
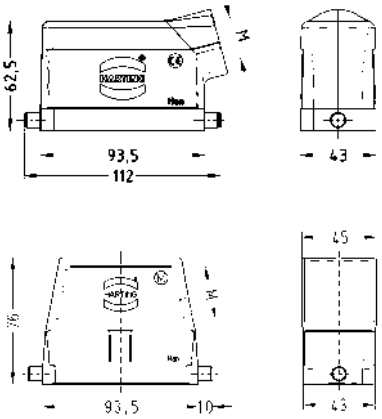
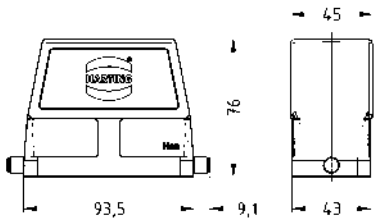
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>2x M20<br>2x M25<br>2x M32 | 19 30 206 1290 | 19 30 206 1250<br><br>19 30 206 0291<br>19 30 206 0292 |  |
| Han® HMC,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 30 206 1750 | 19 30 206 0756<br>19 30 206 0757 |  |

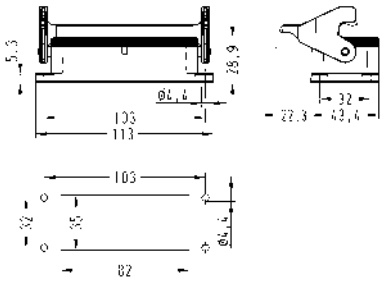
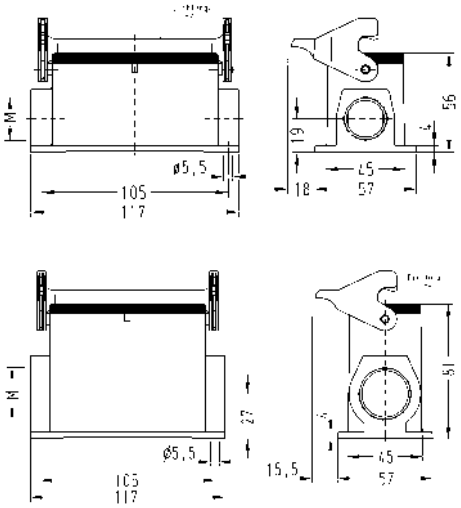
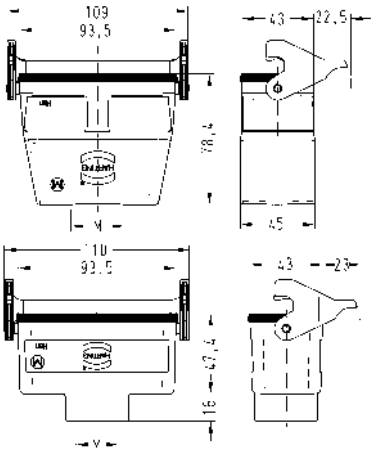
Special hoods and housings for high mating cycles
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC, Hood, Top entry, IP65  | 1x M20<br>1x M25<br>1x M32 | 19 30 210 1440<br>19 30 210 1441 | 19 30 210 0447 |  |
| Han® HMC, Hood, Side entry, IP65  | 1x M20<br>1x M25<br>1x M32 | 19 30 210 1540<br>19 30 210 1541 | 19 30 210 0547 |  |
| Han® HMC, Hood, Without cable entry, IP65  | | | 09 30 210 0803 |  |

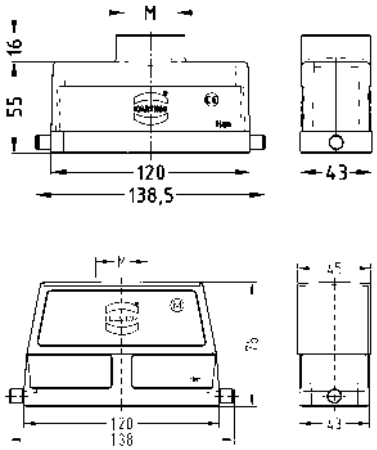
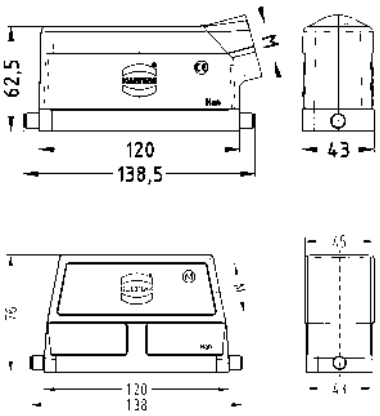
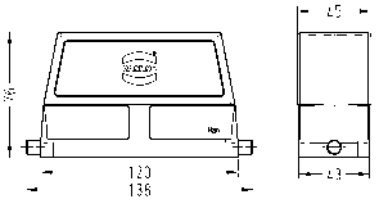
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 210 0305 | | <br>Panel cut out |
| Han® HMC,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>2x M20<br>2x M25<br>2x M32 | 19 30 210 1250<br>19 30 210 1290 | 19 30 210 0291<br>19 30 210 0292 |  |
| Han® HMC,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>1x M25 | 19 30 210 1750 | 19 30 210 0756 |  |

Special hoods and housings for high mating cycles
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC,<br>Hood,<br>Top entry,<br>IP65  | 1x M25<br>1x M32<br>1x M40 | 19 30 216 1441<br>19 30 216 1442 | 19 30 216 0447<br>19 30 216 0448 |   |
| Han® HMC,<br>Hood,<br>Side entry,<br>IP65  | 1x M25<br>1x M32 | 19 30 216 1541<br>19 30 216 1542 | 19 30 216 0547 |   |
| Han® HMC,<br>Hood,<br>Without cable entry,<br>IP65  | | | 09 30 216 0803 |   |

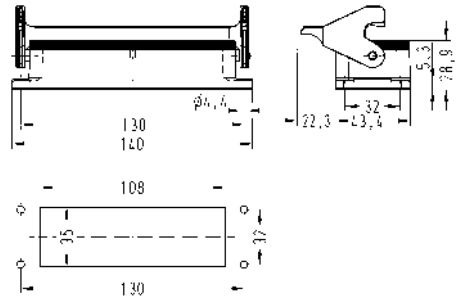
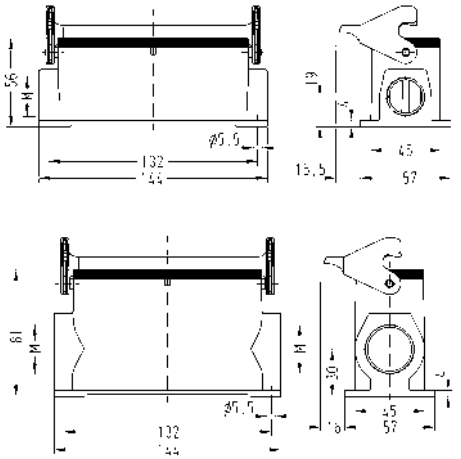
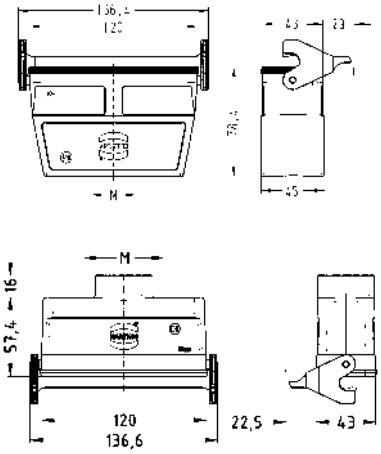
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 216 0307 | | <br>Panel cut out |
| Han® HMC,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32<br>2x M25<br>2x M32 | 19 30 216 1251<br><br>19 30 216 1291 | 19 30 216 0252<br>19 30 216 0291<br>19 30 216 0292 |  |
| Han® HMC,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | 19 30 216 1751<br>19 30 216 1752 | 19 30 216 0757 |  |

Special hoods and housings for high mating cycles
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC, Hood, Top entry, IP65  | 1x M32<br>1x M40 | 19 30 224 1442 | 19 30 224 0447<br>19 30 224 0448 |  |
| Han® HMC, Hood, Side entry, IP65  | 1x M25<br>1x M32<br>1x M40 | 19 30 224 1541<br>19 30 224 1542 | 19 30 224 0547<br>19 30 224 0548 |  |
| Han® HMC, Hood, Without cable entry, IP65  | | | 09 30 224 0803 |  |

# Hoods/Housings

Size 24 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® HMC,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 224 0307 | | <br>Panel cut out |
| Han® HMC,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>2x M25<br>2x M32 | 19 30 224 1251<br>19 30 224 1291 | 19 30 224 0292 |  |
| Han® HMC,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32 | 19 30 224 1752 | 19 30 224 0757 |  |

# Docking frame



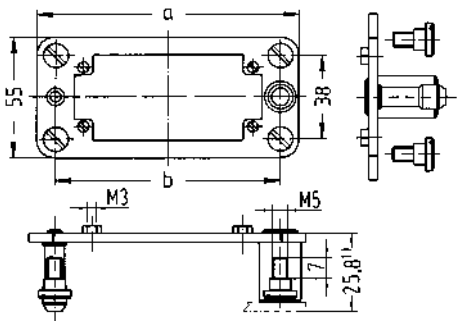
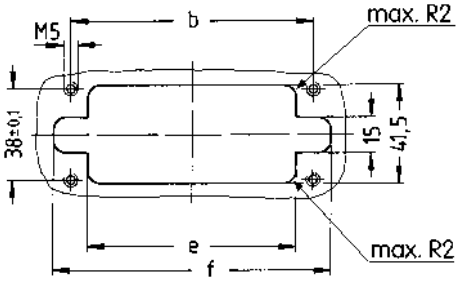


## Features

- Suitable for all inserts of the series Han E®, Han E® HMC, Han EE®, Han EE® HMC, Han EEE®, Han EEE® HMC, Han® ES, Han D® (size B), Han D® HMC, Han DD®, Han DD® HMC, Han-Com®, Han® HsB, Han-Modular®
- Due to the floating system of the docking frame the PE connection of the mounting base has to be installed separately.
- Inserts are protected against mechanical damage

## Technical characteristics

| | |
|---|---|
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (accessories) | Stainless steel |
| RoHS | compliant with exemption |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Docking frame,<br>Pack contents:<br>1 frame,<br>4 cheese head shoulder screws (Steel, zinc plated) to fix the docking frame<br><br>Pull-in-range x-axis: ± 1.5 mm<br>Pull-in-range y-axis: ± 1.5 mm | 06 B<br>10 B<br>16 B<br>24 B | 09 30 006 1704<br>09 30 010 1704<br>09 30 016 1704<br>09 30 024 1704 | <br><br>Distance for electrical and FO contacts max. 27 mm; for Han-Modular® series max. 26.5 mm<br>6 B: a=86; b=69<br>10 B: a=99; b=82<br>16 B: a= 119.5 ; b= 102.5<br>24 B: a=146; b=129<br><br><br>6 B: b= 69; e= 54.5; f= 84<br>10 B: b= 82; e= 67.5; f= 97<br>16 B: b= 102.5; e= 88; f= 117.5<br>24 B: b= 129; e= 114.5; f= 144 |

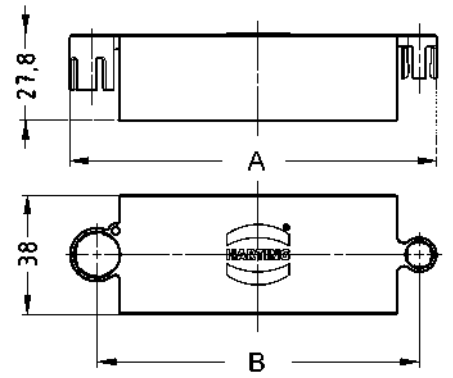
# Docking frame

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP20 |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |

## Specifications and approvals

EN 45545-2 R22: HL1, HL2, HL3
EN 45545-2 R23: HL1, HL2, HL3

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Protection cover, for Han® docking frame, IP20  | 06 B<br>10 B<br>16 B<br>24 B | 09 30 006 5418<br>09 30 010 5418<br>09 30 016 5418<br>09 30 024 5418 |   |

| | A | B |
|---|---|---|
| 6 B | 83.3 mm | 69 mm |
| 10 B | 96.3 mm | 82 mm |
| 16 B | 116.8 mm | 102.5 mm |
| 24 B | 143.3 mm | 129 mm |

# Docking frame



## Features

- Blind mating connector system for drawer systems
- Highest flexibility due to a product range of over 100 connector modules
- Direct panel mounting without hoods and housings
- Leading centring system compensates for tolerances of +/- 2 mm
- Very robust mechanical characteristics

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Lock-in range | ±4 mm |
| Material (frames) | Zinc die-cast |
| RoHS | compliant |

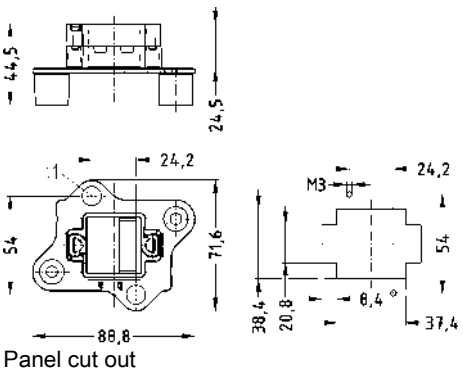
## Specifications and approvals

EN 60664-1
IEC 61984

## Details

The docking frame has no PE contact as it is not required in many drawer system applications.

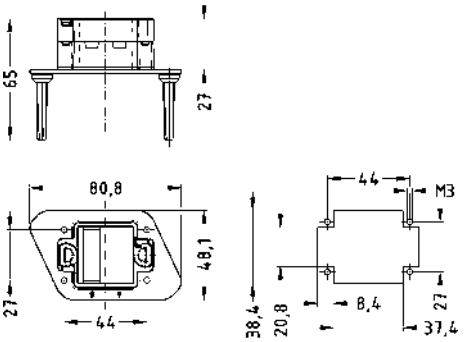
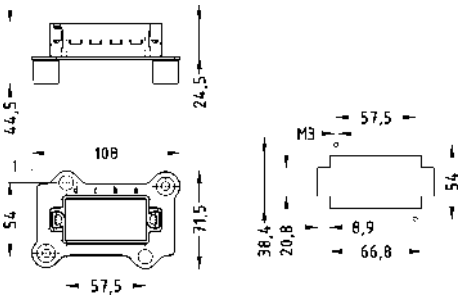
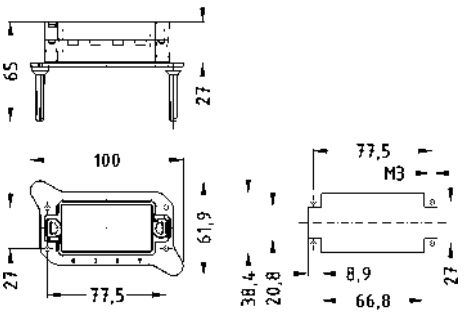
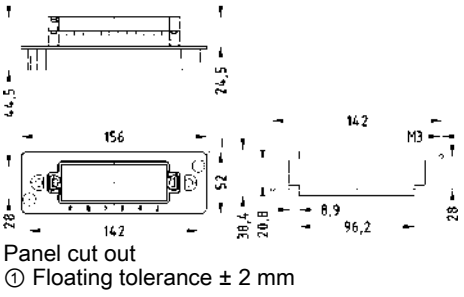
Suitable for Han-Modular® modules except for Han® Megabit module, Han® RJ45 module, optical and pneumatic modules.

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Docking frame,<br>Float mount,<br>for 2 modules,<br>a ... f | 09 14 006 1706 | <br>Panel cut out<br>① Floating tolerance ± 2 mm |



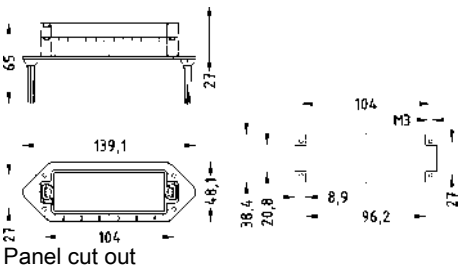
# Docking frame



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Docking frame,<br>Fixed,<br>for 2 modules,<br>A ... F | 09 14 006 1716 | <br>Panel cut out |
| Han-Modular®,<br>Docking frame,<br>Float mount,<br>for 4 modules,<br>a ... f | 09 14 016 1706 | <br>Panel cut out<br>① Floating tolerance ± 2 mm |
| Han-Modular®,<br>Docking frame,<br>Fixed,<br>for 4 modules,<br>A ... F | 09 14 016 1716 | <br>Panel cut out |
| Han-Modular®,<br>Docking frame,<br>Float mount,<br>for 6 modules,<br>a ... f | 09 14 024 1706 | <br>Panel cut out<br>① Floating tolerance ± 2 mm |

# Docking frame



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Modular®,<br>Docking frame,<br>Fixed,<br>for 6 modules,<br>A ... F | 09 14 024 1716 | <br><br>Panel cut out |



# Han® High Temp

| Contents | Page |
|---|---|
| Han® Q 5/0 High Temp ..... | **Han 17.3** |
| Han® High Temp hoods/housings 3 A..... | **Han 17.4** |
| Han® High Temp inserts ..... | **Han 17.6** |
| Han® High Temp contacts ..... | **Han 17.11** |
| Han® High Temp hoods/housings..... | **Han 17.12** |

## Description

We used high-quality materials with wide temperature ranges to produce connectors that are uniquely suited for a wide variety of applications.

These connectors can withstand temperatures up to 200 °C – so they can be used directly in machines and facilities that would otherwise require cumbersome and complex constructions.

For our users, this delivers direct advantages:

- The electro-mechanical design process is optimized.
  Machine parts which are exposed to high temperatures can be designed modularly.
- The work process is optimized
  since lower wiring complexity results in reduced maintenance costs.
- The after-sales phase is optimized
  because this more service-friendly approach results in less outages and down times.

## Design overview

The basic structure of the Han® High Temp connector consists of a bulkhead mounted housing and a cable-side hood.

Hoods and housings:
The aluminium die-cast hoods and housings feature a highly compressed surface with excellent non-stick properties. It also has a special non-stick coating on the bulkhead-side seal which allows easy handling without significant sticking.

Inserts:
The Han® High Temp series features very rugged contact inserts, which are really the heart of any connector. The LCP injection-moulded insert delivers outstanding temperature resistance coupled with excellent mechanical stability.

Contacts:
Our new temperature resistant contacts, for either screw or crimp terminations, ensure reliable connections with minimal contact resistance even at extreme temperatures.





Han® High Temp connectors
remain robust and reliable for their entire lifespan!

Number of contacts

5+ ⏚

16 A 230/400 V 4 kV 3

## Technical characteristics

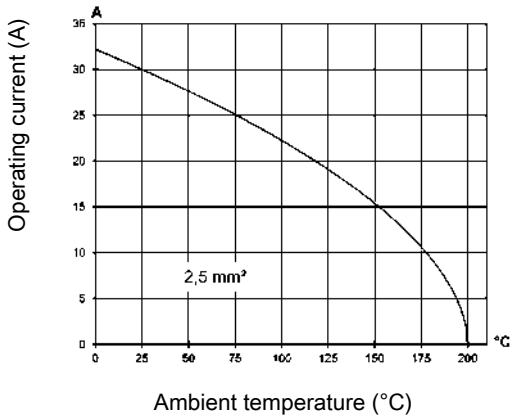
| | |
|---|---|
| Number of contacts | 5 |
| Rated current | 16 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +200 °C With Han® High Temp components |
| Mating cycles | ≥500 |
| Material (insert) | Liquid crystal polymer (LCP) |
| Colour (insert) | Black |
| Material flammability class acc. to UL 94 | V-0 |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

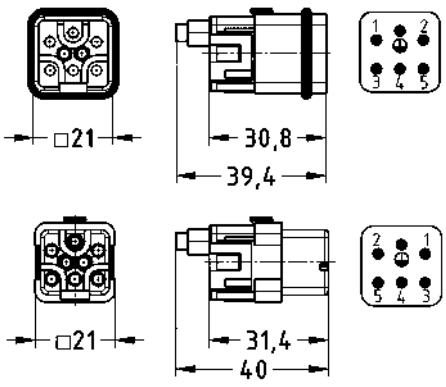
Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

## Specifications and approvals

EN 60664-1
IEC 61984

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Q High Temp, 5/0, Crimp termination  Please order crimp contacts separately. Coding pins on request | 0.14 ... 2.5 | 09 12 805 3004 | 09 12 805 3104 |   |

# Han® High Temp hoods/housings 3 A

Size 3 A

Hoods/housings for harsh environments
Single locking lever

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C, -40 ... +200 °C With Han® High Temp compo-nents |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Stainless steel |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (locking) | Stainless steel |

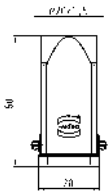
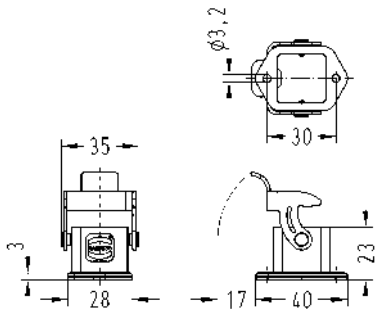
## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

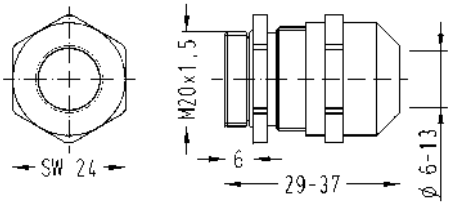
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw  | 1x M20 | 19 44 003 1440 |  |
| Han-INOX®,<br>Han® High Temp,<br>Bulkhead mounted housing,<br>Straight,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw  | | 19 44 003 0301 | <br>Panel cut out 22 x 22 mm |

## Technical characteristics

| | |
|---|---|
| Material (seal) | FPM |
| Colour (seal) | Light grey |

## Technical characteristics

| | |
|---|---|
| Material (cable glands) | Stainless steel |
| Material (clamping ring) | Polyamide (PA) |
| RoHS | compliant |

| Identification | Size | Clamping range (mm) | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|---|
| Han A®, Flange gasket, FPM  | | | 3 A | 09 37 000 9912 | |
| Han-INOX®, Cable gland | M20 | 6 ... 13 | | 19 44 000 5082 |   |

## Features

- for extreme temperatures up to 200 °C
- All piece parts (contacts, insert material, hoods and housings, seals and grounding elements) are designed in a temperature resistant way

## Technical characteristics

| | |
|---|---|
| Number of contacts | 6, 10, 16, 24 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +200 °C With Han® High Temp components |
| Mating cycles | ≥500 |
| Material (insert) | Liquid crystal polymer (LCP) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

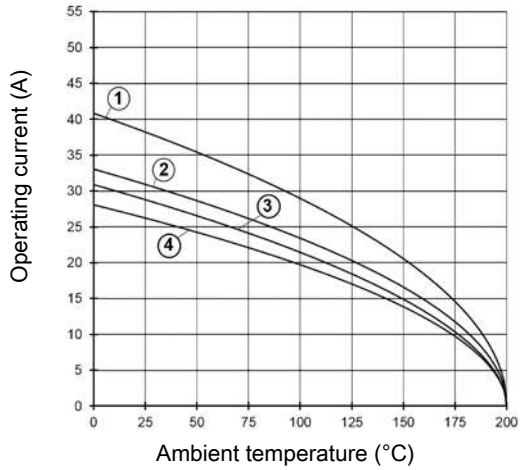
## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

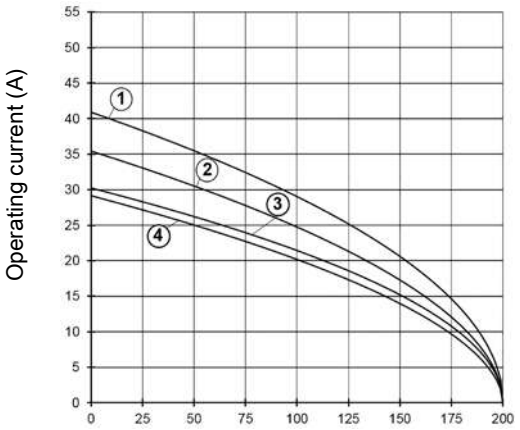
Crimp termination




① Han® 6 E High Temp 2,5 mm²
② Han® 10 E High Temp 2,5 mm²
③ Han® 16 E High Temp 2,5 mm²
④ Han® 24 E High Temp 2,5 mm²

## Derating

Screw termination




① Han® 6 E High Temp 2.5 mm²
② Han® 10 E High Temp 2.5 mm²
③ Han® 16 E High Temp 2.5 mm²
④ Han® 24 E High Temp 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

Han® High Temp crimp inserts are only for use with the special Han® High Temp crimp contacts.

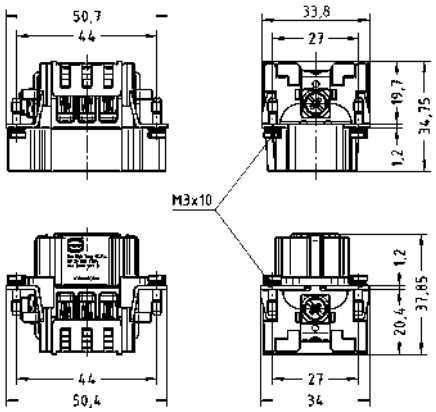
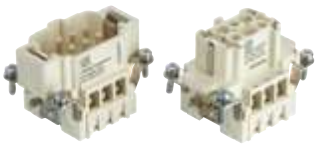
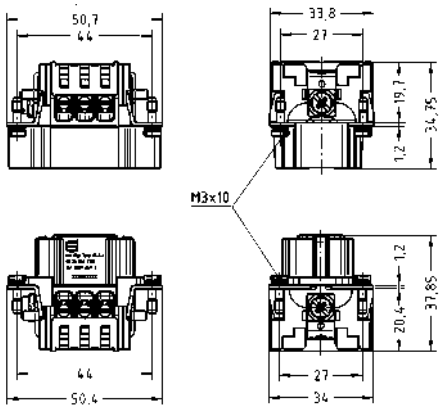
Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm

Number of contacts

6+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® High Temp, Crimp termination<br><br>Please order crimp contacts separately. | 0.5 ... 2.5 | 09 33 806 2604 | 09 33 806 2704 |  |
| Han E® High Temp, Screw termination, With wire protection,<br>Contact surface: Silver plated<br> | 0.75 ... 2.5 | 09 33 806 2603 | 09 33 806 2703 |  |

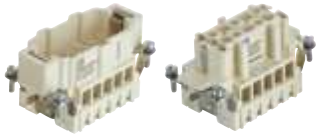
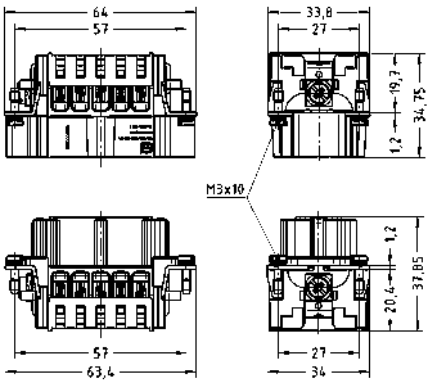
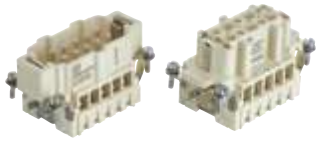
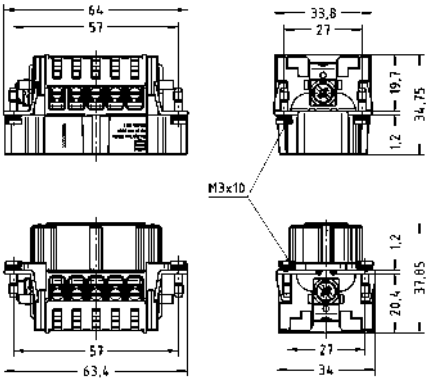
# Han® High Temp inserts

Size 10 B

Number of contacts

10+ ⏚

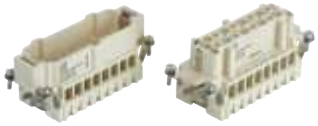
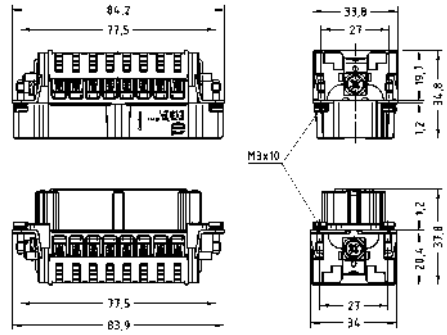
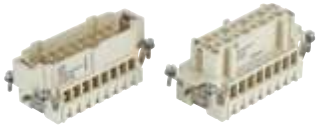
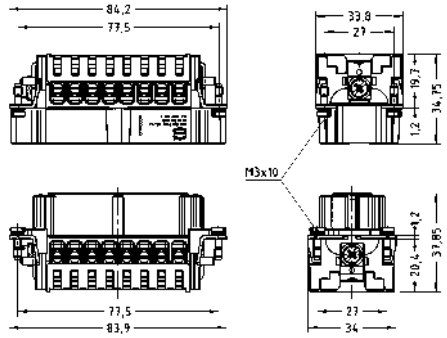
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® High Temp,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.5 ... 2.5 | 09 33 810 2604 | 09 33 810 2704 |  |
| Han E® High Temp,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 09 33 810 2603 | 09 33 810 2703 |  |

Number of contacts

16+

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® High Temp, Crimp termination<br><br>Please order crimp contacts separately. | 0.5 ... 2.5 | 09 33 816 2604 | 09 33 816 2704 |  |
| Han E® High Temp, Screw termination, With wire protection,<br>Contact surface: Silver plated<br> | 0.75 ... 2.5 | 09 33 816 2603 | 09 33 816 2703 |  |

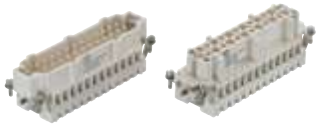
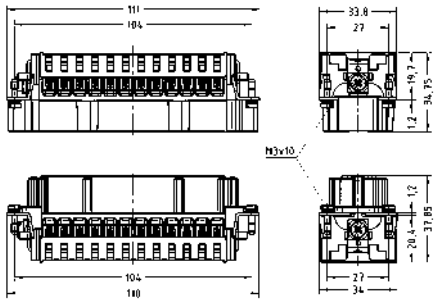
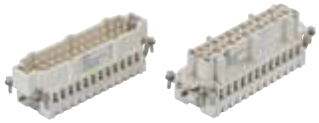
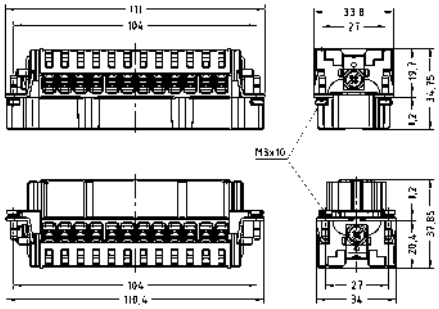
# Han® High Temp inserts

Size 24 B

Number of contacts

24+

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® High Temp, Crimp termination<br><br>Please order crimp contacts separately. | 0.5 ... 2.5 | 09 33 824 2604 | 09 33 824 2704 |  |
| Han E® High Temp, Screw termination, With wire protection,<br>Contact surface: Silver plated<br> | 0.75 ... 2.5 | 09 33 824 2603 | 09 33 824 2703 |  |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

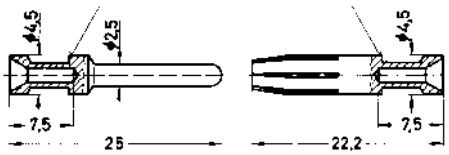
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E® High Temp, Crimp contact, Contact surface: Silver plated  | 0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 33 800 6121<br>09 33 800 6114<br>09 33 800 6105<br>09 33 800 6104<br>09 33 800 6102 | 09 33 800 6220<br>09 33 800 6214<br>09 33 800 6205<br>09 33 800 6204<br>09 33 800 6202 |  |



| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |
| * on the back crimp collar | | |

Stripping length 7.5 mm

# Han® High Temp hoods/housings

High Temp

## Features

- for extreme temperatures up to 200 °C
- All piece parts (contacts, insert material, hoods and housings, seals and grounding elements) are designed in a temperature resistant way
- Hoods/Housings, corrosion resistant metal

## Technical characteristics

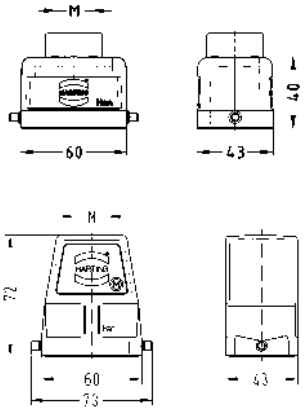
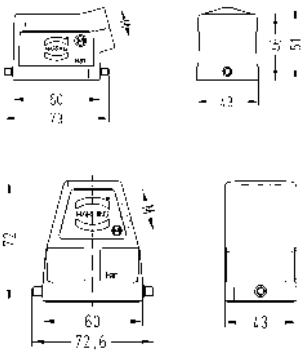
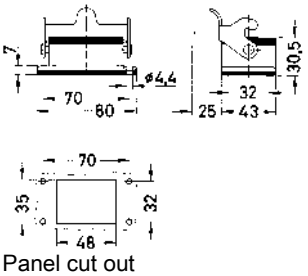
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C, -40 ... +200 °C With Han® High Temp components |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | FPM |
| Colour (seal) | Red |
| Material (locking) | Stainless steel |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

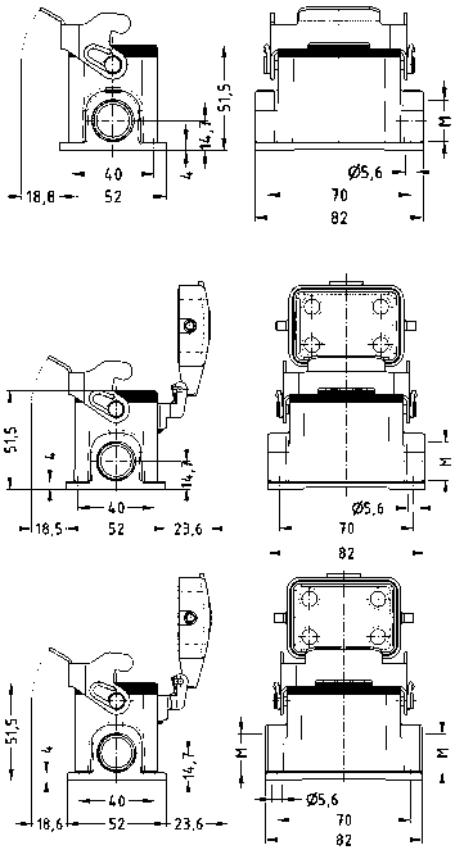
CE

Single locking lever

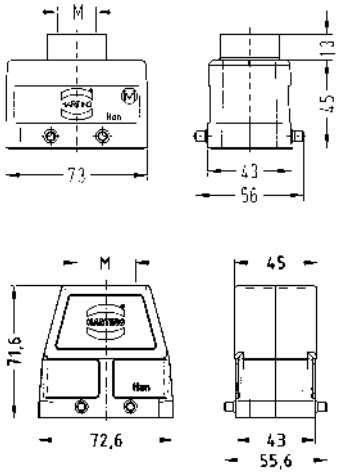
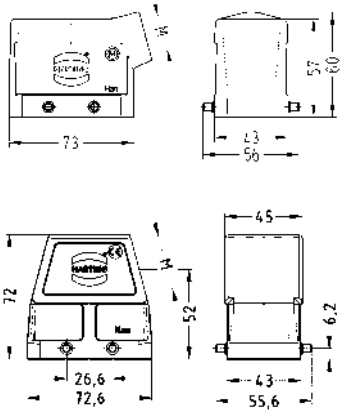
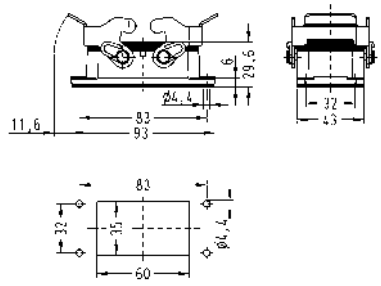
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 62 806 1440 | 19 62 806 0446<br>19 62 806 0447 |  |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 62 806 1540<br>19 62 806 1541 | 19 62 806 0546<br>19 62 806 0547 |  |
| Han® High Temp,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 62 806 0391 | | <br>Panel cut out |

# Han® High Temp hoods/housings

Size 6 B

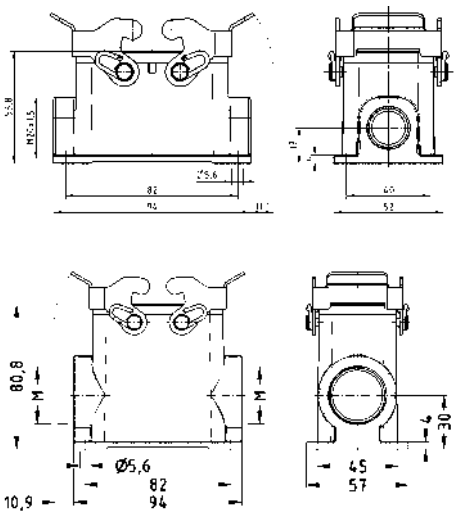
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® High Temp,<br>Surface mounted housing,<br>Side entry,<br>IP65  | 1x M20<br>1x M20<br>2x M20 | 19 62 806 1291<br>19 62 806 2255<br>19 62 806 2295 | |   |

Double locking lever

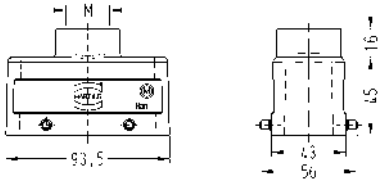
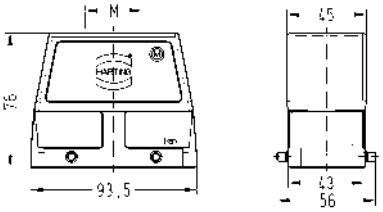
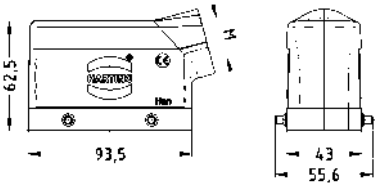
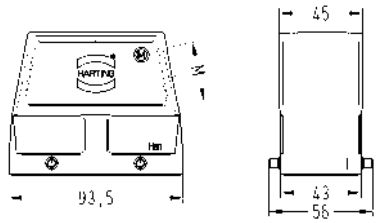
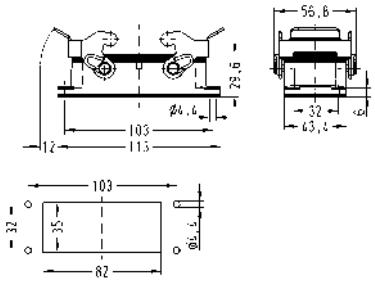
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32<br>1x M40 | 19 62 810 1420<br>19 62 810 1421 | 19 62 810 0426<br>19 62 810 0427<br>19 62 810 0428 |  |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 62 810 1520 | 19 62 810 0526<br>19 62 810 0527 |  |
| Han® High Temp,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 62 810 0391 | | <br>Panel cut out |

# Han® High Temp hoods/housings

Size 10 B

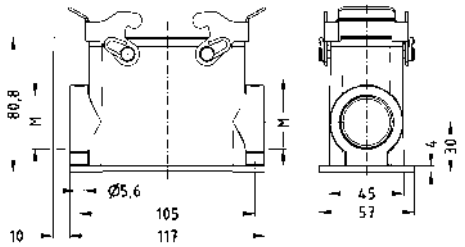
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® High Temp,<br>Surface mounted housing,<br>Side entry,<br>IP65  | 1x M20<br>2x M32 | 19 62 810 1235 | 19 62 810 0292 |   |

Double locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M25<br>1x M32<br>1x M40 | 19 62 816 1421 | 19 62 816 0427<br>19 62 816 0428 | <br> |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M25<br>1x M32<br>1x M40 | 19 62 816 1521 | 19 62 816 0527<br>19 62 816 0528 | <br> |
| Han® High Temp,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 62 816 0391 | | <br>Panel cut out |

# Han® High Temp hoods/housings

Size 16 B

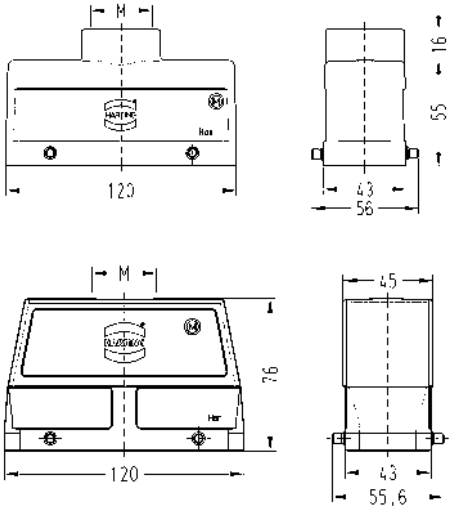
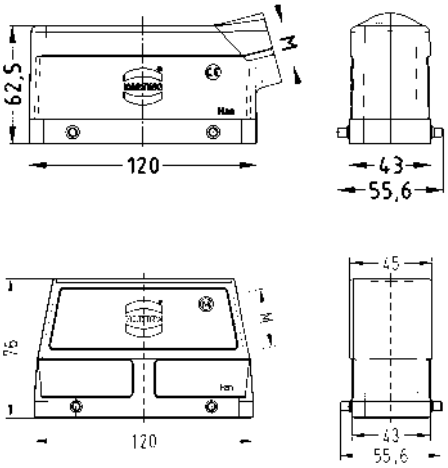
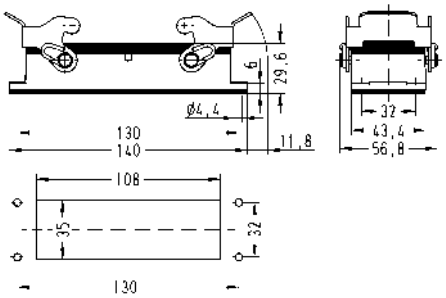
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® High Temp,<br>Surface mounted housing,<br>Side entry,<br>IP65 | 2x M32 | | 19 62 816 0292 |  |

# Han® High Temp hoods/housings

Size 24 B

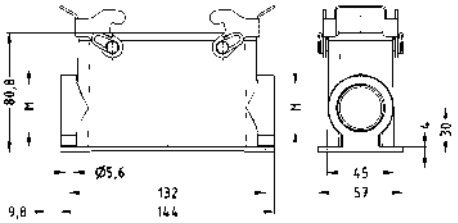


Double locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M32<br>1x M40<br>1x M50 | 19 62 824 1422 | 19 62 824 0427<br>19 62 824 0428<br>19 62 824 0429 |  |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M25<br>1x M32<br>1x M40 | 19 62 824 1521 | 19 62 824 0527<br>19 62 824 0528 |  |
| Han® High Temp,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 62 824 0391 | | <br>Panel cut out |

# Han® High Temp hoods/housings

Size 24 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® High Temp,<br>Surface mounted housing,<br>Side entry,<br>IP65<br> | 2x M32 | | 19 62 824 0292 |  |

# Han-Brid®



| Contents | Page |
|---|---|
| Han-Brid® Cu | **Han 19.6** |
| Han-Brid® FO | **Han 19.10** |
| Han-Brid® Quintax 3 A | **Han 19.13** |
| Han-Brid® Quintax 3 A with coaxial contacts | **Han 19.15** |
| Han-Brid® Quintax 3 A with Han-Quintax® contacts | **Han 19.18** |
| Han-Brid® Quintax 3 A with Han-Quintax® HD contacts | **Han 19.20** |
| Han-Brid® RJ45 C | **Han 19.21** |
| Han-Brid® USB | **Han 19.24** |
| Han-Brid® FireWire | **Han 19.25** |
| Han® 4 A SC | **Han 19.26** |
| Hoods/Housings, metal Han® 3 A | **Han 19.29** |
| Hoods/Housings, thermoplastic Han® 3 A | **Han 19.31** |
| Han® M hoods/housings | **Han 19.33** |
| Han® EMC hoods/housings | **Han 19.34** |
| Han-INOX® hoods/housings | **Han 19.35** |
| Han® HPR hoods/housings | **Han 19.37** |

## Data interfaces



Han-Brid® F.O.
- Is suitable for all HP Versatile Link (Horizontal Package) transmitters and receivers
- Data rates: Standard 12 Mbit/s, suitable for all common fieldbus systems
- Insert allows integration of HP standard contacts for POF and HCS®* fibres
- Temperature range -40 °C ... +70 °C

Han-Brid® Cu
- For termination of a shielded twisted pair
- Insert for 2x Han D® male or female contacts
- Connection of the shield by means of shielding plate and fixing clamps
- Connection of the device side can be realized either by a printed circuit board as a modular version or as part of the appliance PCB
- Insert for bulkhead mounted housing or the coupling housing are always equipped with a screening spring

Bus Terminator
- Active bus terminator in male and female version
- Standard Han® 3 A hoods and housings
- Power supply to the termination network via electrical contacts of Han-Brid®
- Integrated, galvanically separated DC/DC converter 24 V / 5 V

Han-Brid® Quintax 3 A
- Possibility to terminate shielded four/eight wires conductors
- Possibility to terminate Coax cable with large diameter
- Suitable for all 4-wire bus systems
- Suitable for shielded cable conductor diameter 3 – 9.5 mm
- Transmission of shielding separately from the hood's ground
- Connections are carried out acc. to DIN EN 50 173, Cat. 5
- Temperature range -40 °C ... +70 °C

Han-Brid® RJ45 C
- Suitable for standard RJ 45 Plug and Jack, shielded version
- Connections provided for conductors acc. to DIN EN 50 173, Cat. 5
- Termination from the device side is carried out via a PCB, two versions are possible: modular version or as part of the appliance PCB
- Assembly with standard tools
- Insert for 2 Han-D® male or female contacts offers the combination with electrical bus connector
- Rated current 10 A
- Rated voltage 24 V
- termination side 0.14 - 2.5 mm²

Han-Brid® USB
- Insert for all Han® 3 A hoods and housings
- Hood with glued sealing
- Simple and low-cost termination via insert of a patch cable
- Strain-relief via cable tie

Han-Brid® FireWire
- Insert for all Han® 3 A hoods and housings
- Hood with glued sealing
- Simple and low-cost termination via insert of a patch cable
- Strain-relief via cable tie
- Compatible to IEEE 1394

Han® 4 A SC
- Suitable with housings, size Han® 3 A including versions Han® M, Han® EMV and Han® HPR
- Degree of protection up to IP 68
- For fibre optic SC contacts; up to 4 SC contacts per connector
- For 1 mm POF
- For Multimode fibre 50 - 62.5 / 125 µm and Single-mode fibre 9 / 125 µm
- Full ceramic sleeves for a minimal insertion loss

* HCS® = Hard Clad Silica (registered trade mark of the SpecTran Corporation)

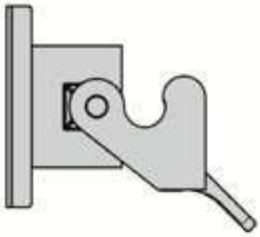
# Overview (Sample: Han-Brid® Cu)



Thermoplastic
09 20 003 0320 (light grey)
09 20 003 0327 (black)

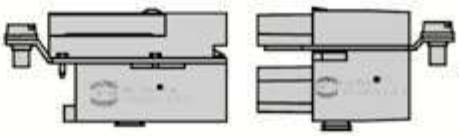
Metal
09 20 003 0301

EMC
09 62 003 0301



Device side
09 12 006 2611
09 12 006 2695
09 12 006 2694

Cable side
09 12 006 3111



Thermoplastic
19 20 003 0423 (light grey)
19 20 003 0426 (black)

Metal
19 20 003 1443

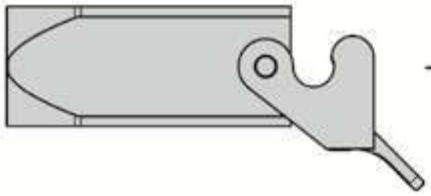
EMC
19 62 003 1443



Thermoplastic
19 20 003 0720 (light grey)
19 20 003 0727 (black)

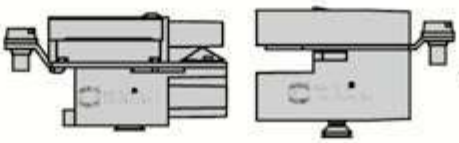
Metal
19 20 003 1750

EMC
19 62 003 1750



Device side
09 12 006 2701
09 12 006 2795
09 12 006 2794

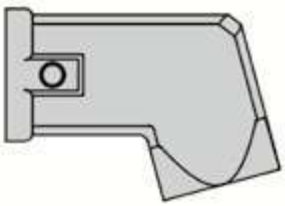
Cable side
09 12 006 3001



Thermoplastic
19 20 003 0623 (light grey)
19 20 003 0627 (black)

Metal
19 20 003 1643

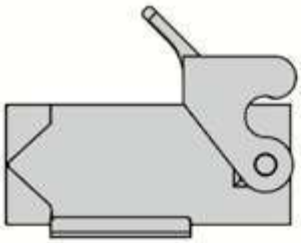
EMC
19 62 003 1643



Thermoplastic
19 20 003 0220 (light grey)
19 20 003 0227 (black)

Metal
19 20 003 1250

EMC
19 62 003 1250



# Overview (Sample: Han-Brid® RJ45 C)



Thermoplastic
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19 20 003 0427 (black)

Metal
09 20 003 1443

EMC
19 62 003 1443



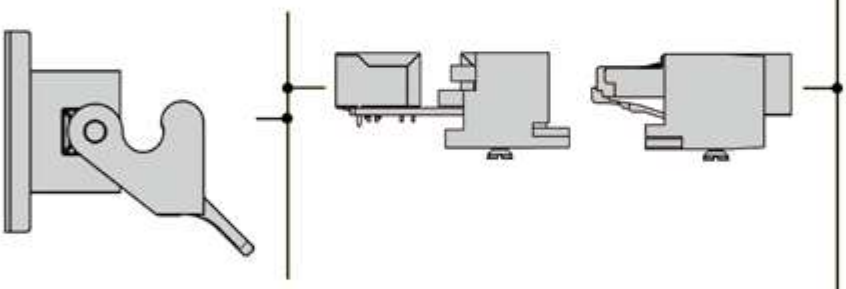
Thermoplastic
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09 20 003 0327 (black)

Metal
09 20 003 0301

EMC
09 62 003 0301

Device side
09 12 003 2770
09 12 003 2774
09 12 003 2776

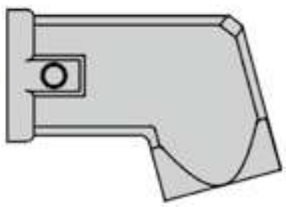
Cable side
09 12 003 3011
09 12 003 3021
09 12 003 3031



Thermoplastic
19 20 003 0623 (light grey)
19 20 003 0627 (black)

Metal
19 20 003 1643

EMC
19 62 003 1643



## Features

General Description

The Han-Brid® series allows the connection of a data interface and a power supply in a single space saving connector. This means that it is now possible to provide data transmission and power to devices in a single bus structure. This hybrid connector family includes provision for connection of a max. 50 V, 10 A power supply together with a range of inserts for connection of a variety of data protocols and transmission medias:

- Han-Brid® F.O. for plastic (POF) or for HCS®* optical fibre
- Han-Brid® Cu for shielded twisted pair
- Han-Brid® Quintax 3 A for Coax cable with large diameter
- Han-Brid® Quintax 3 A for shielded 4 or 8 wire bus systems
- Han-Brid® RJ45 C for Ethernet application
- Han-Brid® USB / Firewire for fast data transmission

Han-Brid® inserts fit into the standard plastic as well as metal hoods and housings with seal of the Han® 3 A series offering a degree of protection IP 65 according to DIN EN 60 529. For harsher environments Han® 3 HPR hoods and housings with a degree of protection of IP 68 can be used.

## Power supply

- Han D® male and female with standard crimp contacts (Order crimp contacts separately)
- Rated current 10 A
- Rated voltage 50 V
- termination side 0.14 - 2.5 mm²
- Approval

# Han-Brid® Cu

## Features

- for termination of a shielded twisted pair
- Insert for Han D® male or female contacts
- Connection of the shield by means of shielding plate and contact springs
- Connection of the device side can be realised either by a printed circuit board as a modular version or as part of the appliance PCB
- Insert for bulkhead mounted or cable to cable housings are always equipped with a contact spring
- Active bus terminator in standard Han® 3 A hoods and housings
- Power supply to the termination network via electrical contacts of Han-Brid®
- Integrated, galvanically separated DC/DC converter 24 V / 5 V

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Additional contacts | + 4 electrical contacts 10 A + option for PE |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (hood/housing) | Polycarbonate (PC), Zinc die-cast |
| Colour (hood/housing) | RAL 9005 (jet black), RAL 7037 (dust grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

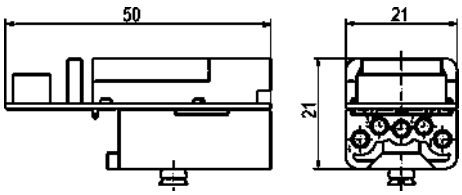
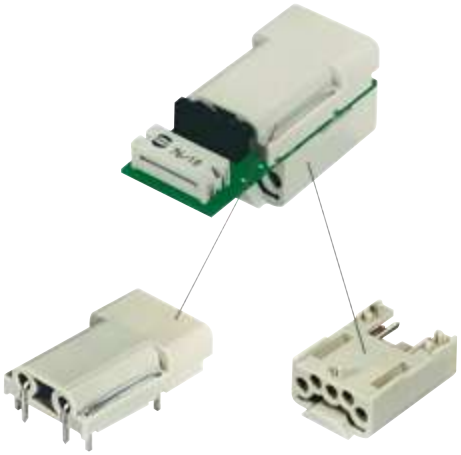
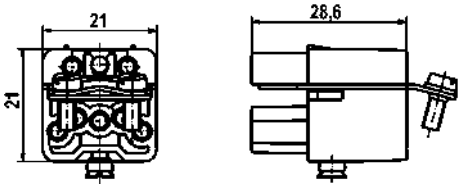
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Number of contacts

2

10 A 50 V 0.8 kV 3
+ 4 electrical contacts 10 A + option for PE



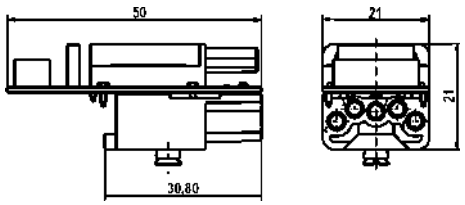
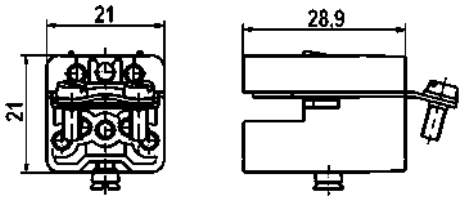
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Brid®, Han-Brid® Cu, Hybrid field bus connector  Device side | 09 12 006 2611 | |   Also available as single parts:<br>09 12 002 2611 Upper part, loaded<br>09 12 002 3011 Upper part, unloaded<br>09 12 004 3011 Lower part, unloaded |
| Han-Brid®, Han-Brid® Cu, Hybrid field bus connector  Cable side | | 09 12 006 3111 |  Contact arrangement (view from termination side) |

Number of contacts

# 2

10 A 50 V 0.8 kV 3
+ 4 electrical contacts 10 A + option for PE



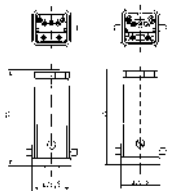
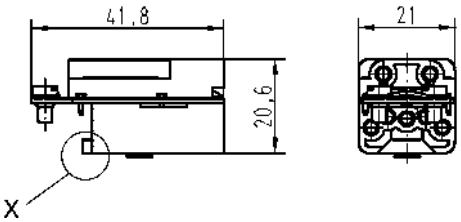
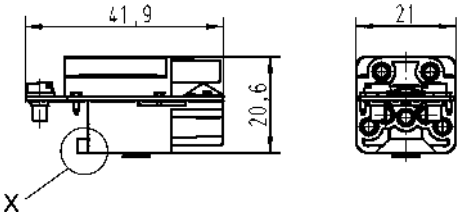
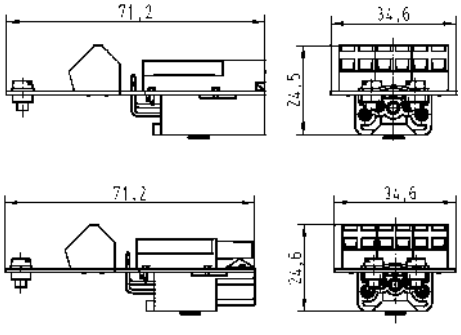
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Brid®,<br>Han-Brid® Cu,<br>Hybrid field bus connector<br><br>Device side | | 09 12 006 2701 | <br><br><br>Also available as single parts:<br>09 12 002 2701 Upper part, loaded<br>09 12 002 3101 Upper part, unloaded<br>09 12 004 3101 Lower part, unloaded |
| Han-Brid®,<br>Han-Brid® Cu,<br>Hybrid field bus connector<br><br>Cable side | 09 12 006 3001 | | <br> |

Number of contacts

# 2

10 A 50 V 0.8 kV 3
+ 4 electrical contacts 10 A + option for PE



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Brid®,<br>Han-Brid® Cu,<br>Bus terminator,<br>Plastic hoods/housings  | 09 12 006 2691 | 09 12 006 2791 |  |
| Han-Brid®,<br>Han-Brid® Cu,<br>Bus terminator,<br>Metal hoods / housings  | 09 12 006 2692 | 09 12 006 2792 | |
| Han-Brid®,<br>Han-Brid® Cu,<br>Panel feed through  | 09 12 006 2694 | 09 12 006 2794 | <br><br>X= Cutting off the fin allows the use in cable to cable housings. |
| Han-Brid®,<br>Han-Brid® Cu,<br>Panel feed through <br>With cage clamp | 09 12 006 2695 | 09 12 006 2795 |  |

# Han-Brid® FO

## Features

- Is suitable for all HP Versatile Link (Horizontal Package) transmitters and receivers
- Data rates: Standard 12 Mbit/s, suitable for all common fieldbus systems
- Insert allows integration of HP standard contacts for POF and HCS® fibres

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Additional contacts | + 4 electrical contacts 10 A + option for PE |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +70 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

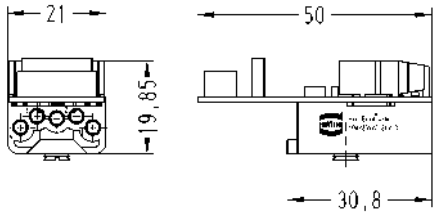
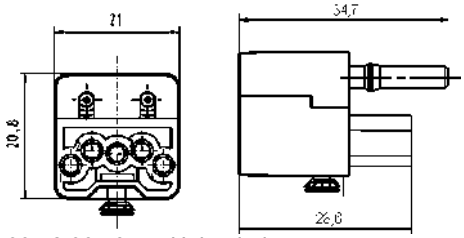
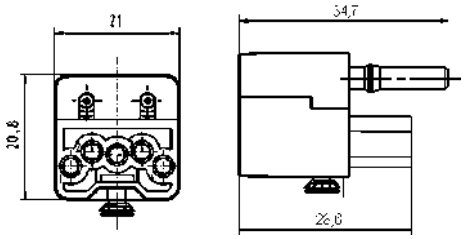
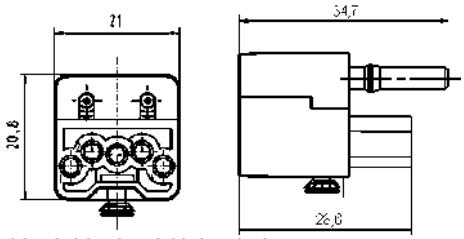
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Number of contacts

# 2

10 A 50 V 0.8 kV 3
+ 4 electrical contacts 10 A + option for PE



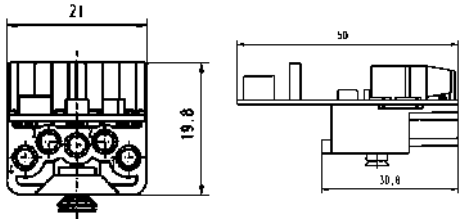
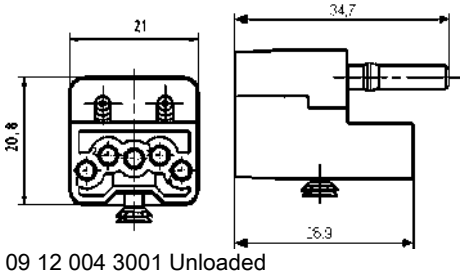
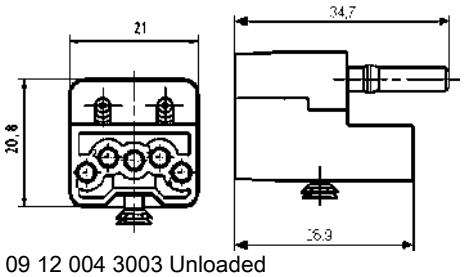
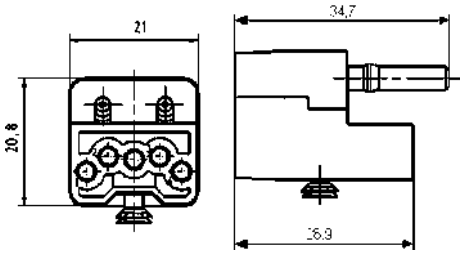
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector  Device side FO (f) + Han D® (m) With PCB | 09 12 004 2611 | |   Contact arrangement (view from termination side) Also available as single parts: 09 12 004 3011 Lower part, unloaded |
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector  Cable side FO (m) + Han D® (f) for POF | | 09 12 004 2711 |   09 12 004 3111 Unloaded |
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector  Cable side FO (m) + Han D® (f) for POF crimpless | | 09 12 004 2713 |   09 12 004 3113 Unloaded |
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector  Cable side FO (m) + Han D® (f) for HCS® fibre | | 09 12 004 2716 |   09 12 004 3116 Unloaded |

Number of contacts

# 2

10 A 50 V 0.8 kV 3
+ 4 electrical contacts 10 A + option for PE



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector<br><br>Device side<br>FO (f) + Han D® (f)<br>With PCB | | 09 12 004 2701 | <br>Also available as single parts:<br>09 12 004 3101 Lower part, unloaded |
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector<br><br>Cable side<br>FO (m) + Han D® (m)<br>for POF | 09 12 004 2601 | | <br>09 12 004 3001 Unloaded |
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector<br><br>Cable side<br>With FO contacts<br>FO (m) + Han D® (m)<br>for POF crimpless | 09 12 004 2603 | | <br>09 12 004 3003 Unloaded |
| Han-Brid®, Han-Brid® FO, Hybrid field bus connector<br><br>Cable side<br>FO (m) + Han D® (m)<br>for HCS® fibre | 09 12 004 2606 | | <br>09 12 004 3006 Unloaded |

# Han-Brid® Quintax 3 A

## Features

- Possibility to terminate shielded four/eight wires conductors (2 pair STP)
- Possibility to terminate Coax cable with large diameter
- Suitable for all 4-wire bus systems
- Suitable for shielded cable conductor diameter 3 ... 9.5 mm
- Transmission of shielding separately from the hood's ground
- Connections are carried out acc. to EN 50173, Cat. 5

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1, 4, 8 |
| Additional contacts | + shielding + 2 power contacts |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +70 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

ATTENTION! Han-Brid® Quintax in Han® HPR housings only to be used with the long version!

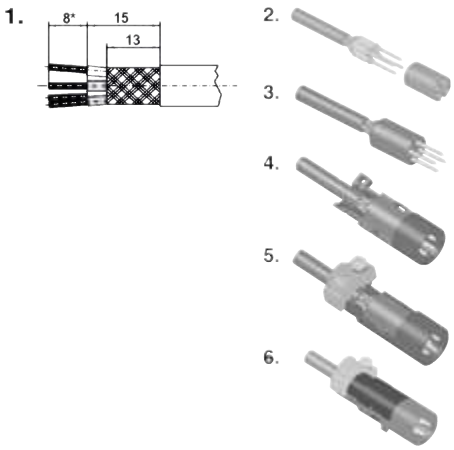
## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

**Assembly instructions**




1. Strip cable acc. to drawing 1 and fold the shielding over the cable.
2. Crimp Han D® contacts onto the wires.
3. Insert Han D® contacts into corresponding cavaties of insulator until they are snapped in.
4. Fit the insert including the cable into the opened shielded bushing. The coding pin of the shielded bushing has to meet the groove of the insulator.
5. Clamp the tilt over the shielding onto the cable by means of the special clamp (small opening for cable diameter of 3 ... 6 mm, large opening for cable diameter of 6 ... 9.5 mm).
6. Check the wiring. Close the shielded bushing with the cover and insert it into the corresponding cavity of the Quintax Module as usual.

# Han-Brid® Quintax 3 A

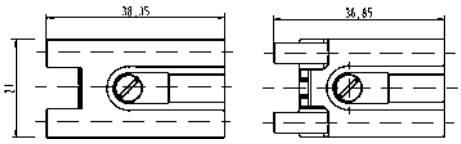
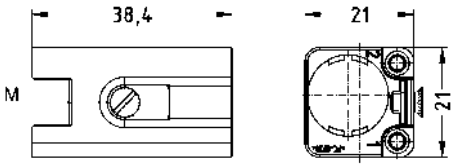
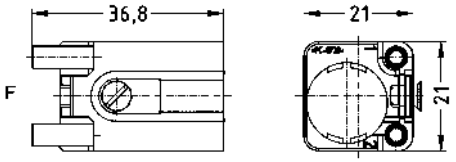
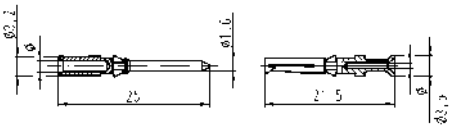
Size 3 A

Number of contacts

## 1,4,8

+ shielding + 2 power contacts



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Brid®,<br>Han-Brid® Quintax 3 A,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 15 003 3001 | 09 15 003 3101 |  |
| Han-Brid®,<br>Han-Brid® Quintax 3 A,<br>Snap-in latches,<br>snap-fit,<br>Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 2.5 | 09 15 003 3002 | 09 15 003 3102 | <br> |
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 | <br>Conductor cross-section / ø / Stripping length<br>0.14-0.37 mm² AWG 26-22 / 0.9 mm / 8 mm<br>0.5 mm² AWG 20 / 1.1 mm / 8 mm<br>0.75 mm² AWG 18 / 1.3 mm / 8 mm<br>1 mm² AWG 18 / 1.45 mm / 8 mm<br>1.5 mm² AWG 16 / 1.75 mm / 8 mm<br>2.5 mm² AWG 14 / 2.25 mm / 6 mm |

# Han-Brid® Quintax 3 A with coaxial contacts



Number of contacts

1

10 A 50 V 0.8 kV 3
+ shielding

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Additional contacts | + shielding |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Impedance | 75 Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

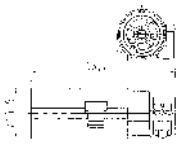
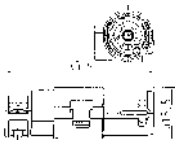
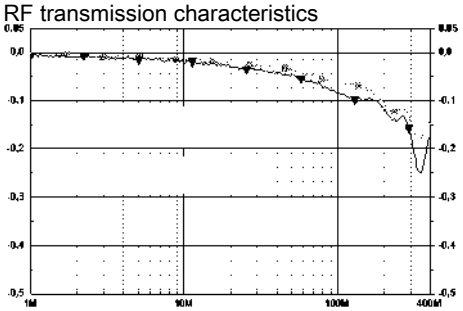
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

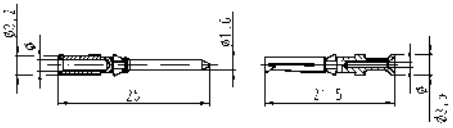
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® D Coax, Crimp termination, for Han D® crimp contacts  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 15 001 3013 | 09 15 001 3113 | M  F  RF transmission characteristics  ▩ 75 Ohm Cable ▾ 75 Ohm Cable with Han D® Coax |

# Han-Brid® Quintax 3 A with coaxial contacts



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han-Brid® Quintax 3 A with coaxial contacts



Number of contacts

**1**

16 A 50 V 0.8 kV 3
+ shielding

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Additional contacts | + shielding |
| Rated current | 16 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Contact resistance | ≤1 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Impedance | 50 Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

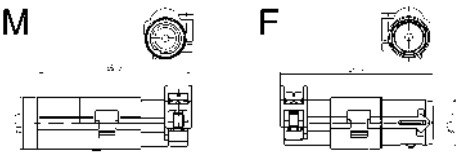
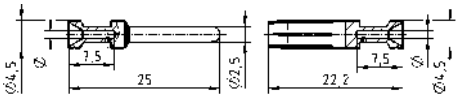
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® E Coax,<br>Crimp termination,<br>for Han E® crimp contacts<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 15 001 3023 | 09 15 001 3123 | M F<br><br>Han E® Coax with RG 213 cable (2.5 mm²) / 200 MHz / 500 MHz / 1.0 GHz / 1.2 GHz / 1.5 GHz / 2.0 GHz / 2.5 GHz<br>Return loss [db] / 23.8 / 21.1 / >18.7 / >17.7 / >16.4 / >14.1 / >12.0<br>Attenuation [db] / 0:07 / 0.11 / 0.17 / 0.2 / <0.23 / <0.53 / <2.0 |
| Han E®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>4 | 09 33 000 6117<br>09 33 000 6122<br>09 33 000 6115<br>09 33 000 6118<br>09 33 000 6116<br>09 33 000 6123<br>09 33 000 6119 | 09 33 000 6217<br>09 33 000 6222<br>09 33 000 6215<br>09 33 000 6218<br>09 33 000 6216<br>09 33 000 6223<br>09 33 000 6221 | <br>Ø4.5 / 7.5 / 25 / Ø2.5 / 22.2 / 7.5 / Ø4.5 |

| Conductor cross-section | | Identification |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | no groove |
| 0.5 mm² | AWG 20 | no groove |
| 0.75 mm² | AWG 18 | 1 groove* |
| 1 mm² | AWG 18 | 1 groove |
| 1.5 mm² | AWG 16 | 2 groove |
| 2.5 mm² | AWG 14 | 3 groove |
| 3 mm² | AWG 12 | wide groove |
| 4 mm² | AWG 12 | no groove |

* on the back crimp collar

Stripping length 7.5 mm

# Han-Brid® Quintax 3 A with Han-Quintax® contacts



Number of contacts

**4**

10 A 50 V 0.8 kV 3
+ shielding

## Features

- Shielding bus separate from housing potential
- Suitable for the transmission of sensitive signals (e.g. bus signals)
- The four pole Han® Quintax contact is suitable for Ethernet cat. 5 and PROFIBUS when diagonally wiring of the data pairs.

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4 |
| Additional contacts | + shielding |
| Rated current | 10 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

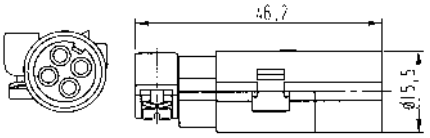
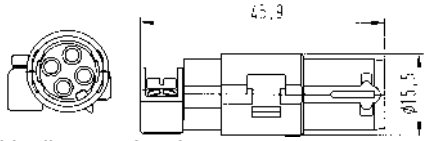
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

**Crimping tools** see chapter Han 90

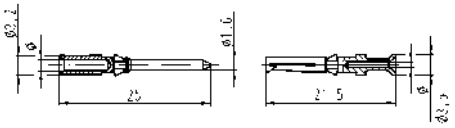
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Quintax®, for Han D® crimp contacts  Please order crimp contacts separately. | 0.14 ... 2.5 | 09 15 004 3013 | 09 15 004 3113 | M  F  Cable diameter 3 ... 9.5 mm |

# Han-Brid® Quintax 3 A with Han-Quintax® contacts



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5 | 09 15 000 6124<br>09 15 000 6123<br>09 15 000 6125<br>09 15 000 6122<br>09 15 000 6121<br>09 15 000 6126 | 09 15 000 6224<br>09 15 000 6223<br>09 15 000 6225<br>09 15 000 6222<br>09 15 000 6221<br>09 15 000 6226 |  |

| Conductor cross-section | | ø | Stripping length |
|---|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 0.9 mm | 8 mm |
| 0.5 mm² | AWG 20 | 1.1 mm | 8 mm |
| 0.75 mm² | AWG 18 | 1.3 mm | 8 mm |
| 1 mm² | AWG 18 | 1.45 mm | 8 mm |
| 1.5 mm² | AWG 16 | 1.75 mm | 8 mm |
| 2.5 mm² | AWG 14 | 2.25 mm | 6 mm |

# Han-Brid® Quintax 3 A with Han-Quintax® HD contacts



Number of contacts

8

5 A 50 V 0.8 kV 3
+ shielding

## Technical characteristics

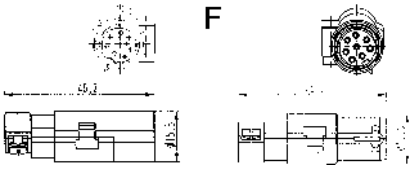
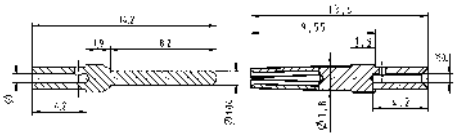
| | |
|---|---|
| Number of contacts | 8 |
| Additional contacts | + shielding |
| Rated current | 5 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Contact resistance | ≤10 mΩ |
| Contact resistance, shielding | ≤100 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Material (shielding) | Zinc die-cast, nickel-plated |
| Colour (insert) | RAL 7032 (pebble grey) |

## Technical characteristics

| | |
|---|---|
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E102079
CSA-C22.2 No. 182.3 ECBT8.E102079

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Quintax® High Density, for Han® D-Sub crimp contacts<br><br>Please order crimp contacts separately. | 0.09 ... 0.52 | 09 15 008 3013 | 09 15 008 3113 | M F<br><br>Cable diameter 3 ... 9.5 mm |
| D-Sub, Standard, Crimp contact<br> | 0.09 ... 0.25<br>0.13 ... 0.33<br>0.25 ... 0.52 | 09 67 000 7576<br>09 67 000 5576<br>09 67 000 8576 | 09 67 000 7476<br>09 67 000 5476<br>09 67 000 8476 | <br>Conductor cross-section / ø / Stripping length<br>0.09-0.25 mm² / 0.64 mm / 4 mm<br>0.13-0.33 mm² / 0.88 mm / 4 mm<br>0.25-0.52 mm² / 1.13 mm / 4 mm<br>0.33-0.82 mm² / 1.34 mm / 4 mm<br>for stranded wire according IEC 60228 Class 5 |

# Han-Brid® RJ45 C

## Features

- Suitable for standard RJ 45 Plug and Jack, shielded version
- Connections are carried out acc. to EN 50173, Cat. 5
- Connection of the device side can be realised either by a printed circuit board as a modular version or as part of the appliance PCB
- Assembly with standard tools
- Insert for 2 Han-D® male or female contacts offers the combination with electrical bus connector

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Additional contacts | + RJ45 |
| Rated current | 10 A |
| Rated voltage | 24 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +70 °C, -40 ... +125 °C |
| Mating cycles | ≥500 |
| Wire outer diameter | ≤1.6 mm |
| Transmission characteristics | Cat. 5, Class D up to 100 MHz |
| Data rate | 10 Mbit/s, 100 Mbit/s |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

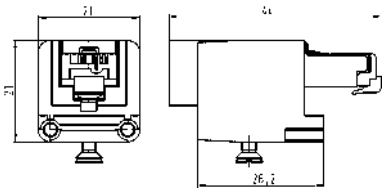
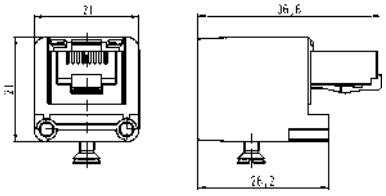
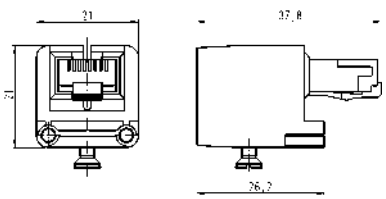
## Specifications and approvals

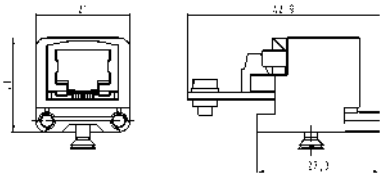
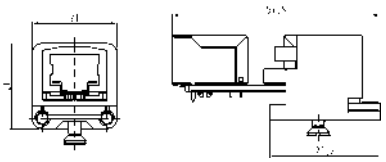
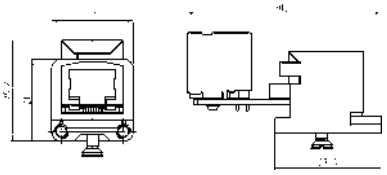
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Number of contacts

2

10 A 24 V 0.8 kV 3
+ RJ45

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector  With RJ Industrial | 0.12 Stranded 0.22 ... 0.32 Stranded, 0.26 ... 0.32 Solid | 09 12 003 3013<br>09 12 003 3011 | |  |
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector, 10 Gbit/s  With RJ Industrial | | 09 12 003 3015 | | |
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector, Cat. $6_A$  With RJ Industrial | | 09 12 003 3016 | | |
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector  With Stewart RJ45 | | 09 12 003 3021 | |  |
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector  With HIROSE RJ45 | | 09 12 003 3031 | |  |

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector  Panel feed through With 4-pin terminal block | | | 09 12 003 2770 |  |
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector  Panel feed through Straight | | | 09 12 003 2774 |  |
| Han-Brid®, Han-Brid® RJ45 C, hybrid network connector  Panel feed through Angled | | | 09 12 003 2776 |  |

Number of contacts

# 2

1 A 50 V 0.8 kV 3
+ USB

## Features

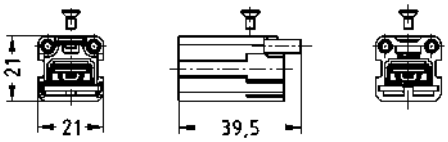
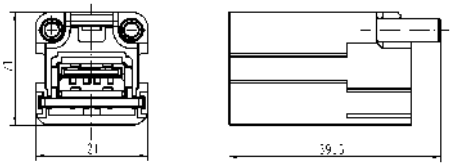
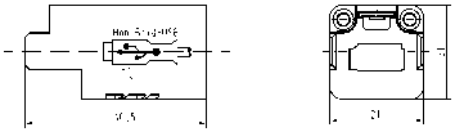
- Insert for all Han® 3 A hoods with glued seal
- Simple and cost effective termination by plug in patch cable
- Cable tie strain relief

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Additional contacts | + USB |
| Rated current | 1 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≥4 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

| Identification | | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Brid®, Han-Brid® USB, USB 3.0<br>Device side |  | 09 12 001 2793 | |  |
| Han-Brid®, Han-Brid® USB, USB 2.0<br>Device side |  | 09 12 001 2794 | |  |
| Han-Brid®, Han-Brid® USB<br>Cable side |  | | 09 12 001 3091 |  |

Number of contacts

# 2

1 A 50 V 0.8 kV 3
+ FireWire

## Features

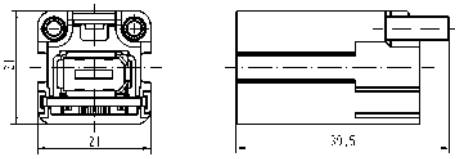
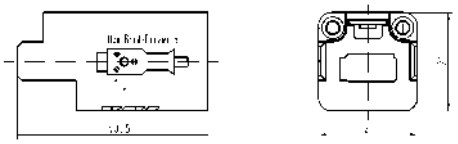
- Insert for all Han® 3 A hoods with glued seal
- Simple and cost effective termination by plug in patch cable
- Cable tie strain relief
- Compatibel to IEEE 1394

## Technical characteristics

| | |
|---|---|
| Number of contacts | 2 |
| Additional contacts | + FireWire |
| Rated current | 1 A |
| Rated voltage | 50 V |
| Rated impulse voltage | 0.8 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≥4 mΩ |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Brid®, Han-Brid® FireWire<br><br>Device side | 09 12 001 2774 | |  |
| Han-Brid®, Han-Brid® FireWire<br><br>Cable side | | 09 12 001 3071 |  |

# Han® 4 A SC

Han-Brid

## Features

- Suitable for housings, size Han® 3 A including versions Han® M, Han® EMC and Han® HPR
- Degree of protection up to IP68
- Suitable for HARTING SC contacts
- for Multimode fibre 50 - 62.5 / 125 µm and Singlemode fibre 9 / 125 µm
- 4 full ceramic sleeves for a minimal insertion loss
- 1 mm POF

## Technical characteristics

| | |
|---|---|
| Number of contacts | 4 |
| Insulation resistance | >$10^{10}$ Ω |
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

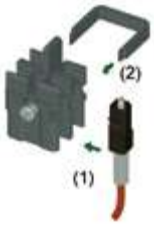
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

**Assembly instructions**

Male module




Assemble the SC contact
① Push the SC contact from the side into the relevant insert
② Push the spring clip over the contact body.

**Assembly instructions**

Female module

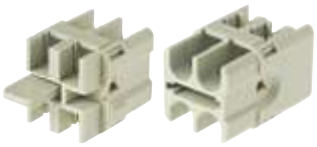
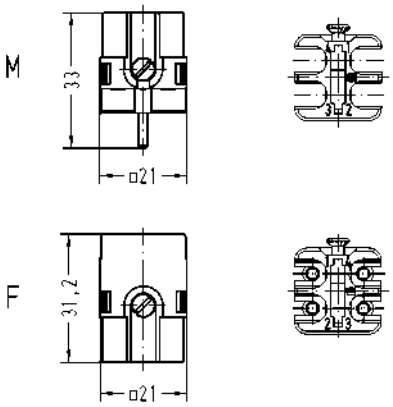
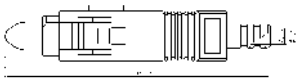
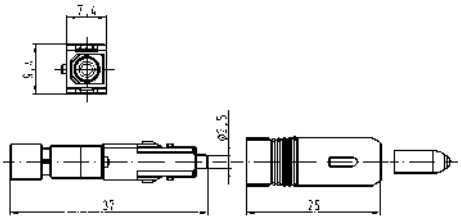
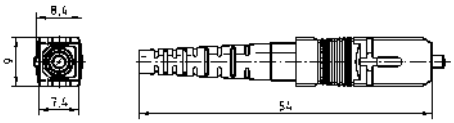


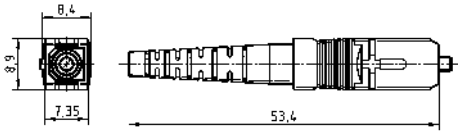
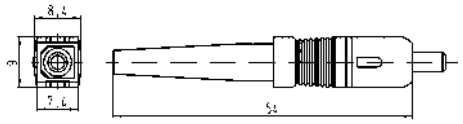

Assemble the SC contact
① Push the centering ferrule (included in delivery) on the SC contact
② Push the SC contact from the side into the relevant insert
③ Push the spring clip over the contact body.

Number of contacts

# 4



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Brid®,<br>Han® 4 A SC,<br>for FO<br><br>Please order contacts separately. | 09 20 004 4701 | 09 20 004 4711 | <br>Contact arrangement (view from termination side)<br>The female inserts are equipped with centering ferrules. 4 ferrules are included within the delivery. |
| SC contact,<br>for 1 mm plastic fibre,<br>Crimp termination<br> | 20 10 001 5211 | |  |
| SC contact,<br>for 1 mm plastic fibre,<br>Fast termination<br> | 20 10 001 5217 | |  |
| SC contact,<br>for singlemode fibre 9/125 µm<br> | 20 10 125 5220 | |  |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| SC contact,<br>for GI fibre 50/125 µm,<br>for ceramic ferrule 62.5/125 µm  | 20 10 125 5211 | |   |
| SC contact,<br>for SI fibre (HCS®) 200/230 µm | 20 10 230 5211 | |   |

Standard Hoods/housings for industrial applications
Single locking lever

## Features

- Hoods/housings for industrial applications
- With glued seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| RoHS | compliant with exemption, compliant |

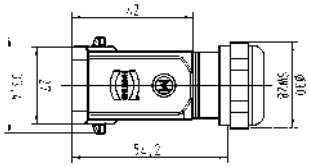
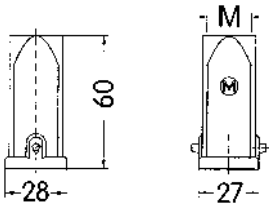
## Specifications and approvals

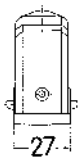
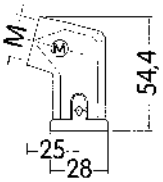
DNV GL

CE

## Details

The special hoods with glued seal can be combined with standard housings (see chapter Han 31).

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>With integrated cable gland,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x Integrated<br>1x Integrated | 5 ... 13<br>6 ... 12 | 19 20 003 1423<br>19 20 003 1425 |  |
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20<br>1x M25 | | 19 20 003 1443<br>19 20 003 1447 |  |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Side entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20 | | 19 20 003 1643 |     |

Standard Hoods/housings for industrial applications
Single locking lever



## Features

- Hoods/housings for industrial applications
- With glued seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 7032 (pebble grey), RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

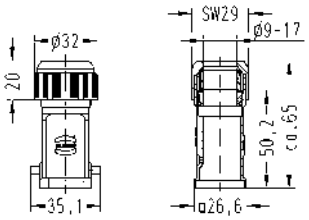
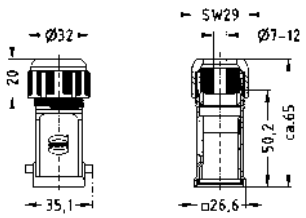
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

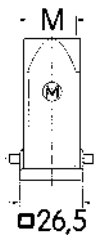
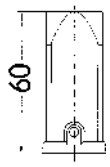
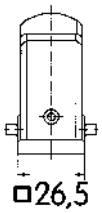
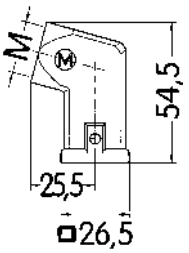
## Details

The special hoods with glued seal can be combined with standard housings (see chapter Han 31).

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>With integrated cable gland,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | 1x Integrated | 9 ... 17 | 19 20 003 0413 |  |
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>With integrated cable gland,<br>Top entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | 1x Integrated<br>1x Integrated | 7 ... 12<br>9 ... 17 | 19 20 003 0421<br>19 20 003 0418 |  |

# Hoods/Housings, thermoplastic Han® 3 A

Size 3 A

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20<br>1x M25 | | 19 20 003 0423<br>19 20 003 0433 |   |
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Top entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20<br>1x M25 | | 19 20 003 0426<br>19 20 003 0436 | |
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Side entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20 | | 19 20 003 0623 |   |
| Han A®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Side entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20 | | 19 20 003 0626 | |

# Han® M hoods/housings

Size 3 A

Hoods/housings for rough environments
Single locking lever

## Features

- Hoods/housings for rough environments
- Corrosion resistance ASTM B117-09 (500 h)
- With glued seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | FPM |
| RoHS | compliant |

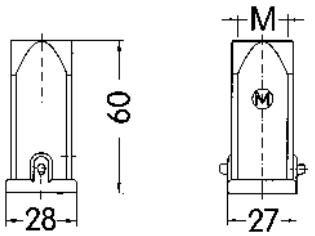
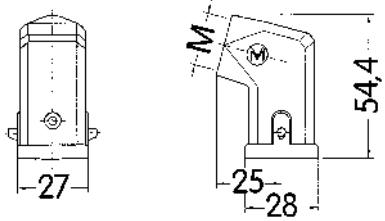
## Specifications and approvals

DNV GL

CE

## Details

The special hoods with glued seal can be combined with standard housings (see chapter Han 31).

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 37 003 1443<br>19 37 003 1447 |  |
| Han® M,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Side entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 37 003 1643 |  |

# Han® EMC hoods/housings

Size 3 A

Hoods/Housings for higher EMC requirements
Single locking lever

## Features

- Hoods/Housings for higher EMC requirements
- With glued seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | NBR |
| RoHS | compliant |

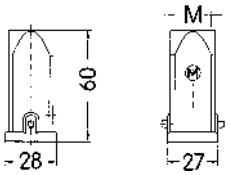
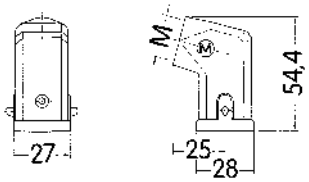
## Specifications and approvals

DNV GL

CE

## Details

The special hoods with glued seal can be combined with standard housings (see chapter Han 31).

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20<br>1x M25 | 19 62 003 1443<br>19 62 003 1447 |   |
| Han® EMC,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Side entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20 | 19 62 003 1643 |   |

Hoods/housings for harsh environments
Single locking lever



## Features

- Hoods/housings for harsh environments
- Extremely resistant to chemicals and other aggressive influences
- Made completely from high-quality stainless steel
- Extremely resistant to corrosion
- With glued seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Stainless steel |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | NBR |
| RoHS | compliant |

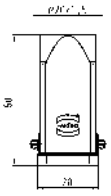
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

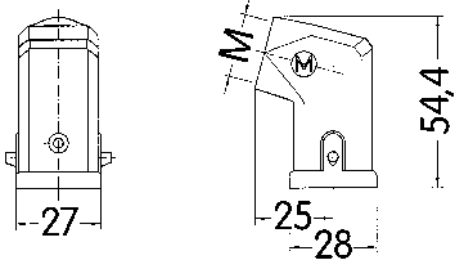
## Details

The special hoods with glued seal can be combined with standard housings (see chapter Han 31).

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 44 003 1443 |  |

# Han-INOX® hoods/housings



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Side entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 44 003 1643 |  |

# Han® HPR hoods/housings



## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Screw locking M4
- Field of application: for external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded
- Distinguishing feature: colour-coded black, internal seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 2 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated, Chromated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (locking) | Stainless steel |
| RoHS | compliant, not compliant |

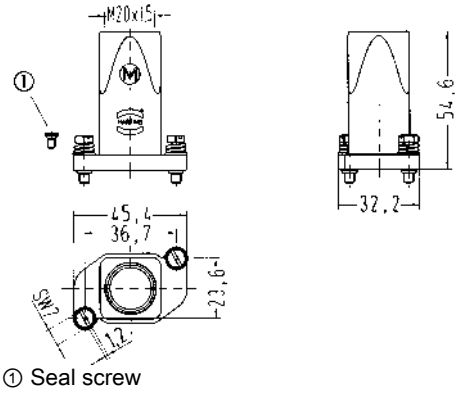
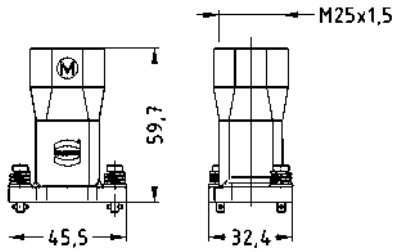
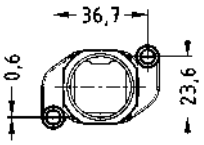
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

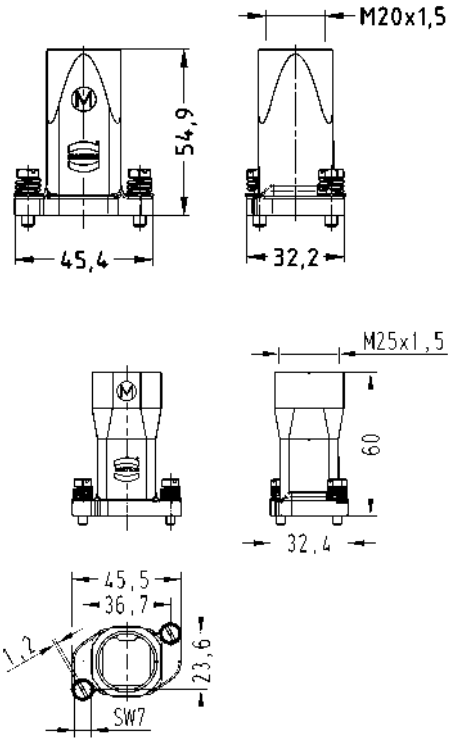
Hoods/housings for harsh outdoor environments
Toggle locking



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68<br>Pack contents:<br>With seal screw  | 1x M20<br>1x M25 | 19 40 703 0400<br>19 40 703 0401 |  ① Seal screw   |

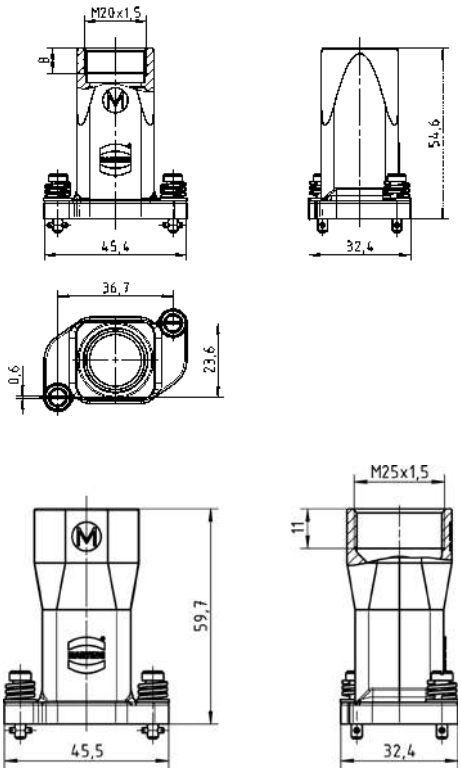
Hoods/housings for harsh outdoor environments
Screw locking



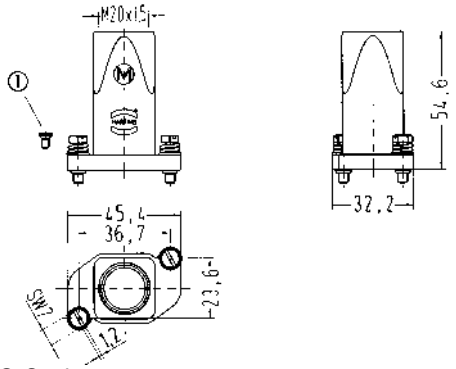
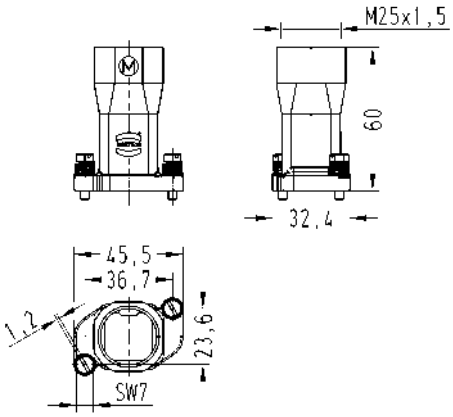
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 40 703 0410<br>19 40 703 0411 |  |

Hoods/housings for harsh outdoor environments
Toggle locking



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 40 003 0400<br>19 40 003 0401 | <br>① Seal screw |

Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 40 003 0410<br>19 40 003 0411 | <br>① Seal screw<br> |

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PCB adapter for Han® DDD module ..... **Han 20.17**

PCB adapter for Han® 40 A Axial module ..... **Han 20.19**

PCB adapter for Han E® ..... **Han 20.20**

PCB adapter for Han® 40 EEE ..... **Han 20.21**

PCB adapter for Han® Q 4/2 ..... **Han 20.22**

PCB adapter for Han® Q 5/0 ..... **Han 20.25**

PCB adapter for Han® Q 7/0 ..... **Han 20.28**

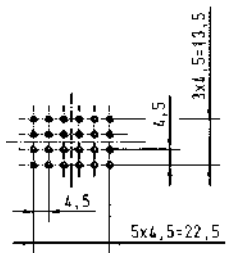
PCB adapter for Han® Q 8/0 ..... **Han 20.31**

PCB adapter for Han® Q 12/0 ..... **Han 20.34**

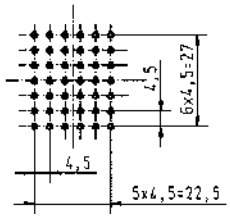
# PCB adapter for Han DD®

## Layout of PCB

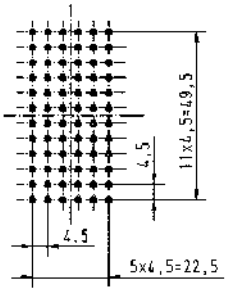
Han® 24 DD



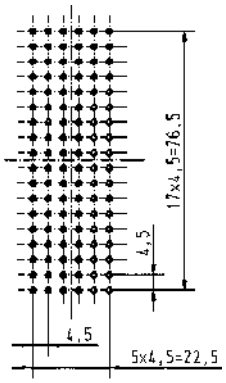

Han® 42 DD




Han® 72 DD

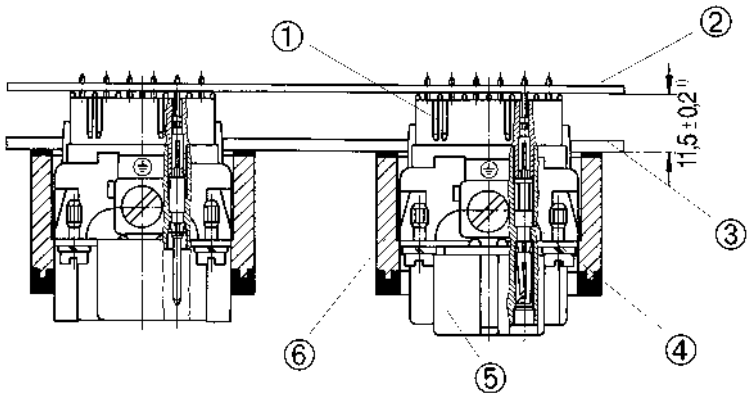



Han® 108 DD




Recommended hole diameter: 0.8 mm

## Assembly situation



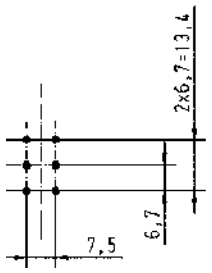

① PCB adapter
② Printed circuit board (PCB)
③ Switch board panel
④ Han DD® double contact
⑤ Han DD® insert
⑥ Han® B bulkhead mounted housing

1) for Han® B EMC housings spacing of 12.5 ± 0.2 mm is necessary as no flange seal is used

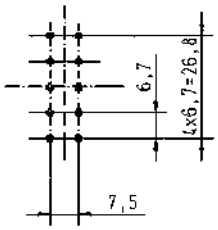
# PCB adapter for Han E®

## Layout of PCB

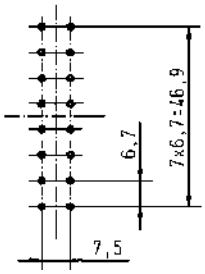
Han® 6 E



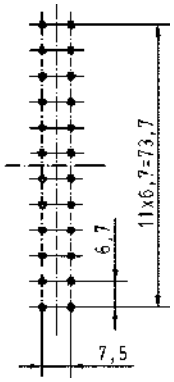

Han® 10 E



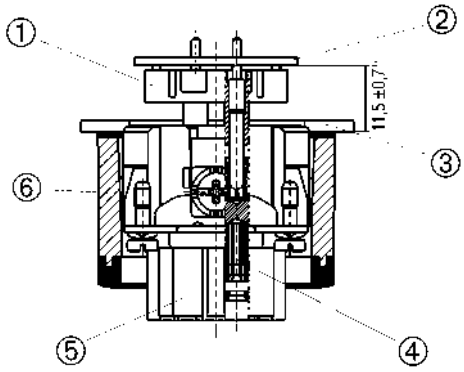

Han® 16 E




Han® 24 E




## Assembly situation



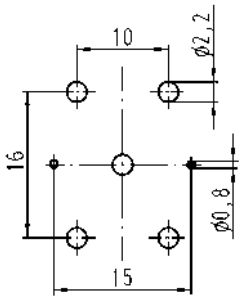

① PCB adapter
② Printed circuit board (PCB)
③ Switch board panel
④ Han E® double contact
⑤ Han E® insert
⑥ Han® B bulkhead mounted housing

1) for Han® B EMC housings spacing of 12.5 ± 0.7 mm is necessary as no flange seal is used

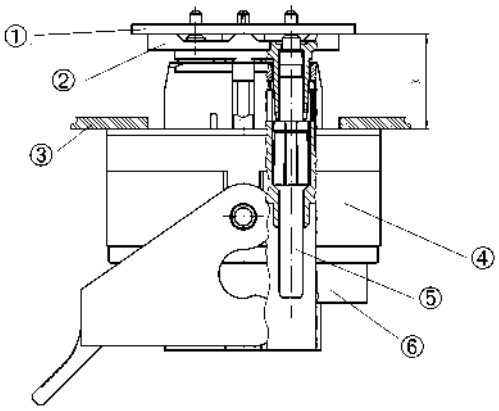
## Layout of PCB



Dimensions in mm




## Assembly situation

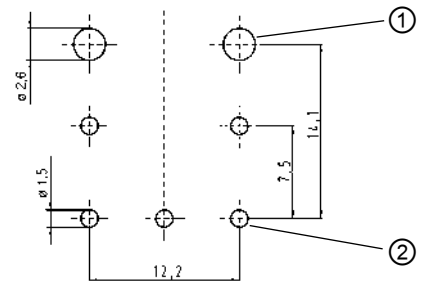



X = $16^{+1}$ with signal contact or $16^{+2}$ without signal contact

① Printed circuit board (PCB)
② PCB adapter
③ Switch board panel
④ Han-Compact® bulkhead mounted housing
⑤ Han® C double contact
⑥ Han® Q 4/2 insert

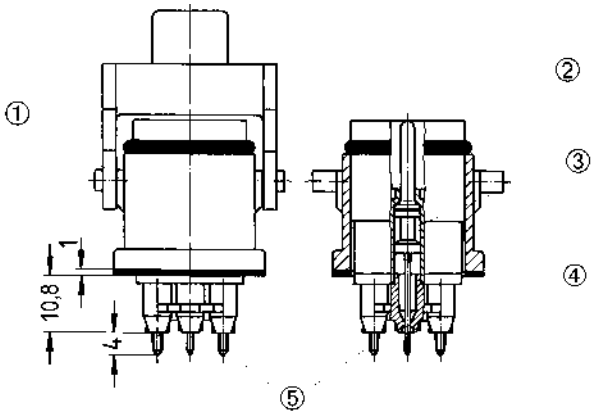
## Layout of PCB

Dimensions in mm




① Recommended hole diameter: 2.6 mm
② Recommended hole diameter: 1.5 mm

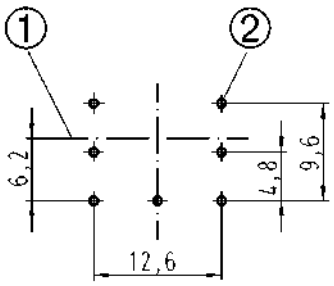
## Assembly situation




① Han® 3 A bulkhead mounting housing
② Han® Q 5/0
③ Solder contacts
④ PCB adapter
⑤ Connection to printed circuit board

# PCB adapter for Han® Q 7/0

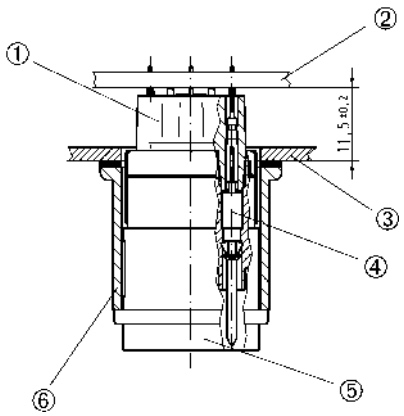
## Layout of PCB




Dimensions in mm

① Median plane of the housing
② Recommended hole diameter: 0.8 mm

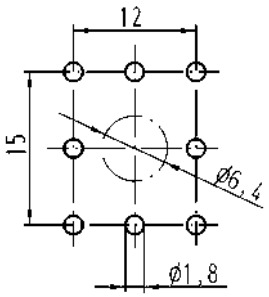
## Assembly situation



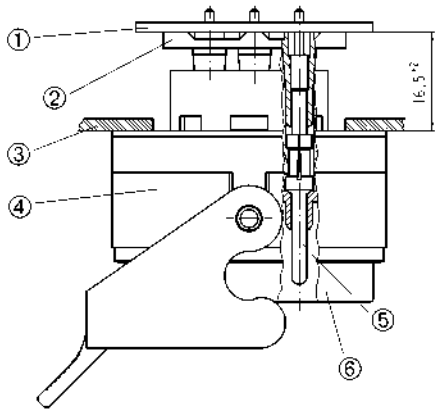

① PCB adapter
② Printed circuit board (PCB)
③ Switch board panel
④ Han D® double contact
⑤ Han® Q 7/0 Insert
⑥ Han® 3 A bulkhead mounting housing

## Layout of PCB

Dimensions in mm




## Assembly situation

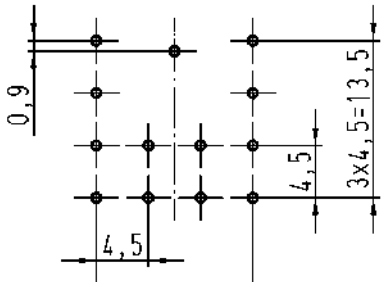



① Printed circuit board (PCB)
② PCB adapter
③ Switch board panel
④ Han-Compact® bulkhead mounted housing
⑤ Han E® double contact
⑥ Han® Q 8/0 Insert

## Layout of PCB

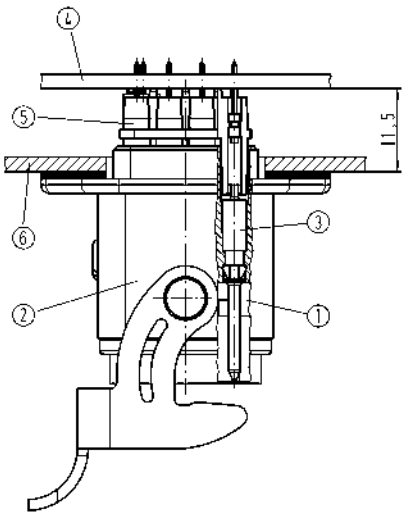
Dimensions in mm

Recommended hole diameter: 0.8 mm

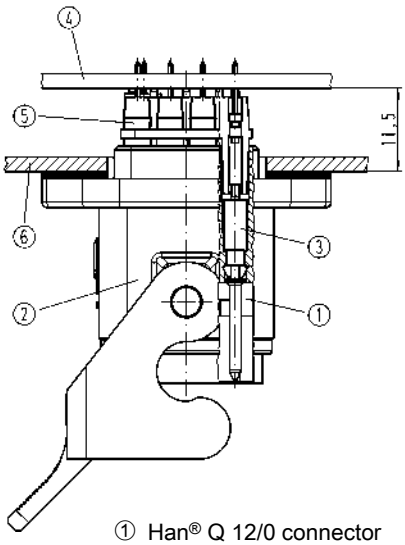



## Assembly situation

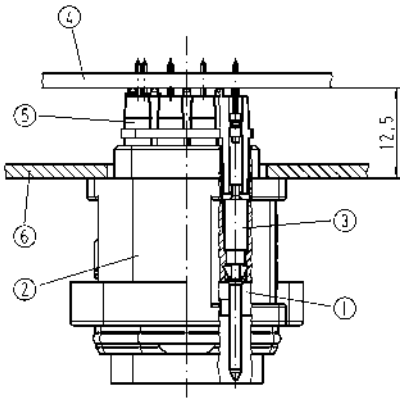
Han® 3 A Standard / EMC




Han® 3 A plastic




Han® 3 A HPR

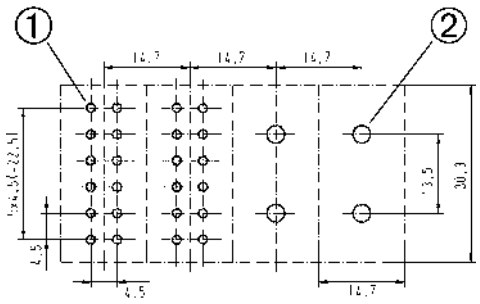



① Han® Q 12/0 connector
② Han® 3 A housing bulkhead mounting
③ R15-double contact
④ Printed circuit board (PCB)
⑤ PCB adapter
⑥ Switch board panel

## Layout of PCB



Dimensions in mm

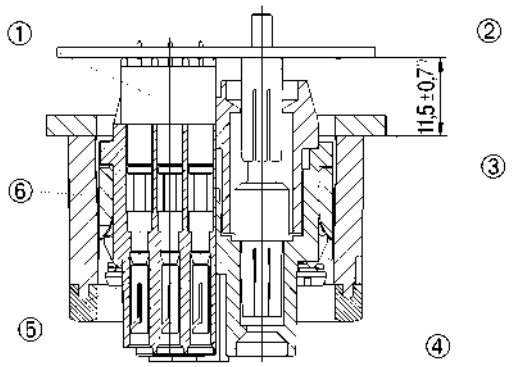



Han DD® module

Han® 40 A module

① Recommended hole diameter: 0.8 mm
② Recommended hole diameter: 3.2 mm

## Assembly situation



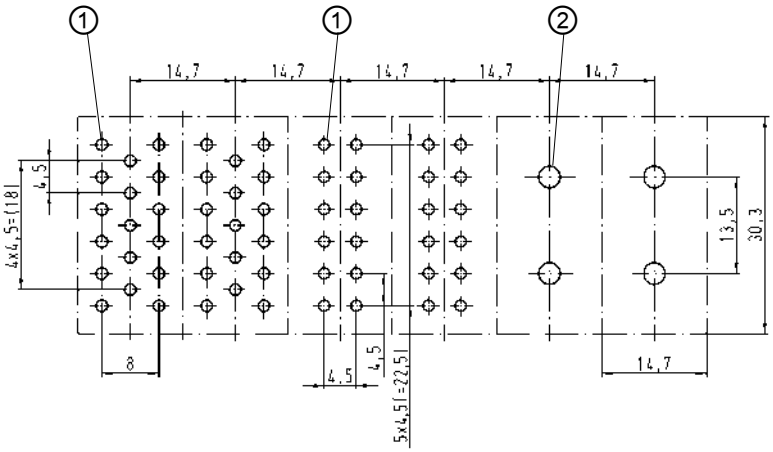

① Han DD® PCB-adapter
② Han® C solder contact
③ Switch board panel
④ Module for connection to printed circuit board
⑤ Han D® double contact
⑥ Han® B bulkhead mounted housing

1) for Han® B EMC housings spacing of 12.5 ± 0.7 mm is necessary as no flange seal is used

# PCB adapter for Han® DDD module

## Layout of PCB

Dimensions in mm

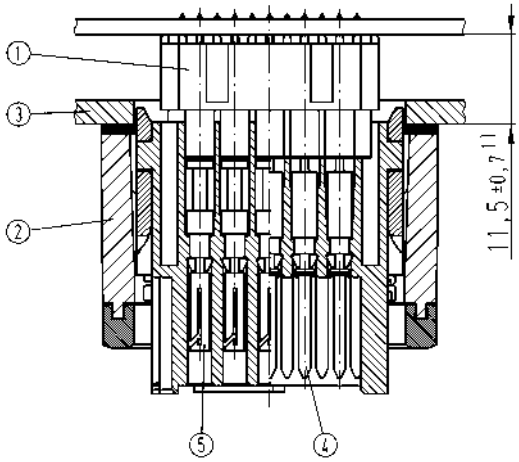



Han® DDD module  Han® DD module  Han® 70 A module

① Recommended hole diameter: 0.8 mm
② Recommended hole diameter: 3.2 mm

## Assembly situation

Dimensions in mm




① Han DDD® PCB adapter 5 pins
② Han® B bulkhead mounted housing
③ Switch board panel
④ Han D® double male contact, 09 15 000 6197
⑤ Han D® double female contact, 09 15 000 6291

[1] for Han® B EMV hood and housing spacing of 12.5 ±0.7 mm is necessary as no flange seal is used.

For further information and Han-Modular® frames please refer to chapter 06 (Han-Modular®)



For more technical details see chapter Han 06

# Han-Fast® Lock

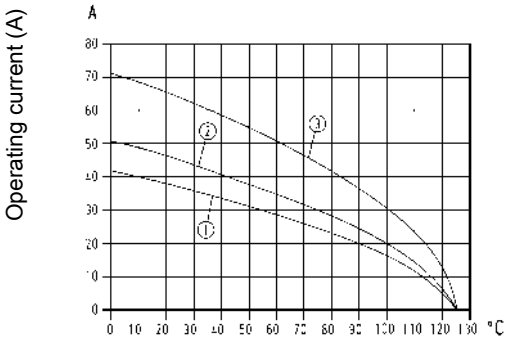
## Features

- Solder free PCB termination
- PCB contact with locking element
- Machine processing
- Flexible in terms of applications
- Practical and easy handling
- Fast assembly to PCB
- Locking directly on the PCB

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤2 mΩ |
| Material (locking) | Copper alloy |
| Surface (locking) | Passivated |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Derating




Ambient temperature (°C)

① Conductor cross-section 4 mm²
② Conductor cross-section 6 mm²
③ Conductor cross-section 10 mm²

## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

PCB thickness 1.6 ... 3.2 mm

Clearance and creepage distances have to be considered for the printed circuit board

Finished hole d= 4.4 mm +0.05/-0.04

The new connection of wires to the PCB offers optimized PCB design, combined with outstanding contact qualities.

The Han-Fast® Lock is flexible and allows a fast and simple PCB connection. The PCB has one drilled hole and a pad.

The inner surface of the plated drilled hole serves as the interface. The Han-Fast® Lock is simply inserted into the through-plated PCB hole. The locking pin is pushed in and hence locks the contact into position.

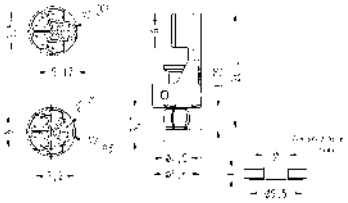
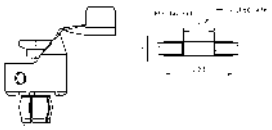
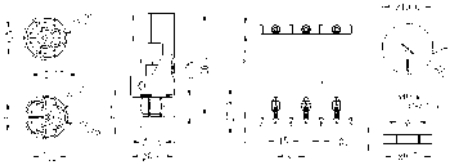
The solder free connection technique is easy to handle and to operate. Maintenance has been made simple with the facility to detach the contact.

Han-Fast® Lock also supports SMD assembly of the PCB.

- Current up to 60 Amps
- Standard drilled hole with pad
- Position independent of connector
- Solder free PCB termination
- Easy locking solution

# Han-Fast® Lock



| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Fast® Lock,<br>PCB contact,<br>With pin,<br>Pack contents:<br>Single contact<br>Contact surface:<br>Silver plated | 1.5 ... 2.5<br>4 ... 6<br>10 | 09 08 000 7122<br>09 08 000 7123<br>09 08 000 7124 | <br>Stripping length 7.5 mm |
| Han-Fast® Lock,<br>PCB contact,<br>With pin,<br>Angled,<br>Pack contents:<br>Single contact<br>Contact surface:<br>Silver plated | 1.5 ... 2.5<br>4 ... 6<br>10 | 09 08 000 7222<br>09 08 000 7223<br>09 08 000 7224 | <br>Stripping length 7.5 mm |
| Han-Fast® Lock,<br>PCB contact,<br>With pin,<br>Pack contents:<br>2300 pieces on reel<br>Contact surface:<br>Silver plated | 1.5 ... 2.5<br>4 ... 6<br>10 | 09 08 000 6122<br>09 08 000 6123<br>09 08 000 6124 | <br>Stripping length 7.5 mm |

# PCB adapter for Han® C module



## Technical characteristics

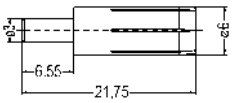
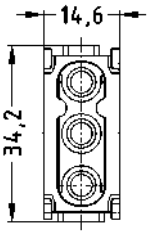
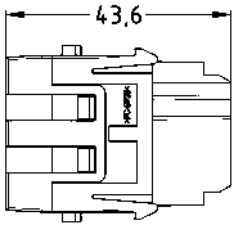
| | |
|---|---|
| Rated current | 40 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Material (insert) | Polycarbonate (PC) |
| Material (contacts) | Copper alloy |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® C,<br>PCB contact,<br>Contact surface:<br>Silver plated  | 09 32 000 6295 | |  |
| PCB adapter,<br>In the Han® C module | | 09 14 003 2710 |   |

# PCB adapter for Han DD®



## Features

- Robust design
- Suitable for standard and EMC hoods and housings
- Low wiring costs
- High density of contacts

## Technical characteristics

| | |
|---|---|
| Rated current | 7.5 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Material (insert) | Polyamide (PA) |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

**Han DD® crimp inserts** see chapter Han 02

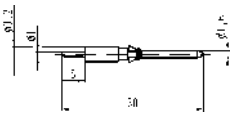
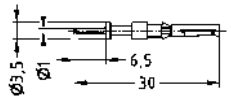
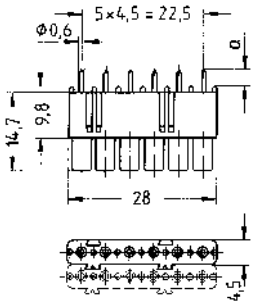
**Modules** see chapter Han 06

**Han® B bulkhead mounted housings** see chapter Han 31

**Crimping tools** see chapter Han 90

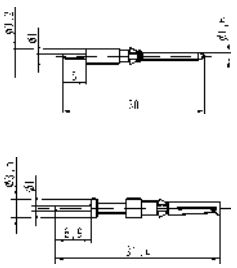
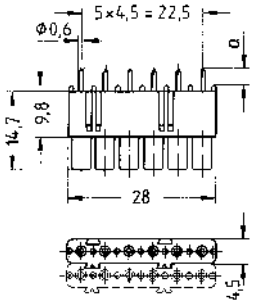
# PCB adapter for Han DD® crimp inserts



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han D®,<br>PCB contact,<br>Contact surface:<br>Silver plated<br> | 09 15 000 6191 | 09 15 000 6291 | <br> |
| PCB adapter,<br>In the Han DD® crimp insert,<br>In the Han DD® module,<br>In the Han® DDD module (different electrical data: 7.5 A 160 V 2.5 kV 3)<br><br>for PCB´s up to 1.6 mm | 09 16 000 9905 | 09 16 000 9905 | <br>09 16 000 9905 a= 2.6<br>09 16 000 9908 a= 3.4 |
| PCB adapter,<br>In the Han DD® crimp insert,<br>In the Han DD® module,<br>In the Han® DDD module (different electrical data: 7.5 A 160 V 2.5 kV 3)<br><br>for PCB´s up to 2.4 mm | 09 16 000 9908 | 09 16 000 9908 | |

# PCB adapter for Han DD® module



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han D®,<br>PCB contact,<br>Contact surface:<br>Silver plated<br> | 09 15 000 6191 | 09 15 000 6294 |  |
| PCB adapter,<br>In the Han DD® crimp insert,<br>In the Han DD® module,<br>In the Han® DDD module (different electrical data: 7.5 A 160 V 2.5 kV 3)<br><br>for PCB´s up to 1.6 mm | 09 16 000 9905 | 09 16 000 9905 | <br>09 16 000 9905 a= 2.6<br>09 16 000 9908 a= 3.4 |
| PCB adapter,<br>In the Han DD® crimp insert,<br>In the Han DD® module,<br>In the Han® DDD module (different electrical data: 7.5 A 160 V 2.5 kV 3)<br><br>for PCB´s up to 2.4 mm | 09 16 000 9908 | 09 16 000 9908 | |

# PCB adapter for Han® DDD module

## Features

- Robust design
- Suitable for standard and EMC hoods and housings
- Low wiring costs
- High density of contacts

## Technical characteristics

| | |
|---|---|
| Rated current | 7.5 A |
| Rated voltage | 160 V |
| Rated impulse voltage | 2.5 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Material (insert) | Polyamide (PA) |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

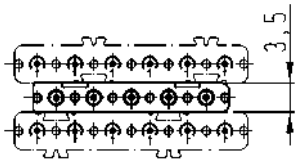
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

## Details

**Modules** see chapter Han 06

**Han® B bulkhead mounted housings** see chapter Han 31

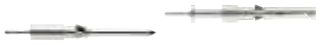
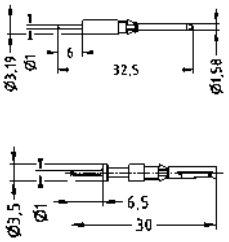
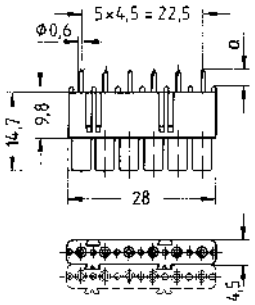
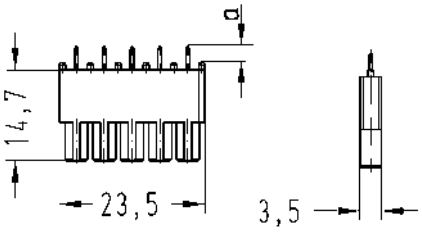
**Crimping tools** see chapter Han 90




For a 17-pin PCB termination with the Han® DDD module two 6-pin and one 5-pin PCB adapters are necessary.

# PCB adapter for Han® DDD module



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han D®,<br>PCB contact,<br>Contact surface:<br>Silver plated<br> | 09 15 000 6197 | 09 15 000 6291 |  |
| PCB adapter,<br>In the Han DD® crimp insert,<br>In the Han DD® module,<br>In the Han® DDD module (different electrical data: 7.5 A 160 V 2.5 kV 3)<br><br>for PCB´s up to 1.6 mm | 09 16 000 9905 | 09 16 000 9905 | <br>09 16 000 9905 a= 2.6<br>09 16 000 9908 a= 3.4 |
| PCB adapter,<br>In the Han DD® crimp insert,<br>In the Han DD® module,<br>In the Han® DDD module (different electrical data: 7.5 A 160 V 2.5 kV 3)<br><br>for PCB´s up to 2.4 mm | 09 16 000 9908 | 09 16 000 9908 | |
| PCB adapter,<br>5-pin,<br>In the Han® DDD module<br><br>for PCB´s up to 1.6 mm | 09 16 000 9915 | 09 16 000 9915 | <br>09 16 000 9915 a= 2.6<br>09 16 000 9918 a= 3.4 |
| PCB adapter,<br>5-pin,<br>In the Han® DDD module<br><br>for PCB´s up to 2.4 mm | 09 16 000 9918 | 09 16 000 9918 | |

# PCB adapter for Han® 40 A Axial module



## Features

- Modular assembly
- Robust design
- Suitable for standard and EMC hoods and housings
- Low wiring costs

## Technical characteristics

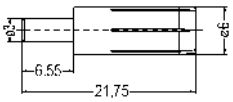
| | |
|---|---|
| Rated current | 40 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Material (insert) | Polycarbonate (PC) |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

**Hinged frames** see chapter Han 06

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® C,<br>PCB contact,<br>Contact surface:<br>Silver plated  | 09 32 000 6295 | |   |
| PCB adapter,<br>In the Han® 40 A Axial module  | 09 14 002 2603 | 09 14 002 2703 | |

# PCB adapter for Han E®



## Features

- Robust design
- Suitable for standard and EMC hoods and housings
- Low wiring costs
- Counter connector available with screw, crimp or cage clamp termination

## Technical characteristics

| | |
|---|---|
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Material (insert) | Polycarbonate (PC) |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

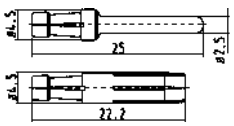
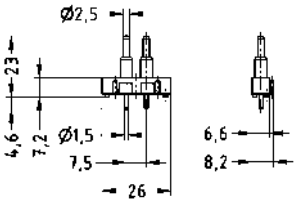
EN 60664-1
IEC 61984

## Details

**Han E® crimp inserts** see chapter Han 03

**Hoods/Housings** see chapter Han 31

**Crimping tools** see chapter Han 90

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han E®, PCB contact, Contact surface: Silver plated  | 09 33 000 6180 | 09 33 000 6280 |   |
| PCB adapter, In the Han E® crimp insert  | 09 33 000 9996 | 09 33 000 9996 |   |

# PCB adapter for Han® 40 EEE



Number of contacts

**40**

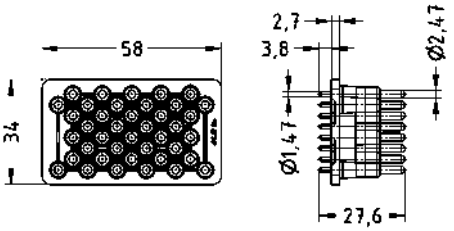
16 A 500 V 6 kV 3

## Technical characteristics

| | |
|---|---|
| Number of contacts | 40 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |

## Technical characteristics

| | |
|---|---|
| Pollution degree | 3 |
| Limiting temperature | -40 ... +125 °C |
| Material (insert) | Polycarbonate (PC) |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

| Identification | Size | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| PCB adapter,<br>In the Han® 40 EEE crimp insert,<br>Contact surface:<br>Silver plated  | 16 B | 09 33 000 9880 | 09 33 000 9880 |   |

# PCB adapter for Han® Q 4/2



## Features

- Robust design
- Low wiring costs
- High density of contacts
- Suitable for Han-Compact® hoods and housings

## Technical characteristics

| | |
|---|---|
| Rated current | 30 A |
| Rated voltage conductor-earth | 400 V |
| Rated voltage conductor-conductor | 690 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 2 |
| Rated current (signal) | 7.5 A |
| Rated voltage (signal) | 250 V |
| Rated impulse voltage (signal) | 4 kV |
| Pollution degree (signal) | 2 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (insert) | Liquid crystal polymer (LCP) |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Polyamide (PA) |
| Colour (locking) | RAL 9005 (jet black) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

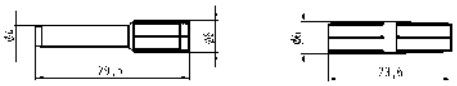
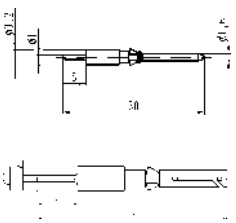
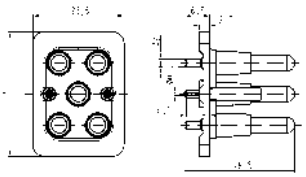
## Details

**Han® Q inserts** see chapter Han 13

**Crimping tools** see chapter Han 90

# PCB adapter for Han® Q 4/2



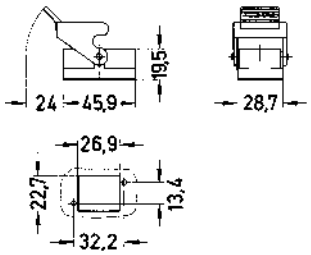
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® C,<br>PCB contact,<br>Contact surface:<br>Silver plated  | 09 32 000 6180 | 09 32 000 6280 |  |
| Han D®,<br>PCB contact,<br>Contact surface:<br>Silver plated  | 09 15 000 6191 | 09 15 000 6293 |  |
| PCB adapter,<br>In the Han® Q 4/2 <br>for PCB´s up to 2.4 mm | 09 12 006 9901 | 09 12 006 9901 |  |

# PCB adapter for Han® Q 4/2

Size Han-Compact®

Hoods/housings for industrial applications
Single locking lever

PCB

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Compact®,<br>Bulkhead mounted housing,<br>Straight,<br>IP65  | 09 12 008 0327 |   |

# PCB adapter for Han® Q 5/0

## Features

- Robust design
- Suitable only for EMC housings size Han® 3 A
- Additional robust and secure PE-connection between housing and PCB

## Technical characteristics

| | |
|---|---|
| Rated current | 10 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (insert) | Polycarbonate (PC) |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | PTFE |
| Material (locking) | Steel |
| Surface (locking) | Zinc plated |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

CE

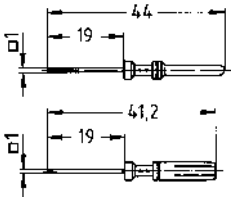
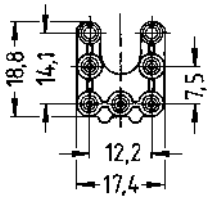
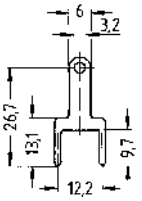
## Details

**Han® Q inserts** see chapter Han 13

**Crimping tools** see chapter Han 90

# PCB adapter for Han® Q 5/0



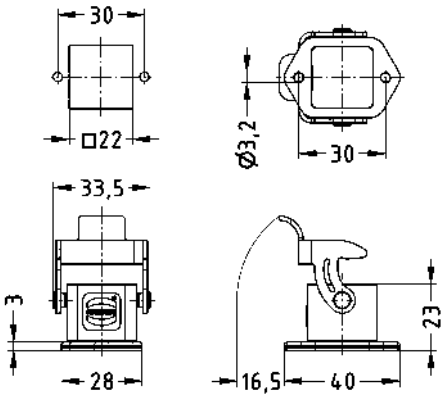
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han E®,<br>PCB contact,<br>Contact surface:<br>Silver plated<br> | 09 33 000 6195 | 09 33 000 6295 |  |
| PCB adapter,<br>5-pin,<br>In the Han® Q 5/0<br><br>for PCB´s up to 2.4 mm | 09 12 000 9905 | 09 12 000 9905 | <br>Adapter PE contact panel<br> |

# PCB adapter for Han® Q 5/0

Size 3 A

Hoods/Housings for higher EMC requirements
Single locking lever



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han® EMC,<br>Bulkhead mounted housing,<br>Straight,<br>for PCB termination with Han® Q 5/0,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 09 62 003 0304 |   |

# PCB adapter for Han® Q 7/0



## Features

- Robust design
- Suitable for standard and EMC hoods and housings
- High density of contacts

## Technical characteristics

| | |
|---|---|
| Rated current | 7.5 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (insert) | Polycarbonate (PC) |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Steel |
| Surface (locking) | Zinc plated |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

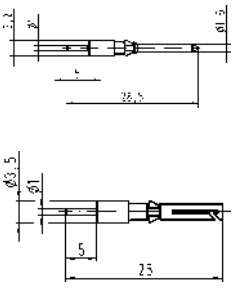
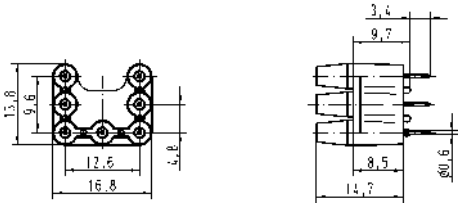
## Details

**Han® Q inserts** see chapter Han 13

**Crimping tools** see chapter Han 90

# PCB adapter for Han® Q 7/0

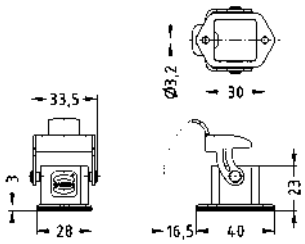


| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han D®,<br>PCB contact,<br>Contact surface:<br>Silver plated  | 09 15 000 6190 | 09 15 000 6290 |  |
| PCB adapter,<br>In the Han® Q 7/0 <br>for PCB´s up to 2.4 mm | | 09 12 000 9908 |  |

# PCB adapter for Han® Q 7/0 Size 3 A

Standard Hoods/housings for industrial applications
Single locking lever



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han A®,<br>Bulkhead mounted housing,<br>Straight,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 09 20 003 0301 |  Panel cut out 22 x 22 mm |

# PCB adapter for Han® Q 8/0

## Features

- Robust design
- Suitable for Han-Compact® hoods and housings
- Low wiring costs
- High density of contacts

## Technical characteristics

| | |
|---|---|
| Rated current | 16 A |
| Rated voltage conductor-earth | 230 V |
| Rated voltage conductor-conductor | 400 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 2 |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (insert) | Liquid crystal polymer (LCP) |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Polyamide (PA) |
| Colour (locking) | RAL 9005 (jet black) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

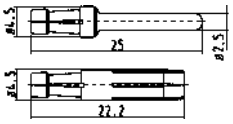
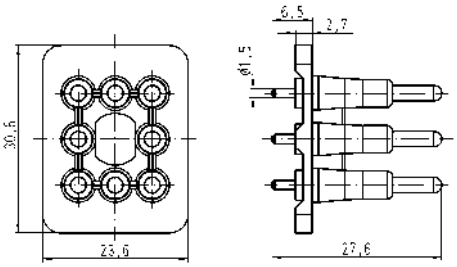
## Details

**Han® Q inserts** see chapter Han 13

**Crimping tools** see chapter Han 90

# PCB adapter for Han® Q 8/0



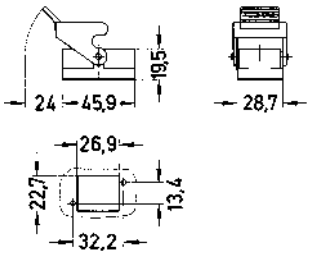
| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han E®,<br>PCB contact,<br>Contact surface:<br>Silver plated<br> | 09 33 000 6180 | 09 33 000 6280 |  |
| PCB adapter,<br>In the Han® Q 8/0<br><br>for PCB´s up to 1.6 mm | 09 12 008 9901 | |  |

# PCB adapter for Han® Q 8/0

Size Han-Compact®

Hoods/housings for industrial applications
Single locking lever



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Compact®,<br>Bulkhead mounted housing,<br>Straight,<br>IP65  | 09 12 008 0327 |  |

# PCB adapter for Han® Q 12/0



## Features

- Robust design
- Suitable for standard and EMC hoods and housings
- High density of contacts

## Technical characteristics

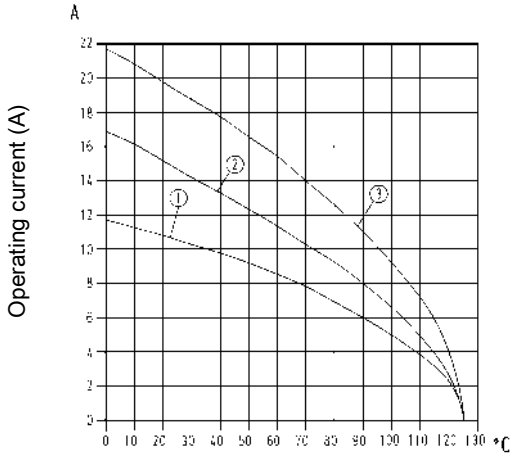
| | |
|---|---|
| Number of contacts | 12 |
| Rated current | 7.5 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

## Derating

**Current carrying capacity**

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 0.75 mm²
② Conductor cross-section 1.5 mm²
③ Conductor cross-section 2.5 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

# PCB adapter for Han® Q 12/0

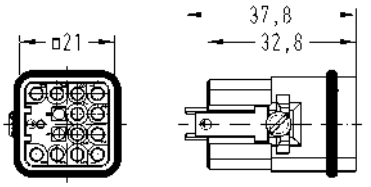
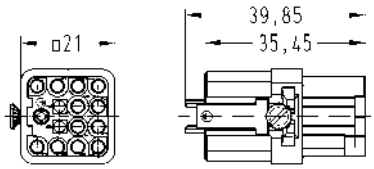
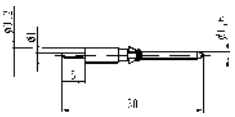
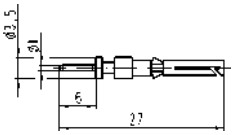
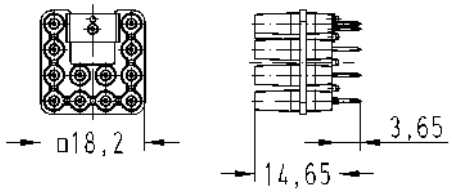
Size 3 A



Number of contacts

12+ ⏚

7.5 A 250 V 4 kV 3

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® Q,<br>for PCB adapter,<br>Solder termination<br><br>Please order contacts separately. | 09 12 012 3002 | 09 12 012 3102 | M<br><br>F<br> |
| Han D®,<br>PCB contact,<br>Contact surface:<br>Silver plated<br> | 09 15 000 6191 | 09 15 000 6297 | <br> |
| PCB adapter,<br>In the Han® Q 12/0<br><br>for PCB´s up to 2.4 mm | | 09 12 012 9901 |  |

Contents


| | Page |
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| Inserts for Han-*Yellock*® 10 | **Han 25.7** |
| Inserts for adapter frames | **Han 25.9** |
| Quick Lock module | **Han 25.11** |
| Crimp module | **Han 25.13** |
| Multiplier block | **Han 25.15** |
| Multiplier | **Han 25.17** |
| Adapter frames | **Han 25.20** |
| Monoblocks | **Han 25.23** |
| Han-*Yellock*® 10 hoods/housings | **Han 25.26** |
| Han-*Yellock*® 30 hoods/housings | **Han 25.29** |
| Han-*Yellock*® 60 hoods/housings | **Han 25.36** |
| Accessories | **Han 25.43** |

# Description of the Han-*Yellock*® system



## The Han-*Yellock*® - a special Han® connector

Han-*Yellock*® is a new product series which retains the core functionality but differs significantly from current size and shape formats. The approach of this series makes many new functions possible, for example:

- An internal, latched locking mechanism on the hood
- Multiplies the potentials in the connector with Han-*Yellock*® modules
- Usage of Han-Modular® modules with adapter frames
- Insulators can snap into the front or back walls of the housing
- Protected Earth contact (PE) in crimp or Quick Lock termination

These new technical features encourage sustained and effective improvements:
when purchasing products –

- Less article numbers and less inventory,

when planning for the electrical and mechanical layout –

- Less wiring work within a machine,

during the work flow –

- Less steps in the work flow and quicker assembly,

and during the after-sales stage –

- Reduced down times because of the latched locking mechanism and maintenance-friendly design



Assembly details

### Design overview

The Han-*Yellock*® interface consists of a housing, bulkhead mounting, on the housing side and a carrier hood with cover on the cable side.
Han-*Yellock*® offers the following features when assembling components:

- Han-*Yellock*® modules require only male crimp contacts.
- The PE is contacted on the housing; it can be connected with crimp and/or Quick Lock contacts.
- The Han-*Yellock*® hoods/housing are not plug-compatible with all other Han® hood/housing series.

The Han-*Yellock*® system can be used with a variety of insulators and contact inserts in order to establish an interface.

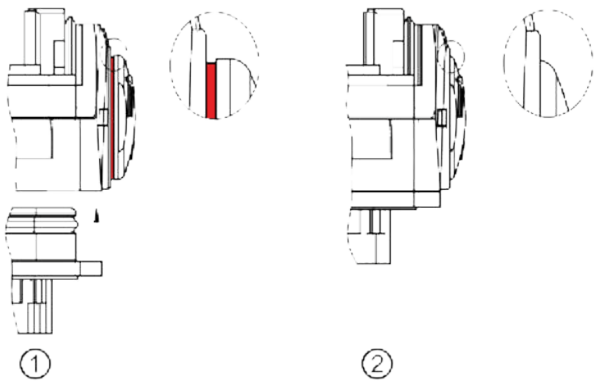
## The Locking

The locking ability is a key function of the Han-*Yellock*®. The function makes connections and disconnections safe, simple and quick – even under harsh industrial conditions.

Main advantages include:

- Easy handling
- Resistance to vibrations and shock
- Protected against accidental opening
- Compact, space-saving design

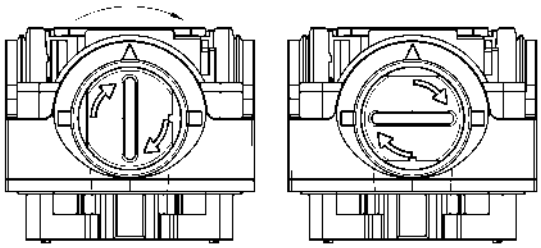
Han-*Yellock*® features a patented internal locking mechanism. The locking takes place as the cable and device sides are simply joined together. A red ring around the perimeter of the push button will be visible if the housing halves do not snap together properly. This ring disappears as soon as the internally protected stainless steel springs snap into place.



① ②

① unlocked
② locked

This press-button locking also features an integrated blocking function. The locking mechanism can be locked by rotating the button 90°. It is then no longer possible to open the connector.



„open“ „blocked“

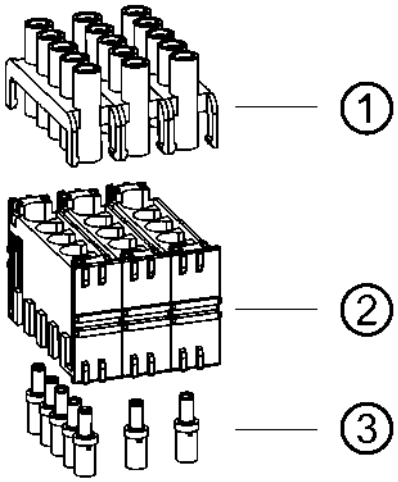
The press button can be set back to its visually open position only after the button is turned back 90°. It is then possible to release the two housing halves by pressing the snap-in button.

This feature provides an elegant mechanism for preventing an accidental opening of the connector – and no additional components are needed for it.

## Han-*Yellock*® modules

This new product series enables an improved approach and strategy for electrical planning and procurement.

For assembling the Han-*Yellock*® connector only male crimp contacts are needed. The conduct between the two male contacts is made by multipliers.




① multiplier
② Han-*Yellock*® module
③ Han-*Yellock*® crimp contacts

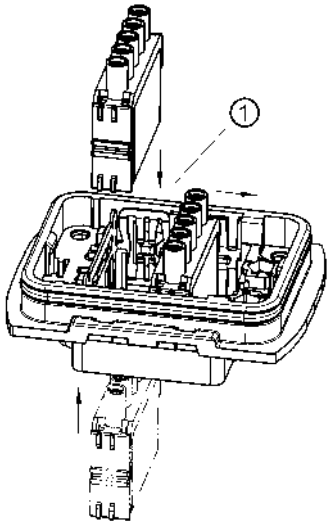
This concept allows a 1:1 wire to wire arrangement and in additon the use of bridges. Two to five contacts can be arranged.

It does not matter if the bridge attachment is inserted on the cable side or the housing side of the connector.

In the past, terminals blocks have been responsible for the function of multiplying potentials. But now this function has been integrated into the connector for a quick, compact and easy-to-service solution.

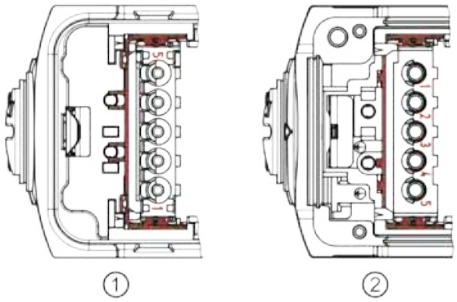
## Inserting the module into the hoods/housing

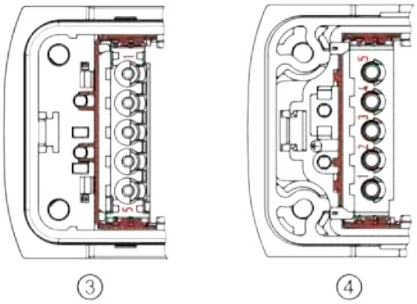
- The Han-*Yellock*® module should only be inserted into the „A“ plug-in position in the metal clamp.




① plug-in position „A“

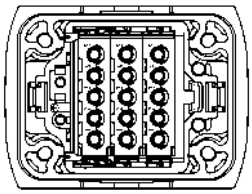
- The illustration shows the orientation of the module (see arrangement of contacts 1 ... 5).



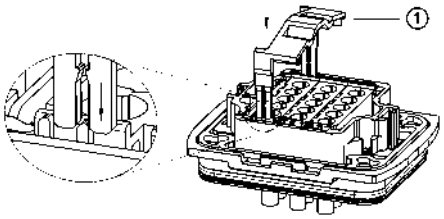

① Carrier hood, mating side
② Carrier hood, connection side
③ Housing, bulkhead mounting, mating side
④ Housing, bulkhead mounting, connection side

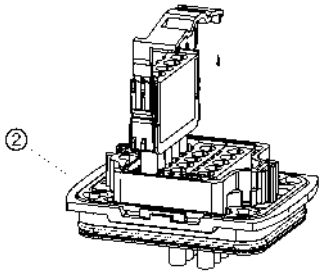
- A distinct click can be heard when the module snaps into position. It is then pushed along the rail to its final position. The plug-in slots must always be completely filled.



Disassembling the Han-*Yellock*® module

- The removal tool (part no. 11 99 000 0001) is required to take out the module.
- The following illustration shows how to insert the removal tool into the metal clamp. The tool should then be pressed down until it reaches the end stop.
- The tool is then pulled back and the module comes out of the housing.
- The removal can be made from the connection side as well as from the mating side.

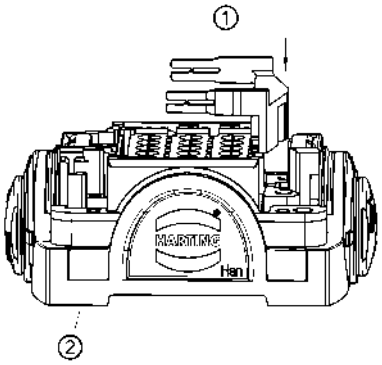



① removal tool
② housing, bulkhead mounting

The process is identical for both housings, bulkhead mounting, and carrier hoods.

The removal tool can be stored on the carrier hood:



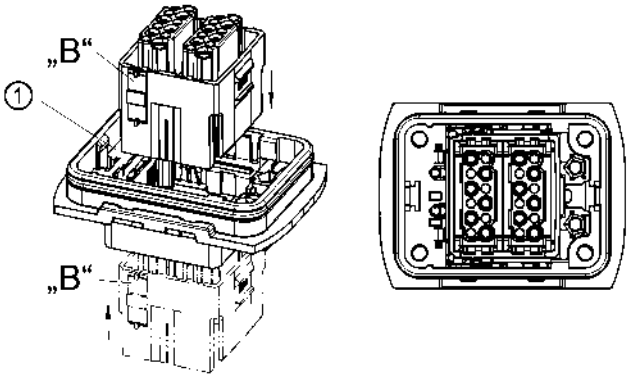

① removal tool
② carrier hood

## Han-*Yellock*® adapter frame

Han-Modular® series interfaces can be established using the Han-*Yellock*® adapter frame. The connection is based on a male/female contact arrangement.

Inserting the adapter frame in the housing:

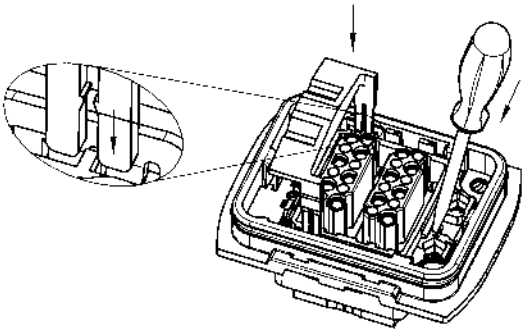
- The adapter frame can be snapped into the housing, bulkhead mounting, on the termination side and the mating side (refer to the illustration).
- The lateral plastic tabs („B“) are pressed into the metal clamps on the housing.
- The adapter frame then snaps in with a distinctly audible click.

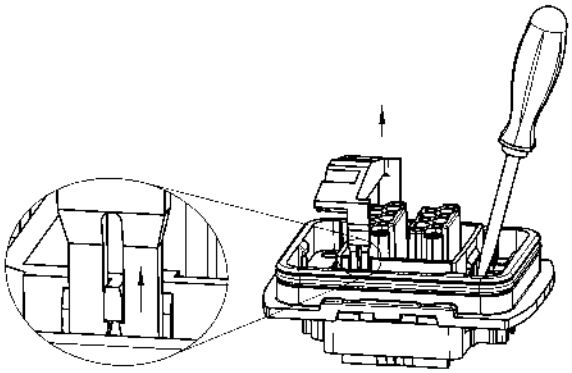



① metal clamp

Removal the adapter frame:

- The removal tool part no. 11 99 000 0001 is required for disassembly.
- The removal tool is inserted into the metal clamp and pressed down as shown in the following illustration. A screwdriver need also be placed into the notch in the housing.
- The removal tool should then be pulled outwards to remove the adapter frame from the housing.
- The removal can be made from the termination side as well as from the mating side.
- The process is identical for both housings, bulkhead mounting, and carrier hoods.





## Han-*Yellock*® Protection covers

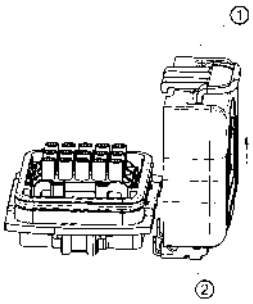
Protection cover function

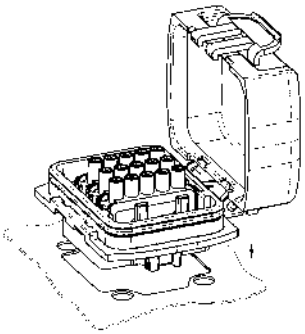
To protect the insert against dust and water it is possible to use a Han-*Yellock*® protection cover.

The protection cover comes with a metal bearing pedestal and can be installed during initial or retrofit installation.

The Han-*Yellock*® design offer the possibility to snap in the pedestal either on the left or on the right side of the housing.

The direction of the cover movement can flip without turning the housing and inserts.



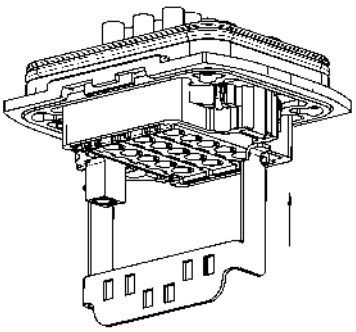
① cover
② bearing pedestal

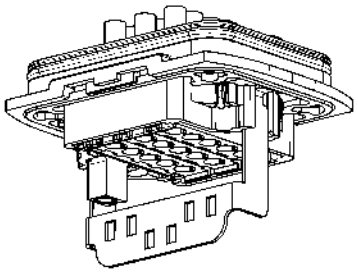
## Han-*Yellock*® Ground terminal

Ground terminal assembly

On the housing side ground terminals can be used.

After placing the frame deeply inside the housing slots the housing will be fixed to the panel leading to solid mounting of the complete set.





# Inserts for Han-*Yellock*® 10



| Series | Han® 3 A | Han® 3 A Quick Lock | Han® 3 A Quick Lock | Han® 4 A |
|---|---|---|---|---|
| Number of contacts | 3 + ⏚ | 3 + ⏚ | 3 + ⏚ | 4 + ⏚ |
| Termination | Screw terminal | Quick Lock termination | Quick Lock termination | Screw terminal |
| |  |  |  |  |
| Rated current<br>Rated voltage<br>Wire gauge | 10 A<br>230 / 400 V<br>0.75 ... 1.5 mm² | 10 A<br>230 / 400 V<br>0.5 ... 2.5 mm² | 10 A<br>230 / 400 V<br>0.25 ... 1.5 mm² | 10 A<br>230 / 400 V<br>0.75 ... 1.5 mm² |
| Male insert (M) | 09 20 003 2611 | 09 20 003 2633 | 09 20 003 2634 | 09 20 004 2611 |
| Female insert (F) | 09 20 003 2711 | 09 20 003 2733 | 09 20 003 2734 | 09 20 004 2711 |

| Series | Han® 4 A Quick Lock | Han® 4 A Quick Lock | Han® 8 D | Han® 8 D Quick Lock |
|---|---|---|---|---|
| Number of contacts | 4 + ⏚ | 4 + ⏚ | 8 | 8 |
| Termination | Quick Lock termination | Quick Lock termination | Crimp terminal | Quick Lock termination |
| |  |  |  |  |
| Rated current<br>Rated voltage<br>Wire gauge | 10 A<br>230 / 400 V<br>0.5 ... 2.5 mm² | 10 A<br>230 / 400 V<br>0.25 ... 1.5 mm² | 10 A<br>~ 50 V / – 120 V<br>0.14 ... 2.5 mm² | 10 A<br>~ 50 V / – 120 V<br>0.25 ... 1.5 mm² |
| Male insert (M) | 09 20 004 2633 | 09 20 004 2634 | 09 36 008 3001 | 09 36 008 2632 |
| Female insert (F) | 09 20 004 2733 | 09 20 004 2734 | 09 36 008 3101 | 09 36 008 2732 |

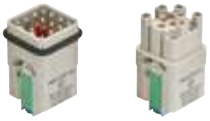
| Series | Han® Q 2/0 | Han® Q 2/0 | Han® Q 2/0 | Han® Q 2/0 |
|---|---|---|---|---|
| Number of contacts | 2 + ⏚ | 2 + ⏚ | 2 + ⏚ | 2 + ⏚ |
| Termination | Axial screw terminal | Axial screw terminal | Crimp terminal | Axial screw terminal |
| |  |  |  |  |
| Rated current<br>Rated voltage<br>Wire gauge | 40 A<br>400 V<br>2.5 ... 6 mm² | 40 A<br>400 V<br>4 ... 10 mm² | 40 A<br>400 V<br>1.5 ... 10 mm² | 40 A<br>830 V<br>2.5 ... 6 mm² |
| Male insert (M) | 09 12 002 2653 | 09 12 002 2651 | 09 12 002 3051 | 09 12 002 2654 |
| Female insert (F) | 09 12 002 2753 | 09 12 002 2751 | 09 12 002 3151 | 09 12 002 2754 |

By using in Han-*Yellock*® 10 hoods/housings the seal on the insert has to be removed.

# Inserts for Han-*Yellock*® 10



| Series | Han® Q 2/0 | Han® Q 2/0 | Han® Q 3/0 | Han® Q 5/0 |
|---|---|---|---|---|
| Number of contacts | 2 + ⏚ | 2 + ⏚ | 3 + ⏚ | 5 + ⏚ |
| Termination | Axial screw terminal  | Crimp terminal  | Crimp terminal | Crimp terminal  |
| Rated current<br>Rated voltage<br>Wire gauge | 40 A<br>830 V<br>4 ... 10 mm² | 40 A<br>830 V<br>1.5 ... 10 mm² | 40 A<br>400 V<br>1.5 ... 10 mm² | 16 A<br>230 / 400 V<br>0.14 ... 2.5 mm² |
| Male insert (M) | 09 12 002 2652 | 09 12 002 3052 | 09 12 003 3051 | 09 12 005 3001 |
| Female insert (F) | 09 12 002 2752 | 09 12 002 3152 | 09 12 003 3151 | 09 12 005 3101 |

| Series | Han® Q 5/0 Quick Lock | Han® Q 7/0 | Han® Q 12/0 | |
|---|---|---|---|---|
| Number of contacts | 5 + ⏚ | 7 + ⏚ | 12 + ⏚ | |
| Termination | Quick Lock termination  | Crimp terminal  | Crimp termination/<br>Quick Lock termination  | |
| Rated current<br>Rated voltage<br>Wire gauge | 16 A<br>230 / 400 V<br>0.5 ... 2.5 mm² | 10 A<br>400 V<br>0.14 ... 2.5 mm² | 10 A<br>400 V<br>0.14 ... 2.5 mm² | |
| Male insert (M) | 09 12 005 2633 | 09 12 007 3001 | 09 12 012 3001 | |
| Female insert (F) | 09 12 005 2733 | 09 12 007 3101 | 09 12 012 3101 | |

| Series | Han-Brid® RJ45 C | Han-Brid® RJ45 C | Han-Brid® RJ45 C | Han-Brid® RJ45 C |
|---|---|---|---|---|
| Number of contacts | 2 / 8 | 2 / 8 | 2 / 8 | 2 / 8 |
| Termination | Crimp terminal /<br>RJ45  | Crimp terminal /<br>RJ45  | Crimp terminal /<br>RJ45  | Crimp terminal /<br>RJ45  |
| Rated current<br>Rated voltage<br>Wire gauge | 10 A<br>24 V<br>0.14 ... 2.5 mm² | 10 A<br>24 V<br>0.14 ... 2.5 mm² | 10 A<br>24 V<br>0.14 ... 2.5 mm² | 10 A<br>24 V<br>0.14 ... 2.5 mm² |
| Male insert (M) | 09 12 003 3021 | 09 12 003 3031 | | |
| Female insert (F) | | | 09 12 003 2774 | 09 12 003 2776 |

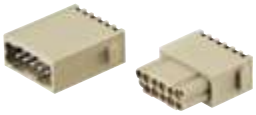
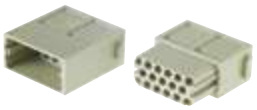
By using in Han-*Yellock*® 10 hoods/housings the seal on the insert has to be removed.

# Inserts for adapter frames



| Series | Han® CC Protected module | Han® CD module | Han E® module | Han® E Quick Lock module |
|---|---|---|---|---|
| Number of contacts | 4 | 3 | 6 | 6 |
| Modules | Crimp terminal | Crimp terminal | Crimp terminal | Quick Lock termination |
| |  |  |  |  |
| Rated current | 40 A | 40 A | 16 A | 16 A |
| Rated voltage | 830 V | 830 V | 500 V | 500 V |
| Wire gauge | 1.5 ... 6 mm² | 1.5 ... 6 mm² | 0.14 ... 4 mm² | 0.5 ... 2.5 mm² |

| Series | Han® EE module | Han® EE Quick Lock module | Han E® Protected module | Han® EEE module |
|---|---|---|---|---|
| Number of contacts | 8 | 8 | 6 | 20 |
| Modules | Crimp terminal | Quick Lock termination | Crimp terminal | Crimp terminal |
| |  |  |  |  |
| Rated current | 16 A | 16 A | 16 A | 16 A |
| Rated voltage | 400 V | 400 V | 830 V | 500 V |
| Wire gauge | 0.14 ... 4 mm² | 0.5 ... 2.5 mm² | 0.14 ... 4 mm² | 0.14 ... 4 mm² |

| Series | Han® ES module | Han DD® module | Han DD® Quick Lock module | Han® DDD module |
|---|---|---|---|---|
| Number of contacts | 5 | 12 | 12 | 17 |
| Modules | Cage-clamp terminal | Crimp terminal | Quick Lock termination | Crimp terminal |
| |  |  |  |  |
| Rated current | 16 A | 10 A | 10 A | 10 A |
| Rated voltage | 400 V | 250 V | 250 V | 160 V |
| Wire gauge | 0.14 ... 2.5 mm² | 0.14 ... 2.5 mm² | 0.25 ... 1.5 mm² | 0.14 ... 2.5 mm² |

| Series | Han® High Density module | Han® D-Sub module | | |
|---|---|---|---|---|
| Number of contacts | 25 | 9 | | |
| Modules | Crimp terminal | Crimp terminal | | |
| |  |  | | |
| Rated current | 4 A | 5 A | | |
| Rated voltage | 50 V | 50 V | | |
| Wire gauge | 0.08 ... 0.52 mm² | 0.08 ... 0.52 mm² | | |

For more technical details see chapter Han 06

# Inserts for adapter frames

Yellock

| Series | Han® USB module | Han® GigaBit module | | |
|---|---|---|---|---|
| Number of contacts | 4 | 8 | | |
| Modules | USB 2.0  | Ethernet Cat. 6  | | |

| Series | Han-Quintax® module | | | | Han® Multi module |
|---|---|---|---|---|---|
| Number of contacts | 2 | | | | |
| Modules |  | | | |  |
| Contacts | Han-Quintax® contact 4 + shielding  | High Density Quintax contact 8 + shielding  | Han D® Coax contact 75 Ω 1 + shielding  75 Ω | Han E® Coax contact 50 Ω 1 + shielding  50 Ω | Coaxial contact  50 Ω RG 174<br>75 Ω RG 179<br>50 Ω RG 58 |



For more technical details see chapter Han 06

# Quick Lock module

## Features

- Snap-in assembly from mating side and from termination side
- Bus bar within bridge attachements
- Finger safe design
- Fast and tool-less assembly
- Mating compatible to the crimp version

## Technical characteristics

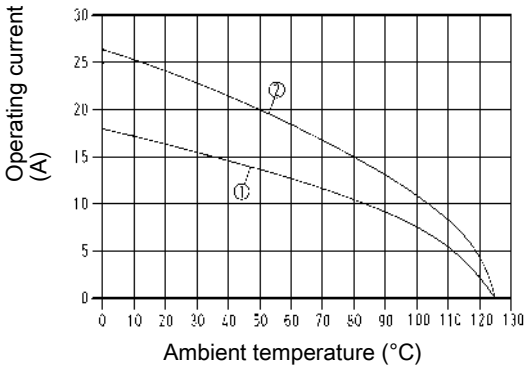
| | |
|---|---|
| Number of contacts | 5 |
| Rated current | 20 A, 10 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2

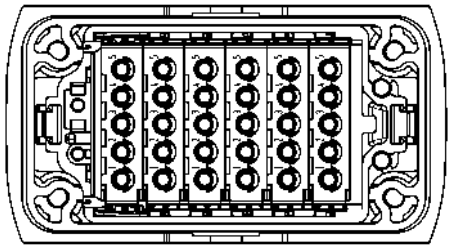



① Conductor cross-section 1.5 mm²
② Conductor cross-section 2.5 mm²
for connector with 3 Han-*Yellock*® modules, fully loaded (multiplier 1:1)

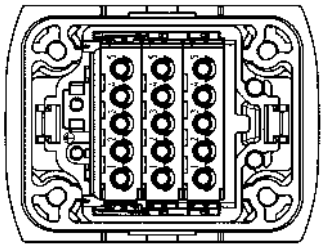
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details



Placement for Han-*Yellock*® 60 with 6 Han-*Yellock*® modules



Placement for Han-*Yellock*® 30 with 3 Han-*Yellock*® modules

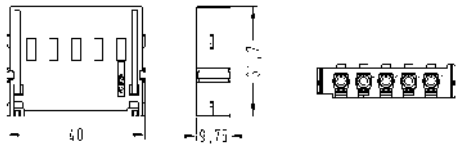
# Quick Lock module



Number of contacts

5

20 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Module,<br>Han-Quick Lock® termination,<br>20 A<br>Contact surface:<br>Silver plated<br><br>Blue slide | 0.5 ... 2.5 | 11 05 105 2633 | <br>Stripping length 10 mm |
| Han-*Yellock*®,<br>Module,<br>Han-Quick Lock® termination,<br>10 A<br>Contact surface:<br>Silver plated<br><br>Black slide | 0.25 ... 1.5 | 11 05 105 2634 | |

# Crimp module



## Features

- Snap-in assembly from mating side and from termination side
- Wiring with male contacts only
- Bus bar within bridge attachements
- Finger safe design
- Fast and tool-less assembly

## Technical characteristics

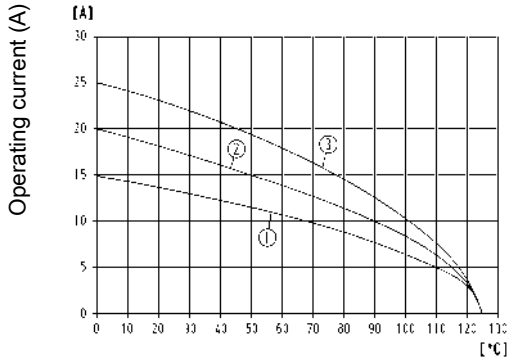
| | |
|---|---|
| Number of contacts | 5 |
| Rated current | 20 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey), RAL 5015 (sky blue), RAL 3000 (flame red) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




Ambient temperature (°C)

① Conductor cross-section 1.5 mm²
② Conductor cross-section 2.5 mm²
③ Conductor cross-section 4 mm²
for connector with 3 Han-*Yellock*® modules, fully loaded (multiplier 1:1)

## Specifications and approvals

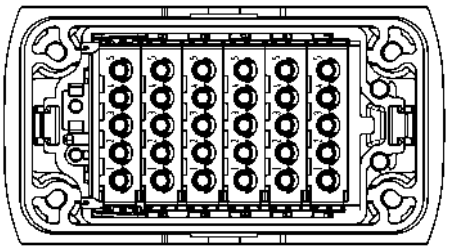
EN 60664-1
IEC 61984
DNV GL

## Details

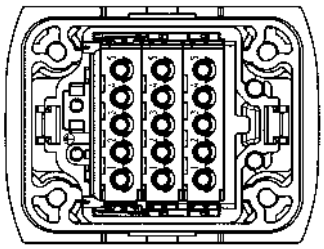
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.



Placement for Han-*Yellock*® 60 with 6 Han-*Yellock*® modules



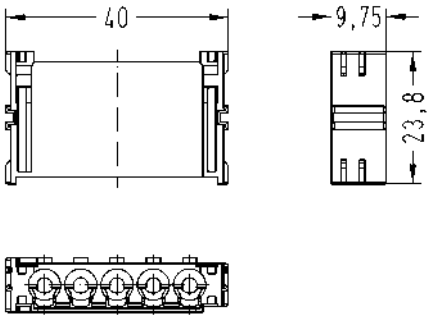
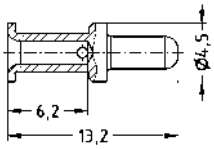
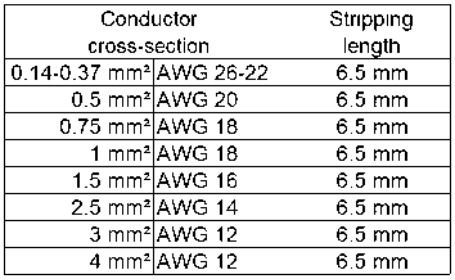
Placement for Han-*Yellock*® 30 with 3 Han-*Yellock*® modules

# Crimp module

Number of contacts

## 5

20 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Module,<br>Crimp termination,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 4<br>0.14 ... 4<br>0.14 ... 4 | 11 05 105 3001<br>11 05 105 3011<br>11 05 105 3012 | <br>11 05 105 3001 Grey<br>11 05 105 3011 Blue<br>11 05 105 3012 Red |
| Han-*Yellock*®,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 11 05 000 6101<br>11 05 000 6102<br>11 05 000 6103<br>11 05 000 6104<br>11 05 000 6105<br>11 05 000 6106<br>11 05 000 6107<br>11 05 000 6108 |  |
| Han-*Yellock*®,<br>Crimp contact,<br>Contact surface:<br>Gold plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 11 05 000 6121<br>11 05 000 6122<br>11 05 000 6123<br>11 05 000 6124<br>11 05 000 6125<br>11 05 000 6126<br>11 05 000 6127<br>11 05 000 6128 | <br>Removal tool 09 99 000 0319<br>See chapter Han 90 |

# Multiplier block

## Features

- Up to 3 Han-Yellock® multipliers can be used in one multiplier bloc
- By using the multipliers, the potential of one up to five contacts can be multiplied
- Needs 3 places in the Han-Modular® Docking frame and Hinged frame
- Wiring with male contacts only

## Technical characteristics

| | |
|---|---|
| Number of contacts | 15 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Contact resistance | ≤1 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

# Multiplier block

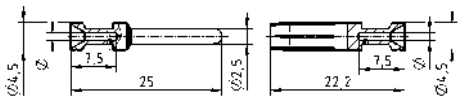
Yellock

Number of contacts

**15**

16 A 500 V 6 kV 3



| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-*Yellock*®, Multiplier block, Crimp termination<br><br>Please order crimp contacts separately. | 0.14 ... 4 | 09 14 015 3001 | 09 14 015 3101 | |
| Han E®, Crimp contact, Contact surface: Silver plated<br> | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 09 33 000 6127<br>09 33 000 6121<br>09 33 000 6114<br>09 33 000 6105<br>09 33 000 6104<br>09 33 000 6102<br>09 33 000 6106<br>09 33 000 6107 | |  |

# Multiplier

## Features

- Snap-in assembly from mating side and from termination side
- Bus bar within bridge attachements
- Visible bridge position from mating side and from termination side
- Fast and easy exchange

## Technical characteristics

| | |
|---|---|
| Number of contacts | 5 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey), RAL 3000 (flame red), RAL 5015 (sky blue) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

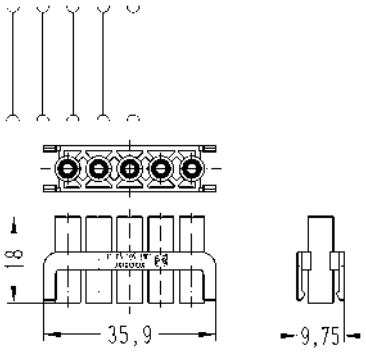
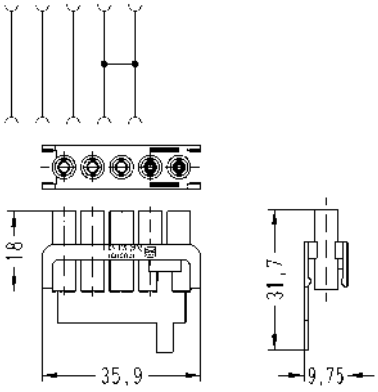
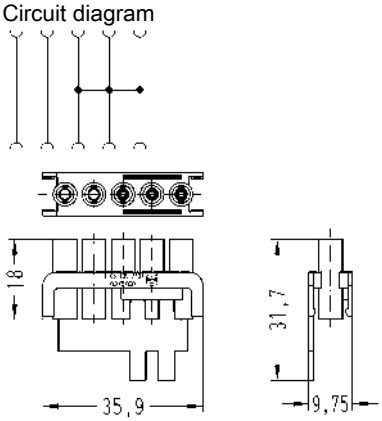
## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

# Multiplier

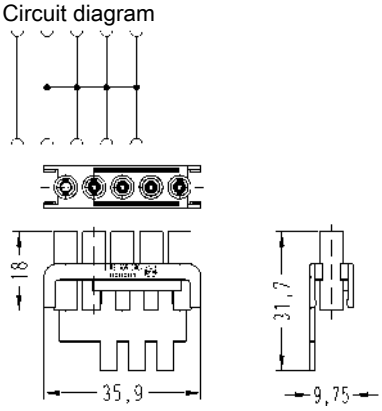
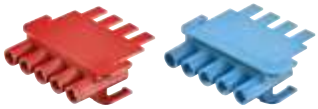
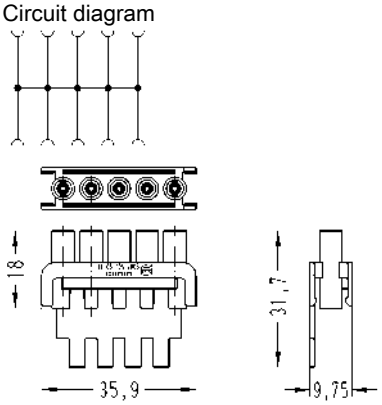
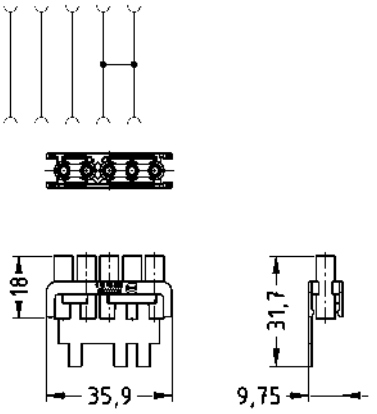
Number of contacts

## 5

| Identification | Part number Female | Drawing (dimensions in mm) |
|---|---|---|
| Han-*Yellock*®,<br>Multiplier,<br>0 Bridged contacts,<br>5 Unbridged contacts  | 11 05 105 2801 | Circuit diagram   |
| Han-*Yellock*®,<br>Multiplier,<br>2 Bridged contacts,<br>3 Unbridged contacts  | 11 05 105 2802 | Circuit diagram   |
| Han-*Yellock*®,<br>Multiplier,<br>3 Bridged contacts,<br>2 Unbridged contacts  | 11 05 105 2803 | Circuit diagram   |

# Multiplier



| Identification | Part number Female | Drawing (dimensions in mm) |
|---|---|---|
| Han-*Yellock*®,<br>Multiplier,<br>4 Bridged contacts,<br>1 Unbridged contacts<br> | 11 05 105 2804 | Circuit diagram<br> |
| Han-*Yellock*®,<br>Multiplier,<br>5 Bridged contacts,<br>0 Unbridged contacts<br> | 11 05 105 2805<br>11 05 105 2815 | Circuit diagram<br><br>11 05 105 2805 Red<br>11 05 105 2815 Blue |
| Han-*Yellock*®,<br>Multiplier,<br>2 Bridged contacts,<br>3 Bridged contacts<br> | 11 05 105 2823 | Circuit diagram<br> |

## Features

- Suitable for Han-Modular® modules
- Fast and tool-less assembly
- Snap-in assembly from mating side and from termination side
- Removal from mating side and from termination side possible

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Polycarbonate (PC) |
| Colour (accessories) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

## Details

**Han-Yellock® adapter frame**

Han-Modular® series interfaces can be established using the Han-*Yellock*® adapter frame. The connection is based on a male/female contact arrangement.

Inserting the adapter frame in the housing:

The adapter frame can be snapped into the housing, bulkhead mounting, on the termination side and the mating side (refer to the illustration).

The lateral plastic tabs („B“) are pressed into the metal clamps on the housing.

The adapter frame then snaps in with a distinctly audible click.

① metal clamp

**Removal of the adapter frame**

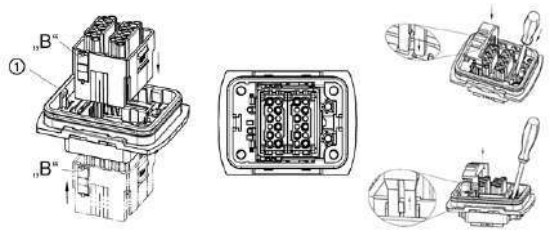
The removal tool part no. 11 99 000 0001 is required for disassembly. (see chapter 90)

The removal tool is inserted into the metal clamp and pressed down as shown in the following illustration. A screwdriver need also be placed into the notch in the housing.

The removal tool should then be pulled outwards to remove the adapter frame from the housing.

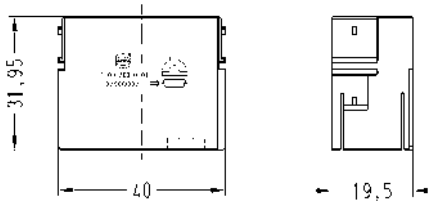
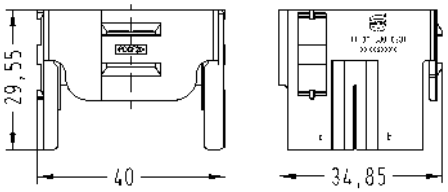
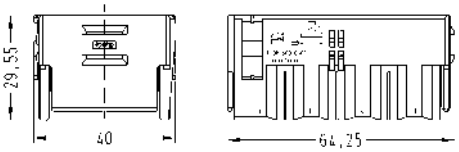
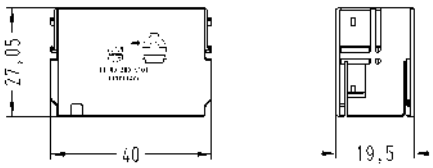
The removal can be made from the termination side as well as from the mating side.

The process is identical for both housings, bulkhead mounting, and carrier hoods.



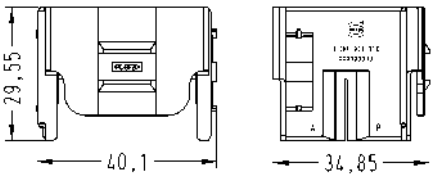
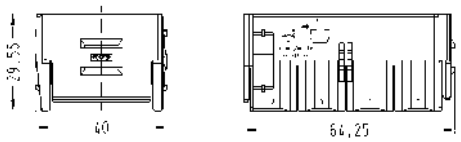
# Adapter frames



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-*Yellock*®,<br>Adapter frames,<br>for bulkhead mounted housings,<br>for Han-*Yellock*® 30,<br>for Han-*Yellock*® 60<br><br>Mounting/removal from termination side only! | 11 00 200 0301 |  |
| Han-*Yellock*®,<br>Adapter frames,<br>for bulkhead mounted housings,<br>for Han-*Yellock*® 30<br> | 11 00 300 0301 |  |
| Han-*Yellock*®,<br>Adapter frames,<br>for bulkhead mounted housings,<br>for Han-*Yellock*® 60<br> | 11 00 600 0301 |  |
| Han-*Yellock*®,<br>Adapter frames,<br>for carrier hoods,<br>for Han-*Yellock*® 30,<br>for Han-*Yellock*® 60<br><br>Mounting/removal from termination side only! | 11 00 200 0101 |  |

# Adapter frames



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-*Yellock*®, Adapter frames, for carrier hoods, for Han-*Yellock*® 30  | 11 00 300 0101 |   |
| Han-*Yellock*®, Adapter frames, for carrier hoods, for Han-*Yellock*® 60  | 11 00 600 0101 |   |

| Combinations | Han-Yellock® Hood/Housing | | | | |
|---|---|---|---|---|---|
| | 30 | 30 | 60 | 60 | 60 |
| Han-Yellock® 20 Adapter frame (for Han-Yellock® 30 und 60) | 1 | | 2 | 1 | |
| Han-Yellock® 30 Adapter frame | | 1 | | | |
| Han-Yellock® 60 Adapter frame | | | | | 1 |
| Han-Yellock® Module | 1 | | 2 | 4 | |

## Features

- Snap-in assembly from mating side and from termination side
- Finger safe design
- Fast and tool-less assembly

## Technical characteristics

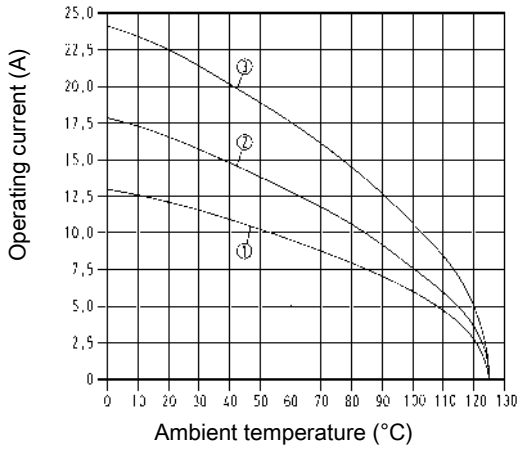
| | |
|---|---|
| Number of contacts | 25, 48 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤2 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Derating

### Current carrying capacity

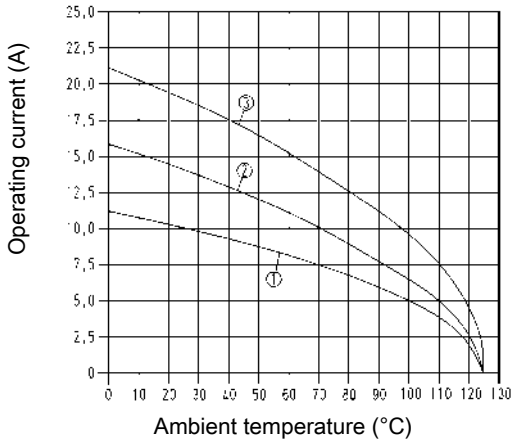
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques acc. to IEC 60512-5-2




① Conductor cross-section 1.5 mm²
② Conductor cross-section 2.5 mm²
③ Conductor cross-section 4 mm²

## Derating




① Conductor cross-section 1.5 mm²
② Conductor cross-section 2.5 mm²
③ Conductor cross-section 4 mm²

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

## Details

**Crimping tools** see chapter Han 90

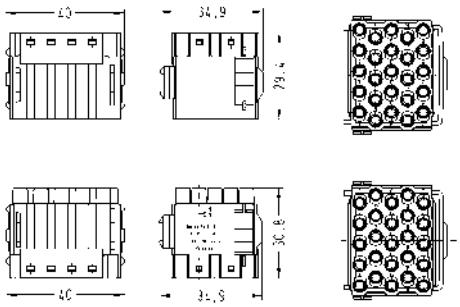
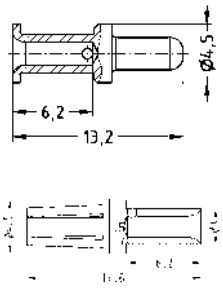
**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

# 25

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-*Yellock*®, Monoblock, Crimp termination  Please order crimp contacts separately. ATTENTION! It is not possible to use 2 monoblocks 30 in the Han-*Yellock*® 60 series! | 0.14 ... 4 | 11 05 325 3001 | 11 05 325 3101 |  |
| Han-*Yellock*®, Crimp contact, Contact surface: Silver plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 11 05 000 6101<br>11 05 000 6102<br>11 05 000 6103<br>11 05 000 6104<br>11 05 000 6105<br>11 05 000 6106<br>11 05 000 6107<br>11 05 000 6108 | 11 05 000 6201<br>11 05 000 6202<br>11 05 000 6203<br>11 05 000 6204<br>11 05 000 6205<br>11 05 000 6206<br>11 05 000 6207<br>11 05 000 6208 |   |
| Han-*Yellock*®, Crimp contact, Contact surface: Gold plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 11 05 000 6121<br>11 05 000 6122<br>11 05 000 6123<br>11 05 000 6124<br>11 05 000 6125<br>11 05 000 6126<br>11 05 000 6127<br>11 05 000 6128 | 11 05 000 6221<br>11 05 000 6222<br>11 05 000 6223<br>11 05 000 6224<br>11 05 000 6225<br>11 05 000 6226<br>11 05 000 6227<br>11 05 000 6228 | |

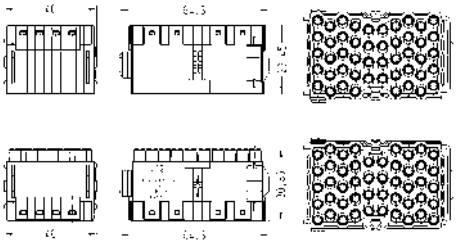
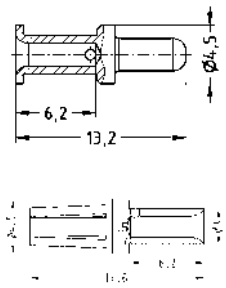
| Conductor cross-section | | Stripping length |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 6.5 mm |
| 0.5 mm² | AWG 20 | 6.5 mm |
| 0.75 mm² | AWG 18 | 6.5 mm |
| 1 mm² | AWG 18 | 6.5 mm |
| 1.5 mm² | AWG 16 | 6.5 mm |
| 2.5 mm² | AWG 14 | 6.5 mm |
| 3 mm² | AWG 12 | 6.5 mm |
| 4 mm² | AWG 12 | 6.5 mm |

Removal tool 09 99 000 0319
See chapter Han 90

Number of contacts

# 48

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-*Yellock*®, Monoblock, Crimp termination  Please order crimp contacts separately. | 0.14 ... 4 | 11 05 648 3001 | 11 05 648 3101 |  |
| Han-*Yellock*®, Crimp contact, Contact surface: Silver plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 11 05 000 6101<br>11 05 000 6102<br>11 05 000 6103<br>11 05 000 6104<br>11 05 000 6105<br>11 05 000 6106<br>11 05 000 6107<br>11 05 000 6108 | 11 05 000 6201<br>11 05 000 6202<br>11 05 000 6203<br>11 05 000 6204<br>11 05 000 6205<br>11 05 000 6206<br>11 05 000 6207<br>11 05 000 6208 |   |
| Han-*Yellock*®, Crimp contact, Contact surface: Gold plated  | 0.14 ... 0.37<br>0.5<br>0.75<br>1<br>1.5<br>2.5<br>3<br>4 | 11 05 000 6121<br>11 05 000 6122<br>11 05 000 6123<br>11 05 000 6124<br>11 05 000 6125<br>11 05 000 6126<br>11 05 000 6127<br>11 05 000 6128 | 11 05 000 6221<br>11 05 000 6222<br>11 05 000 6223<br>11 05 000 6224<br>11 05 000 6225<br>11 05 000 6226<br>11 05 000 6227<br>11 05 000 6228 | |

| Conductor cross-section | | Stripping length |
|---|---|---|
| 0.14-0.37 mm² | AWG 26-22 | 6.5 mm |
| 0.5 mm² | AWG 20 | 6.5 mm |
| 0.75 mm² | AWG 18 | 6.5 mm |
| 1 mm² | AWG 18 | 6.5 mm |
| 1.5 mm² | AWG 16 | 6.5 mm |
| 2.5 mm² | AWG 14 | 6.5 mm |
| 3 mm² | AWG 12 | 6.5 mm |
| 4 mm² | AWG 12 | 6.5 mm |

Removal tool 09 99 000 0319
See chapter Han 90

# Han-*Yellock*® 10 hoods/housings

## Features

- Hoods/housings for industrial applications
- Highly EMC resistant
- High robustness due to internal locking mechanism
- Compatible with inserts size Han® 3 A

## Technical characteristics

| | |
|---|---|
| Un-/locking temperature | -10 ... +85 °C |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated, Zinc passivation |
| Colour (hood/housing) | RAL 7021 (black grey), Metallic |
| Material (seal) | NBR |
| Material (locking) | Polyamide (PA), Stainless steel |
| Colour (locking) | Melon yellow |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

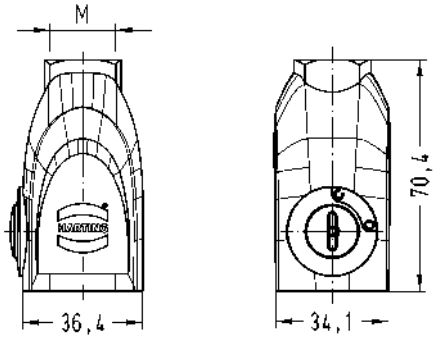
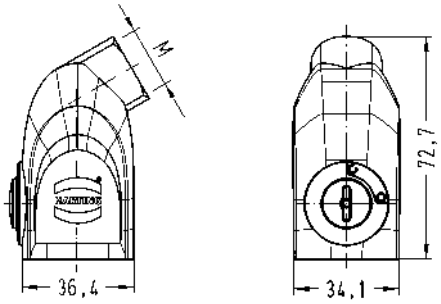
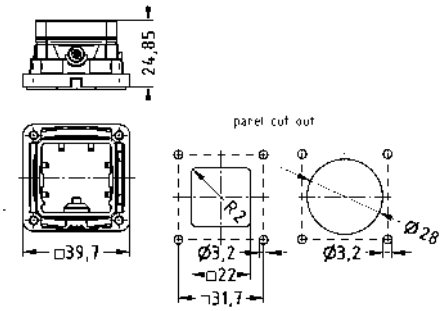
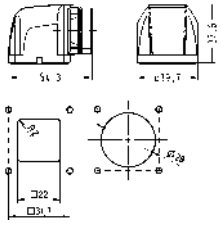
EN 60664-1
IEC 61984
DNV GL

CE

## Details

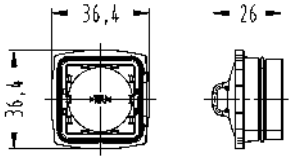
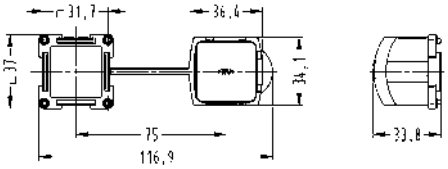
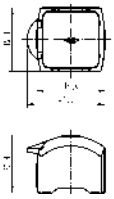
For use with inserts Han® Q, the seal on the insert has to be removed.

Hoods/housings for industrial applications
Push button

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®, Hood, Top entry, IP65, IP67  | 1x M20<br>1x M25 | 11 20 003 1400<br>11 20 003 1401 |   |
| Han-*Yellock*®, Hood, Side entry, IP65, IP67  | 1x M20<br>1x M25 | 11 20 003 1600<br>11 20 003 1601 |   |
| Han-*Yellock*®, Bulkhead mounted housing, Straight, IP65, IP67  | | 11 20 003 0300 |   |
| Han-*Yellock*®, Bulkhead mounted housing, Angled, IP65, IP67  | | 11 20 003 0800 |  |

# Han-*Yellock*® 10 hoods/housings

Size Han-*Yellock*® 10

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Protection cover,<br>for hoods,<br>Thermoplastic<br> | | 11 20 003 5456 |  |
| Han-*Yellock*®,<br>Protection cover,<br>for bulkhead mounted housings,<br>Thermoplastic,<br>With seal<br> | | 11 20 003 5406 |  |
| Han-*Yellock*®,<br>Protection cover,<br>for bulkhead mounted housings,<br>Thermoplastic<br> | | 11 20 003 5407 |  |

# Han-*Yellock*® 30 hoods/housings



## Features

- for three Han-*Yellock*® modules
- High robustness due to internal locking mechanism
- Two-part hood
- Earthed contacts PE in crimped or Han-Quick Lock® termination
- Protection cover retrofit on housing side

## Technical characteristics

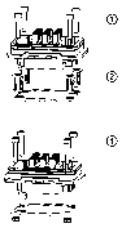
| | |
|---|---|
| Un-/locking temperature | -10 ... +85 °C |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Material (hood/housing) | Zinc die-cast, Aluminium die-cast |
| Surface (hood/housing) | Zinc passivation, Powder-coated, Passivated |
| Colour (hood/housing) | Metallic, RAL 7021 (black grey), RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Polyamide (PA), Stainless steel |
| Colour (locking) | Melon yellow |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

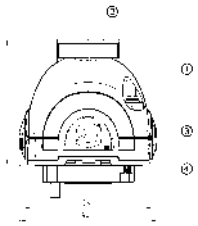
EN 60664-1
IEC 61984
DNV GL

CE

## Details

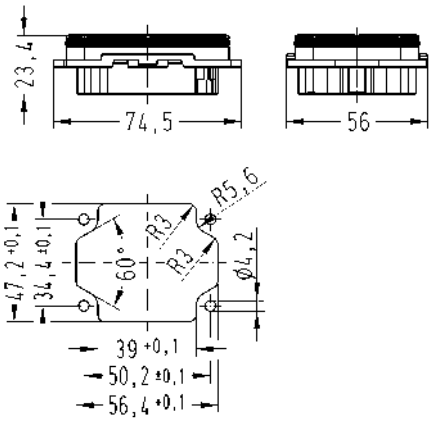
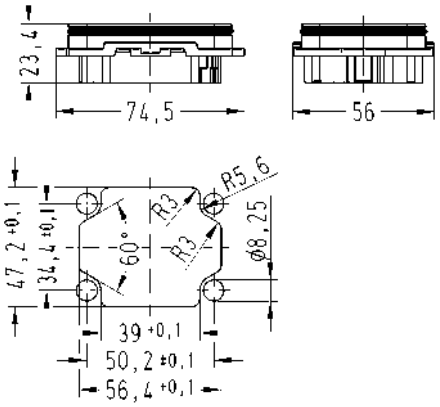
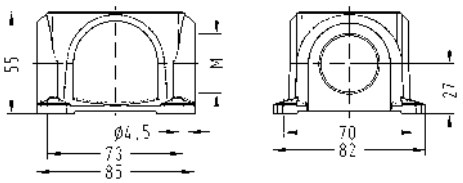


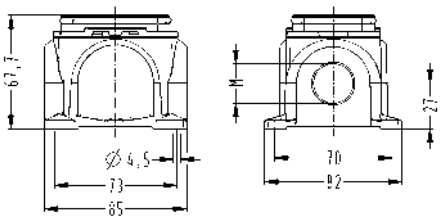
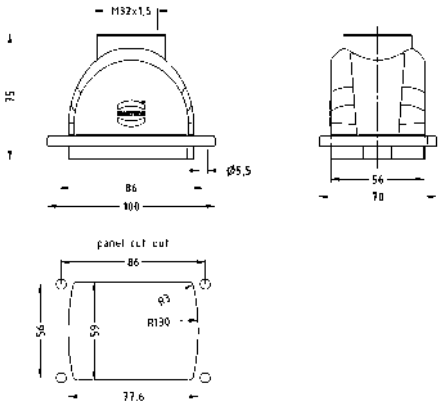
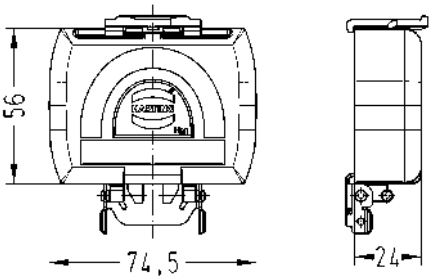
① M4 fixing screw (screw length > 20 mm, tightening torque: 1Nm)
② Panel fastener (tightening torque: 2.3 Nm)



① Shell with top entry
② Cable entry M20 ... M40
③ Carrier hood with push button release
④ Bulkhead mounted housing

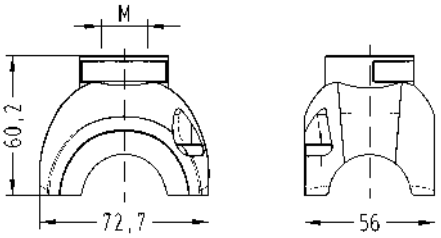
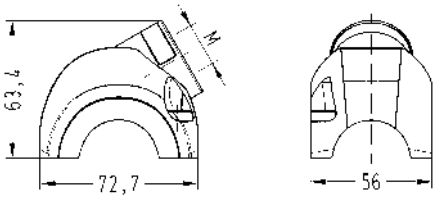
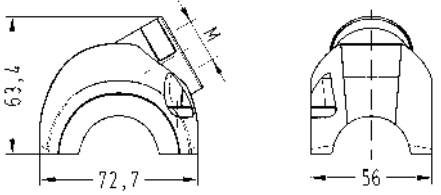
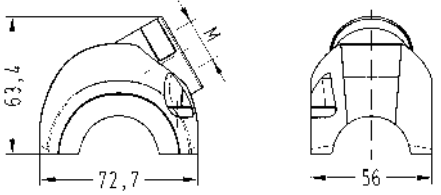
Hoods/housings for industrial applications

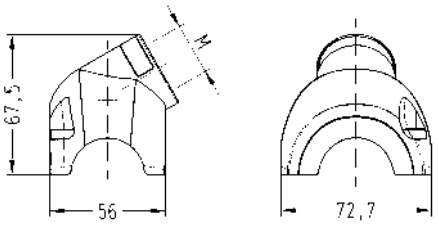
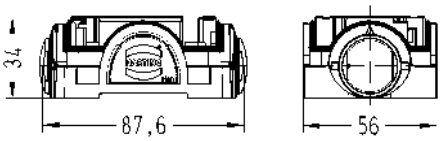
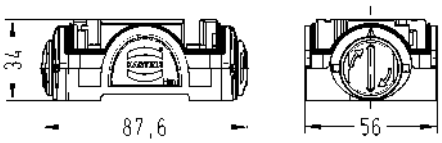
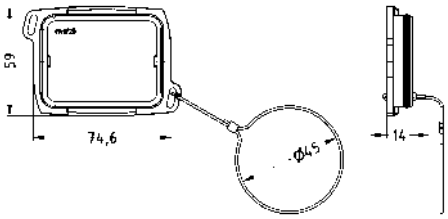
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67<br> | | 11 12 300 0301 |  |
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67<br>Pack contents:<br>incl. 4 panel fastener<br> | | 11 12 300 0302 |  |
| Han-*Yellock*®,<br>Surface mounted housing,<br>Side entry,<br>IP65,<br>IP67<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 11 12 300 1200<br>11 12 300 1201<br>11 12 300 1202<br>11 12 300 1204<br>11 12 300 1205<br>11 12 300 1206 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Surface mounted housing,<br>incl. bulkhead mounted housings,<br>Side entry,<br>IP65,<br>IP67<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 11 12 300 1210<br>11 12 300 1211<br>11 12 300 1212<br>11 12 300 1214<br>11 12 300 1215<br>11 12 300 1216 |  |
| Han-*Yellock*®,<br>Panel feed through housing,<br>Top entry,<br>IP65,<br>IP67<br> | 1x M32 | 11 12 300 1702 |  |
| Han-*Yellock*®,<br>Protection cover,<br>for bulkhead mounted housings,<br>Thermoplastic,<br>IP65,<br>IP67<br> | | 11 12 300 5401 |  |

Hoods/housings for industrial applications
Push button



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®, Shell, Top entry, IP65, IP67  | 1x M20<br>1x M25<br>1x M32 | 11 12 300 1400<br>11 12 300 1401<br>11 12 300 1402 |   |
| Han-*Yellock*®, Shell, Side entry, IP65, IP67  | 1x M20<br>1x M25<br>1x M32 | 11 12 300 1500<br>11 12 300 1501<br>11 12 300 1502 |   |
| Han-*Yellock*®, Shell, White, Side entry, IP65, IP67  | 1x M20 | 11 12 300 1510 |   |
| Han-*Yellock*®, Shell, EMC version, Side entry, IP65, IP67  | 1x M25 | 11 12 300 1581 |   |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Shell,<br>Angled entry,<br>IP65,<br>IP67  | 1x M20<br>1x M25<br>1x M32 | 11 12 300 1600<br>11 12 300 1601<br>11 12 300 1602 |   |
| Han-*Yellock*®,<br>Carrier hood,<br>Plain push button,<br>IP65,<br>IP67  | | 11 12 300 0100 |   |
| Han-*Yellock*®,<br>Carrier hood,<br>Push button, slot,<br>IP65,<br>IP67  | | 11 12 300 0110 |   |
| Han-*Yellock*®,<br>Protection cover,<br>for carrier hoods,<br>With fixing cord,<br>Thermoplastic,<br>IP65,<br>IP67  | | 11 12 300 5451 |   |

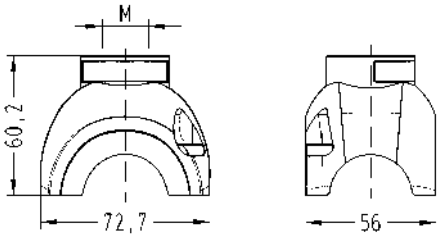
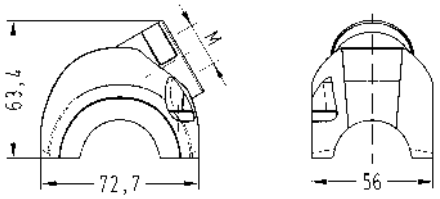
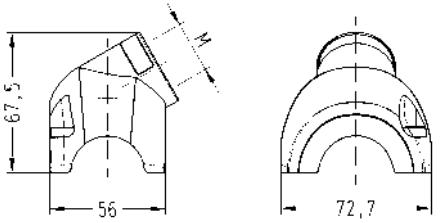
Hoods/housings for outdoor applications



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67  | 11 13 300 0301 | |
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67<br>Pack contents:<br>incl. 4 panel fastener  | 11 13 300 0302 | |

Hoods/housings for outdoor applications
Push button



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®, Shell, Top entry, IP65, IP67  | 1x M25 | 11 13 300 1401 |   |
| Han-*Yellock*®, Shell, Side entry, IP65, IP67  | 1x M25 | 11 13 300 1501 |   |
| Han-*Yellock*®, Shell, Angled entry, IP65, IP67  | 1x M25 | 11 13 300 1601 |   |
| Han-*Yellock*®, Carrier hood, Plain push button, IP65, IP67  | | 11 13 300 0100 | |
| Han-*Yellock*®, Carrier hood, Push button, slot, IP65, IP67  | | 11 13 300 0110 | |

# Han-*Yellock*® 60 hoods/housings

## Features

- for six Han-*Yellock*® modules
- High robustness due to internal locking mechanism
- Two-part hood
- Earthed contacts PE in crimped or Han-Quick Lock® termination
- Protection cover retrofit on housing side

## Technical characteristics

| | |
|---|---|
| Un-/locking temperature | -10 ... +85 °C |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Material (hood/housing) | Zinc die-cast, Aluminium die-cast |
| Surface (hood/housing) | Passivated, Powder-coated |
| Colour (hood/housing) | Metallic, RAL 7021 (black grey), RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Polyamide (PA), Stainless steel |
| Colour (locking) | Melon yellow |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

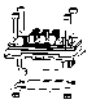
## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

CE

## Details

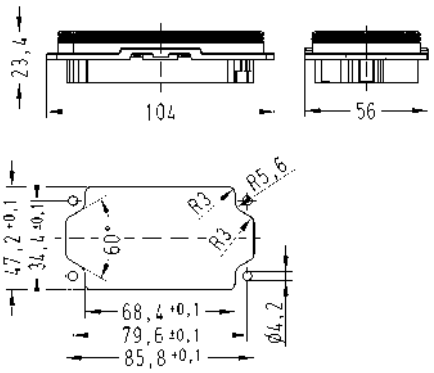
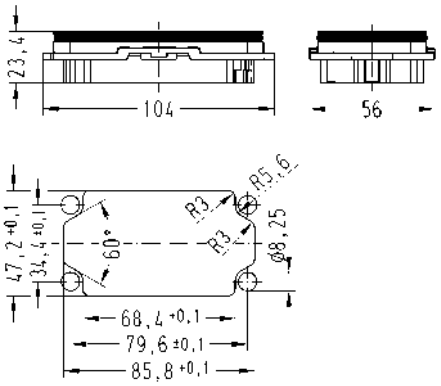
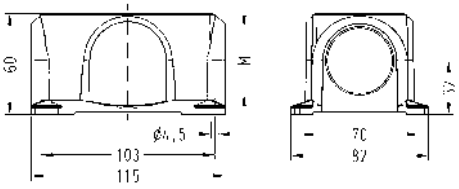



① M4 fixing screw (screw length > 20 mm, tightening torque: 1Nm)
② Panel fastener (tightening torque: 2.3 Nm)

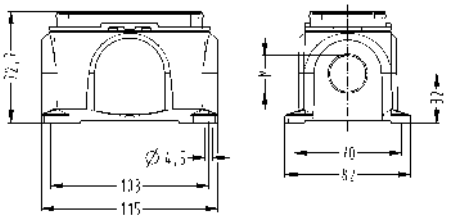
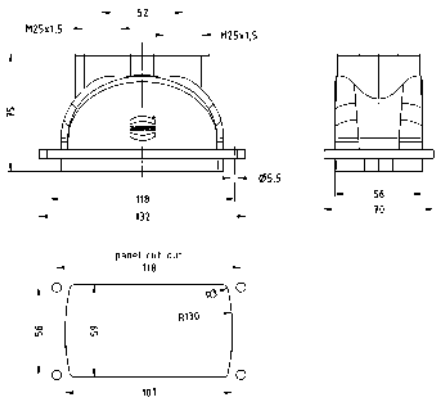
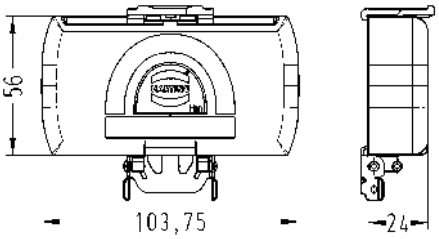
Hoods/housings for industrial applications



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67<br> | | 11 12 600 0301 |  |
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67<br>Pack contents:<br>incl. 4 panel fastener<br> | | 11 12 600 0302 |  |
| Han-*Yellock*®,<br>Surface mounted housing,<br>Side entry,<br>IP65,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 11 12 600 1201<br>11 12 600 1202<br>11 12 600 1203<br>11 12 600 1205<br>11 12 600 1206<br>11 12 600 1207 |  |

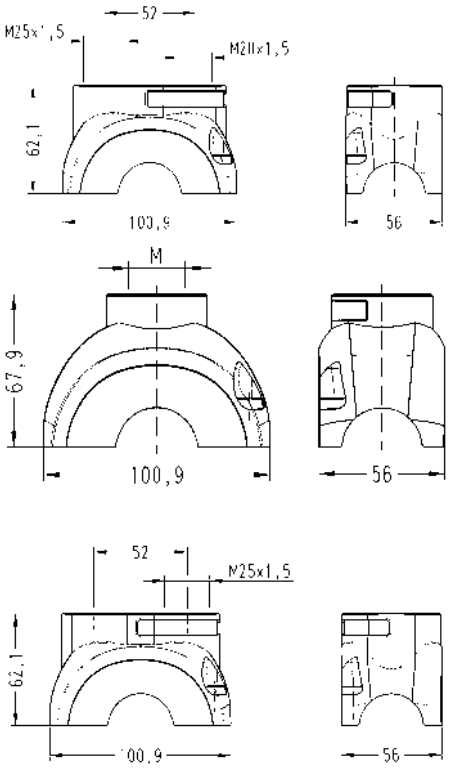
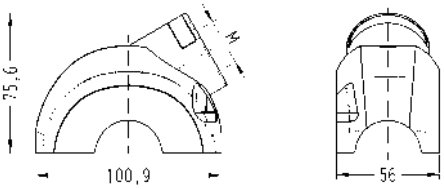
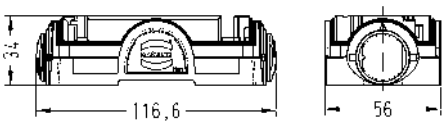
# Han-*Yellock*® 60 hoods/housings

Size Han-*Yellock*® 60

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Surface mounted housing,<br>incl. bulkhead mounted housings,<br>Side entry,<br>IP65,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 11 12 600 1211<br>11 12 600 1212<br>11 12 600 1213<br>11 12 600 1215<br>11 12 600 1216<br>11 12 600 1217 |  |
| Han-*Yellock*®,<br>Panel feed through housing,<br>Top entry,<br>IP65,<br>IP67<br> | 1x M32<br>2x M25 | 11 12 600 1702<br>11 12 600 1711 |  |
| Han-*Yellock*®,<br>Protection cover,<br>for bulkhead mounted housings,<br>Thermoplastic,<br>IP65,<br>IP67<br> | | 11 12 600 5401 |  |

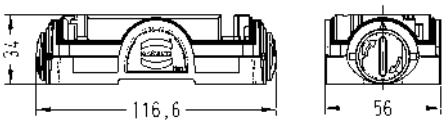
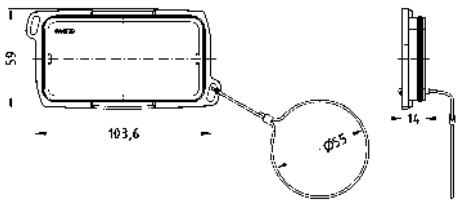
Hoods/housings for industrial applications
Push button



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Shell,<br>Top entry,<br>IP65,<br>IP67<br> | 1x M20, 1x M25<br>1x M25<br>1x M32<br>1x M40<br>2x M25 | 11 12 600 1415<br>11 12 600 1401<br>11 12 600 1402<br>11 12 600 1403<br>11 12 600 1411 |  |
| Han-*Yellock*®,<br>Shell,<br>Side entry,<br>IP65,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40 | 11 12 600 1501<br>11 12 600 1502<br>11 12 600 1503 |  |
| Han-*Yellock*®,<br>Carrier hood,<br>Plain push button,<br>IP65,<br>IP67<br> | | 11 12 600 0100 |  |

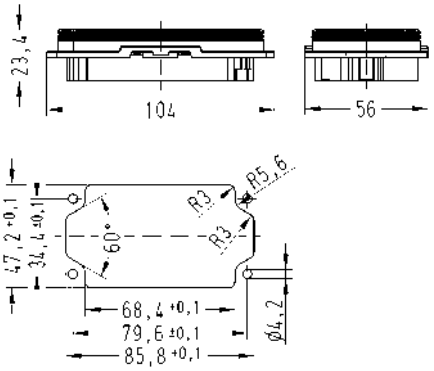
# Han-*Yellock*® 60 hoods/housings

Size Han-*Yellock*® 60

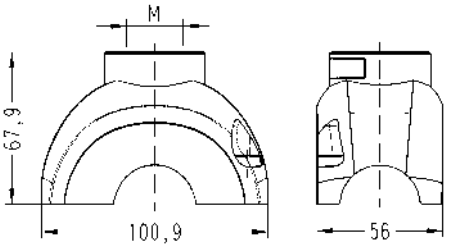
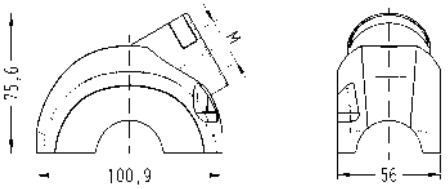
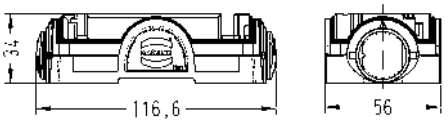
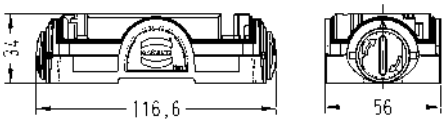
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>Carrier hood,<br>Push button, slot,<br>IP65,<br>IP67<br> | | 11 12 600 0110 |  |
| Han-*Yellock*®,<br>Protection cover,<br>for carrier hoods,<br>With fixing cord,<br>Thermoplastic,<br>IP65,<br>IP67<br> | | 11 12 600 5451 |  |

Hoods/housings for outdoor applications



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67<br> | 11 13 600 0301 | |
| Han-*Yellock*®,<br>Bulkhead mounted housing,<br>IP65,<br>IP67<br>Pack contents:<br>incl. 4 panel fastener<br> | 11 13 600 0302 |  |

Hoods/housings for outdoor applications
Push button

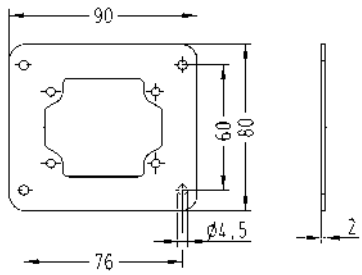
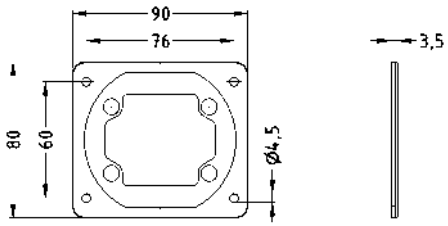
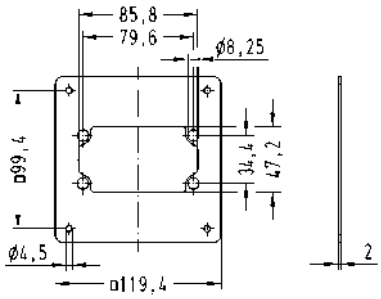
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®, Shell, Top entry, IP65, IP67  | 1x M32<br>1x M40 | 11 13 600 1402<br>11 13 600 1403 |   |
| Han-*Yellock*®, Shell, Side entry, IP65, IP67  | 1x M32 | 11 13 600 1502 |   |
| Han-*Yellock*®, Carrier hood, Plain push button, IP65, IP67  | | 11 13 600 0100 |   |
| Han-*Yellock*®, Carrier hood, Push button, slot, IP65, IP67  | | 11 13 600 0110 |   |

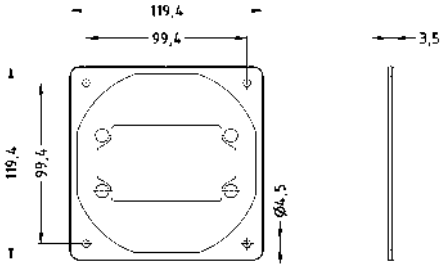
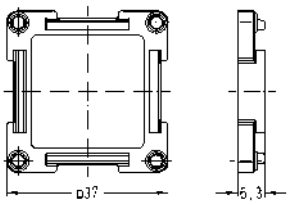
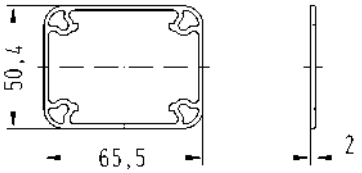
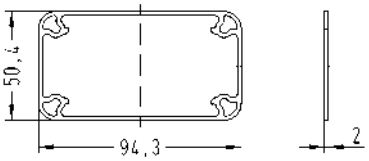
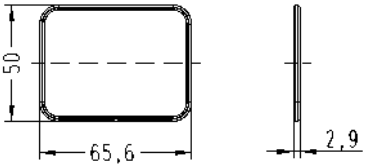
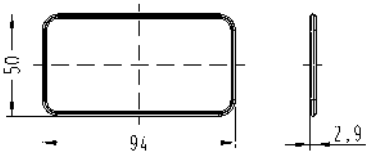
## Technical characteristics

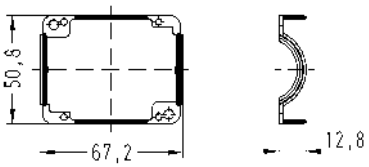
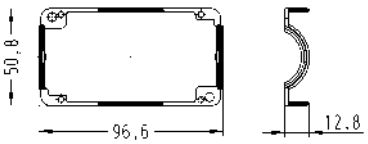
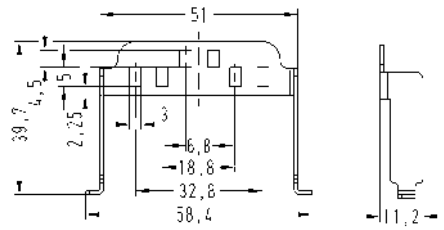
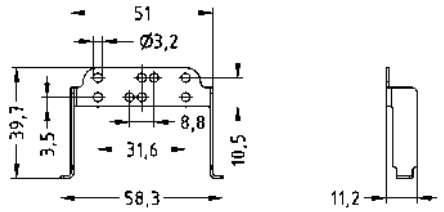
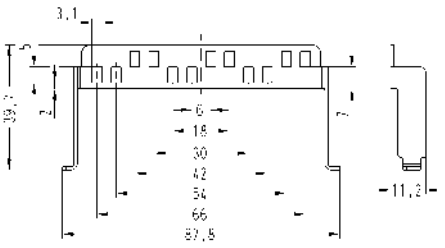
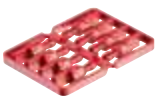
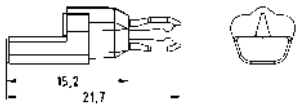
| | |
|---|---|
| Material (seal) | NBR |
| Colour (seal) | Black |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Steel, zinc plated, Thermoplastic |
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Adapter plate, for Han-*Yellock*® 30<br><br>Circular 68 mm punch for Han-*Yellock*® panel cut out | 11 00 300 9601 |  |
| Adapter plate, for Han-*Yellock*® 30, With seal<br> | 11 00 300 9603 |  |
| Adapter plate, for Han-*Yellock*® 60<br> | 11 00 600 9601 |  |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Adapter plate, for Han-*Yellock*® 60, With seal  | 11 00 600 9603 |   |
| Flange gasket, for Han-*Yellock*® 10  | 11 20 003 9904 |   |
| Flange gasket, for Han-*Yellock*® 30  | 11 00 300 9503 |   |
| Flange gasket, for Han-*Yellock*® 60  | 11 00 600 9503 |   |
| Profile gasket, for Han-*Yellock*® 10  | 11 20 003 9905 | |
| Profile gasket, for Han-*Yellock*® 30  | 11 00 300 9501 |   |
| Profile gasket, for Han-*Yellock*® 60  | 11 00 600 9501 |   |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Shaped gasket,<br>for Han-*Yellock*® 30<br> | 11 00 300 9502 |  |
| Shaped gasket,<br>for Han-*Yellock*® 60<br> | 11 00 600 9502 |  |
| Shielding frame,<br>for Han-*Yellock*® 30,<br>for fastening with cable ties<br> | 11 12 300 5201 |  |
| Shielding frame,<br>for Han-*Yellock*® 30,<br>Earthing with saddle terminals<br> | 11 12 300 5202 |  |
| Shielding frame,<br>for Han-*Yellock*® 60,<br>for fastening with cable ties<br> | 11 12 600 5201 |  |
| Han-*Yellock*®,<br>Coding element,<br>Pack contents:<br>8 pieces per frame<br> | 11 00 000 9501 |  |

# Accessories

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Fixing screws,<br>M3,<br>for Han-*Yellock*® 10<br> | 11 20 003 9903 | |
| Han-*Yellock*®,<br>Identification strip,<br>Pack contents:<br>500 pieces on a reel<br> | 11 00 000 9601 | |
| PE / N rail,<br>Suitable for Han-*Yellock*® 30 surface mounted housing,<br>Pack contents:<br>1 bar with fixing screws<br> | 11 00 000 9512 | |
| PE / N rail,<br>Suitable Han-*Yellock*® 60 surface mounted housing,<br>Pack contents:<br>1 bar with fixing screws<br> | 11 00 000 9511 | |

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤2 mΩ |
| Material (contacts) | Copper alloy |
| RoHS | compliant with exemption |

## Specifications and approvals

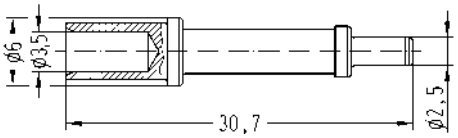
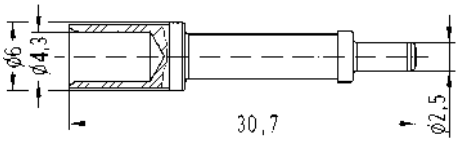
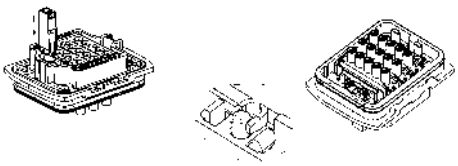
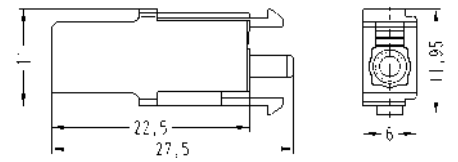
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-*Yellock*®,<br>PE contact,<br>Crimp termination,<br>Contact surface:<br>Silver plated<br> | 6<br>10 | 11 00 000 9509<br>11 00 000 9510 | <br><br>Stripping length 7.5 mm<br><br><br>Stripping length 7.5 mm |
| Han-*Yellock*®,<br>PE contact chamber,<br>Han-Quick Lock® termination,<br>Contact surface:<br>Silver plated<br> | 0.5 ... 2.5 | 11 05 001 2601 | <br><br><br>Stripping length 10 mm |

Contents


| | Page |
|---|---|
| Modules and monoblocks for Han-Eco® Modular | **Han 29.3** |
| Han-Eco® Monoblocks | **Han 29.7** |
| Han-Eco® Modular for industrial applications | **Han 29.12** |
| Han-Eco® Modular for outdoor applications | **Han 29.25** |
| Han-Eco® A for industrial applications | **Han 29.38** |
| Han-Eco® A for outdoor applications | **Han 29.45** |
| Han-Eco® B for industrial applications | **Han 29.52** |
| Han-Eco® B for outdoor applications | **Han 29.82** |
| Accessories | **Han 29.106** |

**Han-Eco® Modular**
**19 41 xxx xxxx**





**Han-Eco® A**
**19 46 xxx xxxx**





**Han-Eco® B**
**19 43 xxx xxxx**













The Han-Eco® B series is a new series of hoods and housings in the Han-Eco® portfolio that comes in sizes 6B – 24B. This series is completely compatible with the Han® B industrial standard. Standard inserts and modules in conjunction with the hinged frames from the Han-Modular® portfolio may be used.

## Highlights Han-Eco® B



Backwards compatibility with the Han® B metal hoods and housings



Rear mounting for the inserts enables faster installation



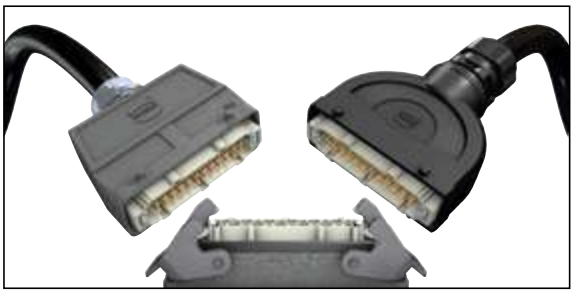
Minimal weight with excellent mechanical robustness

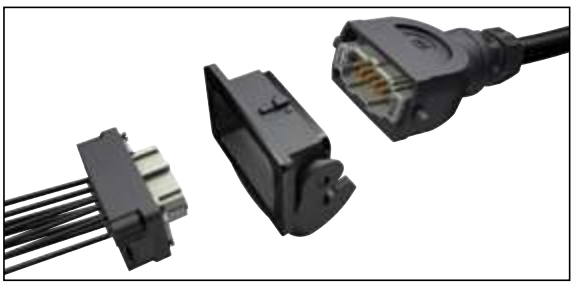


Outdoor variant is available for more extreme environmental conditions




"Click and mate" installation ensures secure assembly



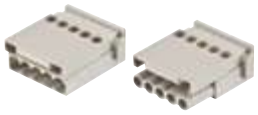


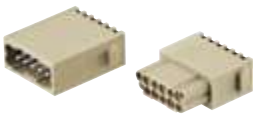
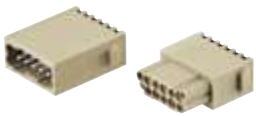
# Modules and monoblocks for Han-Eco® Modular



| | | Han® 100 A Axial module | Han® 100 A Crimp module | Han® 100 A Single module | Han® 70 A Crimp module |
|---|---|---|---|---|---|
| 70 - 100 A | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Termination type | 2*<br>100 A / 1000 V<br>Axial screw termination | 2*<br>100 A / 1000 V<br>Crimp termination | 1<br>100 A / 830 V<br>Crimp termination | 2<br>70 A / 1000 V<br>Crimp termination |
| | Cross-section | 16 … 35 mm² | 10 … 35 mm² | 10 … 35 mm² | 6 … 25 mm² |
| | Male module (M) | 09 14 002 2651 | 09 14 002 3051 | 09 14 001 3031 | 09 14 002 3041 |
| | Female module (F) | 09 14 002 2751 | 09 14 002 3151 | 09 14 001 3131 | 09 14 002 3141 |
| | Cross-section | 10 … 25 mm² | - | - | - |
| | Male module (M) | 09 14 002 2653 | - | - | - |
| | Female module (F) | 09 14 002 2753 | - | - | - |

| | | Han® 70 A Axial module | Han® 70 A Hybrid module | Han® 40 A Axial module | Han® C Axial module |
|---|---|---|---|---|---|
| 40 - 70 A | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Termination type | 2<br>70 A / 1000 V<br>Axial screw termination | 1 + (4 x Han E®)<br>70 A / 1000 V<br>Axial screw termination | 2<br>40 A / 1000 V<br>Axial screw termination | 3<br>40 A / 690 V<br>Axial screw termination |
| | Cross-section | 14 … 22 mm² | 14 … 22 mm² | 6 … 10 mm² | 6 … 10 mm² |
| | Male module (M) | 09 14 002 2647 | 09 14 005 2647 | 09 14 002 2602 | 09 14 003 2602 |
| | Female module (F) | 09 14 002 2742 | 09 14 005 2742 | 09 14 002 2702 | 09 14 003 2702 |
| | Cross-section | 6 … 16 mm² | 6 … 16 mm² | 2.5 … 8 mm² | 2.5 … 8 mm² |
| | Male module (M) | 09 14 002 2646 | 09 14 005 2646 | 09 14 002 2601 | 09 14 003 2601 |
| | Female module (F) | 09 14 002 2741 | 09 14 005 2741 | 09 14 002 2701 | 09 14 003 2701 |

| | | Han E® Quick Lock module | Han® EE Quick Lock module | Han® ES module | Han E® screw module |
|---|---|---|---|---|---|
| 16 A | |  |  |  |  |
| | Number of contacts<br>Electrical data<br>Termination type<br>Cross-section | 6<br>16 A / 500 V<br>Quick Lock termination<br>0.5 … 2.5 mm² | 8<br>16 A / 400 V<br>Quick Lock termination<br>0.5 … 2.5 mm² | 5<br>16 A / 400 V<br>Cage clamp termination<br>0.14 … 2.5 mm² | 5<br>16 A / 230/400 V<br>Screw termination<br>0.5 … 2.5 mm² |
| | Male module (M) | 09 14 006 2633 | 09 14 008 2633 | 09 14 005 2616 | 09 14 005 2601 |
| | Female module (F) | 09 14 006 2733 | 09 14 008 2733 | 09 14 005 2716 | 09 14 005 2701 |

| | | Han DD® Quick Lock module | Han DD® Quick Lock module |
|---|---|---|---|
| ≤ 10 A | |  |  |
| | Number of contacts<br>Electrical data<br>Termination type<br>Cross-section | 12, silver plated<br>10 A / 250 V<br>Quick Lock termination<br>0.25 … 1.5 mm² | 12, gold plated<br>10 A / 250 V<br>Quick Lock termination<br>0.25 … 1.5 mm² |
| | Male module (M) | 09 14 012 2632 | 09 14 012 2634 |
| | Female module (F) | 09 14 012 2732 | 09 14 012 2734 |

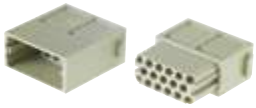
* Double module, requires two places in the frame

For more technical details see chapter Han 06
Removal tools 09 99 000 0331, 09 99 000 0828 and 09 99 000 0842 see chapter Han 90
* Take care of the wiring space! Choose inner positions.

# Modules and monoblocks for Han-Eco® Modular

| | | Han® A Crimp module | Han® C module | Han® CC module | Han® CD module |
|---|---|---|---|---|---|
| 40 A | |  |  |  |  |
| | Number of contacts | 2 | 3 | 4 | 3 + 4 |
| | Electrical data | 40 A / 1000 V | 40 A / 690 V | 40 A / 830 V | 40 A + 10 A / 830 V |
| | Cross-section | 1.5 … 10 mm² | 1.5 … 6 mm² | 1.5 … 6 mm² | 0.14 … 6 mm² |
| | Termination type | Crimp termination, Han® C | Crimp termination, Han® C | Crimp termination, Han® C | Crimp, Han® C + Han D® |
| | Male module (M) | 09 14 002 3002 | 09 14 003 3001 | 09 14 004 3041 | 09 14 007 3001 |
| | Female module (F) | 09 14 002 3102 | 09 14 003 3101 | 09 14 004 3141 | 09 14 007 3101 |

| | | Han E® module | Han® EE module | Han® EEE module | Han E® Protected module |
|---|---|---|---|---|---|
| 16 A | |  |  |  |  |
| | Number of contacts | 6 | 8 | 20* | 6 |
| | Electrical data | 16 A / 500 V | 16 A / 400 V | 16 A / 500 V | 16 A / 830 V |
| | Cross-section | 0.14 … 4 mm² | 0.14 … 4 mm² | 0.14 … 4 mm² | 0.14 … 4 mm² |
| | Termination type | Crimp termination, Han E® | Crimp termination, Han E® | Crimp termination, Han E® | Crimp termination, Han E® |
| | Male module (M) | 09 14 006 3001 | 09 14 008 3001 | 09 14 020 3001 | 09 14 006 3041 |
| | Female module (F) | 09 14 006 3101 | 09 14 008 3101 | 09 14 020 3101 | 09 14 006 3141 |

| | | Han DD® module | Han® DDD module | Han DD® Quad module |
|---|---|---|---|---|
| ≤ 10 A | |  |  |  |
| | Number of contacts | 12 | 17 | 25 |
| | Electrical data | 10 A / 250 V | 10 A / 150 V | 4 A / 50 V |
| | Cross-section | 0.14 … 2.5 mm² | 0.14 … 2.5 mm² | 0.08 … 0.52 mm² |
| | Termination type | Crimp termination, Han D® | Crimp termination, Han D® | Crimp termination, D-Sub |
| | Male module (M) | 09 14 012 3002 | 09 14 017 3001 | 09 14 025 3001 |
| | Female module (F) | 09 14 012 3102 | 09 14 017 3101 | 09 14 025 3101 |

| | | Han® HV module 40 A | Han® HV module 16 A | Han® HV Single module |
|---|---|---|---|---|
| High voltage | |  |  |  |
| | Number of contacts | 2* | 2* | 2 |
| | Electrical data | 40 A / 2900/5000 V | 16 A / 2900/5000 V | 16 A / 2500 V |
| | Cross-section | 1.5 … 10 mm² | 0.14 … 4 mm² | 0.14 … 4 mm² |
| | Termination type | Crimp termination, Han® C | Crimp termination, Han E® | Crimp termination, Han E® |
| | Male module (M) | 09 14 002 3023 | 09 14 002 3021 | 09 14 002 3025 |
| | Female module (F) | 09 14 002 3123 | 09 14 002 3121 | 09 14 002 3125 |

* Double module, requires two places in the frame

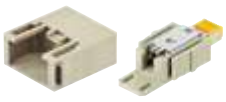


For more technical details see chapter Han 06
Removal tools 09 99 000 0331, 09 99 000 0828 and 09 99 000 0842 see chapter Han 90
* Take care of the wiring space! Choose inner positions.

# Modules and monoblocks for Han-Eco® Modular



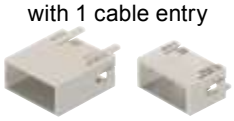
## Han® RJ45 modules

| Han® RJ45 module | for patch cable | for IDC | for patch cable | for IDC and preLink |
|---|---|---|---|---|
| - 8 contacts<br>- Cat. $6_A$<br>- 10 Gbit/s |  |  |  |  |
| Part numbers | Male module (M)<br>09 14 001 4623 | Male module (M)<br>09 14 001 4623 | Female module (F)<br>09 14 001 4721 | Female module (F)<br>09 14 001 4722 |
| | Adapter for patch cables:<br>09 14 000 9966 | RJ Industrial IDC:<br>09 45 400 1560 | - | RJ45 female IDC:<br>09 14 545 1561 |
| | Patch cable cat. 6:<br>09 47 474 71xx | - | - | RJ45 female preLink:<br>09 14 008 4720 |

## Han-Quintax® modules

| | Han-Quintax® | Han® High Density Quintax | Han D® Coax | Han E® Coax |
|---|---|---|---|---|
| Quintax module |  |  |  |  |
| Number of contacts | 2 x 4* | 2 x 8* | 2 x Coax* | 2 x Coax* |
| Male module (M) | 09 14 002 3001 | 09 14 002 3001 | 09 14 002 3001 | 09 14 002 3001 |
| Female module (F) | 09 14 002 3101 | 09 14 002 3101 | 09 14 002 3101 | 09 14 002 3101 |
| Insert<br>(Cable Ø ≤ 9.5 mm) |  |  |  |  |
| Data rate | 100 Mbit/s (Cat. 5e) | 100 Mbit/s (Cat. 5e) | ≤ 500 Mhz / 75 Ω | ≤ 500 Mhz / 50 Ω |
| Electrical data | 10 A / 50 V | 5 A / 50 V | 10 A / 50 V | 16 A / 50 V |
| Cross-section | 0.14 … 2.5 mm² | 0.09 … 0.52 mm² | 0.14 … 2.5 mm² | 0.14 … 4 mm² |
| Termination type | Crimp termination, Han D® | Crimp termination, D-Sub | Crimp termination, Han D® | Crimp termination, Han E® |
| Male insert (M) | 09 15 004 3013 | 09 15 008 3013 | 09 15 001 3013 | 09 15 001 3023 |
| Female insert (F) | 09 15 004 3113 | 09 15 008 3113 | 09 15 001 3113 | 09 15 001 3123 |
| PE shielding termination | *Optional shielding termination to the hinged frame with the aid of Han-Quintax® metal adapter 09 14 000 9915* | | | |

## Han® GigaBit – Han® MegaBit modules

| | Han® GigaBit module | Han® MegaBit module | Han® MegaBit module | Han® Shielded module |
|---|---|---|---|---|
| Adapter Modul |  |  | with 1 cable entry<br> |  |
| Male module (M) | 09 14 001 3011 | 09 14 001 3011 | 09 14 001 3011 | 09 14 001 3011 |
| Female module (F) | 09 14 001 3111 | 09 14 001 3111 | 09 14 001 3111 | 09 14 001 3111 |
| Insert<br>(Cable Ø ≤ 14 mm) |  |  |  |  |
| Number of contacts | 8 | 2 x 4 | 8 | 20 |
| Data rate | 10 Gbit/s (Cat. $6_A$) | 2 x 100 Mbit/s (Cat. 5e) | 1 Gbit/s (Cat. 5e) | |
| Electrical data | 5 A / 50 V | 10 A / 50 V | 10 A / 50 V | 4 A / 32 V |
| Cross-section | 0.09 … 0.52 mm² | 0.14 … 2.5 mm² | 0.14 … 2.5 mm² | 0.09 … 0.52 mm² |
| Termination type | Crimp termination, D-Sub | Crimp termination, Han D® | Crimp termination, Han D® | Crimp termination, D-Sub |
| Shielding termination | Crimp flange | 2 x crimp flange | Crimp flange | Crimp flange |
| Male insert (M) | 09 14 008 3011 | 09 14 008 3016 | 09 14 008 3021 | 09 14 020 3013 |
| Female insert (F) | 09 14 008 3111 | 09 14 008 3116 | 09 14 008 3121 | 09 14 020 3113 |
| | with PE shielding termination | with PE shielding termination | with PE shielding termination | - |
| Male insert (M) | 09 14 008 3012 | 09 14 008 3017 | 09 14 008 3022 | |
| Female insert (F) | 09 14 008 3112 | 09 14 008 3117 | 09 14 008 3122 | |

## Serial Bus modules

| | Han D-Sub module | Han® USB module | Han® FireWire module |
|---|---|---|---|
| |  |  |  |
| Number of contacts | 9 + shielding | 8 | 6 |
| Datenrate | 12 Mbit/s (Profibus) | 5 Gbit/s (USB 3.0) | 400 Mbit/s (IEEE 1394a) |
| Electrical data | 5 A / 50 V | 1 A / 50 V | 1 A / 50 V |
| Cross-section | 0.09 … 0.52 mm² | | |
| Termination type | Crimp termination, D-Sub | USB patch cable | FireWire patch cable |
| Male module (M) | 09 14 009 3001 | 09 14 001 4601 | 09 14 001 4611 |
| Female module (F) | 09 14 009 3101 | 09 14 001 4703 | 09 14 001 4711 |

* Double module, requires two places in the frame

For more technical details see chapter Han 06
Removal tools 09 99 000 0331, 09 99 000 0828 and 09 99 000 0842 see chapter Han 90
* Take care of the wiring space! Choose inner positions.

# Modules and monoblocks for Han-Eco® Modular

## Optical modules

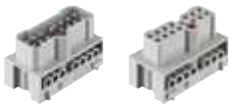
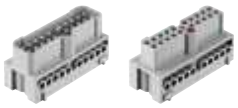
| | Han® SC module | Han® Multi module | Han® Multi module |
|---|---|---|---|
| Number of contacts |  4 |  4 |  12* |
| Male module (M) | 09 14 004 4701 | 09 14 004 4501 | 09 14 012 4501 |
| Female module (F) | 09 14 004 4713 | 09 14 004 4512 | 09 14 012 4512 |
| Contacts |  |  |  |
| 1 mm POF | 20 10 001 5211 | Male: 20 10 001 4211<br>Female: 20 10 001 4221 | Male: 20 10 001 4211<br>Female: 20 10 001 4221 |
| 1 mm POF<br>Fast assembly termination | 20 10 001 5217 | | |
| SI-Fibre 200 / 230 µm<br>Multi-Mode | 20 10 230 5211 | Male: 20 10 230 4211<br>Female: 20 10 230 4221 | Male: 20 10 230 4211<br>Female: 20 10 230 4221 |
| GI-Fibre 50-62.5 / 125 µm<br>Multi-Mode | 20 10 125 5211 | Male: 20 10 125 4212<br>Female: 20 10 125 4222 | Male: 20 10 125 4212<br>Female: 20 10 125 4222 |

## Special modules

| | Han-Eco® PE module | Han® Dummy module |
|---|---|---|
| Field of application | for Han-Eco ® hoods/housings only | to fill-up empty module places |
| Number of contacts<br>Electrical data<br>Cross-section<br>Termination type |  1 x PE<br><br>1.5 … 16 mm²<br>Screw termination |  |
| Male module (M) | 19 41 001 2600 | 09 14 000 9950 |
| Female module (F) | 19 41 001 2700 | |

* Double module, requires two places in the frame

## Monoblocks

| | 6 B | 10 B | 16 B | 24 B |
|---|---|---|---|---|
| Number of contacts<br>Electrical data<br>Cross section<br>Termination type |  10<br>16 A / 500 V<br>0.75 … 2.5 mm²<br>Screw termination |  14<br>16 A / 500 V<br>0.75 … 2.5 mm²<br>Screw termination |  20<br>16 A / 500 V<br>0.75 … 2.5 mm²<br>Screw termination |  28<br>16 A / 500 V<br>0.75 … 2.5 mm²<br>Screw termination |
| Male | 19 41 010 2601 | 19 41 014 2601 | 19 41 020 2601 | 19 41 028 2601 |
| Female | 19 41 010 2701 | 19 41 014 2701 | 19 41 020 2701 | 19 41 028 2701 |



For more technical details see chapter Han 06
Removal tools 09 99 000 0331, 09 99 000 0828 and 09 99 000 0842 see chapter Han 90
* Take care of the wiring space! Choose inner positions.

## Features

- Suitable for Han-Eco® hoods/housings and the Han-Modular® docking frame
- Higher contact density compared to Han E® standard screw inserts (up to 65%)
- Han-Eco® “click and mate” assembly concept
- 6 coding options

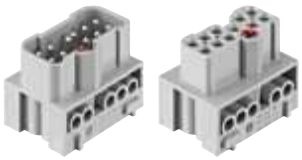
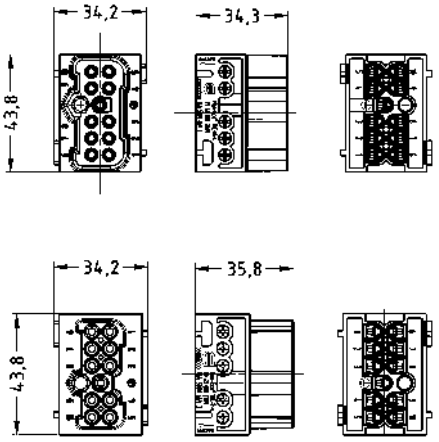
## Technical characteristics

| | |
|---|---|
| Number of contacts | 10, 14, 20, 28 |
| Rated current | 16 A |
| Rated voltage | 500 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Rated voltage acc. to CSA | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption |

Number of contacts

10+ ⏚

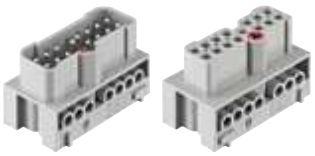
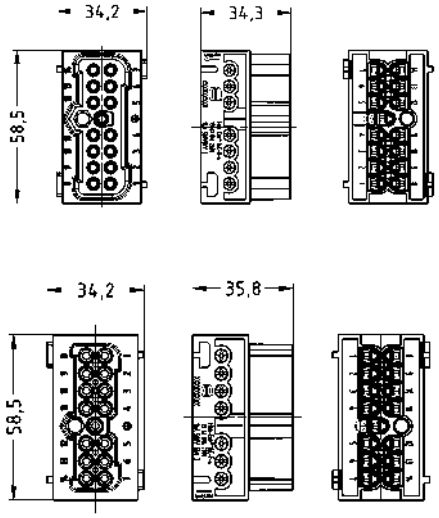
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 19 41 010 2601 | 19 41 010 2701 | <br>Tightening torque 0.5 Nm |

Number of contacts

14+ ⏚

16 A 500 V 6 kV 3

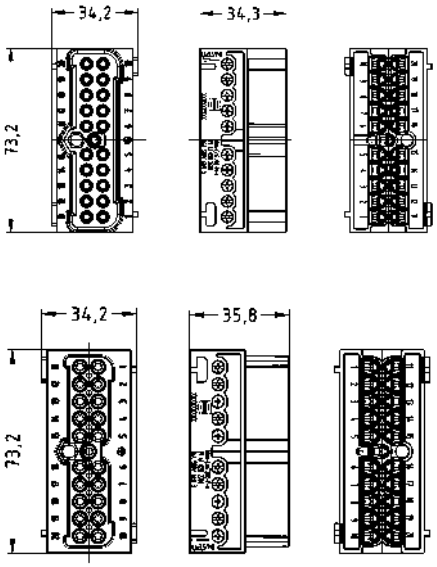
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 19 41 014 2601 | 19 41 014 2701 | <br>Tightening torque 0.5 Nm |

Han Eco

Number of contacts

20+ ⏚

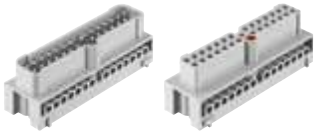
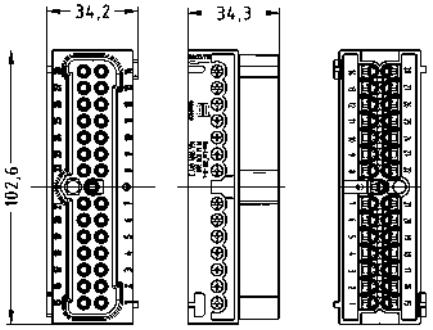
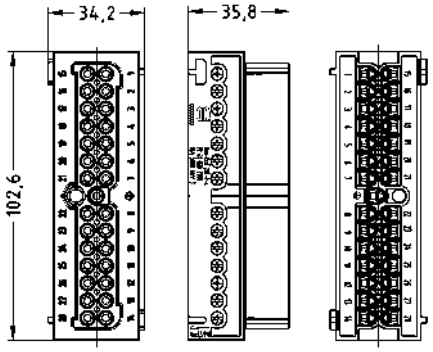
16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 19 41 020 2601 | 19 41 020 2701 | <br>Tightening torque 0.5 Nm |

Number of contacts

28+ ⏚

16 A 500 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco®,<br>Screw termination,<br>With wire protection,<br>Contact surface:<br>Silver plated<br> | 0.75 ... 2.5 | 19 41 028 2601 | 19 41 028 2701 | <br><br>Tightening torque 0.5 Nm |

## Features

- With integrated cable gland
- Optional PE contact module to hold the protective ground conductor
- Suitable for applications according to protection class II

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Number of relockings | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Polyamide (PA), Fibre-glass reinforced |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Colour (seal) | RAL 9005 (jet black) |
| Material (locking) | Polyamide (PA), Fibre-glass reinforced |
| Colour (locking) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 61984
EN 45545-2 R22: HL1, HL2, HL3
EN 45545-2 R23: HL1, HL2, HL3
EN 45545-2 R24: HL1, HL2, HL3
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

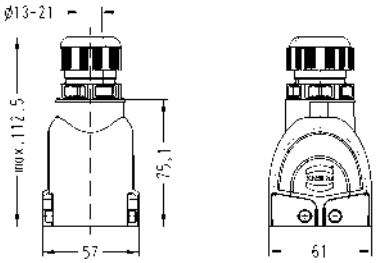
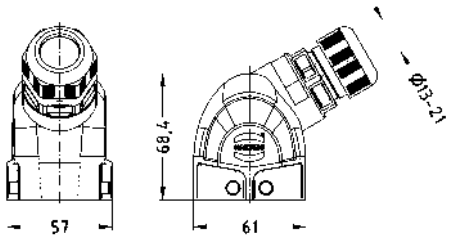
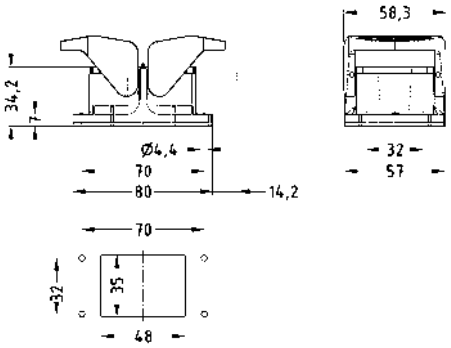
CE

## Details

Assembly dimensions are identical for the Han® B bulkhead mounted housings - not mating compatible with the hoods and housings of the series Han® B.

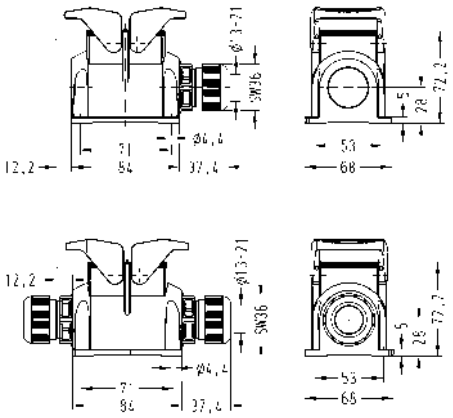
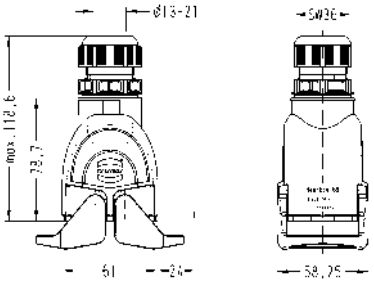
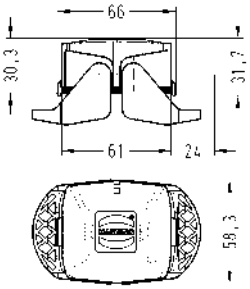
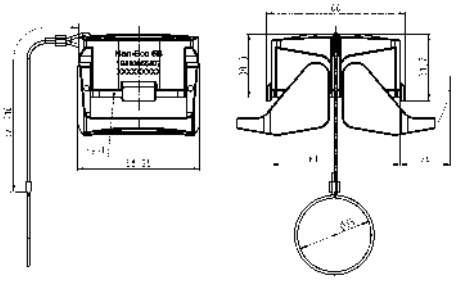
| Size | Module slots |
|---|---|
| 6 B | 3 |
| 10 B | 4 |
| 16 B | 5 |
| 24 B | 7 |

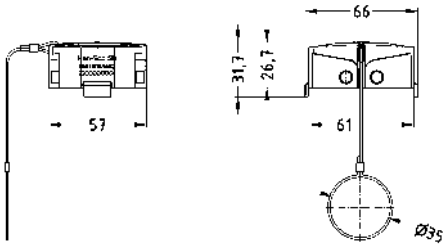
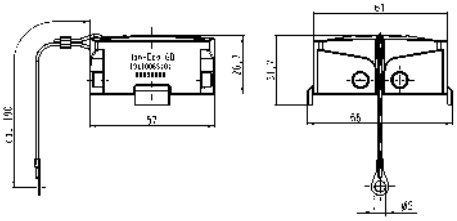
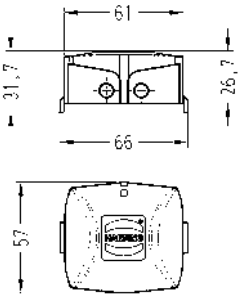
Double locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 41 106 0422<br>19 41 106 0423 |  |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M32 | 13 ... 21 | 19 41 106 0522 |  |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 41 006 0301 | <br>Panel cut out |

# Han-Eco® Modular for industrial applications

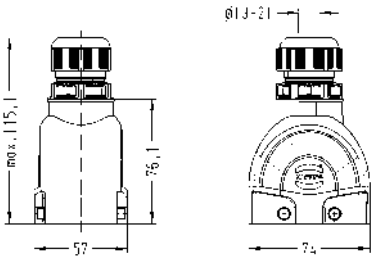
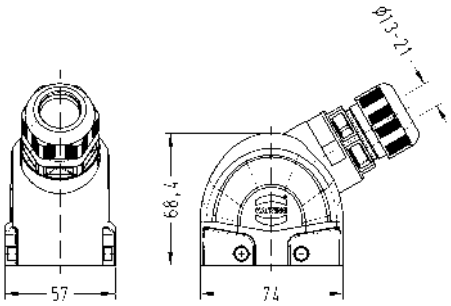
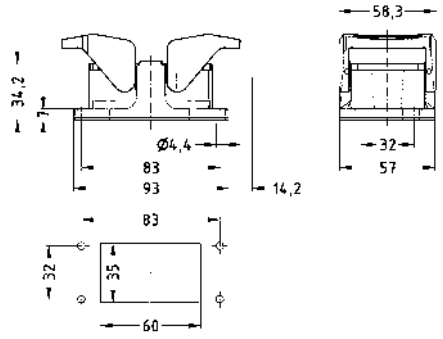
Size 6 B

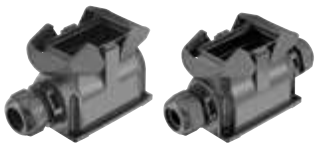
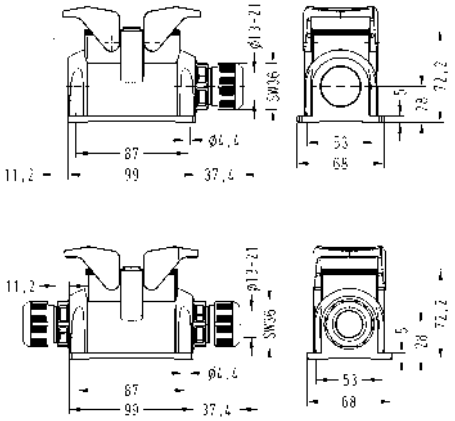
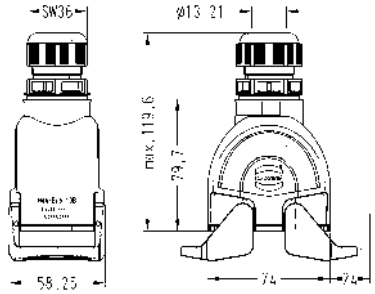
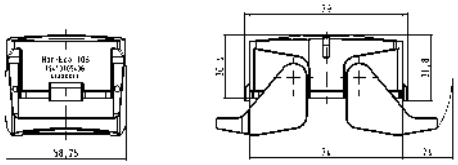
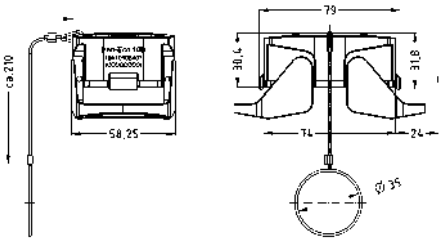
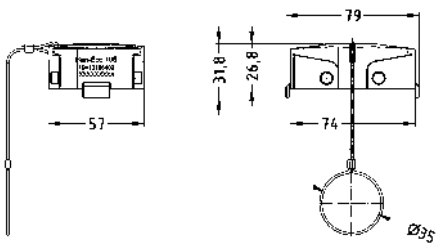
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M32<br>2x M32 | 13 ... 21<br>13 ... 21 | 19 41 106 0232<br>19 41 106 0272 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 41 106 0722<br>19 41 106 0723 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 006 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 006 5407 |  |

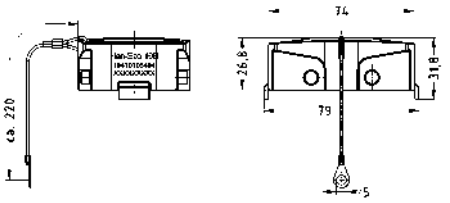
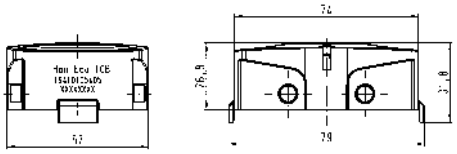
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 006 5402 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 006 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 006 5405 |  |

Double locking lever

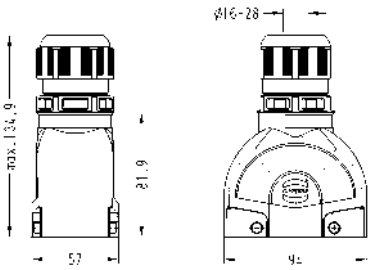
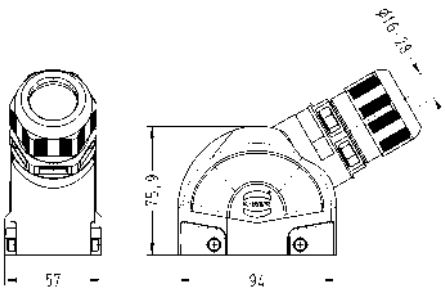
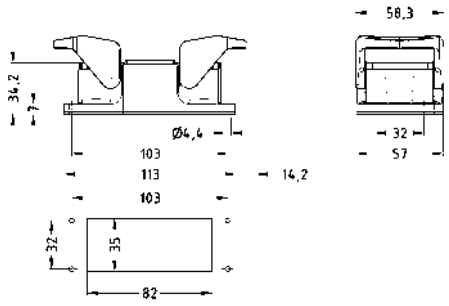


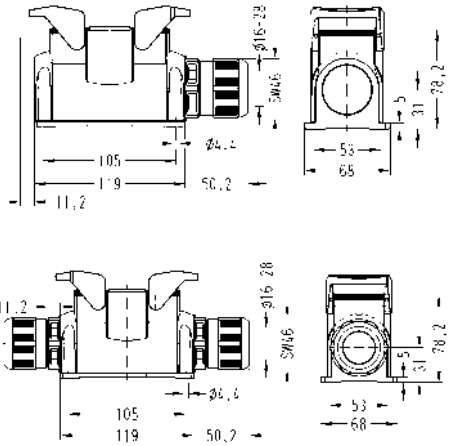
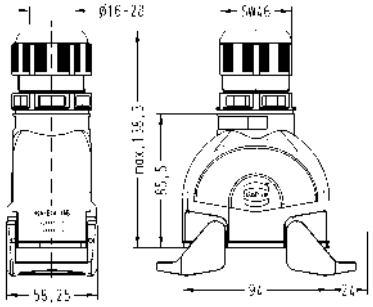
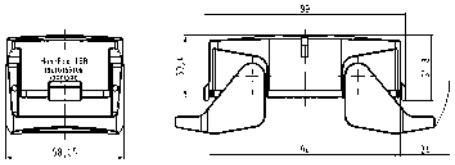
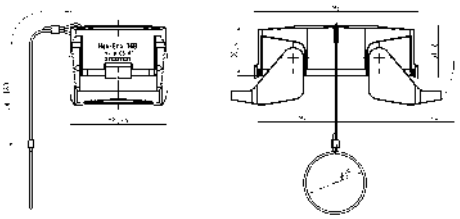
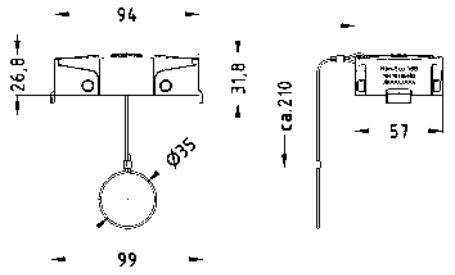
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M32 | 13 ... 21 | 19 41 110 0422 |  |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M32 | 13 ... 21 | 19 41 110 0522 |  |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 41 010 0301 | <br>Panel cut out |

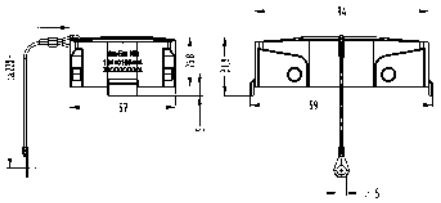
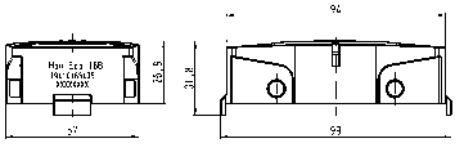
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M32<br>2x M32 | 13 ... 21<br>13 ... 21 | 19 41 110 0232<br>19 41 110 0272 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M32 | 13 ... 21 | 19 41 110 0722 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 010 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 010 5407 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 010 5402 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 010 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 010 5405 |  |

Double locking lever

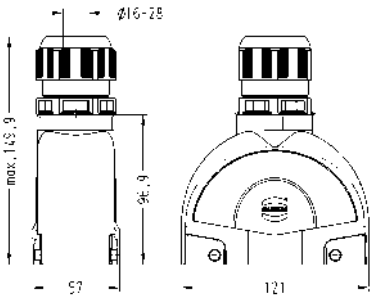
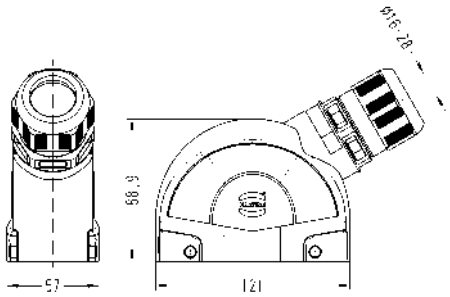
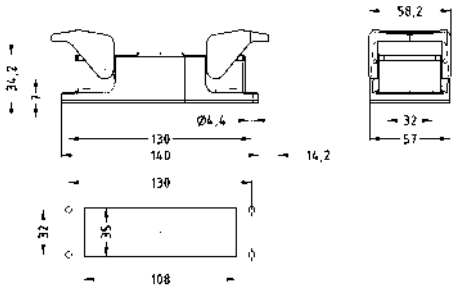
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 116 0423 |  |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 116 0523 |  |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 41 016 0301 | <br>Panel cut out |

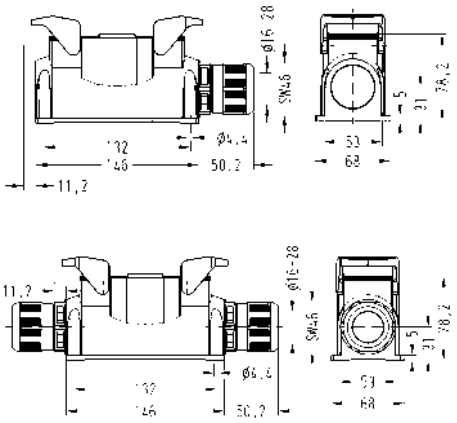
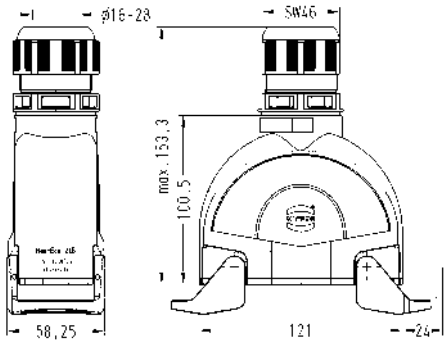
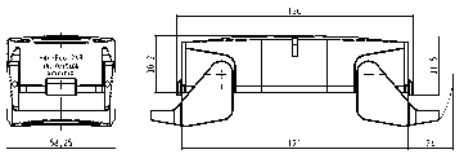
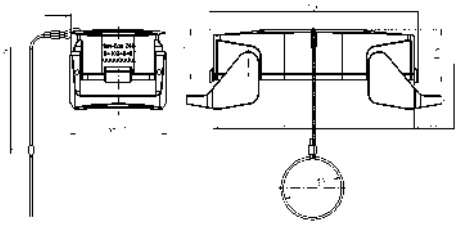
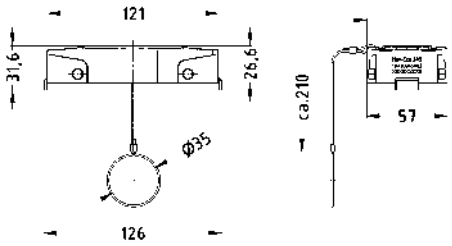
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40<br>2x M40 | 16 ... 28<br>16 ... 28 | 19 41 116 0233<br>19 41 116 0273 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 116 0723 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 016 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 016 5407 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 016 5402 |  |

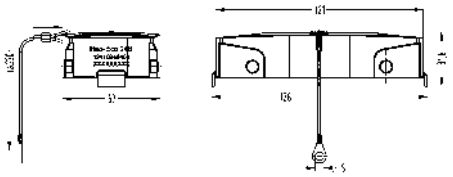
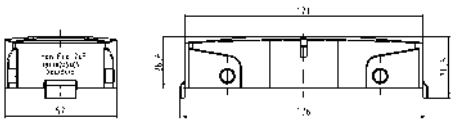
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 016 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 016 5405 |  |

Double locking lever



| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 124 0423 |  |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 124 0523 |  |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 41 024 0301 | <br>Panel cut out |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40<br>2x M40 | 16 ... 28<br>16 ... 28 | 19 41 124 0233<br>19 41 124 0273 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 124 0723 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 024 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 024 5407 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 024 5402 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 024 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 024 5405 |  |

# Han-Eco® Modular for outdoor applications



## Features

- With integrated cable gland
- Optional PE contact module to hold the protective ground conductor
- Suitable for applications according to protection class II

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Number of relockings | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Polyamide (PA), Fibre-glass reinforced |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | FPM |
| Colour (seal) | RAL 7001 (silver-grey) |
| Material (locking) | Polyamide (PA), Fibre-glass reinforced |
| Colour (locking) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

## Specifications and approvals

IEC 61984
EN 45545-2 R22: HL1, HL2, HL3
EN 45545-2 R23: HL1, HL2, HL3
EN 45545-2 R24: HL1, HL2, HL3
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

CE

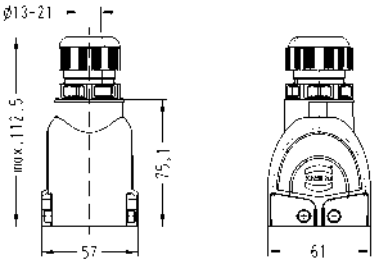
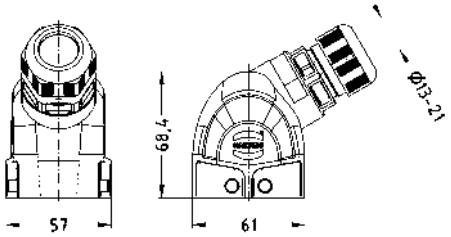
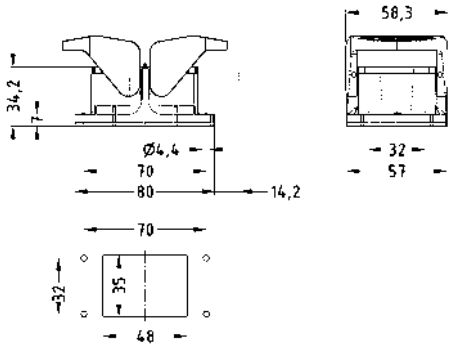
## Details

Assembly dimensions are identical for the Han® B bulkhead mounted housings - not mating compatible with the hoods and housings of the series Han® B.

| Size | Module slots |
|---|---|
| 6 B | 3 |
| 10 B | 4 |
| 16 B | 5 |
| 24 B | 7 |

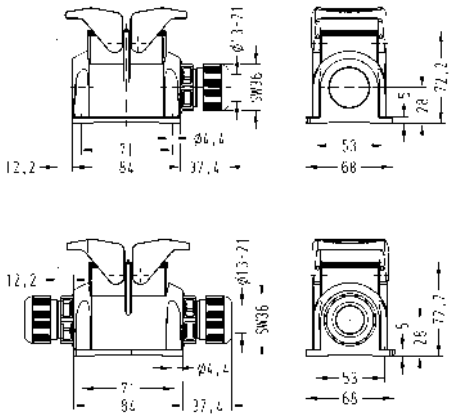
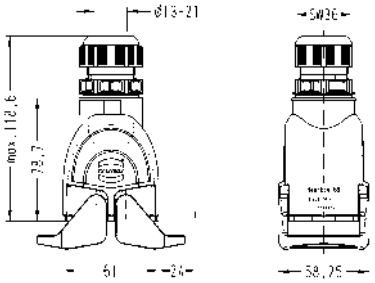
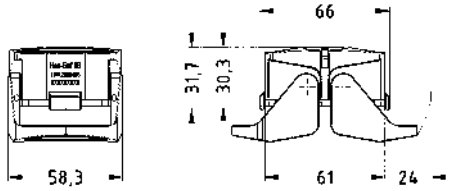
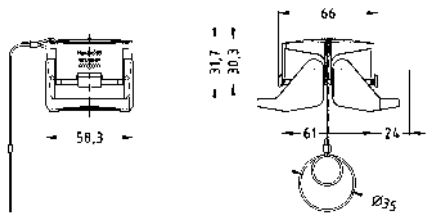
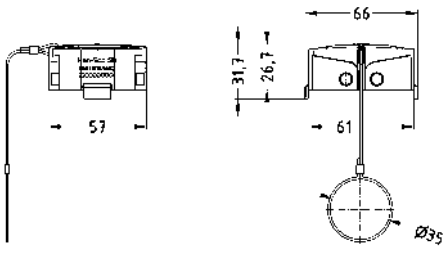
Double locking lever

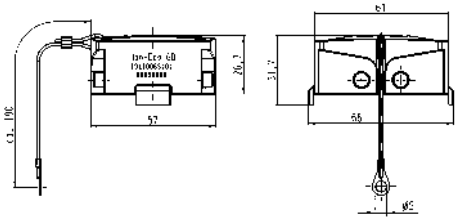
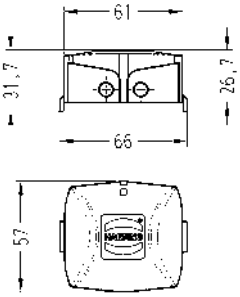


| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 41 106 0422<br>19 41 106 0423 |  |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M32 | 13 ... 21 | 19 41 106 0522 |  |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 41 206 0301 | <br>Panel cut out |

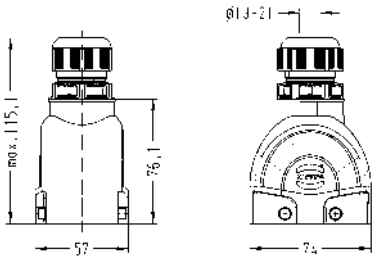
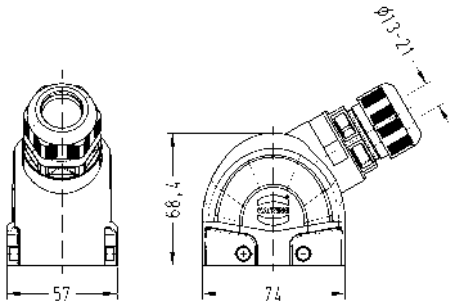
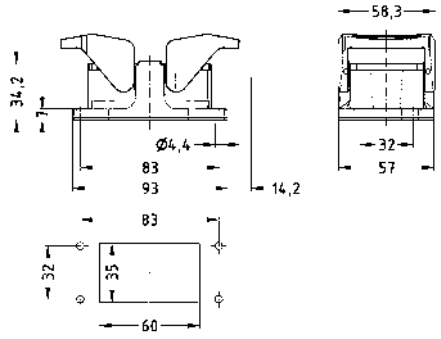
# Han-Eco® Modular for outdoor applications

Size 6 B

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M32<br>2x M32 | 13 ... 21<br>13 ... 21 | 19 41 306 0232<br>19 41 306 0272 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M32 | 13 ... 21 | 19 41 306 0722 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 206 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 206 5407 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 006 5402 |  |

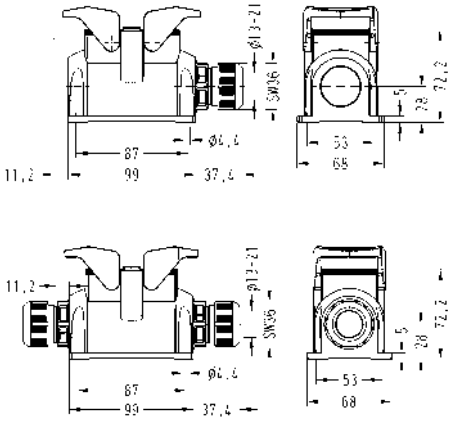
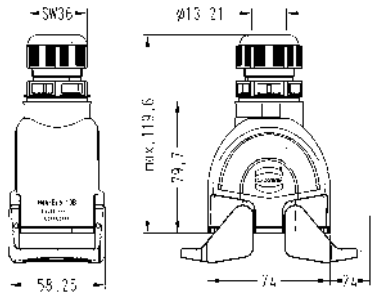
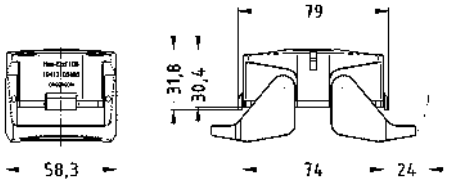
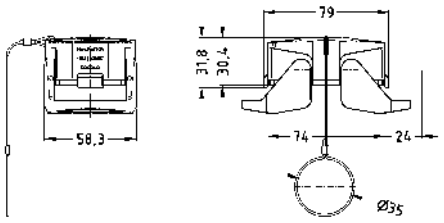
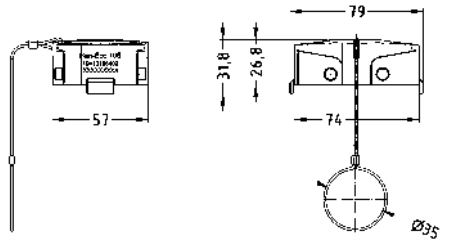
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 006 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 006 5405 |  |

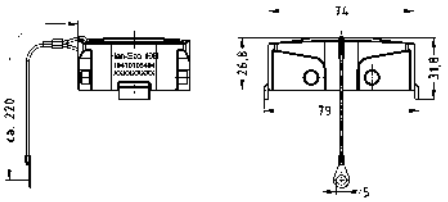
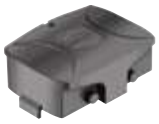
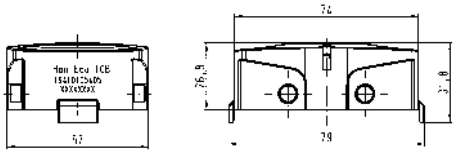
Double locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65  | 1x M32 | 13 ... 21 | 19 41 110 0422 |   |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65  | 1x M32 | 13 ... 21 | 19 41 110 0522 |   |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65  | | | 19 41 210 0301 |   Panel cut out |

# Han-Eco® Modular for outdoor applications

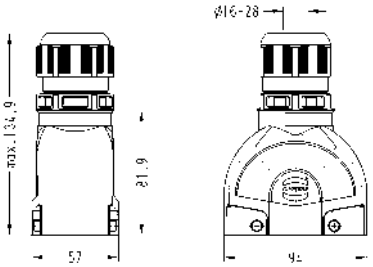
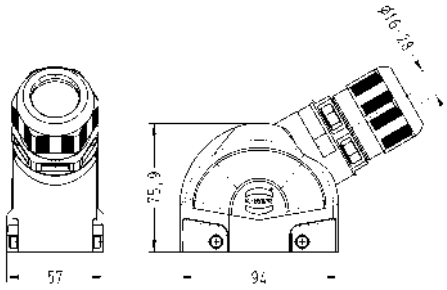
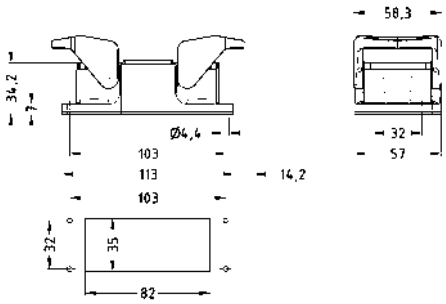
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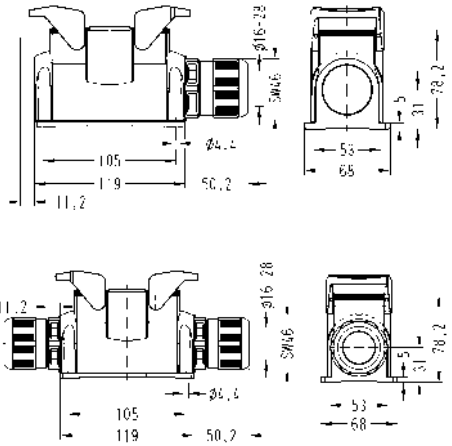
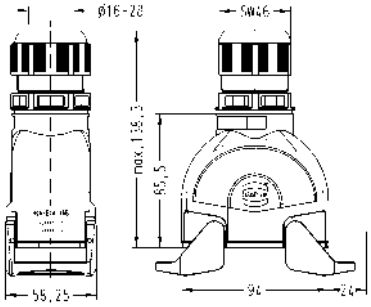
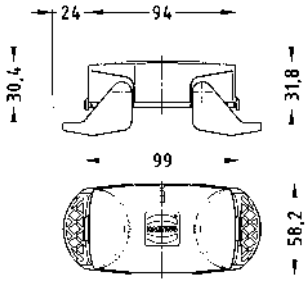
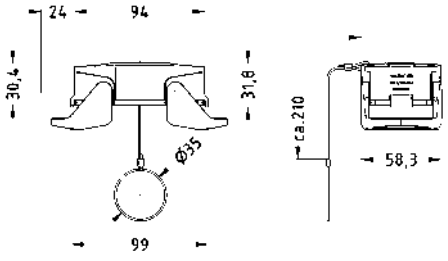
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M32<br>2x M32 | 13 ... 21<br>13 ... 21 | 19 41 310 0232<br>19 41 310 0272 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M32 | 13 ... 21 | 19 41 310 0722 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 210 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 210 5407 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 010 5402 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 010 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 010 5405 |  |

Double locking lever

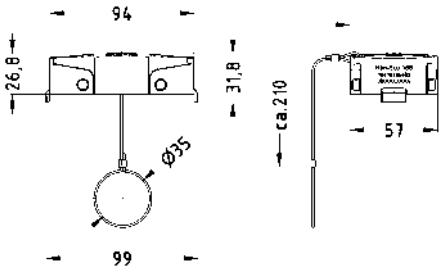
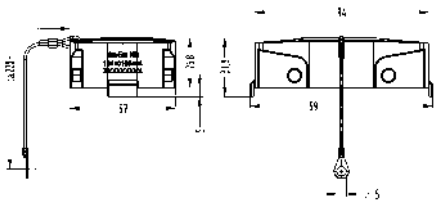
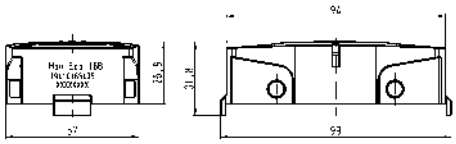


| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 116 0423 |  |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 116 0523 |  |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 41 216 0301 | <br>Panel cut out |

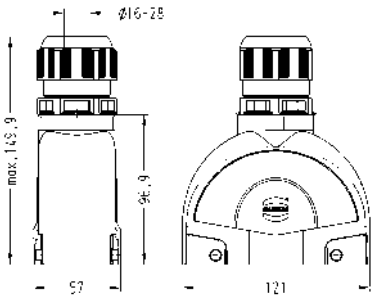
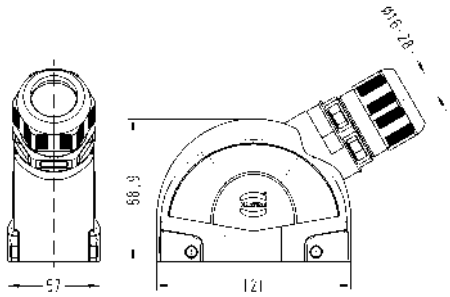
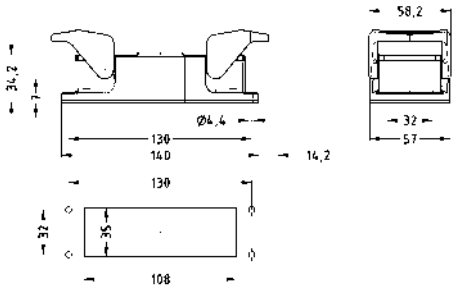
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40<br>2x M40 | 16 ... 28<br>16 ... 28 | 19 41 316 0233<br>19 41 316 0273 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 316 0723 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 216 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 216 5407 |  |

# Han-Eco® Modular for outdoor applications

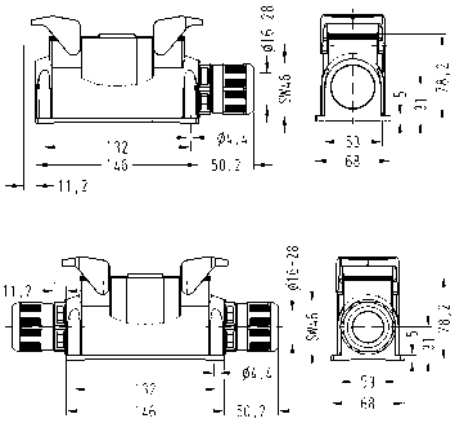
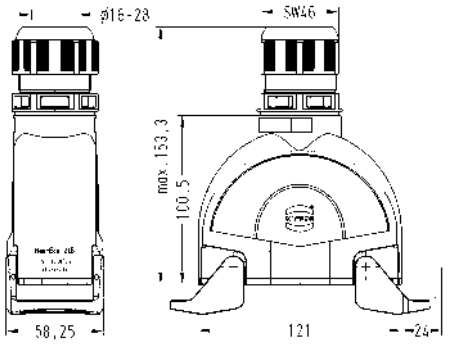
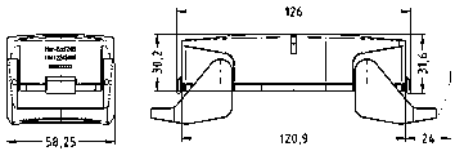
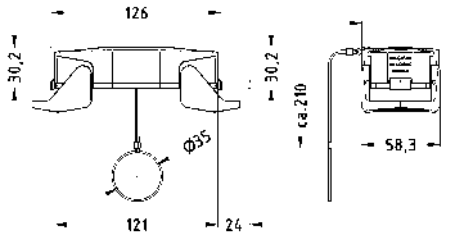
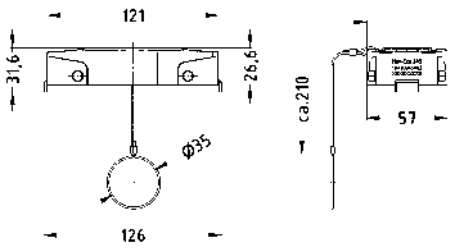
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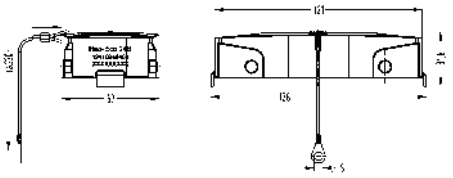
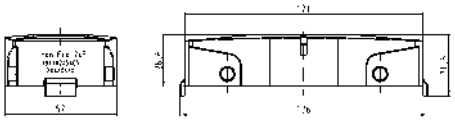
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 016 5402 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 016 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 016 5405 |  |

Double locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 124 0423 |  |
| Han-Eco® Modular,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 124 0523 |  |
| Han-Eco® Modular,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 41 224 0301 | <br>Panel cut out |

# Han-Eco® Modular for outdoor applications Size 24 B

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M40<br>2x M40 | 16 ... 28<br>16 ... 28 | 19 41 324 0233<br>19 41 324 0273 |  |
| Han-Eco® Modular,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M40 | 16 ... 28 | 19 41 324 0723 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>IP65<br> | | | 19 41 224 5406 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for hoods,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 224 5407 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (loop),<br>IP65<br> | | | 19 41 024 5402 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>With fixing cord (cable shoe),<br>IP65<br> | | | 19 41 024 5404 |  |
| Han-Eco® Modular,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>IP65<br> | | | 19 41 024 5405 |  |

## Features

- With integrated cable gland
- Suitable for applications according to protection class I

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Number of relockings | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Polyamide (PA), Fibre-glass reinforced |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Colour (seal) | RAL 9005 (jet black) |
| Material (locking) | Polyamide (PA), Fibre-glass reinforced |
| Colour (locking) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

IEC 61984
EN 45545-2 R22: HL1, HL2, HL3
EN 45545-2 R23: HL1, HL2, HL3
EN 45545-2 R24: HL1, HL2, HL3

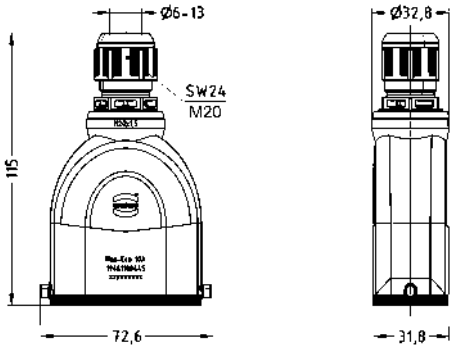
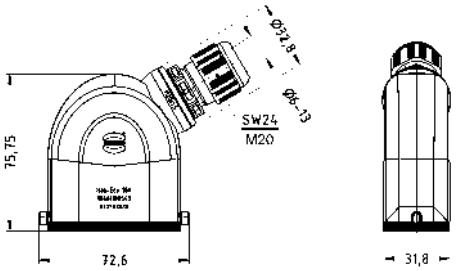
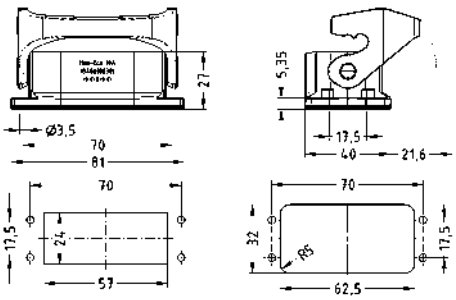
CE

## Details

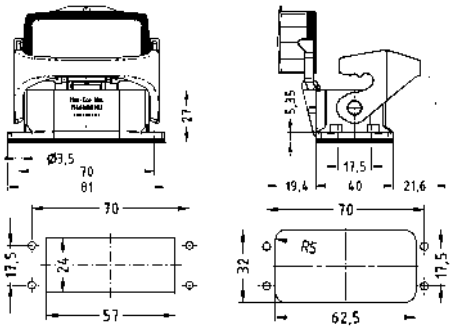
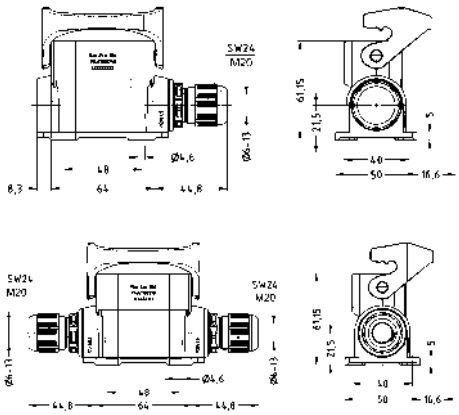
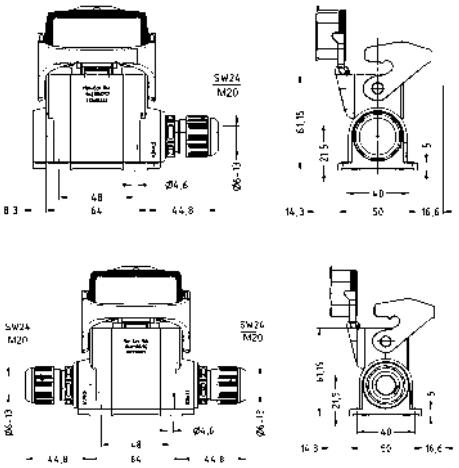
Assembly dimensions are identical for the Han® A bulkhead and surface mounted housings – mating compatible with all metal hoods and housings of the series Han® A.

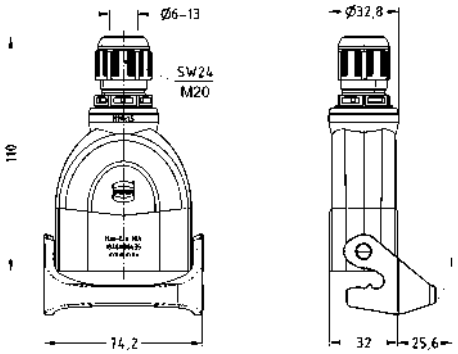
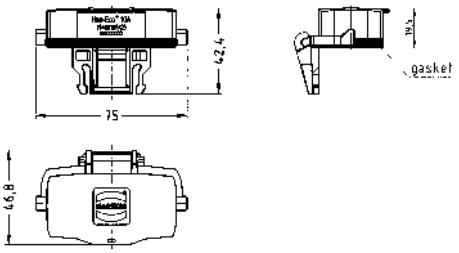
As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

Single locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 110 0445<br>19 46 110 0446 |  |
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 110 0545<br>19 46 110 0546 |  |
| Han-Eco® A,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 46 010 0301 | <br>Panel cut out<br>Front mounting / Rear mounting |

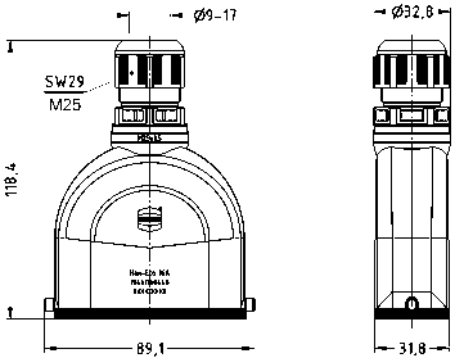
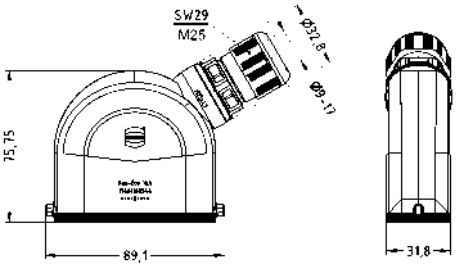
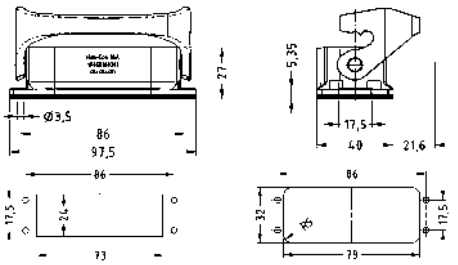
# Han-Eco® A for industrial applications — Size 10 A

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | | 19 46 010 0302 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® A,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 110 0250<br>19 46 110 0251<br>19 46 110 0290<br>19 46 110 0291 |  |
| Han-Eco® A,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 110 0252<br>19 46 110 0253<br>19 46 110 0292<br>19 46 110 0293 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 110 0435<br>19 46 110 0436 |  |
| Han-Eco® A,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65<br> | | | 19 46 010 5425 |  |

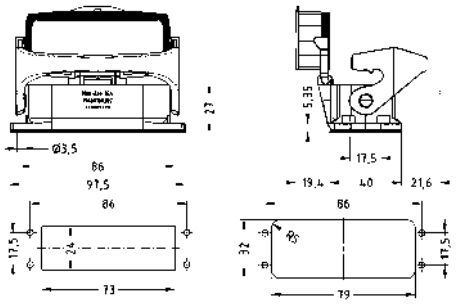
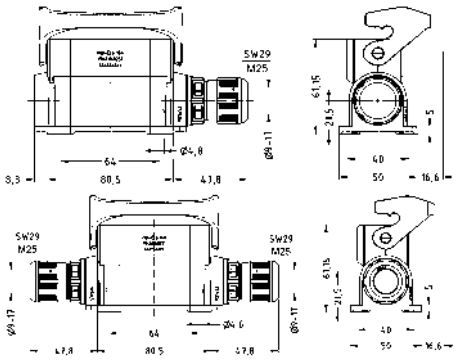
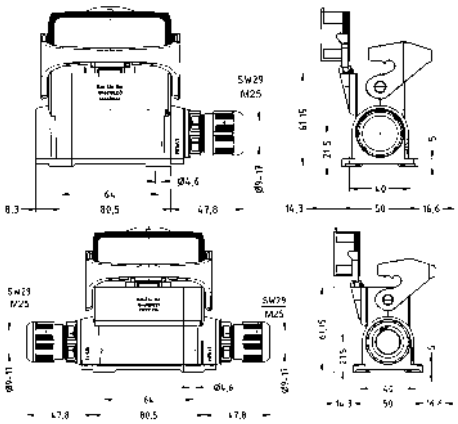
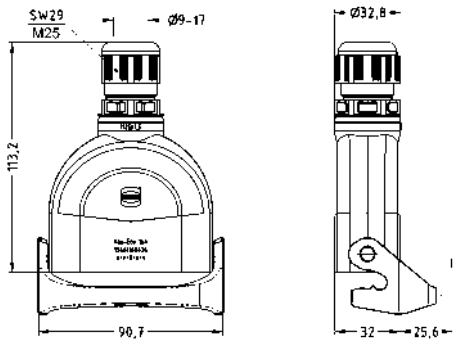
Single locking lever

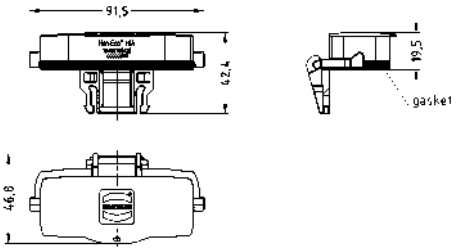


| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65  | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 116 0445<br>19 46 116 0446 |   |
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65  | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 116 0545<br>19 46 116 0546 |   |
| Han-Eco® A,<br>Bulkhead mounted housing,<br>IP65  | | | 19 46 016 0301 |   Panel cut out<br>Front mounting / Rear mounting |

# Han-Eco® A for industrial applications

Size 16 A

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65  | | | 19 46 016 0302 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® A,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65  | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 116 0250<br>19 46 116 0251<br>19 46 116 0290<br>19 46 116 0291 |  |
| Han-Eco® A,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP65  | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 116 0252<br>19 46 116 0253<br>19 46 116 0292<br>19 46 116 0293 |  |
| Han-Eco® A,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65  | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 116 0435<br>19 46 116 0436 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65<br> | | | 19 46 016 5425 |  |

# Han-Eco® A for outdoor applications

## Features

- With integrated cable gland
- Suitable for applications according to protection class I

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Number of relockings | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Polyamide (PA), Fibre-glass reinforced |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | FPM |
| Colour (seal) | RAL 7001 (silver-grey) |
| Material (locking) | Polyamide (PA), Fibre-glass reinforced |
| Colour (locking) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

IEC 61984
EN 45545-2 R22: HL1, HL2, HL3
EN 45545-2 R23: HL1, HL2, HL3
EN 45545-2 R24: HL1, HL2, HL3

CE

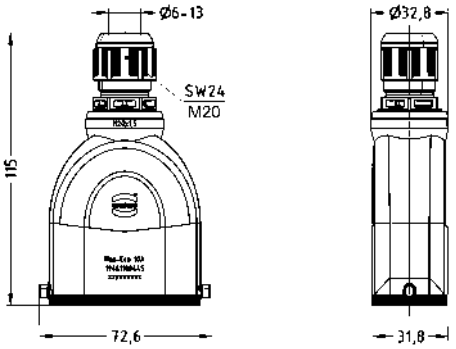
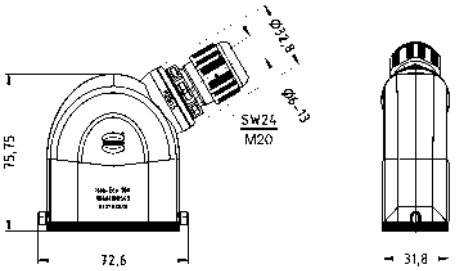
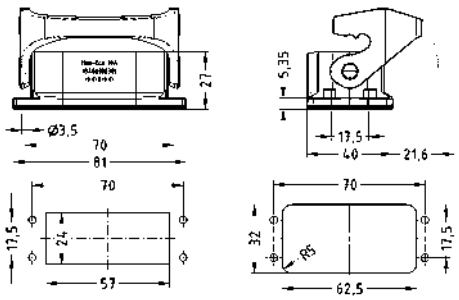
## Details

Assembly dimensions are identical for the Han® A bulkhead and surface mounted housings – mating compatible with all metal hoods and housings of the series Han® A.

As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

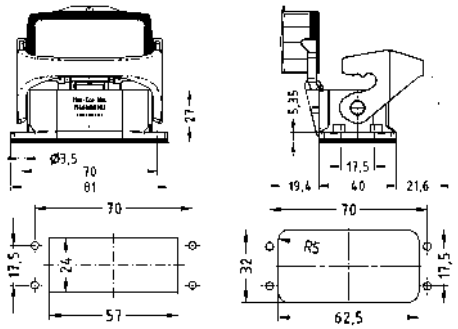
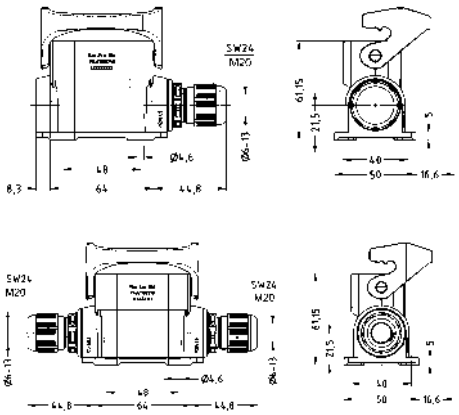
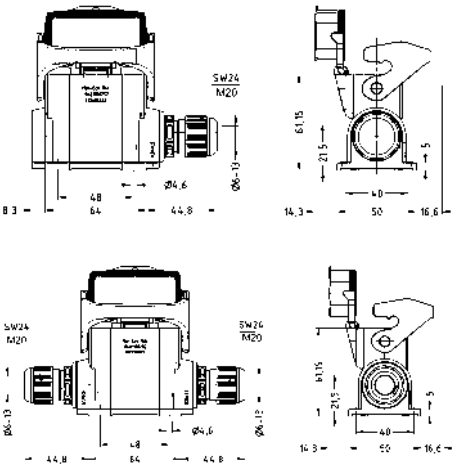
Single locking lever



| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 310 0445<br>19 46 310 0446 |  |
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 310 0545<br>19 46 310 0546 |  |
| Han-Eco® A,<br>Bulkhead mounted housing,<br>IP65<br> | | | 19 46 210 0301 | <br>Panel cut out<br>Front mounting / Rear mounting |

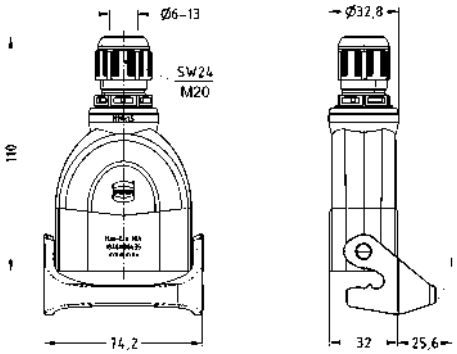
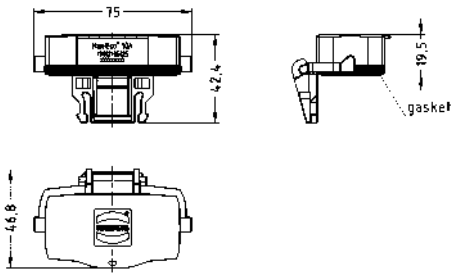
# Han-Eco® A for outdoor applications

Size 10 A

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | | 19 46 210 0302 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® A,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 110 0250<br>19 46 110 0251<br>19 46 110 0290<br>19 46 110 0291 |  |
| Han-Eco® A,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 310 0252<br>19 46 310 0253<br>19 46 310 0292<br>19 46 310 0293 |  |

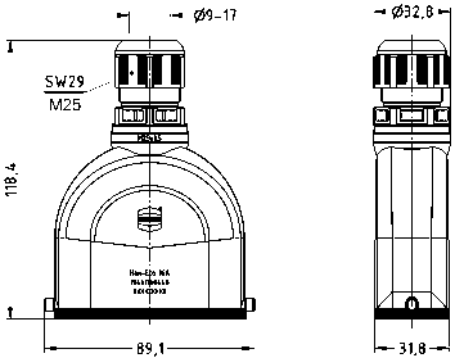
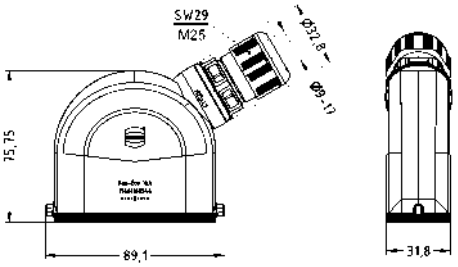
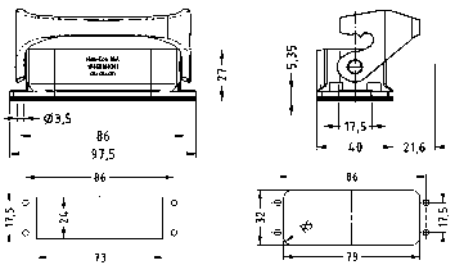
# Han-Eco® A for outdoor applications

Size 10 A

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 110 0435<br>19 46 110 0436 |  |
| Han-Eco® A,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65<br> | | | 19 46 210 5425 |  |

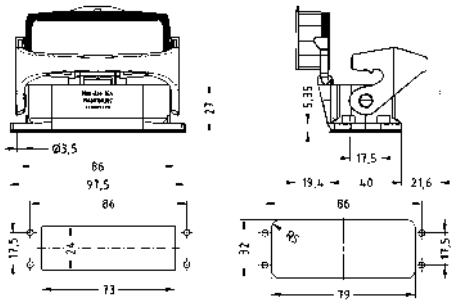
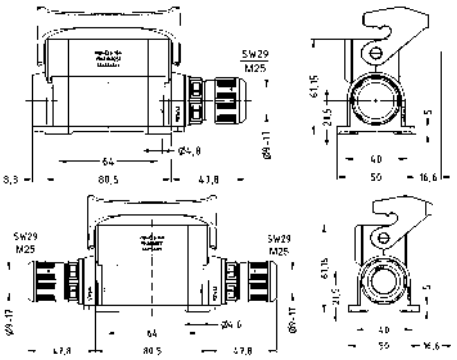
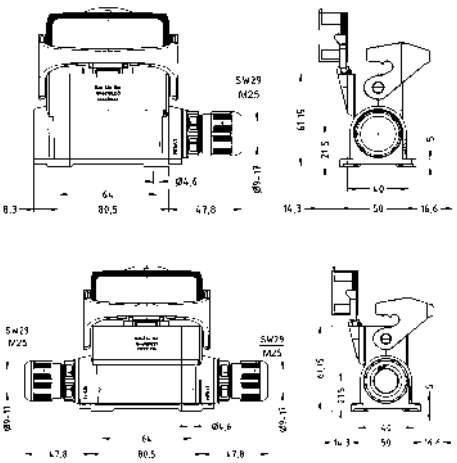
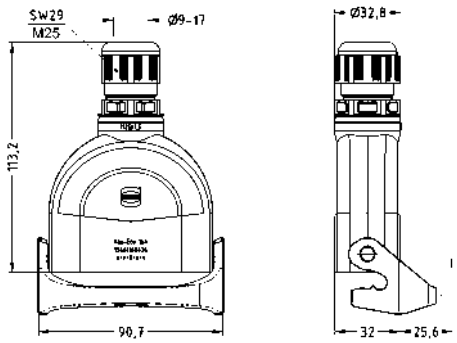
Single locking lever

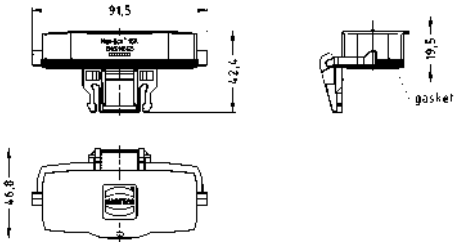


| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP65  | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 316 0445<br>19 46 316 0446 |   |
| Han-Eco® A,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP65  | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 316 0545<br>19 46 316 0546 |   |
| Han-Eco® A,<br>Bulkhead mounted housing,<br>IP65  | | | 19 46 216 0301 |   Panel cut out<br>Front mounting / Rear mounting |

# Han-Eco® A for outdoor applications

Size 16 A

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | | 19 46 216 0302 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® A,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 116 0250<br>19 46 116 0251<br>19 46 116 0290<br>19 46 116 0291 |  |
| Han-Eco® A,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>2x M20<br>2x M25 | 6 ... 13<br>9 ... 17<br>6 ... 13<br>9 ... 17 | 19 46 316 0252<br>19 46 316 0253<br>19 46 316 0292<br>19 46 316 0293 |  |
| Han-Eco® A,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25 | 6 ... 13<br>9 ... 17 | 19 46 116 0435<br>19 46 116 0436 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® A,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65<br> | | | 19 46 216 5425 |  |

# Han-Eco® B for industrial applications

## Features

- Suitable for standard inserts and modules from the Han-Modular® portfolio
- With integrated cable gland
- Suitable for applications according to protection class I
- Minimal weight with excellent mechanical robustness

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Number of relockings | ≥500 |
| Degree of protection acc. to IEC 60529 | IP66 |
| Material (hood/housing) | Polyamide (PA), Fibre-glass reinforced |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Colour (seal) | RAL 9005 (jet black) |
| Material (locking) | Polyamide (PA), Fibre-glass reinforced |
| Colour (locking) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

IEC 61984
EN 45545-2 R22: HL1, HL2, HL3
EN 45545-2 R23: HL1, HL2, HL3
EN 45545-2 R24: HL1, HL2, HL3

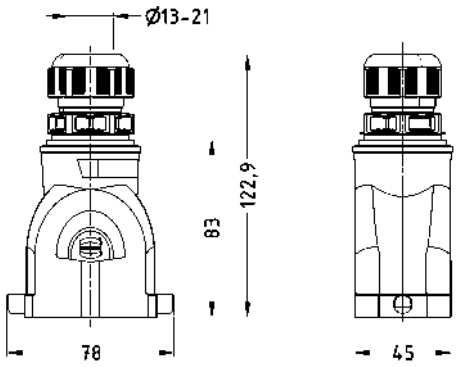
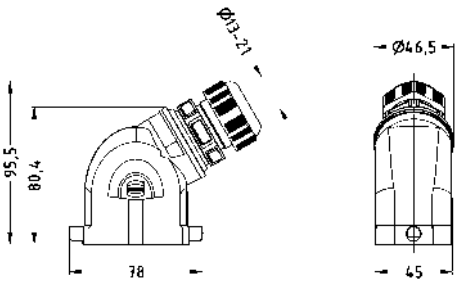
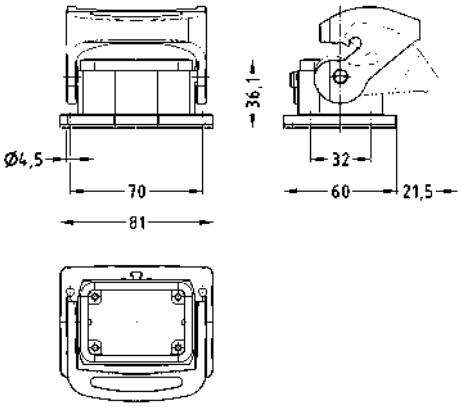
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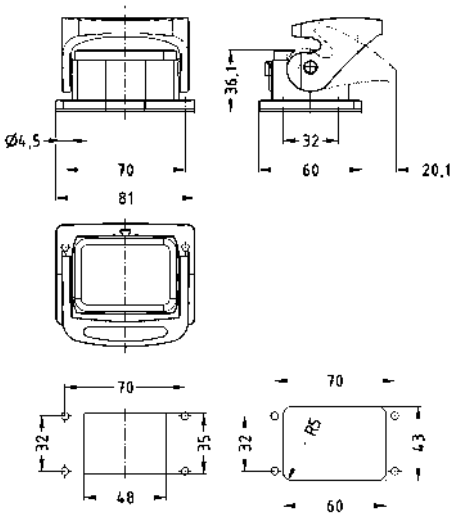
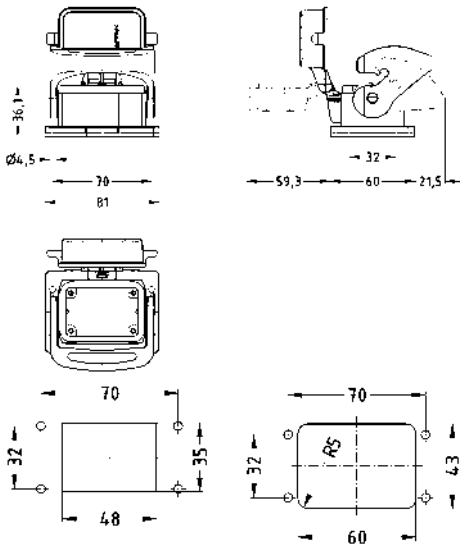
## Details

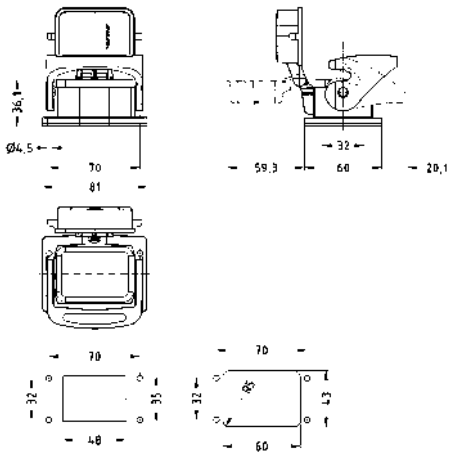
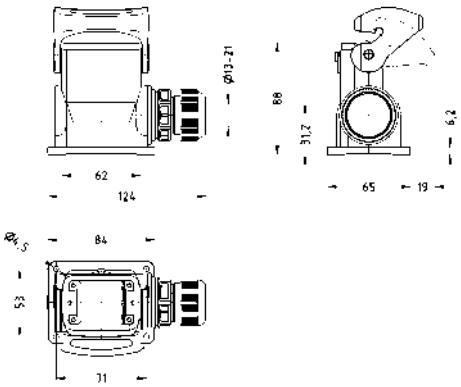
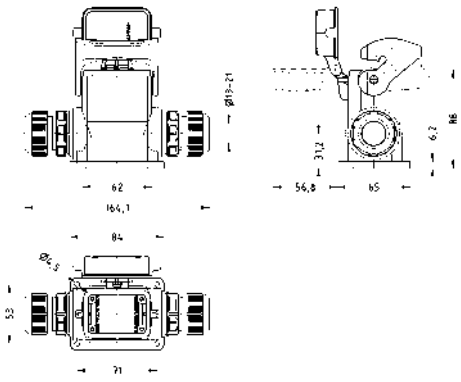
Mating compatible with all metal hoods and housings of the series Han® B.

As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

Single locking lever

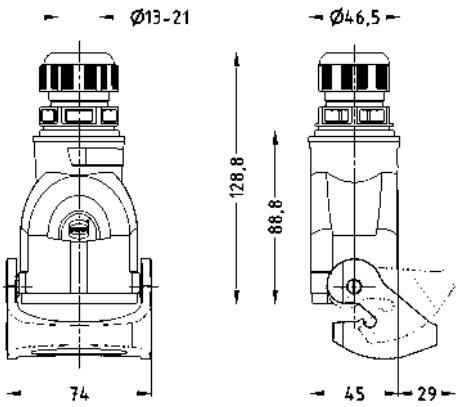
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 106 0445<br>19 43 106 0446<br>19 43 106 0447 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 106 0545<br>19 43 106 0546<br>19 43 106 0547 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 006 0340 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 006 0001 separately. | | | 19 43 006 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 006 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |

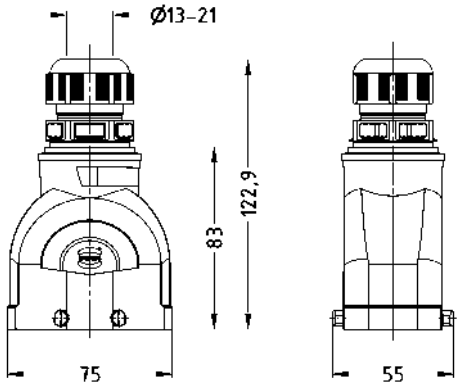
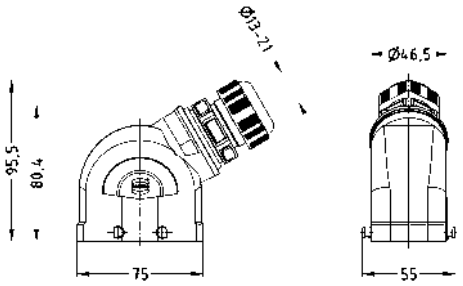
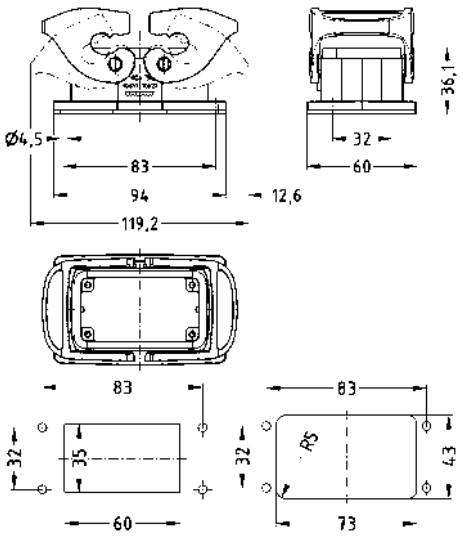
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 006 0001 separately. | | | 19 43 006 0331 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 106 0250<br>19 43 106 0251<br>19 43 106 0252<br>19 43 106 0290<br>19 43 106 0291<br>19 43 106 0292 |  |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 106 0255<br>19 43 106 0256<br>19 43 106 0257<br>19 43 106 0295<br>19 43 106 0296<br>19 43 106 0297 |  |

# Han-Eco® B for industrial applications

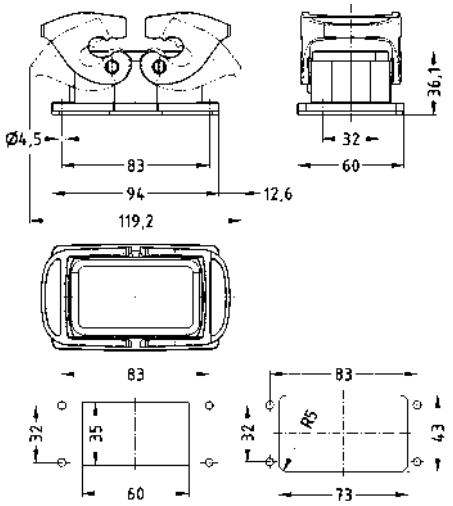
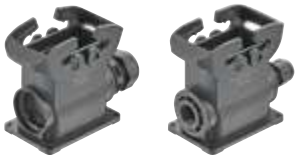
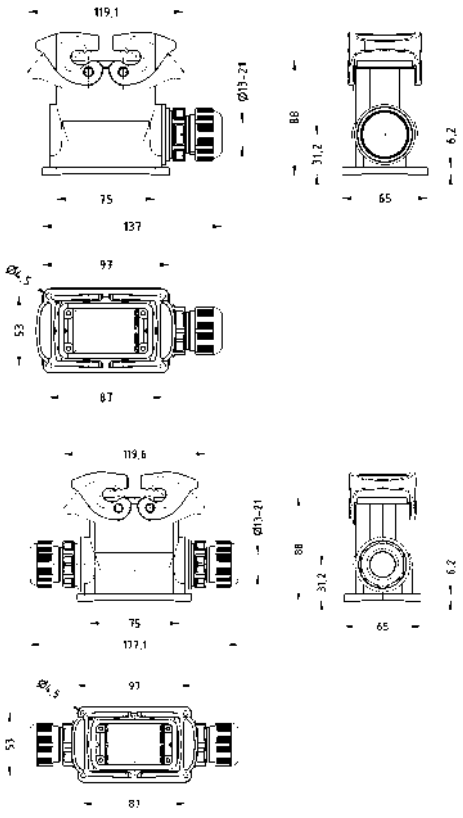
Size 6 B

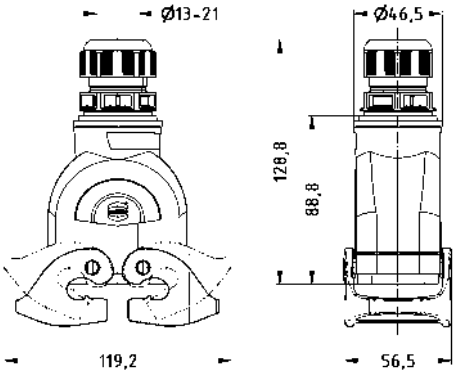
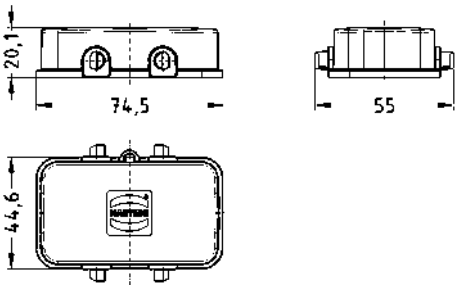
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 106 0755<br>19 43 106 0756<br>19 43 106 0757 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 006 5442 | |
| Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66<br> | | | 19 43 006 5410 | |
| Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 006 5446 | |

Double locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66  | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0425<br>19 43 110 0426<br>19 43 110 0427 |   |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66  | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0525<br>19 43 110 0526<br>19 43 110 0527 |   |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66  | | | 19 43 010 0320 |   Panel cut out<br>Front mounting / Rear mounting |

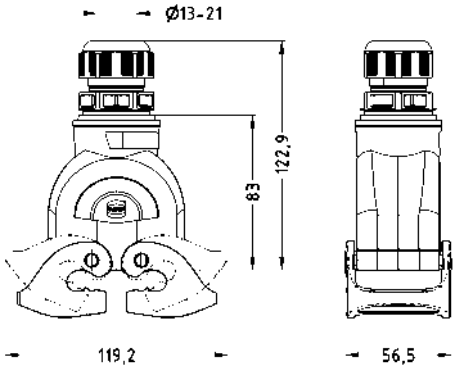
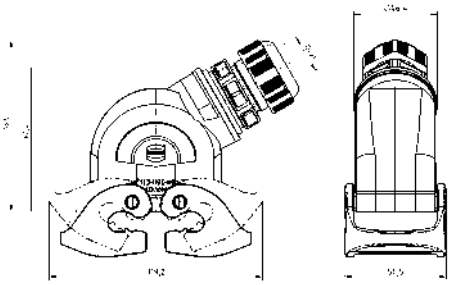
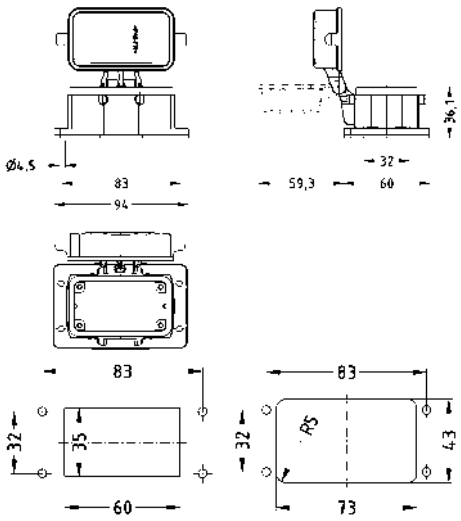
# Han-Eco® B for industrial applications — Size 10 B

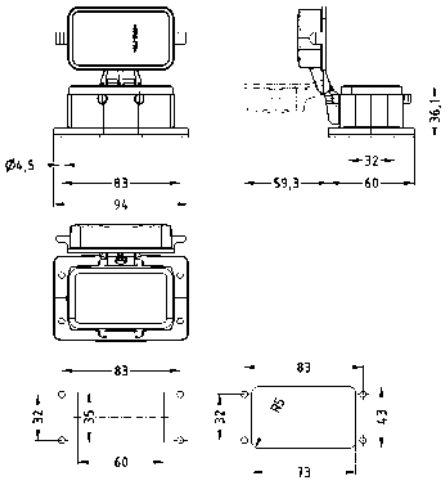
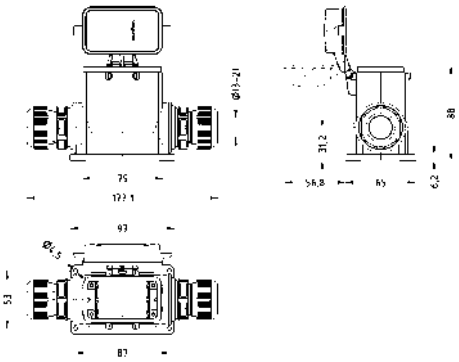
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 010 0001 separately. | | | 19 43 010 0310 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>1x M40<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>16 ... 28<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0230<br>19 43 110 0231<br>19 43 110 0232<br>19 43 110 0233<br>19 43 110 0270<br>19 43 110 0271<br>19 43 110 0272 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0735<br>19 43 110 0736<br>19 43 110 0737 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 010 5422 | |
| Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66<br> | | | 19 43 010 5425 |  |
| Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 010 5426 | |

Double locking lever (on the hood)

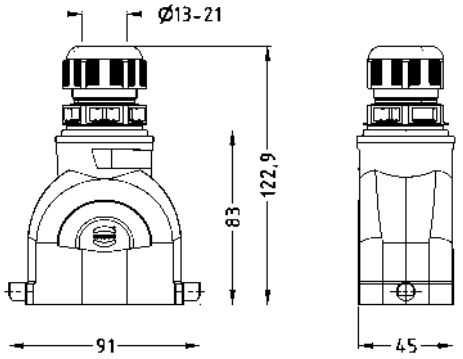
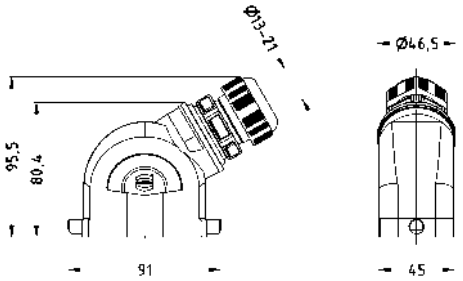
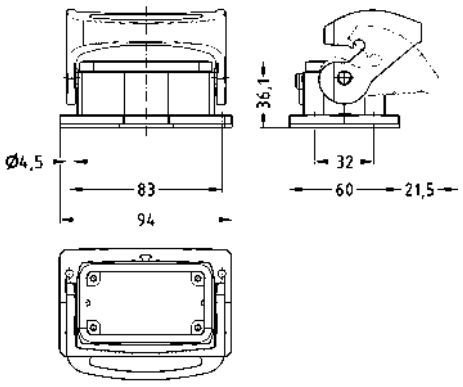


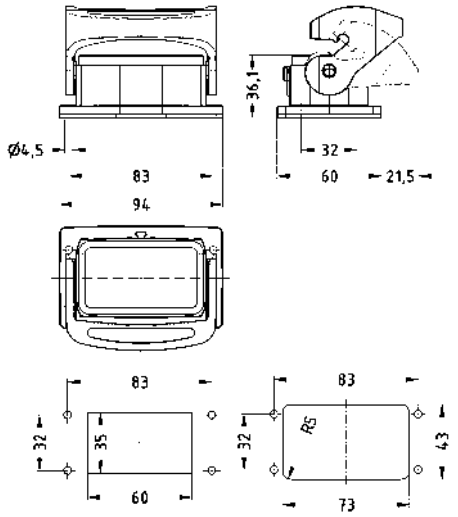
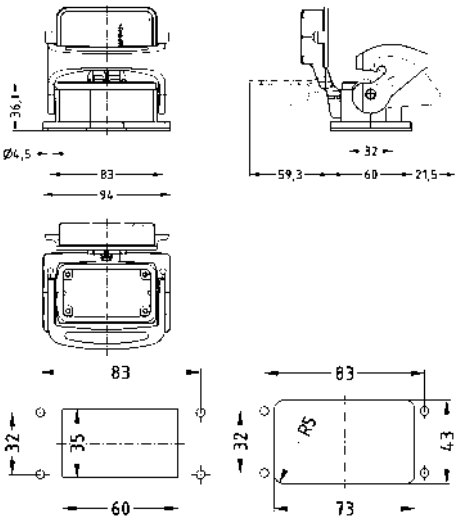
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32 | 13 ... 21 | 19 43 110 0437 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32 | 13 ... 21 | 19 43 110 0537 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 010 0322 | <br>Panel cut out<br>Front mounting / Rear mounting |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 010 0001 separately. | | | 19 43 010 0312 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32<br>2x M32 | 13 ... 21<br>13 ... 21 | 19 43 110 0227<br>19 43 110 0267 |  |

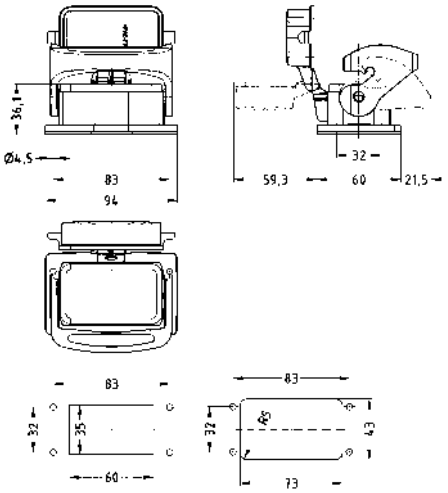
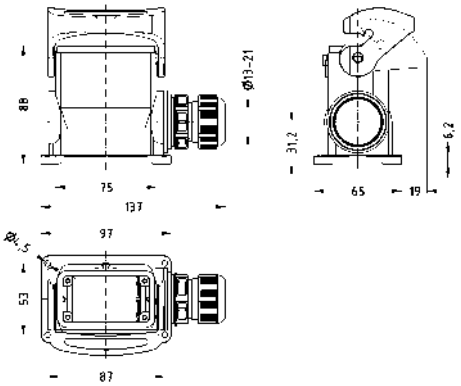
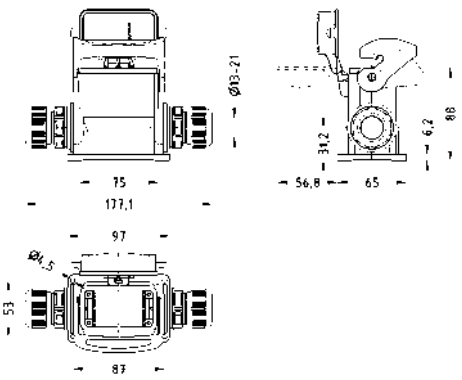
Single locking lever

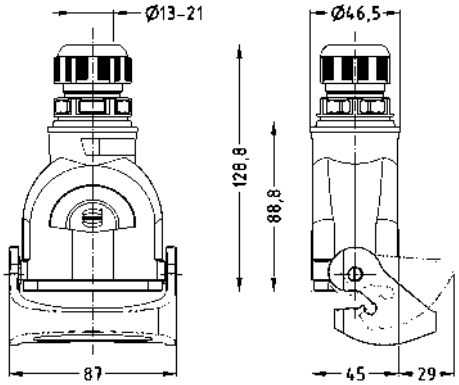


| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0445<br>19 43 110 0446<br>19 43 110 0447 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0545<br>19 43 110 0546<br>19 43 110 0547 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 010 0340 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 010 0001 separately. | | | 19 43 010 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 010 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |

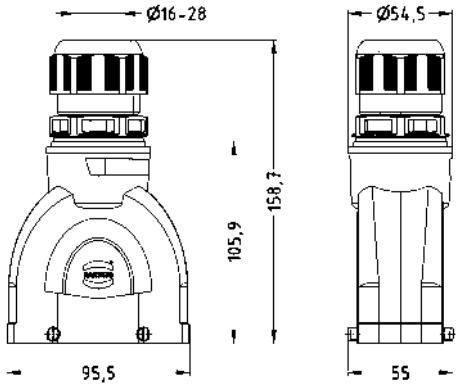
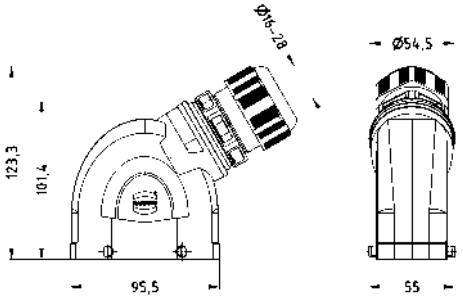
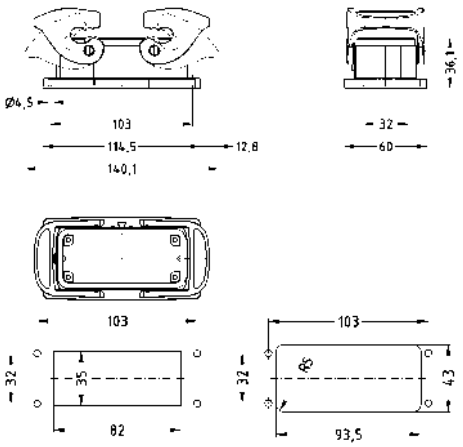
# Han-Eco® B for industrial applications — Size 10 B

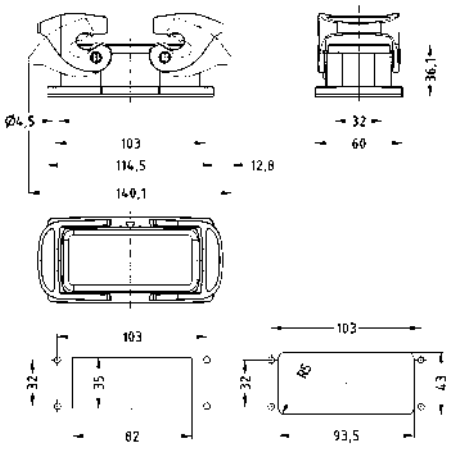
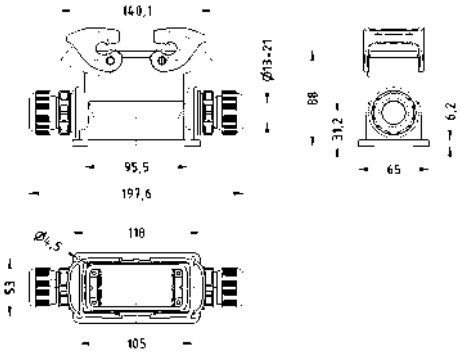
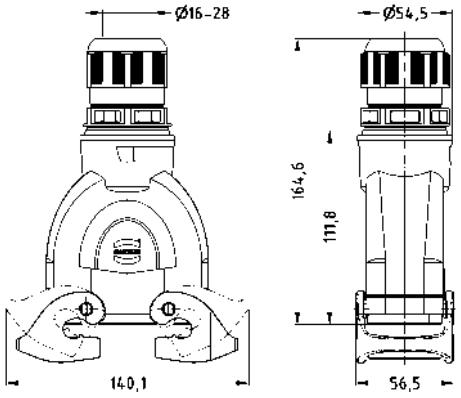
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 010 0001 separately. | | | 19 43 010 0331 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0250<br>19 43 110 0251<br>19 43 110 0252<br>19 43 110 0290<br>19 43 110 0291<br>19 43 110 0292 |  |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0255<br>19 43 110 0256<br>19 43 110 0257<br>19 43 110 0295<br>19 43 110 0296<br>19 43 110 0297 |  |

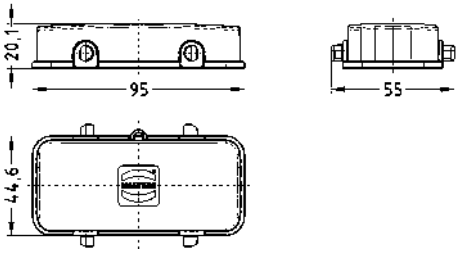
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0755<br>19 43 110 0756<br>19 43 110 0757 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 010 5442 | |
| Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66<br> | | | 19 43 010 5410 | |
| Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 010 5446 | |

Double locking lever

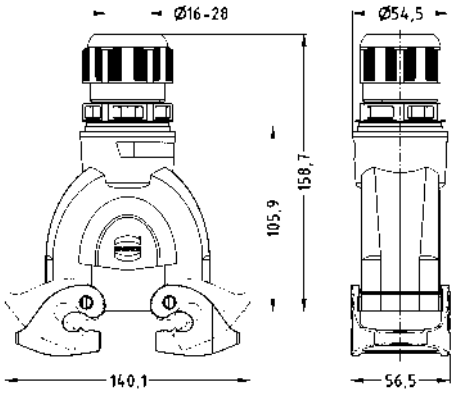
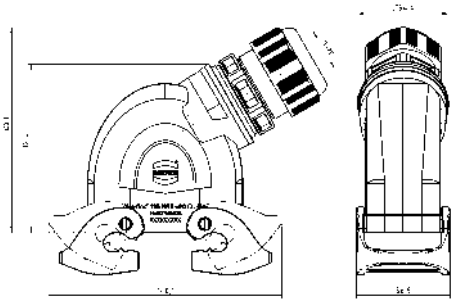
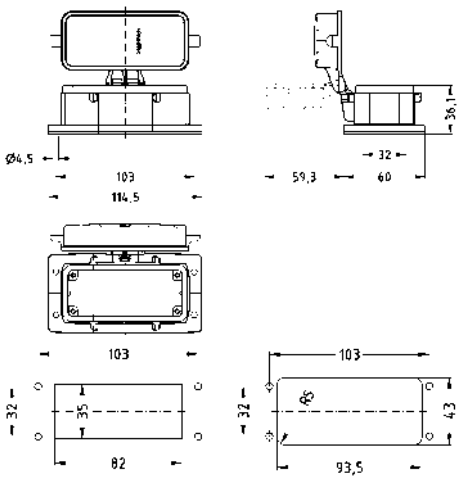


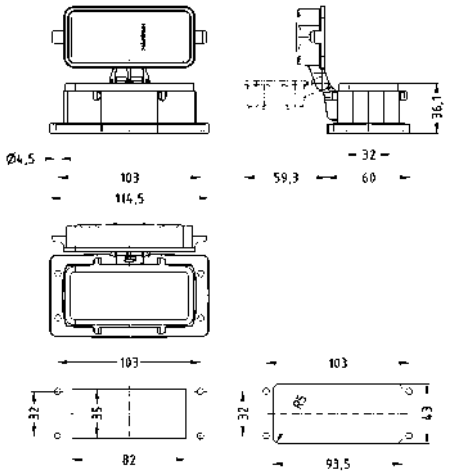
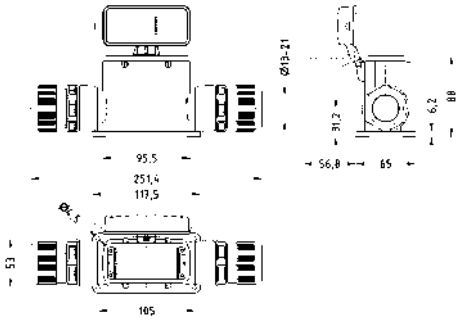
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0426<br>19 43 116 0427<br>19 43 116 0428 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0526<br>19 43 116 0527<br>19 43 116 0528 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 016 0320 | <br>Panel cut out<br>Front mounting / Rear mounting |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 016 0001 separately. | | | 19 43 016 0310 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0231<br>19 43 116 0232<br>19 43 116 0233<br>19 43 116 0271<br>19 43 116 0272<br>19 43 116 0273 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0736<br>19 43 116 0737<br>19 43 116 0738 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 016 5422 | |

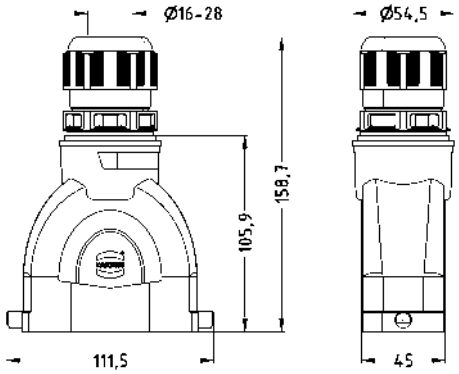
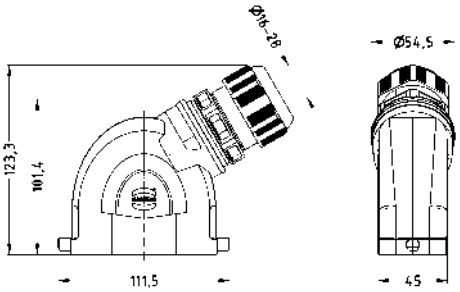
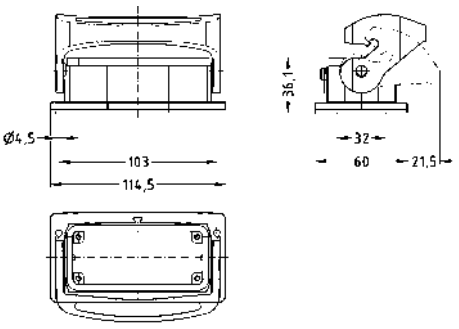
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66<br> | | | 19 43 016 5425 |  |
| Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 016 5426 | |

Double locking lever (on the hood)

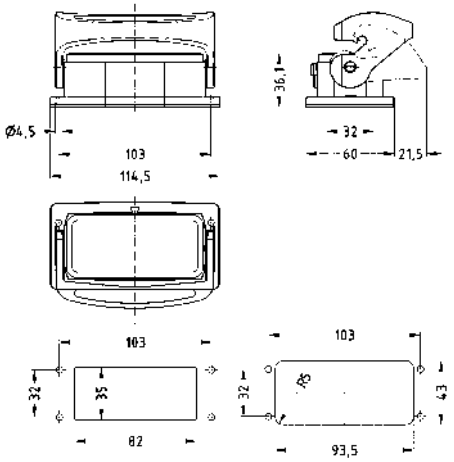
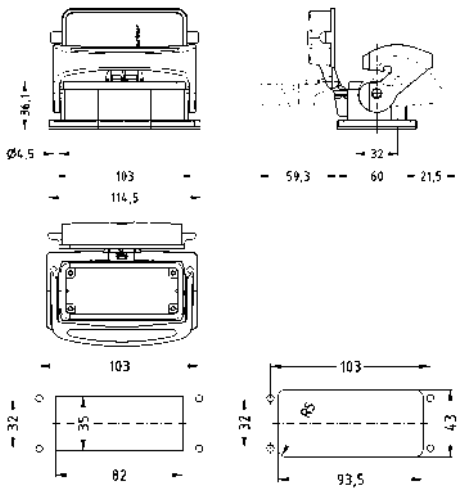
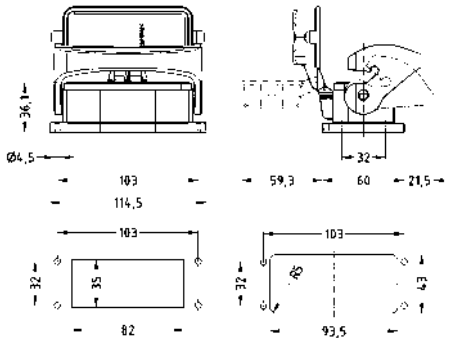
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 116 0438 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 116 0538 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 016 0322 | <br>Panel cut out<br>Front mounting / Rear mounting |

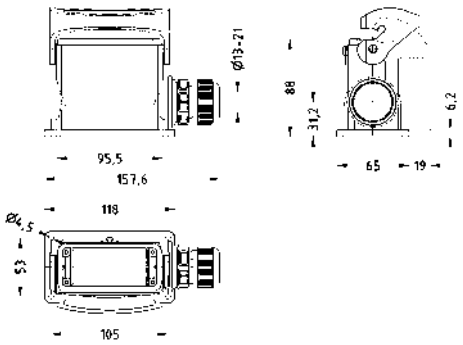
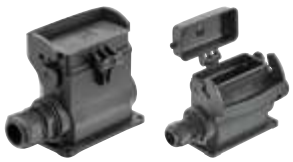
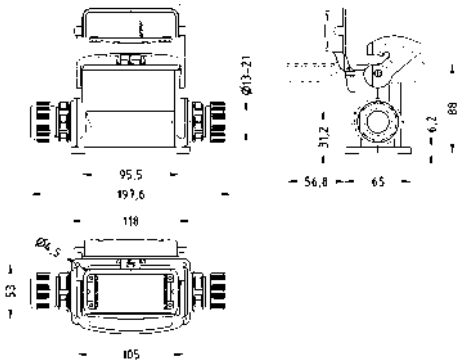
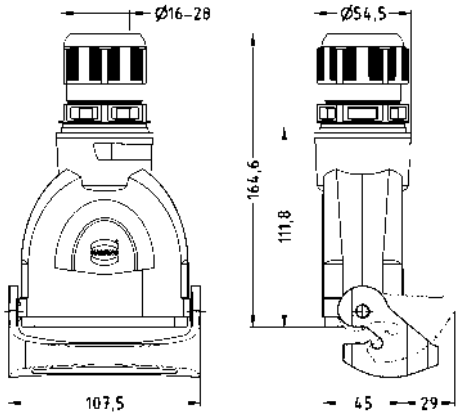
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 016 0001 separately. | | | 19 43 016 0312 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M40<br>2x M40 | 16 ... 28<br>16 ... 28 | 19 43 116 0228<br>19 43 116 0268 |  |

Single locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0446<br>19 43 116 0447<br>19 43 116 0448 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0546<br>19 43 116 0547<br>19 43 116 0548 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 016 0340 |  |

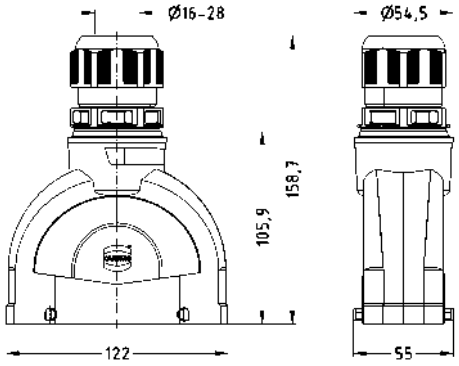
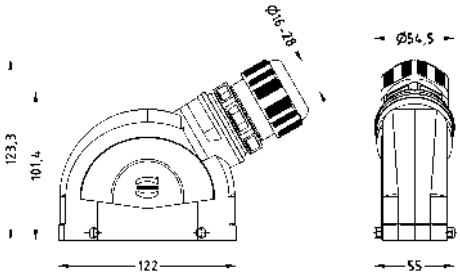
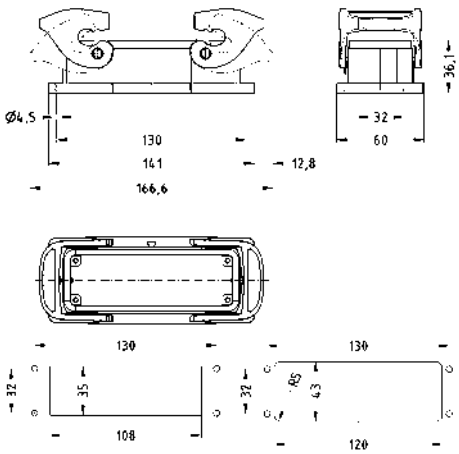
# Han-Eco® B for industrial applications — Size 16 B

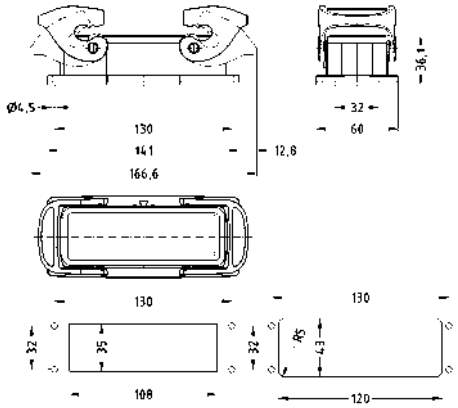
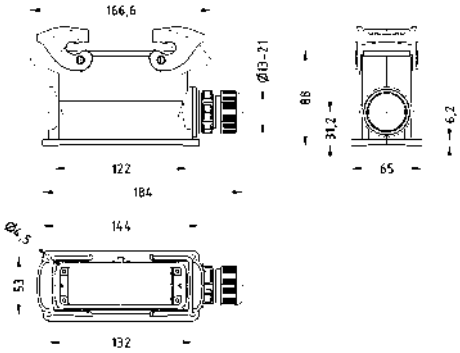
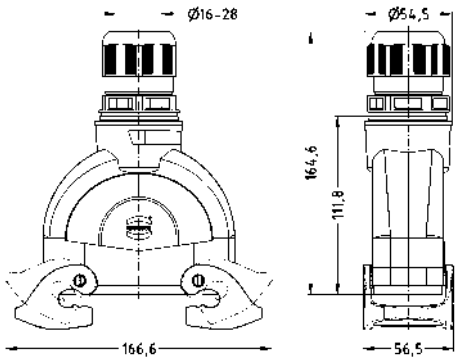
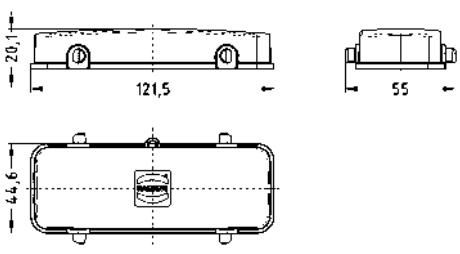
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 016 0001 separately. | | | 19 43 016 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 016 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 016 0001 separately. | | | 19 43 016 0331 | <br>Panel cut out<br>Front mounting / Rear mounting |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0251<br>19 43 116 0252<br>19 43 116 0253<br>19 43 116 0291<br>19 43 116 0292<br>19 43 116 0293 |  |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0256<br>19 43 116 0257<br>19 43 116 0258<br>19 43 116 0296<br>19 43 116 0297<br>19 43 116 0298 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0756<br>19 43 116 0757<br>19 43 116 0758 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66<br><br>Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66<br><br>Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 016 5442<br><br>19 43 016 5410<br><br>19 43 016 5446 | |

Double locking lever

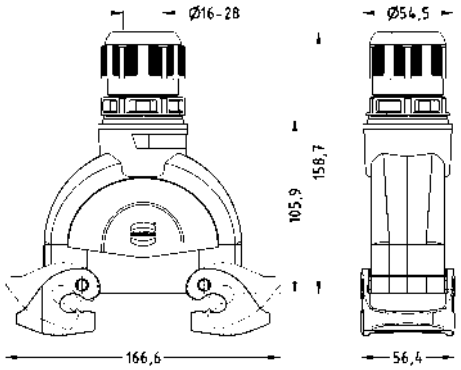
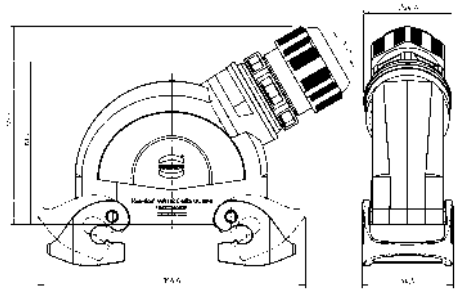
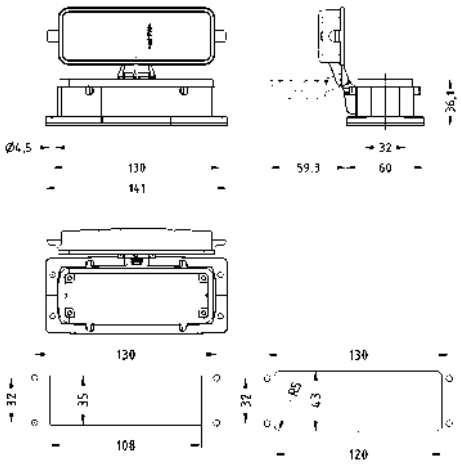


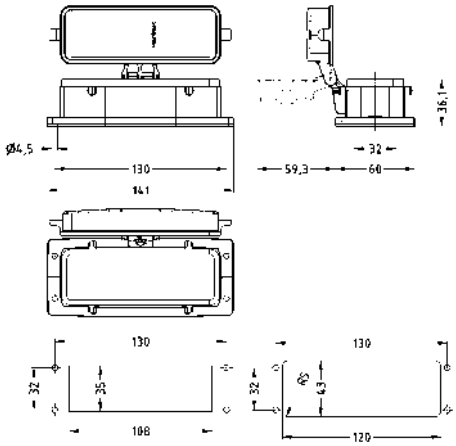
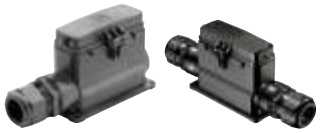
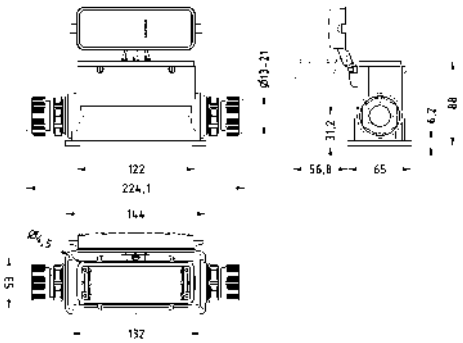
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0427<br>19 43 124 0428 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0527<br>19 43 124 0528 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 024 0320 | <br>Panel cut out<br>Front mounting / Rear mounting |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 024 0001 separately. | | | 19 43 024 0310 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 124 0231<br>19 43 124 0232<br>19 43 124 0233<br>19 43 124 0271<br>19 43 124 0272<br>19 43 124 0273 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0737<br>19 43 124 0738 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66<br><br>Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66<br> | | | 19 43 024 5422<br><br>19 43 024 5425 |  |

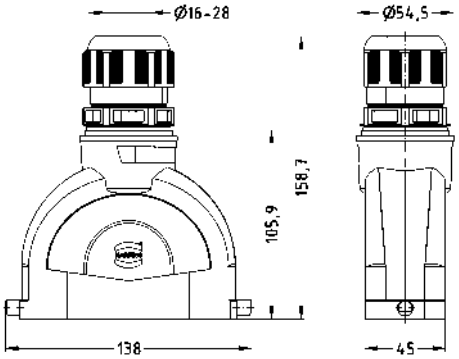
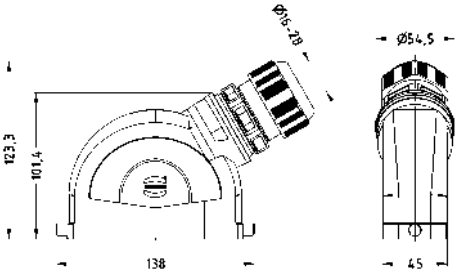
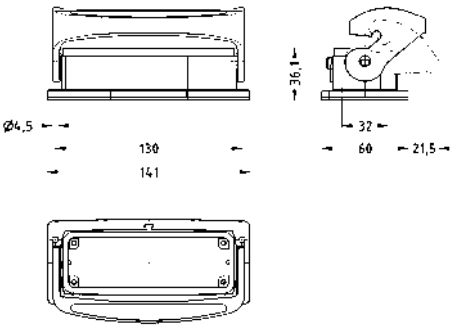
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 024 5426 | |

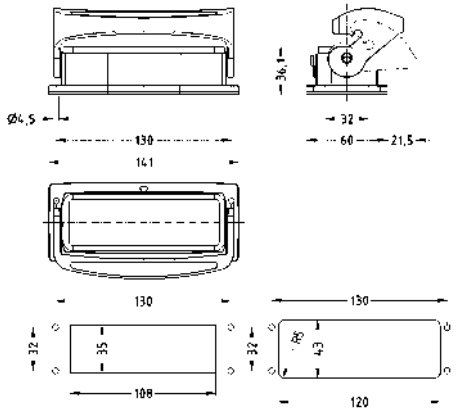
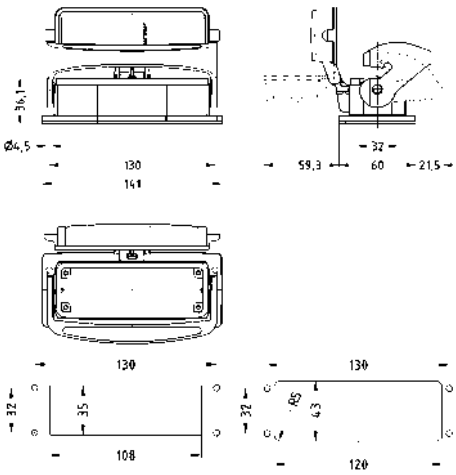
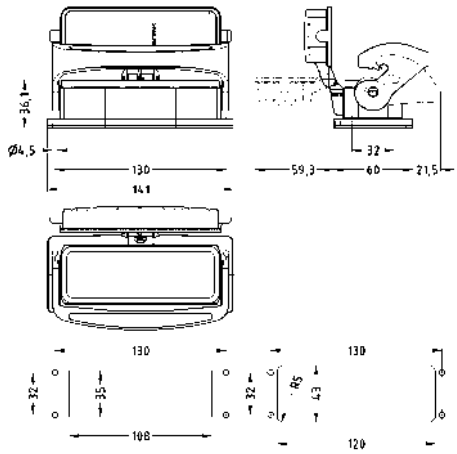
Double locking lever (on the hood)

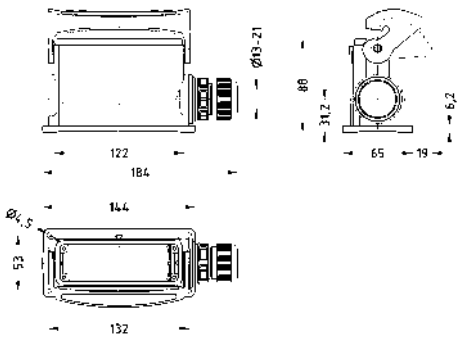
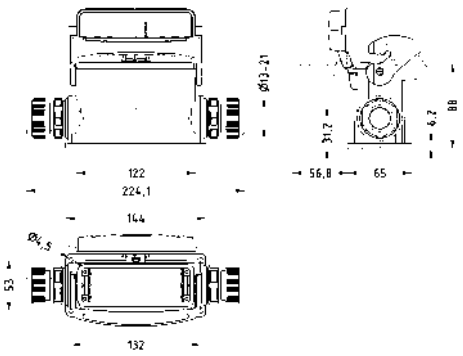
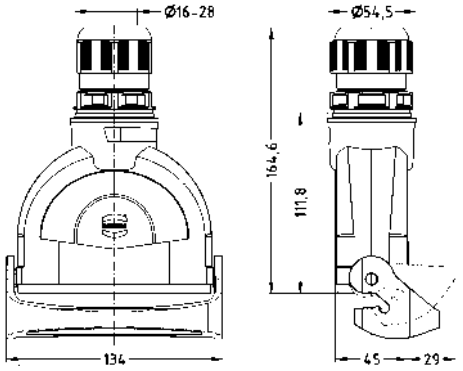
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 124 0438 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 124 0538 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 024 0322 | <br>Panel cut out<br>Front mounting / Rear mounting |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 024 0001 separately. | | | 19 43 024 0312 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32<br>1x M40<br>2x M32<br>2x M40 | 13 ... 21<br>16 ... 28<br>13 ... 21<br>16 ... 28 | 19 43 124 0227<br>19 43 124 0228<br>19 43 124 0267<br>19 43 124 0268 |  |

Single locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0447<br>19 43 124 0448 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0547<br>19 43 124 0548 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 024 0340 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 024 0001 separately. | | | 19 43 024 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 024 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 024 0001 separately. | | | 19 43 024 0331 | <br>Panel cut out<br>Front mounting / Rear mounting |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66  | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 124 0251<br>19 43 124 0252<br>19 43 124 0253<br>19 43 124 0291<br>19 43 124 0292<br>19 43 124 0293 |  |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66  | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 124 0256<br>19 43 124 0257<br>19 43 124 0258<br>19 43 124 0296<br>19 43 124 0297<br>19 43 124 0298 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66  | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0757<br>19 43 124 0758 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 024 5442 | |
| Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66  | | | 19 43 024 5410 | |
| Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 024 5446 | |

# Han-Eco® B for outdoor applications



## Features

- Suitable for standard inserts and modules from the Han-Modular® portfolio
- With integrated cable gland
- Suitable for applications according to protection class I
- Minimal weight with excellent mechanical robustness

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Number of relockings | ≥500 |
| Degree of protection acc. to IEC 60529 | IP66 |
| Material (hood/housing) | Polyamide (PA), Fibre-glass reinforced |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | FPM |
| Colour (seal) | RAL 7001 (silver-grey) |
| Material (locking) | Polyamide (PA), Fibre-glass reinforced |
| Colour (locking) | RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

IEC 61984
EN 45545-2 R22: HL1, HL2, HL3
EN 45545-2 R23: HL1, HL2, HL3
EN 45545-2 R24: HL1, HL2, HL3

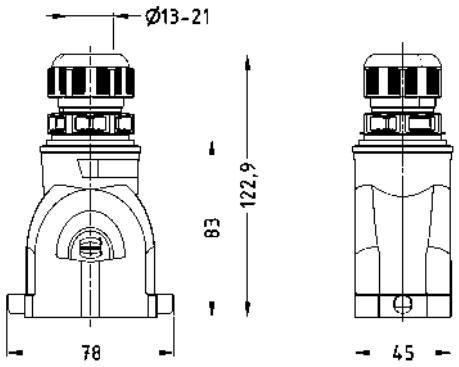
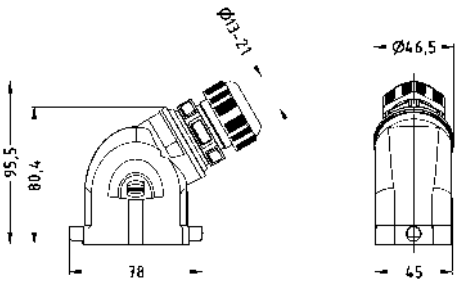
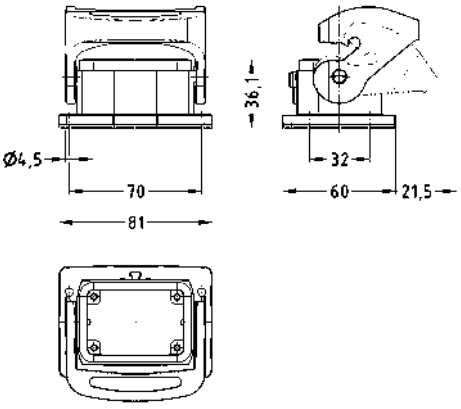
CE

## Details

Mating compatible with all metal hoods and housings of the series Han® B.

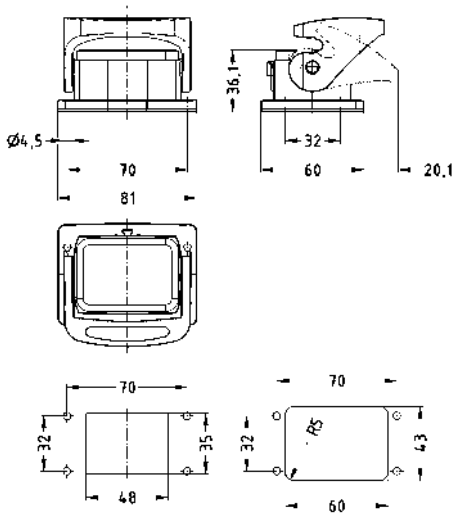
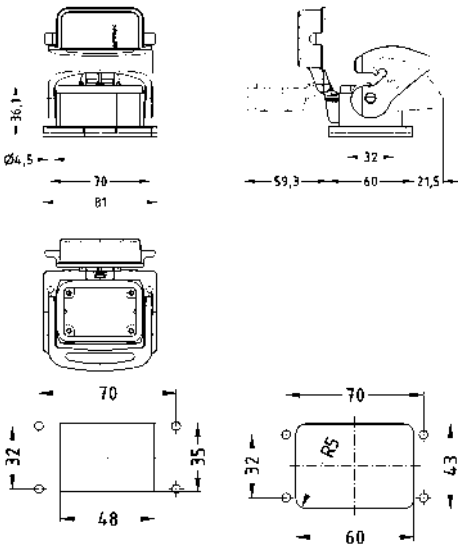
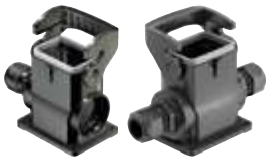
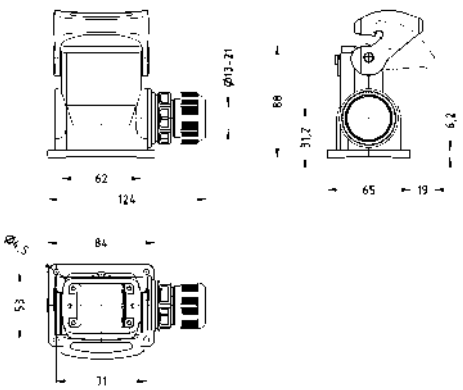
As an option a larger panel cut out for the rear assembly of the bulkhead mounted housings is possible.

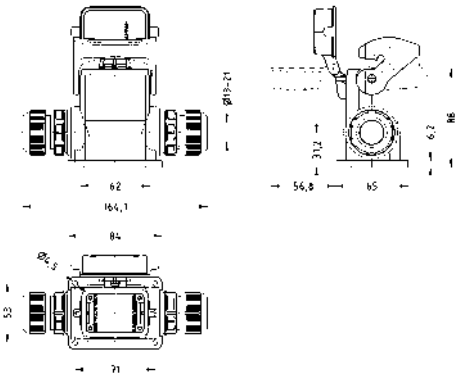
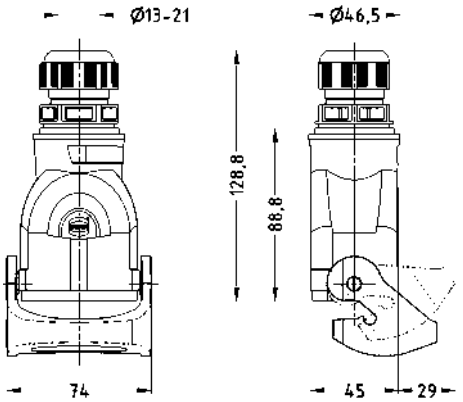
Single locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66  | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 106 0445<br>19 43 106 0446<br>19 43 106 0447 |   |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66  | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 106 0545<br>19 43 106 0546<br>19 43 106 0547 |   |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66  | | | 19 43 206 0340 |   |

# Han-Eco® B for outdoor applications

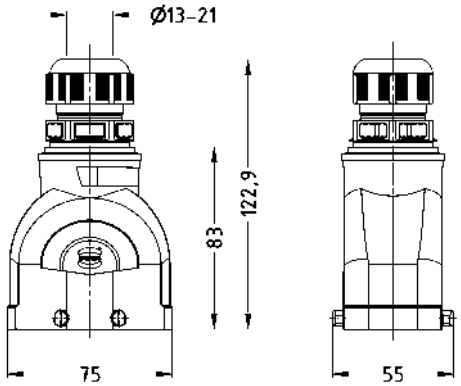
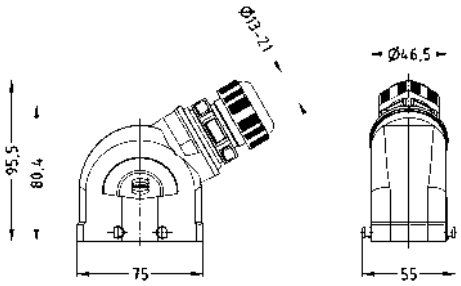
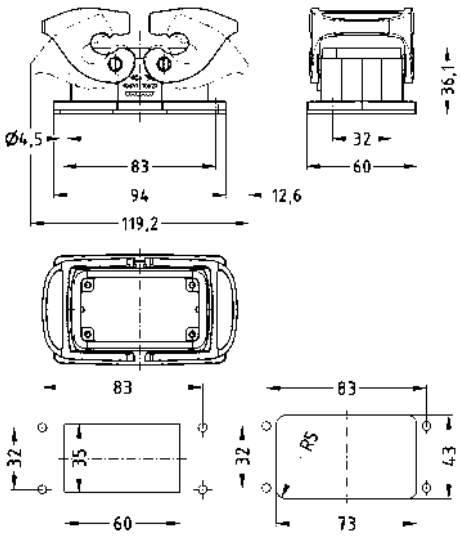
Size 6 B

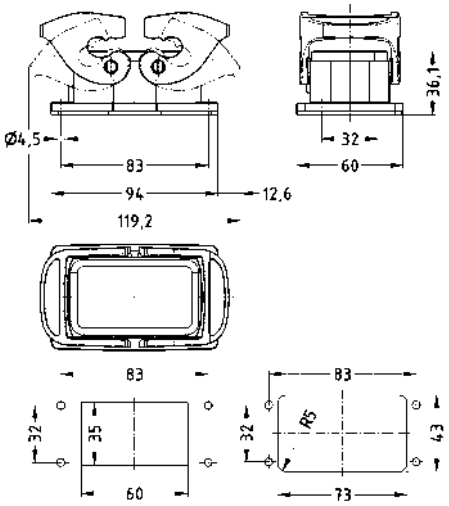
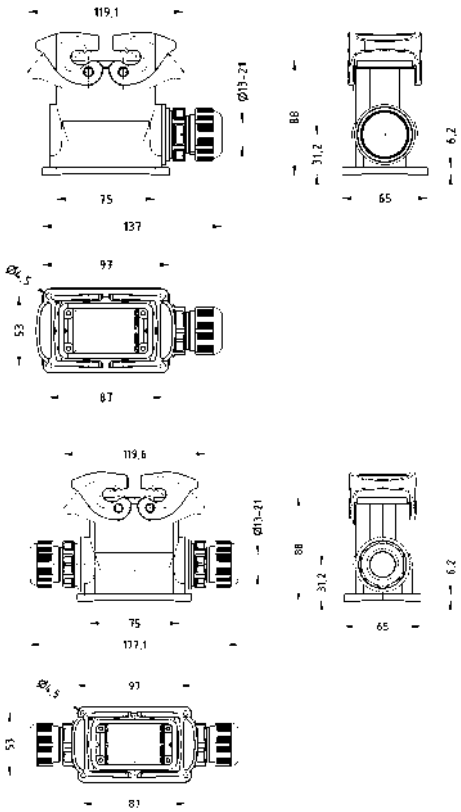
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br>Please order frame 19 43 006 0001 separately. | | | 19 43 206 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 206 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 306 0250<br>19 43 306 0251<br>19 43 306 0252<br>19 43 306 0290<br>19 43 306 0291<br>19 43 306 0292 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 306 0255<br>19 43 306 0256<br>19 43 306 0257<br>19 43 306 0295<br>19 43 306 0296<br>19 43 306 0297 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 306 0755<br>19 43 306 0756<br>19 43 306 0757 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 206 5442 | |
| Han-Eco® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP66<br> | | | 19 43 006 5410 | |
| Han-Eco® B,<br>Protection cover,<br>for cable to cable housing,<br>IP66 | | | 19 43 006 5446 | |

Double locking lever

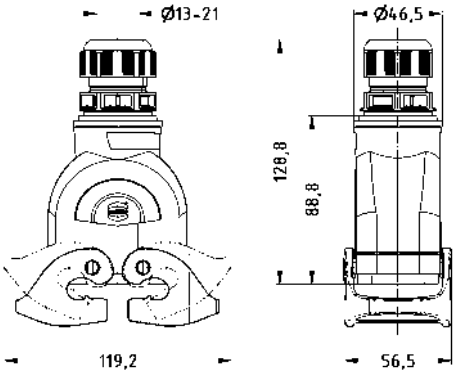


| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0425<br>19 43 110 0426<br>19 43 110 0427 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0525<br>19 43 110 0526<br>19 43 110 0527 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 210 0320 | <br>Panel cut out<br>Front mounting / Rear mounting |

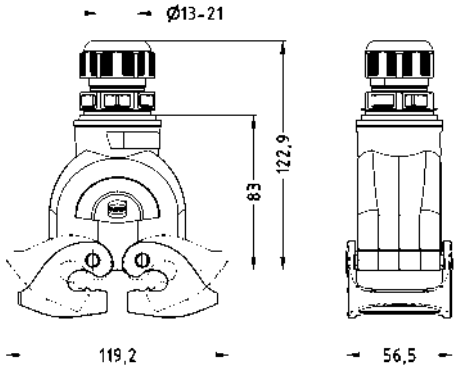
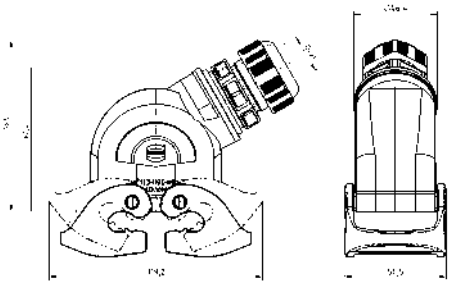
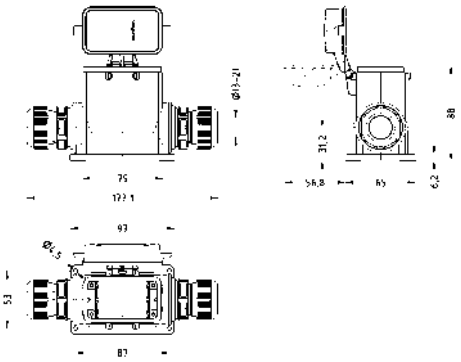
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 010 0001 separately. | | | 19 43 210 0310 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>1x M40<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>16 ... 28<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 310 0230<br>19 43 310 0231<br>19 43 310 0232<br>19 43 310 0233<br>19 43 310 0270<br>19 43 310 0271<br>19 43 310 0272 |  |

# Han-Eco® B for outdoor applications

Size 10 B

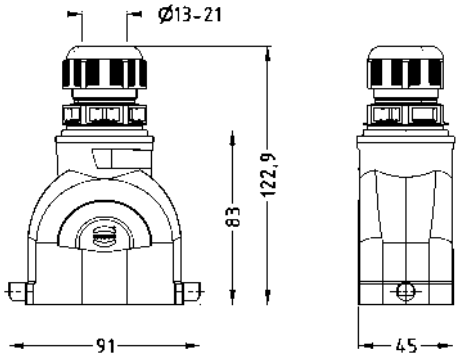
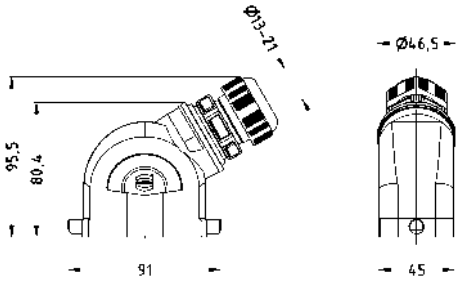
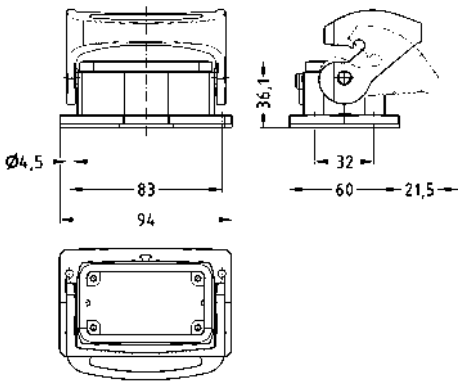
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 310 0735<br>19 43 310 0736<br>19 43 310 0737 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 210 5422 | |

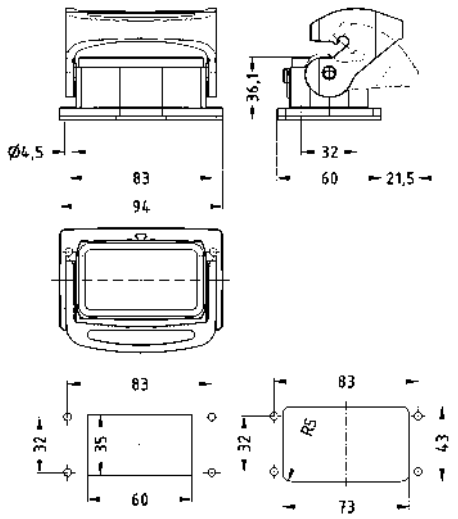
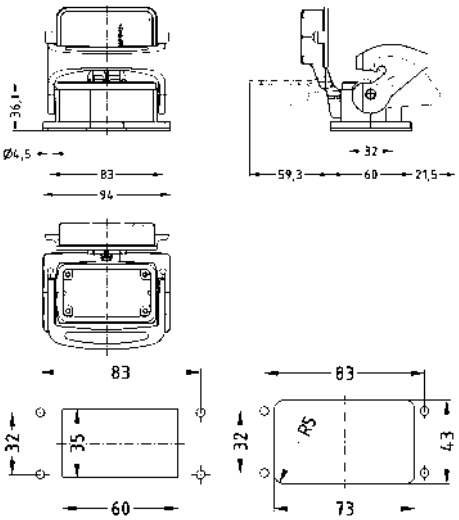
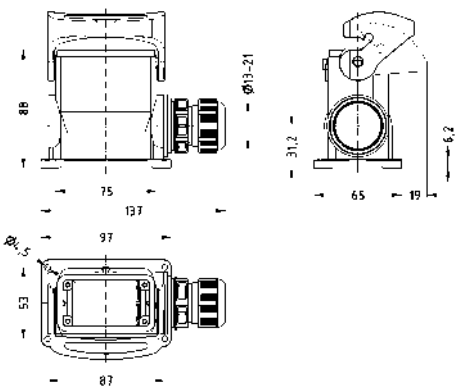
Double locking lever (on the hood)

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32 | 13 ... 21 | 19 43 110 0437 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32 | 13 ... 21 | 19 43 110 0537 |  |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32<br>2x M32 | 13 ... 21<br>13 ... 21 | 19 43 310 0227<br>19 43 310 0267 |  |

Single locking lever

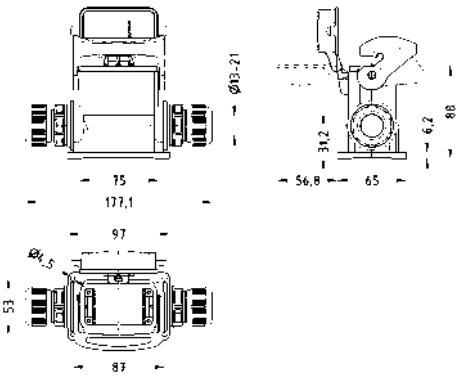
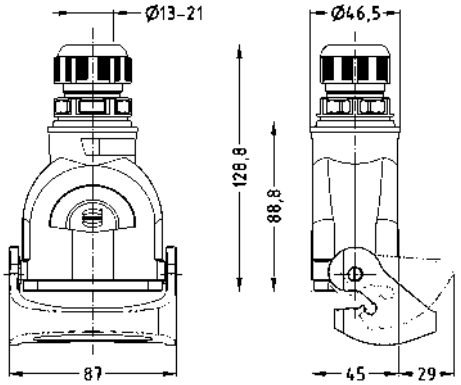


| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20 | 6 ... 13 | 19 43 110 0445 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 110 0545<br>19 43 110 0546<br>19 43 110 0547 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 210 0340 |  |

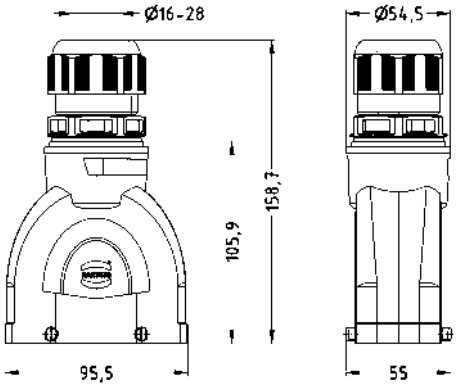
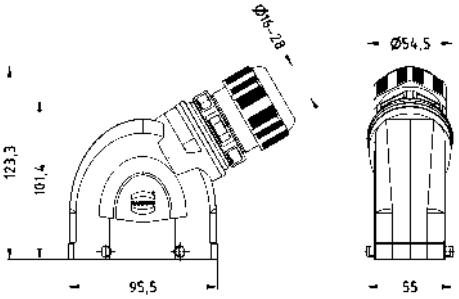
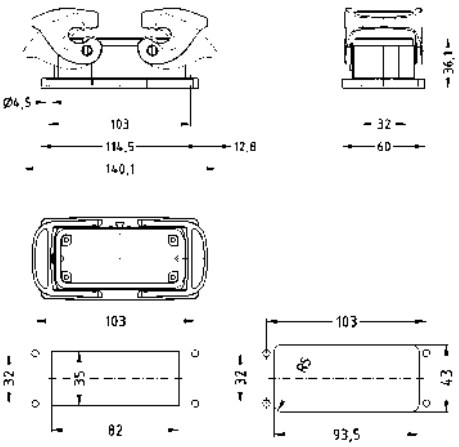
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br>Please order frame 19 43 010 0001 separately. | | | 19 43 210 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 210 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 310 0250<br>19 43 310 0251<br>19 43 310 0252<br>19 43 310 0290<br>19 43 310 0291<br>19 43 310 0292 |  |

# Han-Eco® B for outdoor applications

Size 10 B

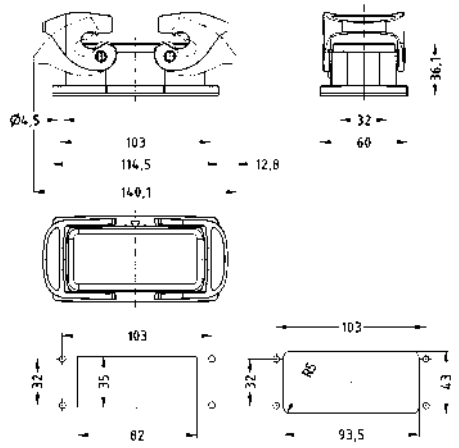
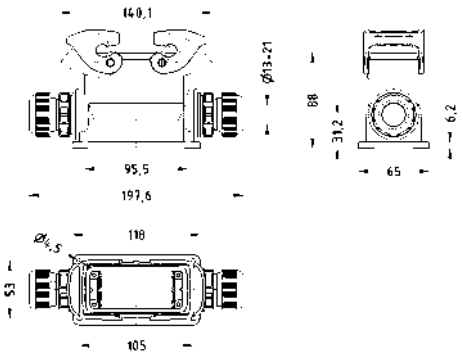
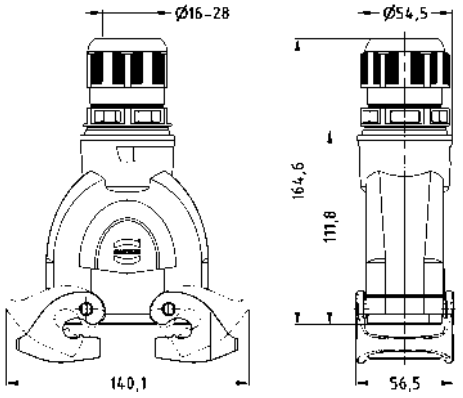
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32<br>2x M20<br>2x M25<br>2x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 310 0255<br>19 43 310 0256<br>19 43 310 0257<br>19 43 310 0295<br>19 43 310 0296<br>19 43 310 0297 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M20<br>1x M25<br>1x M32 | 6 ... 13<br>9 ... 17<br>13 ... 21 | 19 43 310 0755<br>19 43 310 0756<br>19 43 310 0757 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 210 5442 | |

Double locking lever

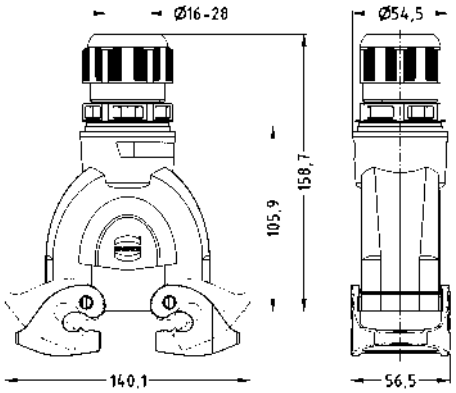
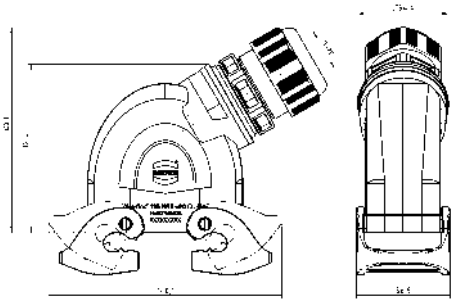
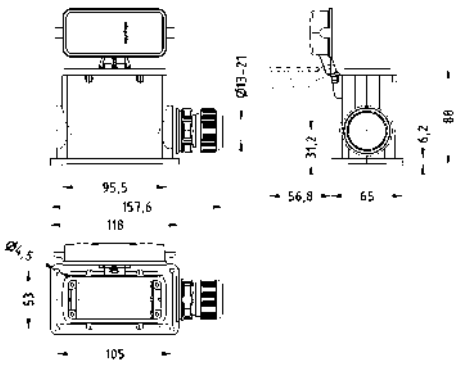
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0426<br>19 43 116 0427<br>19 43 116 0428 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0526<br>19 43 116 0527<br>19 43 116 0528 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 216 0320 | <br>Panel cut out<br>Front mounting / Rear mounting |

# Han-Eco® B for outdoor applications

Size 16 B

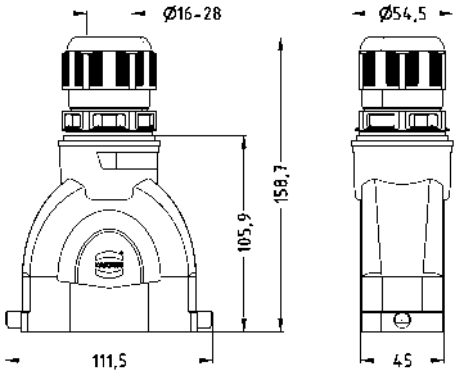
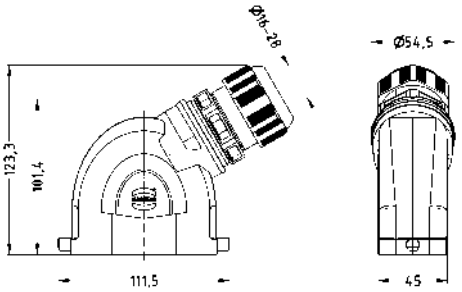
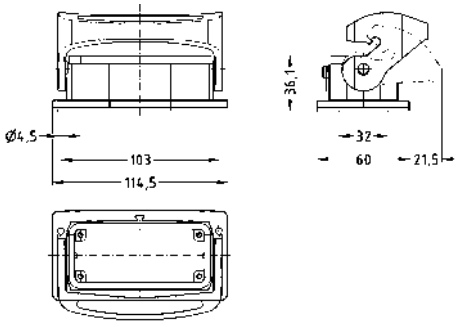
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br>Please order frame 19 43 016 0001 separately. | | | 19 43 216 0310 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66 | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 316 0231<br>19 43 316 0232<br>19 43 316 0233<br>19 43 316 0271<br>19 43 316 0272<br>19 43 316 0273 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66 | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 316 0736<br>19 43 316 0737<br>19 43 316 0738 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 216 5422 | |

Double locking lever (on the hood)

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 116 0438 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 116 0538 |  |
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M40<br>2x M40 | 16 ... 28<br>16 ... 28 | 19 43 316 0228<br>19 43 316 0268 |  |

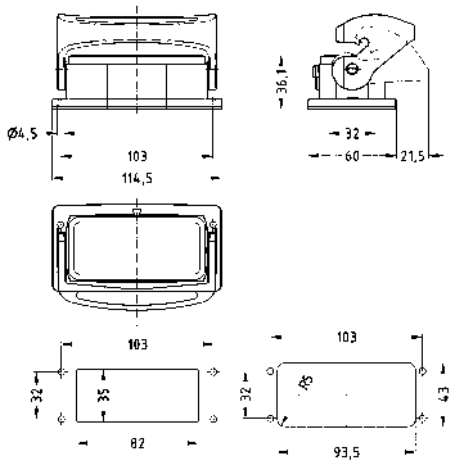
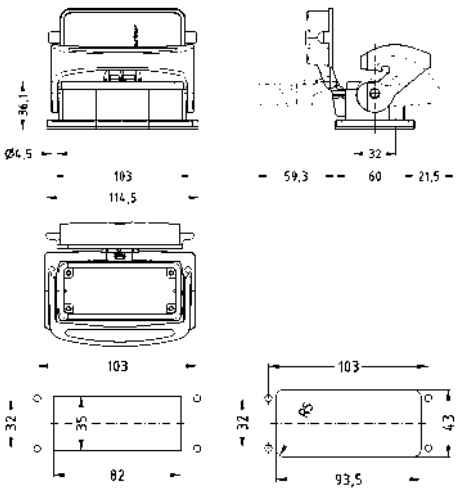
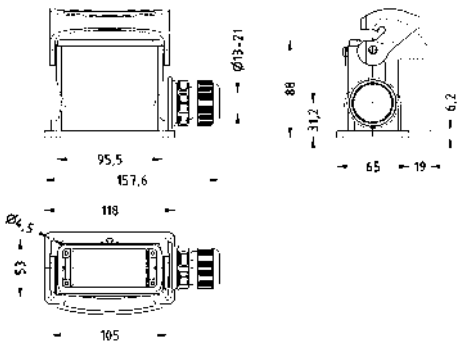
Single locking lever



| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66  | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0446<br>19 43 116 0447<br>19 43 116 0448 |   |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66  | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 116 0546<br>19 43 116 0547<br>19 43 116 0548 |   |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66  | | | 19 43 216 0340 |   |

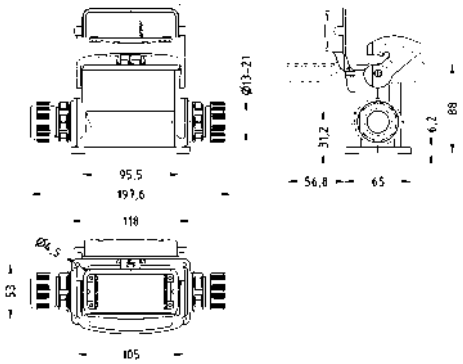
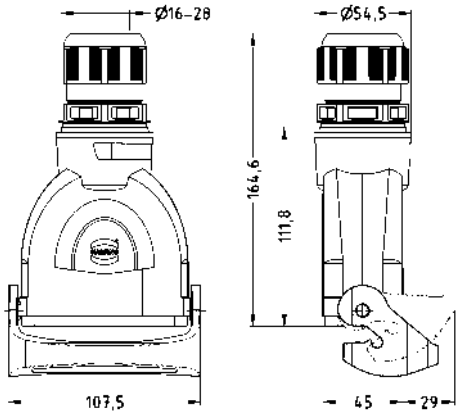
# Han-Eco® B for outdoor applications

Size 16 B

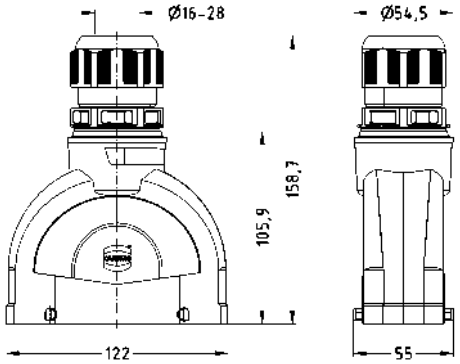
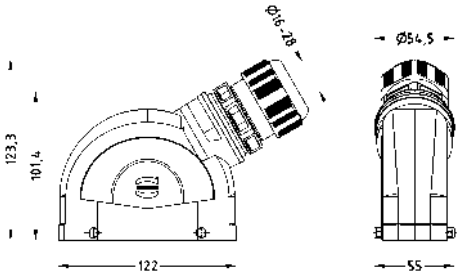
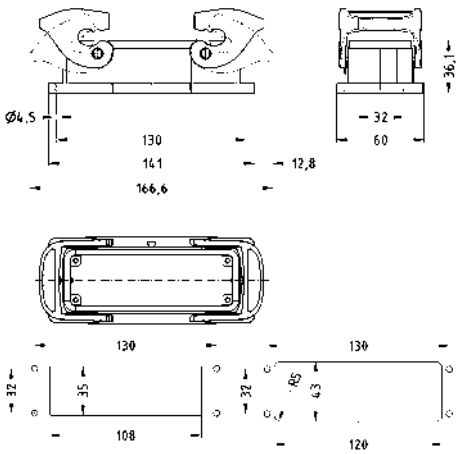
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br><br>Please order frame 19 43 016 0001 separately. | | | 19 43 216 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 216 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 316 0251<br>19 43 316 0252<br>19 43 316 0253<br>19 43 316 0291<br>19 43 316 0292<br>19 43 316 0293 |  |

# Han-Eco® B for outdoor applications

Size 16 B

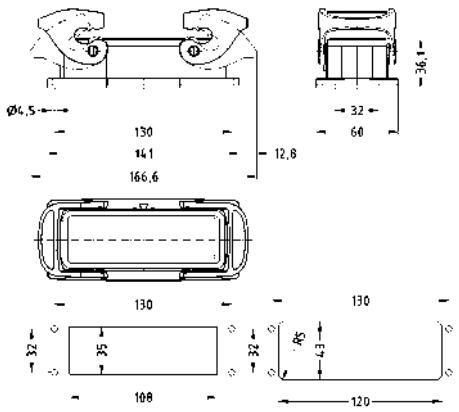
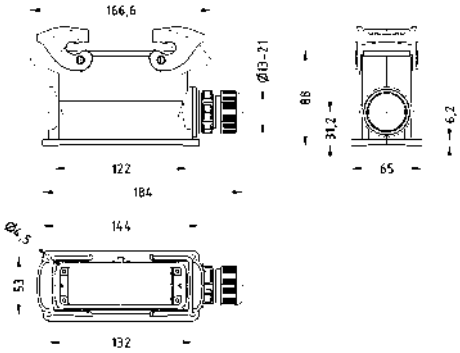
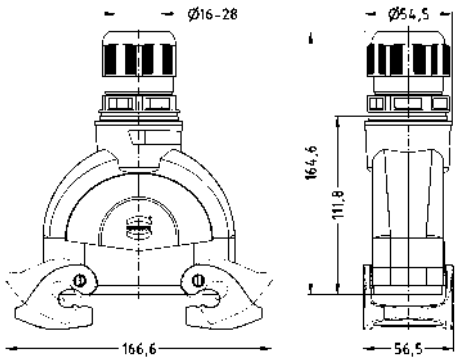
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 316 0256<br>19 43 316 0257<br>19 43 316 0258<br>19 43 316 0296<br>19 43 316 0297<br>19 43 316 0298 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 316 0756<br>19 43 316 0757<br>19 43 316 0758 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 216 5442 | |

Double locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0427<br>19 43 124 0428 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0527<br>19 43 124 0528 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 224 0320 | <br>Panel cut out<br>Front mounting / Rear mounting |

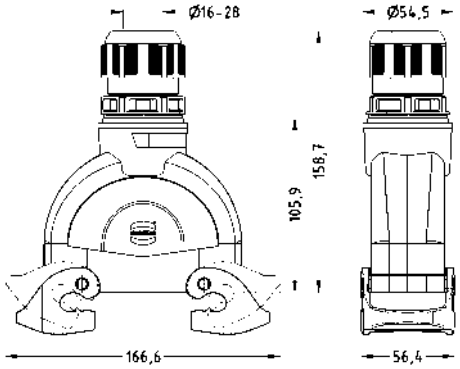
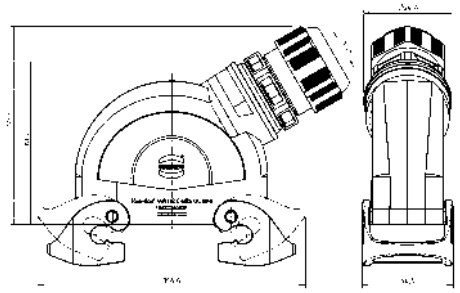
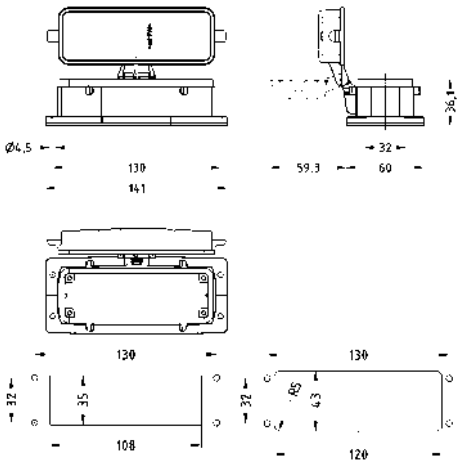
# Han-Eco® B for outdoor applications

Size 24 B

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br>Please order frame 19 43 024 0001 separately. | | | 19 43 224 0310 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66 | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 324 0231<br>19 43 324 0232<br>19 43 324 0233<br>19 43 324 0271<br>19 43 324 0272<br>19 43 324 0273 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66 | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 324 0737<br>19 43 324 0738 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 224 5422 | |

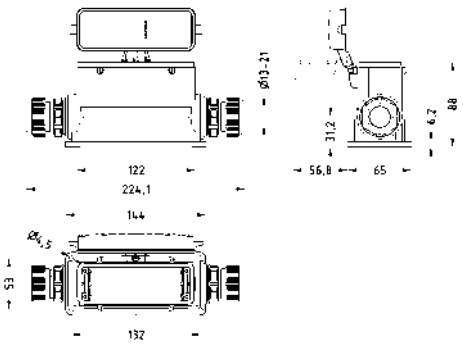
Double locking lever (on the hood)



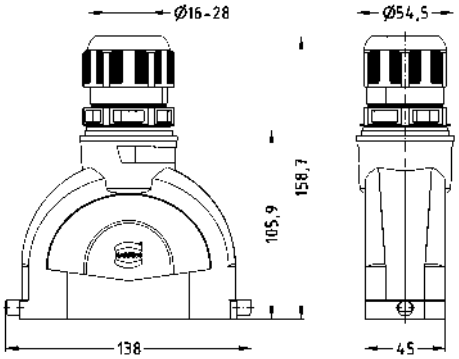
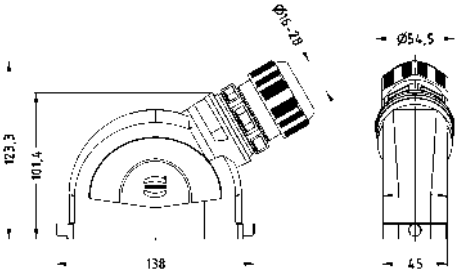
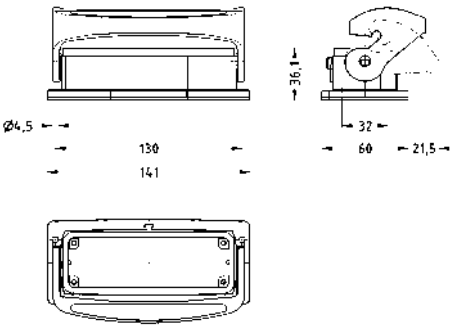
| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 124 0438 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M40 | 16 ... 28 | 19 43 124 0538 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 224 0322 | <br>Panel cut out<br>Front mounting / Rear mounting |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66 | 1x M32<br>1x M40<br>2x M32<br>2x M40 | 13 ... 21<br>16 ... 28<br>13 ... 21<br>16 ... 28 | 19 43 324 0227<br>19 43 324 0228<br>19 43 324 0267<br>19 43 324 0268 | |



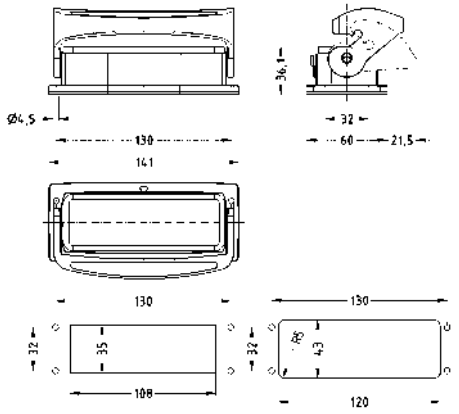
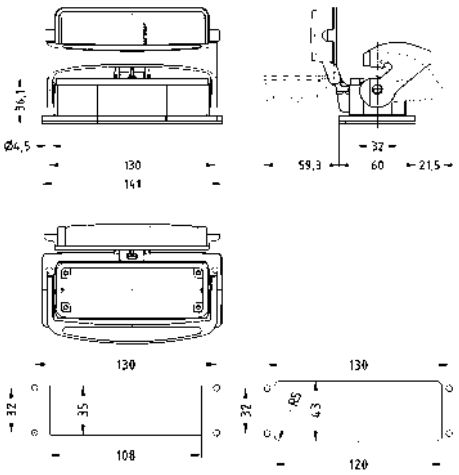
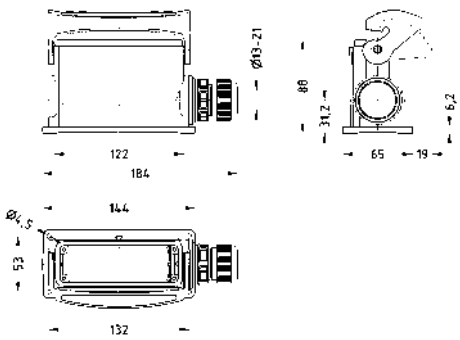


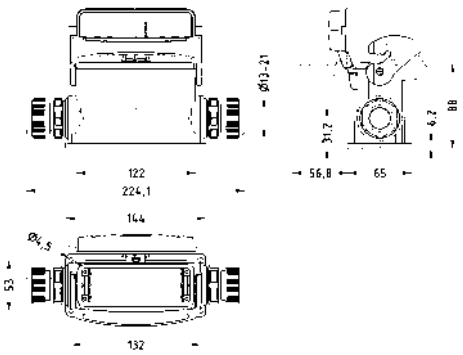
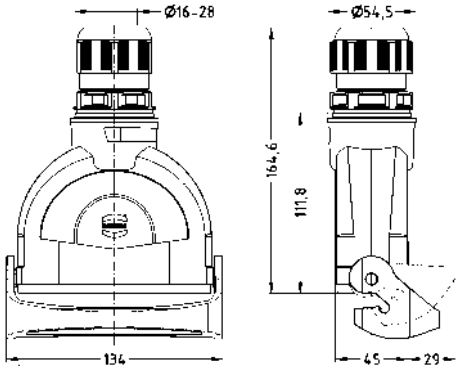
Single locking lever

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0447<br>19 43 124 0448 |  |
| Han-Eco® B,<br>Hood,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 124 0547<br>19 43 124 0548 |  |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>IP66<br> | | | 19 43 224 0340 |  |

# Han-Eco® B for outdoor applications

Size 24 B

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Bulkhead mounted housing,<br>Without frame,<br>IP66<br>Please order frame 19 43 024 0001 separately. | | | 19 43 224 0330 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP66<br> | | | 19 43 224 0341 | <br>Panel cut out<br>Front mounting / Rear mounting |
| Han-Eco® B,<br>Surface mounted housing,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 324 0251<br>19 43 324 0252<br>19 43 324 0253<br>19 43 324 0291<br>19 43 324 0292<br>19 43 324 0293 |  |

| Identification | Cable entry | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>With integrated cable gland,<br>Side entry,<br>IP66<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32<br>2x M40 | 9 ... 17<br>13 ... 21<br>16 ... 28<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 43 324 0256<br>19 43 324 0257<br>19 43 324 0258<br>19 43 324 0296<br>19 43 324 0297<br>19 43 324 0298 |  |
| Han-Eco® B,<br>Cable to cable housing,<br>With integrated cable gland,<br>Top entry,<br>IP66<br> | 1x M32<br>1x M40 | 13 ... 21<br>16 ... 28 | 19 43 324 0757<br>19 43 324 0758 |  |
| Han-Eco® B,<br>Protection cover,<br>for hoods,<br>IP66 | | | 19 43 224 5442 | |

Number of contacts

# 1



## Technical characteristics

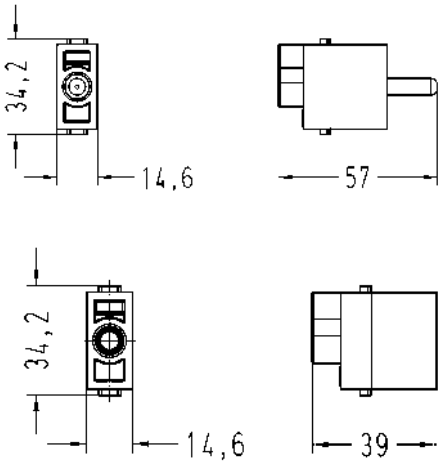
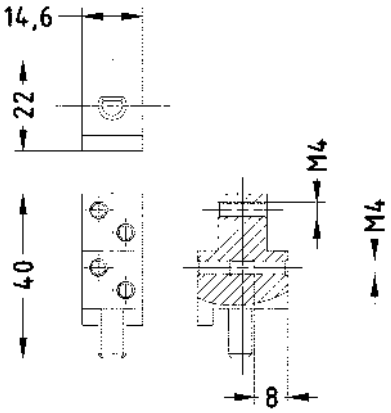
| | |
|---|---|
| Number of contacts | 1 |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material (contacts) | Copper alloy |
| Material (accessories) | Copper alloy |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption |

## Specifications and approvals

UL 1977 ECBT2.E235076
IEC 61984

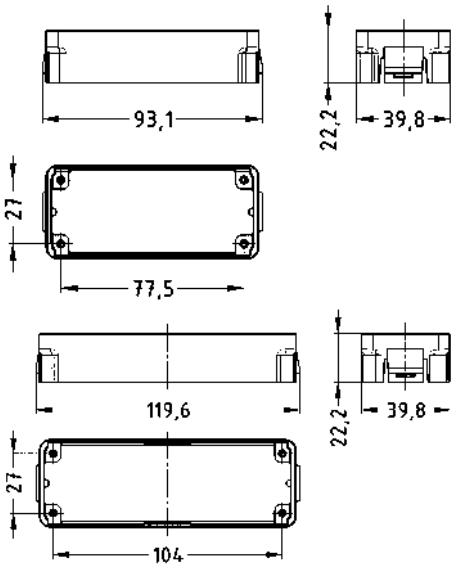
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular,<br>Contact module,<br>Screw termination<br><br>With 09 99 000 0830 HARTING Crimping tool also cable up to 25 mm² with ferrule adaptable<br>Not for Han-Modular® hinged frames! | 1.5 ... 16 | 19 41 001 2600 | 19 41 001 2700 |  |
| Han-Eco® Modular,<br>PE Multiple ground connection,<br>Up to 8 contacts<br> | 0.5 ... 6 with cable shoe M4 (total max. 25 mm²) | 19 41 000 9999 | 19 41 000 9999 |  |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Polyamide (PA), Fibre-glass reinforced |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | RAL 9005 (jet black) |
| RoHS | compliant with exemption, compliant |

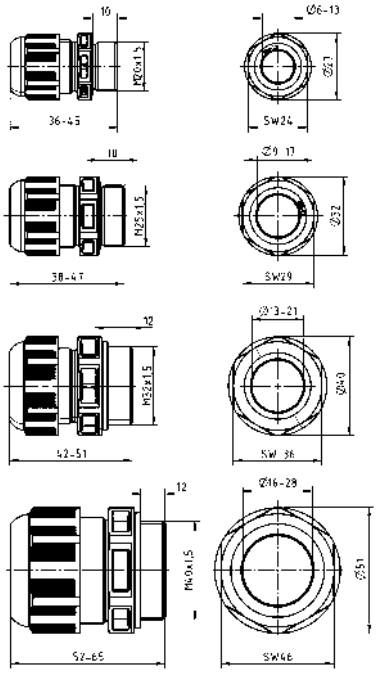
| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Eco® B,<br>Frame,<br>for bulkhead mounted housings | 06 B<br>10 B<br>16 B<br>24 B | 19 43 006 0001<br>19 43 010 0001<br>19 43 016 0001<br>19 43 024 0001 |  |

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Material (cable glands) | Polyamide (PA) |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | RAL 9005 (jet black) |
| RoHS | compliant |

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco®, Cable gland  | M20<br>M25<br>M32<br>M40 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>16 ... 28 | 19 41 000 5111<br>19 41 000 5121<br>19 41 000 5131<br>19 41 000 5141 | Tightening torque<br>Fitting / Cap nut<br>M20: 4 Nm / 3 Nm<br>M25: 10 Nm / 4 Nm<br>M32: 15 Nm / 4 Nm<br>M40: 20 Nm / 20 Nm<br> |
| Han-Eco®, Reduction seal insert  | M32<br>M40 | 9 ... 14<br>12 ... 20 | 19 41 000 5132<br>19 41 000 5142 | |

## Technical characteristics

| | |
|---|---|
| Material (seal) | NBR |

## Technical characteristics

| | |
|---|---|
| Colour (seal) | Black |
| RoHS | compliant |

| Identification | | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han-Eco® Modular, Flange gasket |  | 06 B<br>10 B<br>16 B<br>24 B | 19 41 000 9801<br>19 41 000 9802<br>19 41 000 9803<br>19 41 000 9804 | |
| Han-Eco® A, Flange gasket |  | 10 A<br>16 A | 19 46 000 9992<br>19 46 000 9993 | |
| Han-Eco® B, Flange gasket |  | 06 B<br>10 B<br>16 B<br>24 B | 19 43 000 9801<br>19 43 000 9802<br>19 43 000 9803<br>19 43 000 9804 | |
| Han-Eco® Modular, Profile gasket |  | 06 B<br>10 B<br>16 B<br>24 B | 19 41 000 9901<br>19 41 000 9902<br>19 41 000 9903<br>19 41 000 9904 | |
| Han-Eco® A, Profile gasket |  | 10 A<br>16 A | 19 46 000 9996<br>19 46 000 9997 | |

## Technical characteristics

| | |
|---|---|
| Material (seal) | FPM |

## Technical characteristics

| | |
|---|---|
| Colour (seal) | RAL 7001 (silver-grey) |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Eco® Modular, Flange gasket,  | 06 B<br>10 B<br>16 B<br>24 B | 19 41 000 9851<br>19 41 000 9852<br>19 41 000 9853<br>19 41 000 9854 | |
| Han-Eco® Modular, Profile gasket,  | 06 B<br>10 B<br>16 B<br>24 B | 19 41 000 9951<br>19 41 000 9952<br>19 41 000 9953<br>19 41 000 9954 | |

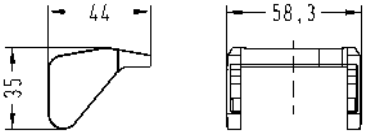
Double locking lever

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Polyamide (PA) |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | Black |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Eco® Modular, Locking levers  | 6/10/16/24 B | 19 41 000 5201 |   |
| Han-Eco® B, Locking levers  | 10/16/24 B | 19 43 000 5221 | |

Single locking lever

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Polyamide (PA) |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | Black |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Eco® A, Locking levers  | 10 A<br>16 A | 19 46 000 5201<br>19 46 000 5202 | |
| Han-Eco® B, Locking levers  | 06 B<br>10 B<br>16 B<br>24 B | 19 43 000 5222<br>19 43 000 5228<br>19 43 000 5229<br>19 43 000 5230 | |

# Han® Hoods and Housings



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| Han® Easy Hood hoods/housings | **Han 31.90** |
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# Types of hood/housing



## Han® 3 A Standard Hoods/Housings
### Metal hoods/housings for industrial applications

| | |
|---|---|
| Material | zinc die-cast |
| Colour | RAL 7037 (grey) |
| Surface | powder-coated |
| Locking element | steel, zinc-plated |
| Lever type | lever, metal |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 12 |
| Flammability acc. to UL 94 | V 0 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP44<br>IP65 / IP67 is achieved with seal screw 09 20 000 9918 |

## Han-Drive® Housings for motor applications

| | |
|---|---|
| Material | aluminium die-cast |
| Colour | non coloured / RAL 7037 (grey) |
| Surface | electrical conductive / powder-coated / unpainted |
| Locking element | stainless steel |
| Lever type | Han-Easy Lock® |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65 |

## Han® 3 A Hoods/Housings
### Plastic hoods/housings for industrial applications

| | |
|---|---|
| Material | polycarbonate |
| Colour | RAL 7032 (light grey) / RAL 9005 (black) |
| Locking element | polyamide |
| Lever type | lever, plastic |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Flammability acc. to UL 94 | V 0 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP44<br>IP65 / IP67 is achieved with seal screw 09 20 000 9918 |

## Han® 3 M Hoods/Housings
### Hoods/Housings for higher environmental requirements

| | |
|---|---|
| Material | zinc die-cast |
| Colour | RAL 9005 (black) |
| Surface | |
| - Top coat | epoxy powder paint |
| Locking element | stainless steel |
| Lever type | lever, metal |
| Hoods/Housings seal | FPM |
| Limiting temperatures | -40 °C ... +125 °C |
| Corrosion resistance | ASTM B117-09 (500 h) |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65, IP67 |

## Han® Standard Hoods/Housings
### Metal hoods/housings for industrial applications

| | |
|---|---|
| Material | aluminium die-cast |
| Colour | RAL 7037 (grey) |
| Surface | powder-coated |
| Locking element | stainless steel |
| Lever type | Han-Easy Lock® |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65, IP66, IP67 |

## Han® M Hoods/Housings
### Hoods/Housings for higher environmental requirements

| | |
|---|---|
| Material | aluminium die-cast |
| Colour | RAL 9005 (black) |
| Surface | |
| - Top coat | epoxy powder paint |
| Locking element | stainless steel |
| Lever type | lever, metal |
| Hoods/Housings seal | FPM |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Corrosion resistance | ASTM B117-09 (500 h) |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65, IP66, IP67 |

# Types of hood/housing



## Han® 3 EMC Hoods/Housings
### Hoods/Housings for higher EMC requirements

| | |
|---|---|
| Material | zinc die-cast |
| Colour | non coloured |
| Surface | electrical conductive |
| Locking element | steel, zinc-plated |
| Lever type | lever, metal |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 12 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP44<br>IP65 / IP67 is achieved with seal screw 09 20 000 9918 |

## Han-INOX® Hoods/Housings
### for higher corrosion requirements

| | |
|---|---|
| Material | stainless steel |
| Colour | non coloured |
| Surface | electrical conductive |
| Locking element | stainless steel |
| Lever type | lever, metal |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65 |
| - Size Han® 3 A | IP65, IP67 |

## Han® EMC Hoods/Housings
### Hoods/Housings for higher EMC requirements

| | |
|---|---|
| Material | aluminium die-cast |
| Colour | non coloured |
| Surface | electrical conductive |
| Locking element | |
| - Screw locking | M5 |
| - Material | stainless steel |
| - Tightening torque | 3 Nm |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65 |

## Han® 3 HPR Hoods/Housings
### Hoods/Housings for harsh environmental requirements

| | |
|---|---|
| Material | zinc die-cast |
| Colour | RAL 9005 (black) |
| Surface | |
| - Top coat | epoxy powder paint / chromated |
| Locking element | |
| - Screw locking | M4 |
| - Material | stainless steel |
| - Tightening torque | 2 Nm |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Corrosion resistance | ASTM B117-09 (500 h) |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65 / IP68 / IP69K |

Attention
If inserts of the series Han® Q and Han A® are used, the seal on the insert must be removed. The sealed screw of the insulation body must be replaced by the sealed screw of the hood.

For angled bulkhead or surface mounted housings with through holes in the mounting flange the user must make sure, that the fixing screws seal to the inner part of the housing.

## Han® EMC/B Hoods/Housings
### Hoods/Housings for higher EMC requirements

| | |
|---|---|
| Material | |
| - Hoods/Housings | aluminium die-cast |
| - shielded frames | zinc die-cast alloy |
| Colour | non coloured |
| Surface | |
| - Hoods/Housings | electrical conductive |
| - shielded frames | electrical conductive |
| Locking element | stainless steel |
| Lever type | Han-Easy Lock® |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65, IP66 |

## Han® HPR Hoods/Housings
### Hoods/Housings for harsh environmental requirements

| | |
|---|---|
| Material | aluminium die-cast, corrosion resistant |
| Colour | RAL 9005 (black) |
| Surface | |
| - Top coat | epoxy powder paint |
| Locking element | |
| - Screw locking | M6 |
| - Material | stainless steel |
| - Tightening torque | 4 Nm |
| - Toggle locking | |
| - Material | stainless steel |
| Hoods/Housings seal | NBR |
| Limiting temperatures | -40 °C ... +125 °C |
| Approval acc. to UL 50 | NEMA Type 4/4X/12 |
| Corrosion resistance | ASTM B117-09 (500 h) |
| Degree of protection acc. to DIN EN 60 529 for coupled connector | IP65 / IP66 / IP68 / IP69K |

# Hoods/Housings, metal Han® 3 A



## Features

- Standard Hoods/housings for industrial applications
- Slim, space saving construction type

## Technical characteristics

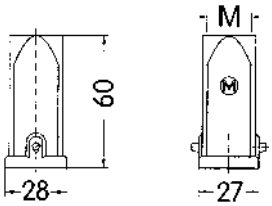
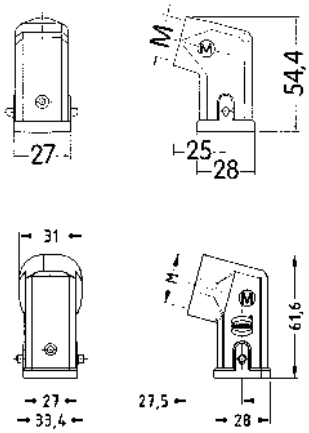
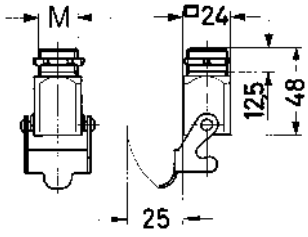
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Steel |
| Surface (locking) | Zinc plated |
| RoHS | compliant with exemption, compliant |

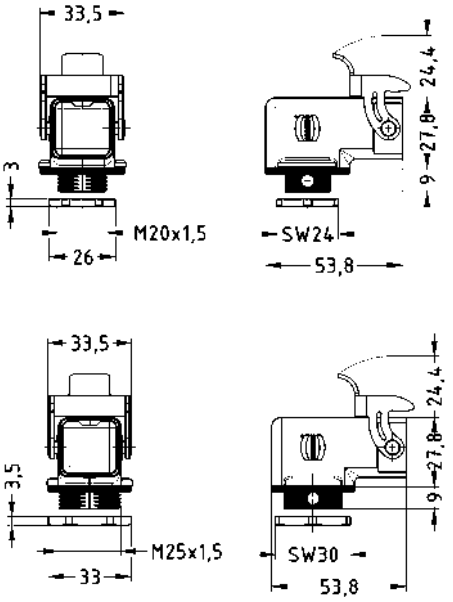
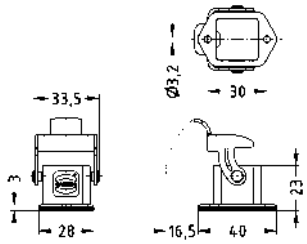
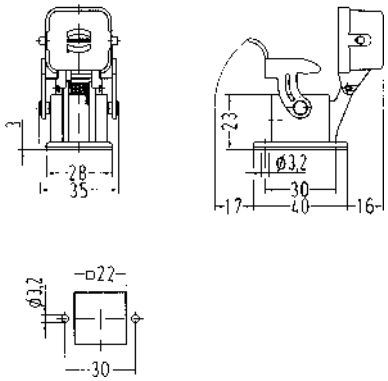
## Specifications and approvals

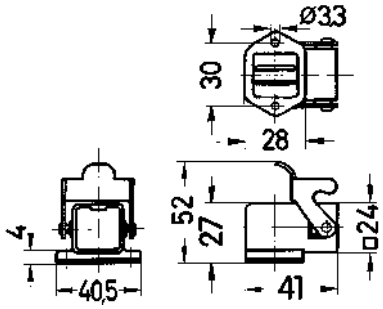
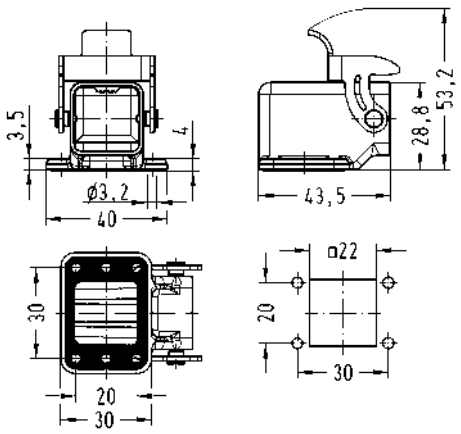
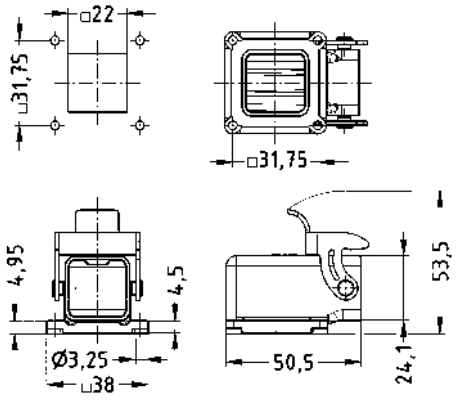
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

Standard Hoods/housings for industrial applications
Single locking lever

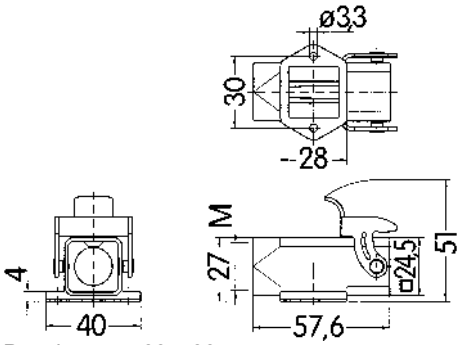
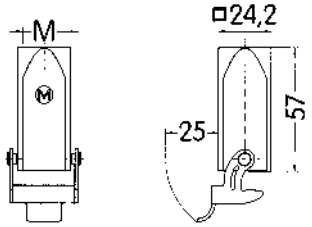
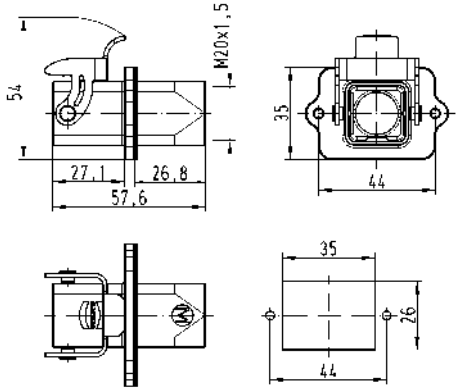
| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x Integrated<br>1x Integrated | 6 ... 12<br>11 ... 17 | 19 20 003 1421<br>19 20 003 1422 | |
| Han A®,<br>Hood,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20<br>1x M25 | | 19 20 003 1440<br>19 20 003 1445 |  |
| Han A®,<br>Hood,<br>Side entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20<br>1x M25 | | 19 20 003 1640<br>19 20 003 1645 |  |
| Han A®,<br>Screw mounted housing,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 1150 |  |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Screw mounted housing,<br>Angled,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20<br>1x M25 | | 19 20 003 1160<br>19 20 003 1165 |  |
| Han A®,<br>Bulkhead mounted housing,<br>Straight,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | | 09 20 003 0301 | <br>Panel cut out 22 x 22 mm |
| Han A®,<br>Bulkhead mounted housing,<br>Straight,<br>With metal cover,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for male inserts | | | 09 20 003 0305 | <br>Panel cut out 22 x 22 mm |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Bulkhead mounted housing,<br>Straight,<br>With metal cover,<br>With seal,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for female inserts | | | 09 20 003 0306 | |
| Han A®,<br>Bulkhead mounted housing,<br>Angled,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | | 09 20 003 0801 | <br>Panel cut out 22 x 22 mm |
| Han A®,<br>Bulkhead mounted housing,<br>Angled,<br>4 fixing screws,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | | 09 20 003 0810 |  |
| Han A®,<br>Bulkhead mounted housing,<br>Angled,<br>4 fixing screws,<br>Square mounting flange,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | | 09 20 003 0811 |  |

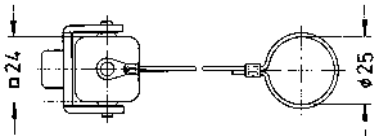
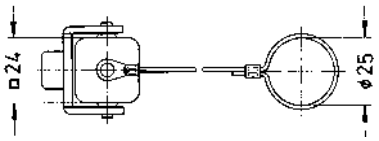
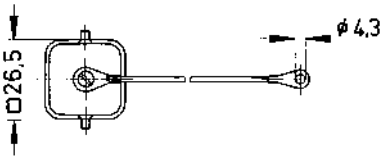
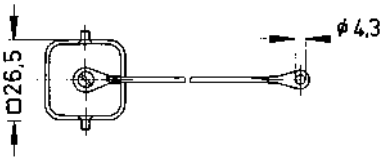
# Hoods/Housings, metal Han® 3 A

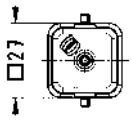
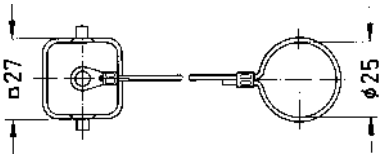
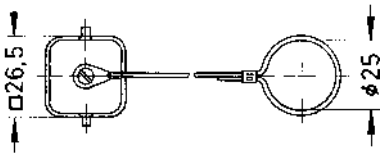
Size 3 A

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Surface mounted housing,<br>Open bottom,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 1250 | <br>Panel cut out 22 x 22 mm |
| Han A®,<br>Surface mounted housing,<br>Bottom closed,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 1252 | |
| Han A®,<br>Cable to cable housing,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20<br>1x M25 | | 19 20 003 1750<br>19 20 003 1755 |  |
| Han A®,<br>Panel feed through housing,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 1120 | <br>Panel cut out |

# Hoods/Housings, metal Han® 3 A

Size 3 A

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>With seal,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert | | | 09 20 003 5421 |  |
| Han A®,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5422 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>With seal,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert or for mounted Han-Brid® insert | | | 09 20 003 5425 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5426 |  |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With seal,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert or for mounted Han-Brid® insert | | | 09 20 003 5432 |  |
| Han A®,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>With seal,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert or for mounted Han-Brid® insert | | | 09 20 003 5427 |  |
| Han A®,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | | 09 20 003 5428 |  |

# Hoods/Housings, thermoplastic Han® 3 A



## Features

- Hoods/housings for industrial applications
- Slim, space saving construction type

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 9005 (jet black), RAL 7032 (pebble grey), Black |
| Material (seal) | NBR |
| Material (locking) | Polyamide (PA) |
| Colour (locking) | RAL 7032 (pebble grey), RAL 9005 (jet black) |
| Material flammability class acc. to UL 94 | V-0 |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant, compliant with exemption |

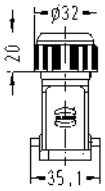
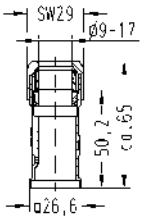
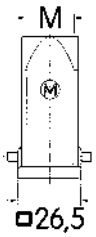
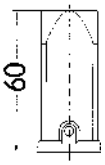
## Specifications and approvals

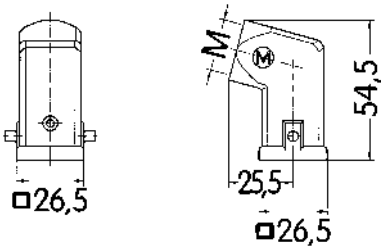
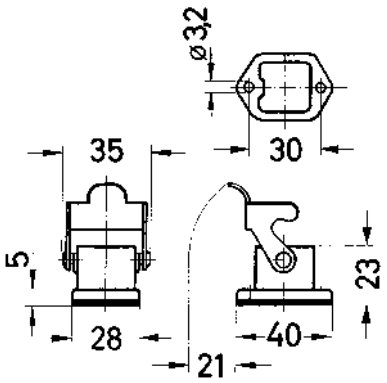
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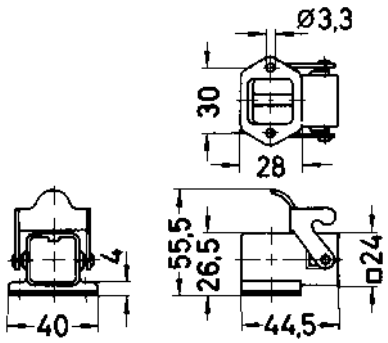
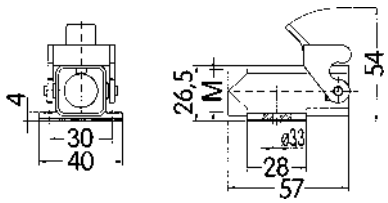
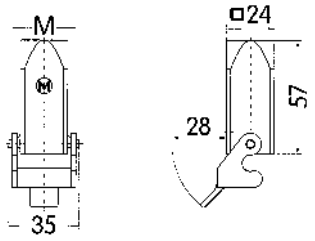
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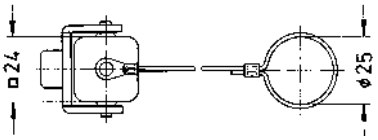
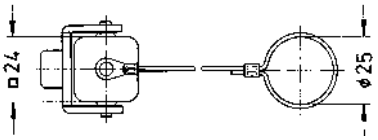
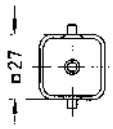
Standard Hoods/housings for industrial applications
Single locking lever



| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x Integrated | 9 ... 17 | 19 20 003 0417 | |
| Han A®,<br>Hood,<br>With integrated cable gland,<br>Top entry,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x Integrated<br>1x Integrated | 7 ... 12<br>9 ... 17 | 19 20 003 0415<br>19 20 003 0410 |   |
| Han A®,<br>Hood,<br>Top entry,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20<br>1x M25 | | 19 20 003 0420<br>19 20 003 0430 |   |
| Han A®,<br>Hood,<br>Top entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20<br>1x M25 | | 19 20 003 0427<br>19 20 003 0437 | |

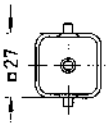
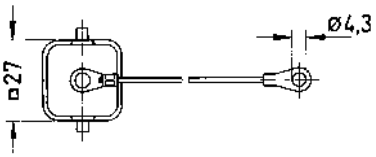
| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>Side entry,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 0620 |  |
| Han A®,<br>Hood,<br>Side entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | 1x M20 | | 19 20 003 0627 | |
| Han A®,<br>Screw mounted housing,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 0102 | |
| Han A®,<br>Bulkhead mounted housing,<br>Straight,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | | 09 20 003 0320 | <br>Panel cut out 22 x 22 mm |
| Han A®,<br>Bulkhead mounted housing,<br>Straight,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | | | 09 20 003 0327 | |

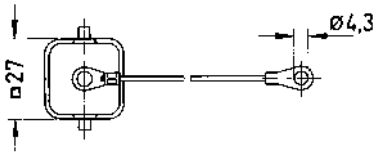
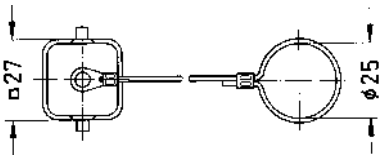
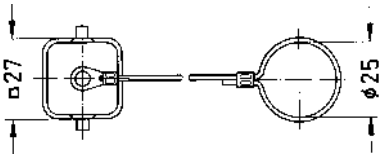
| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Bulkhead mounted housing,<br>Angled,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | | 09 20 003 0820 | <br>Panel cut out 22 x 22 mm |
| Han A®,<br>Bulkhead mounted housing,<br>Angled,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | | | 09 20 003 0827 | |
| Han A®,<br>Surface mounted housing,<br>Top entry,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 0220 | <br>Panel cut out 22 x 22 mm |
| Han A®,<br>Surface mounted housing,<br>Top entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | 1x M20 | | 19 20 003 0227 | |
| Han A®,<br>Cable to cable housing,<br>Top entry,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | | 19 20 003 0720 |  |
| Han A®,<br>Cable to cable housing,<br>Top entry,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | 1x M20 | | 19 20 003 0727 | |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for hoods,<br>Thermoplastic,<br>With fixing cord,<br>With seal,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert or for mounted Han-Brid® insert | | | 09 20 003 5441 |  |
| Han A®,<br>Protection cover,<br>for hoods,<br>Thermoplastic,<br>With fixing cord,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5442 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5407 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With seal,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert or for mounted Han-Brid® insert | | | 09 20 003 5408 | |

# Hoods/Housings, thermoplastic Han® 3 A

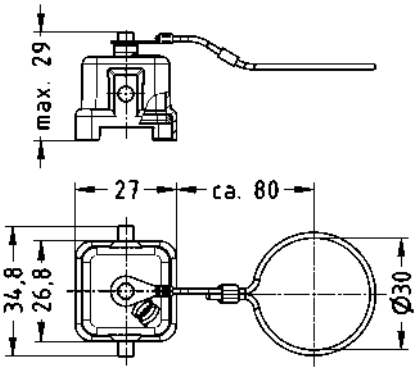
Size 3 A

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With seal,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert or for mounted Han-Brid® insert | | | 09 20 003 5409 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With seal,<br>With fixing cord,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert | | | 09 20 003 5445 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With fixing cord,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5446 | |

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With seal,<br>With fixing cord,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert | | | 09 20 003 5449 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With fixing cord,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5450 | |
| Han A®,<br>Protection cover,<br>for cable to cable housing,<br>Thermoplastic,<br>With seal,<br>With fixing cord,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted female insert | | | 09 20 003 5447 |  |
| Han A®,<br>Protection cover,<br>for cable to cable housing,<br>Thermoplastic,<br>With fixing cord,<br>Grey,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5448 |  |

# Hoods/Housings, thermoplastic Han® 3 A

Size 3 A

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for cable to cable housing,<br>Thermoplastic,<br>With fixing cord,<br>Black,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for mounted male insert | | | 09 20 003 5455 |  |

# Standard hoods/housings Han® 10 ... 32 A



## Features

- Standard Hoods/housings for industrial applications
- Slim, space saving construction type

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel |
| Colour (locking) | RAL 7037 (dust grey) |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant, compliant with exemption |

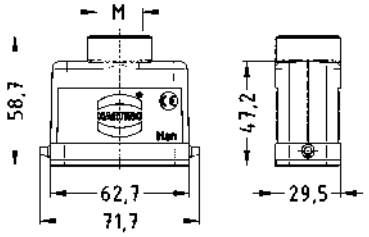
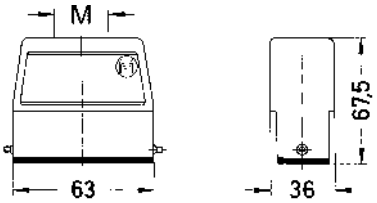
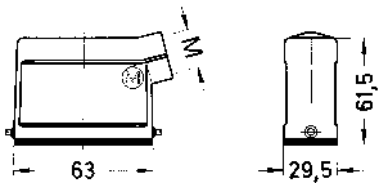
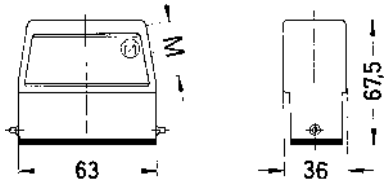
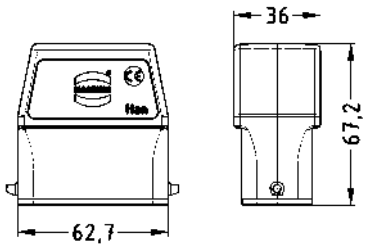
## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

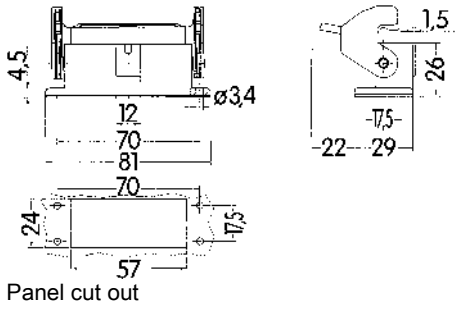
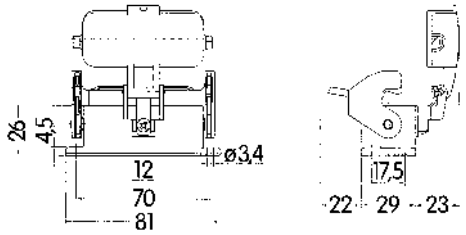
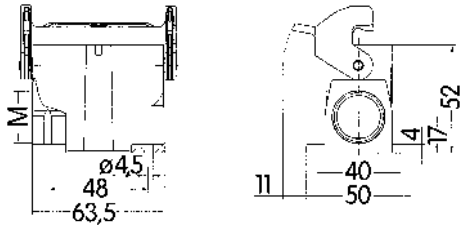
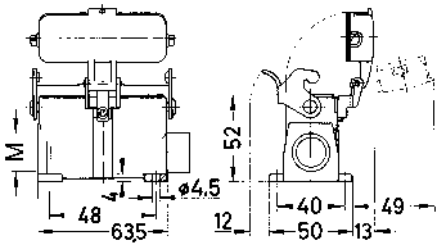
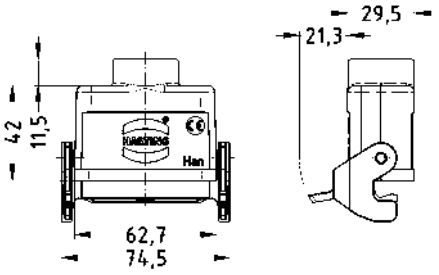
Standard Hoods/housings for industrial applications
Single locking lever



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®, Hood, Top entry, IP65  | 1x M20<br>1x M25 | 19 20 010 1440 | 19 20 010 0446 |     |
| Han A®, Hood, Side entry, IP65  | 1x M20<br>1x M25 | 19 20 010 1540 | 19 20 010 0546 |     |
| Han A®, Hood, Without cable entry, IP65  | | | 09 20 010 0801 |   |

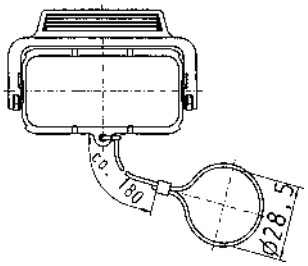
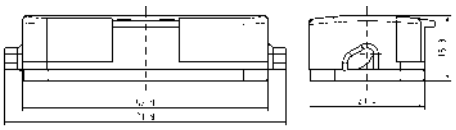
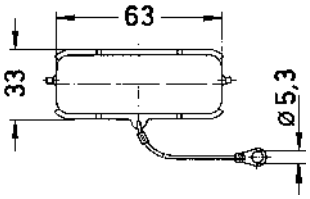
# Standard hoods/housings Han® 10 A

Size 10 A

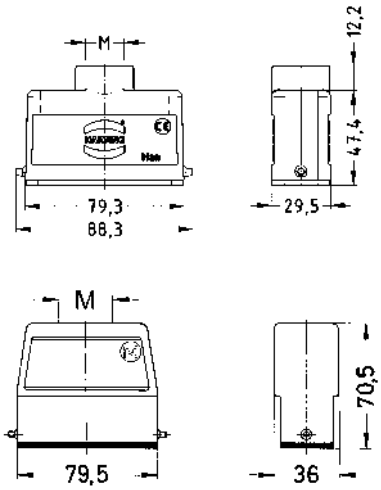
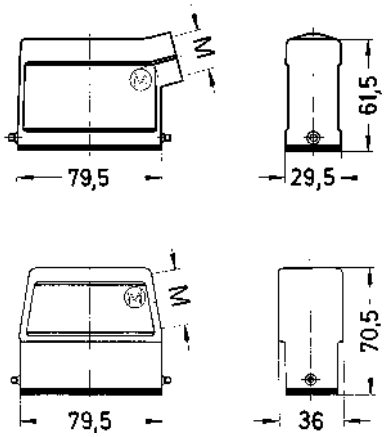
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 20 010 0301 | | <br>Panel cut out |
| Han A®,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 20 010 0321 | |  |
| Han A®,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>2x M20 | 19 20 010 0251<br>19 20 010 0290 | |  |
| Han A®,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M20 | | 19 20 010 0295 |  |
| Han A®,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20 | 19 20 010 1730 | |  |

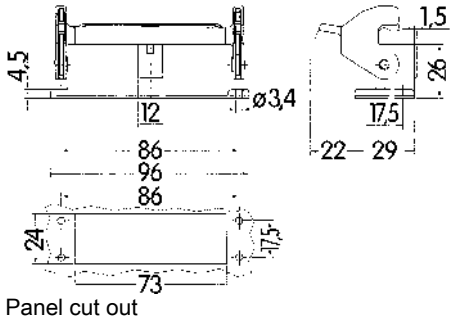
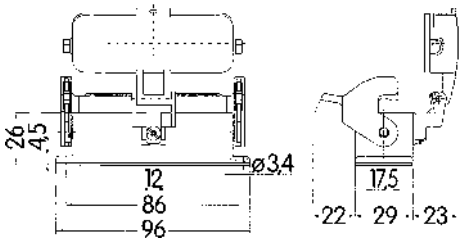
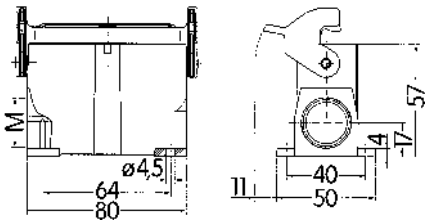
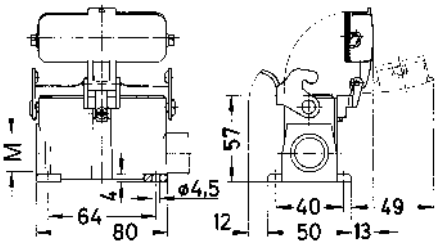
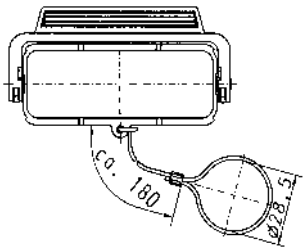
# Standard hoods/housings Han® 10 A

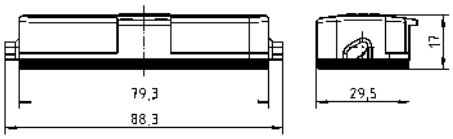
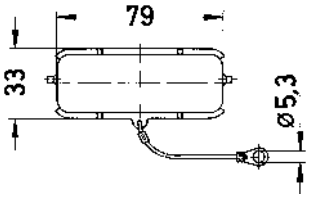
Size 10 A

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 20 010 5423 | 09 20 010 5423 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Thermoplastic,<br>IP65<br> | | 09 20 010 5402 | 09 20 010 5402 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 20 010 5425 | 09 20 010 5425 |  |

Standard Hoods/housings for industrial applications
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®, Hood, Top entry, IP65  | 1x M20<br>1x M25 | 19 20 016 1440 | 19 20 016 0446 |   |
| Han A®, Hood, Side entry, IP65  | 1x M20<br>1x M25 | 19 20 016 1540 | 19 20 016 0546 |   |
| Han A®, Hood, Without cable entry, IP65  | | | 09 20 016 0801 | |

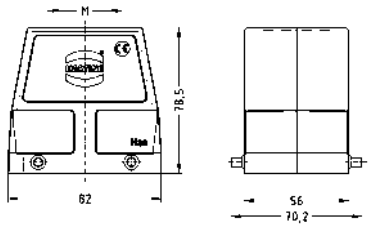
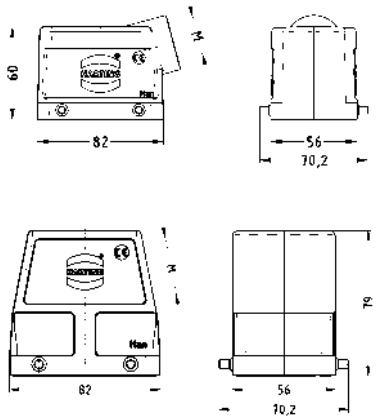
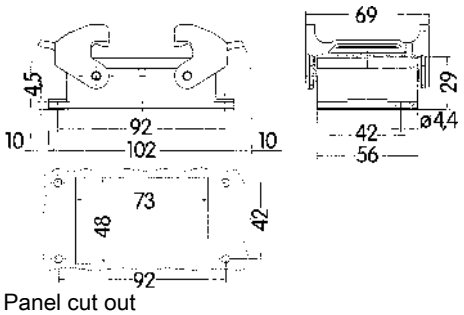
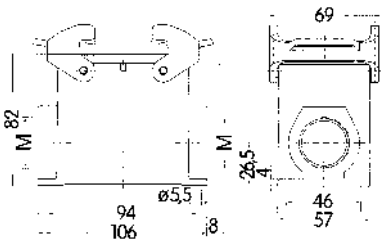
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 20 016 0301 | | <br>Panel cut out |
| Han A®,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 20 016 0321 | |  |
| Han A®,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>2x M20<br>2x M25 | 19 20 016 0251<br>19 20 016 0290<br>19 20 016 0291 | |  |
| Han A®,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M20 | 19 20 016 0295 | |  |
| Han A®,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP65<br> | | 09 20 016 5423 | 09 20 016 5423 |  |

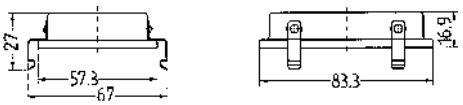
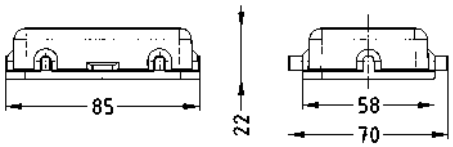
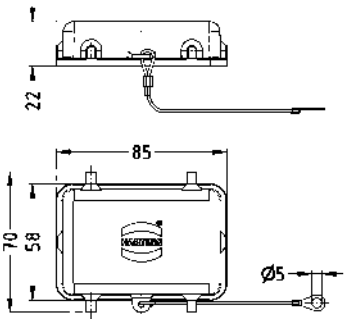
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Thermoplastic,<br>IP65<br> | | 09 20 016 5403 | 09 20 016 5403 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 20 016 5425 | 09 20 016 5425 |  |

# Standard hoods/housings Han® 32 A

Size 32 A

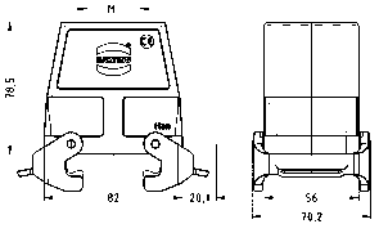
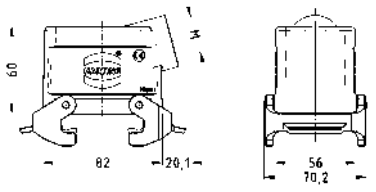
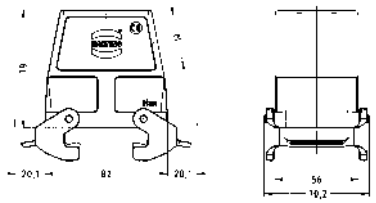
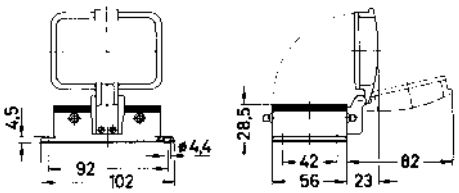
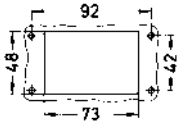
Standard Hoods/housings for industrial applications
Double locking lever

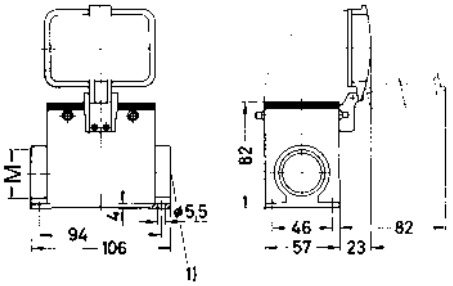
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M25<br>1x M32 | | 19 20 032 0426<br>19 20 032 0427 |  |
| Han A®,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M25<br>1x M32 | 19 20 032 1521 | 19 20 032 0527 |  |
| Han A®,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 20 032 0301 | | <br>Panel cut out |
| Han A®,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32<br>2x M32 | | 19 20 032 0231<br>19 20 032 0232<br>19 20 032 0272 |  |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Protection cover,<br>for hoods,<br>Metal,<br>IP65<br> | | 09 20 032 5401 | 09 20 032 5401 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>IP65<br> | | 09 20 032 5405 | 09 20 032 5405 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>IP65<br> | | 09 20 032 5407 | 09 20 032 5407 |  |
| Han A®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With fixing cord,<br>IP65<br> | | 09 20 032 5408 | 09 20 032 5408 |  |

Standard Hoods/housings for industrial applications
Double locking lever (on the hood)



| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Hood,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32 | | 19 20 032 0437 |  |
| Han A®,<br>Hood,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | 19 20 032 1531 | 19 20 032 0537 | <br> |
| Han A®,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | 09 20 032 0302 | | <br><br>Panel cut out |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>IP65<br> | 1x M25 | | 19 20 032 0226 | <br>1) Blind way for one cable entry |

# Standard hoods/housings Han® B

## Features

- Standard hoods/housings for industrial connectors
- Locking levers: Han-Easy Lock®
- Field of application: for excellent mechanical and electrical protection in demanding environments, for example, in the automobile and mechanical engineering industries also for process and regulation control applications
- Distinguishing feature: hoods/housings colour-coded grey (RAL 7037)
- Many variations: for precise industrial applications
- Reduces the number of connector interfaces required on the machine (with up to 8 Han Modular® inserts in one housing)
- Han-Easy Lock® bracket (cross) or metal bracket (longitudinal) available
- Cable entries can be designed variably (up to M50) using the hood configurator

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65, IP66, IP67 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel, Steel, zinc plated |
| Colour (locking) | RAL 7037 (dust grey) |
| Material (accessories) | Polyamide (PA), Stainless steel |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

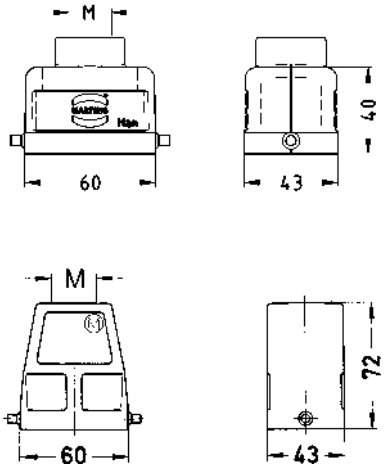
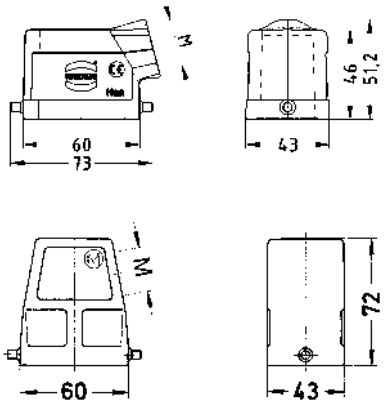
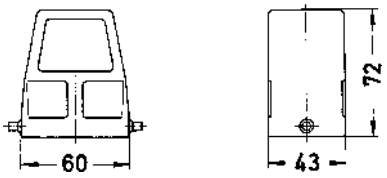
## Details

Standard degree of protection: IP65

IP67 possible, in combination with special bulkhead mounted housings

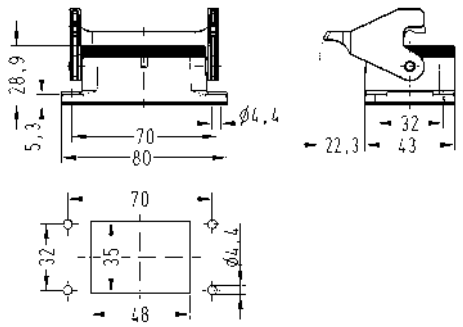
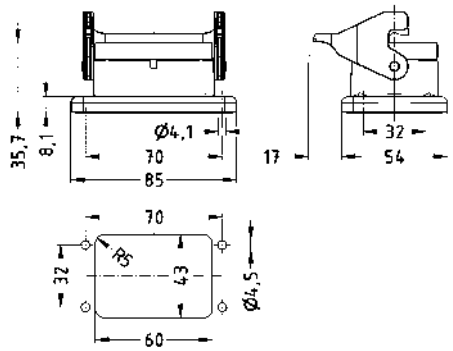
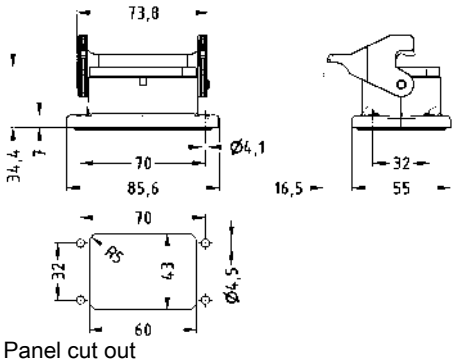
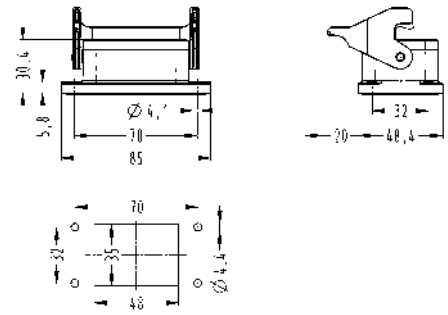
IP44 for self-closing covers in unlocked position

Standard hoods/housings for industrial connectors
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32 | 19 30 006 1440 | 19 30 006 0446<br>19 30 006 0447 |   |
| Han® B,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32 | 19 30 006 1540<br>19 30 006 1541 | 19 30 006 0546<br>19 30 006 0547 |   |
| Han® B,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67  | | | 09 30 006 0801 |   |

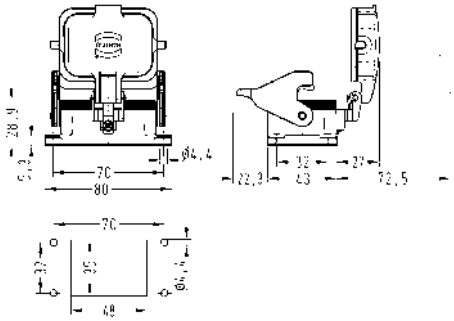
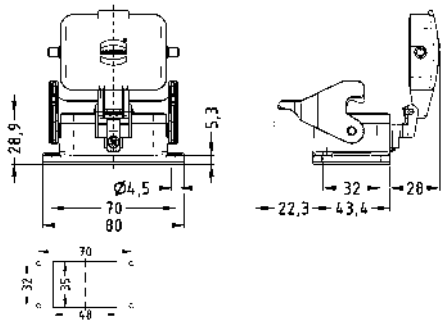
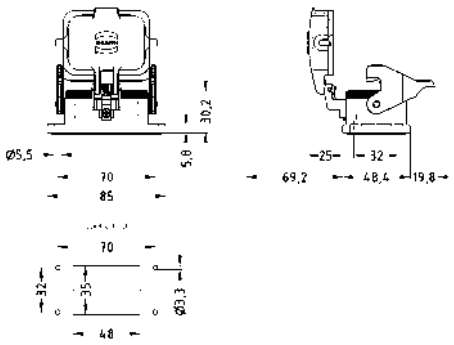
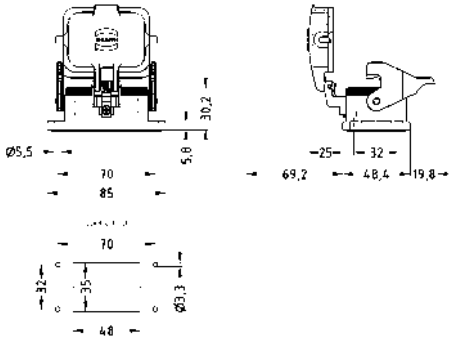
# Standard hoods/housings Han® 6 B

Size 6 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 006 0301 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 30 006 0391 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br> | | 09 30 006 0392 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 006 1301 | | <br>Panel cut out |

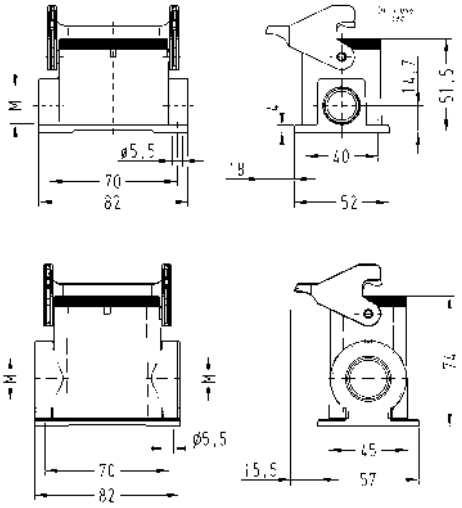
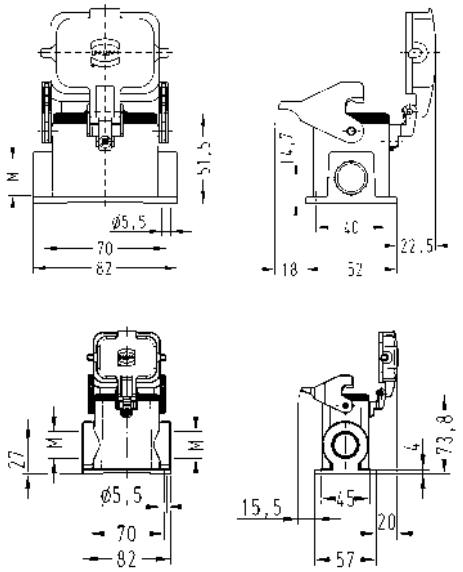
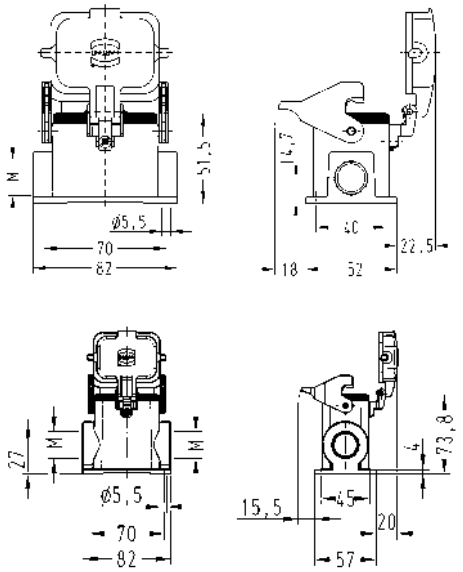
# Standard hoods/housings Han® 6 B

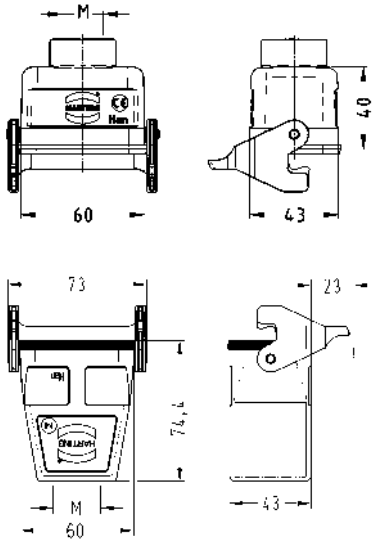
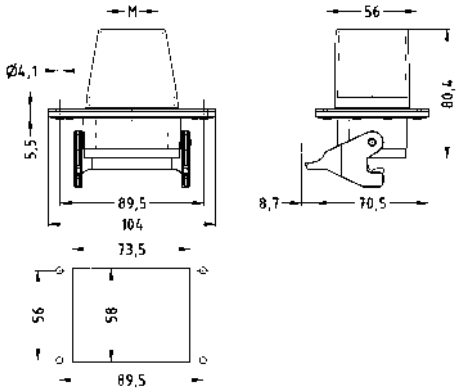
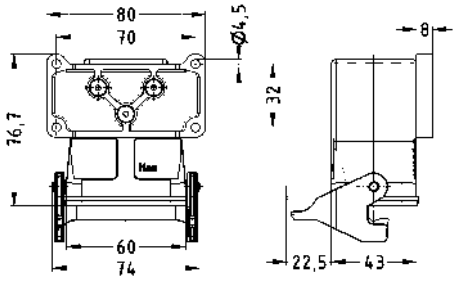
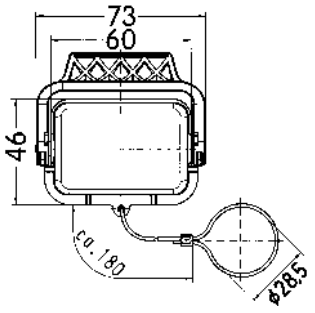
Size 6 B

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 006 0302 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 006 0318 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With self-closing cover,<br>Han-Easy Lock®,<br>IP65<br><br>IP44 for self-closing covers in unlocked position | | 09 30 006 1306 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 006 1308 | | <br>Panel cut out |

# Standard hoods/housings Han® 6 B

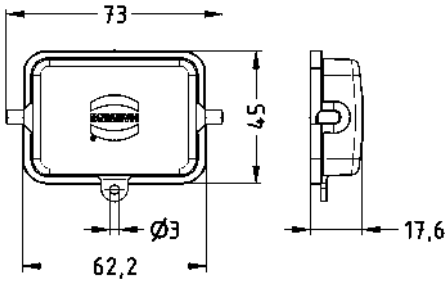
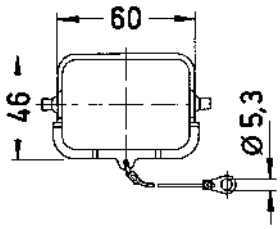
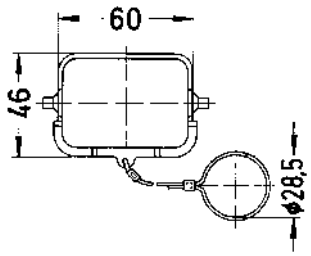
Size 6 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65  | 1x M20<br>2x M20<br>2x M25<br>2x M32 | 19 30 006 1250<br>19 30 006 1290 | 19 30 006 0291<br>19 30 006 0292 |  |
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65  | 1x M20<br>2x M20<br>2x M25<br>2x M32 | 19 30 006 1255<br>19 30 006 1295 | 19 30 006 0296<br>19 30 006 0297 |  |
| Han® B,<br>Surface mounted housing,<br>With metal cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65  | 1x M20<br>2x M20<br>2x M25<br>2x M32 | 19 30 006 2255<br>19 30 006 2295 | 19 30 006 7296<br>19 30 006 7297 |  |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 30 006 1750 | 19 30 006 0756<br>19 30 006 0757 |  |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | | 19 30 006 1121<br>19 30 006 1122 | <br>Panel cut out |
| Han® B,<br>Flange housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25 | 19 30 006 0716 | |  |
| Han® B,<br>Protection cover,<br>for hoods,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 006 5423 | 09 30 006 5423 |  |

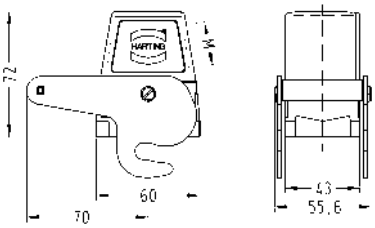
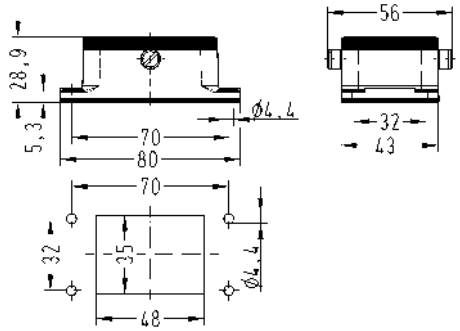
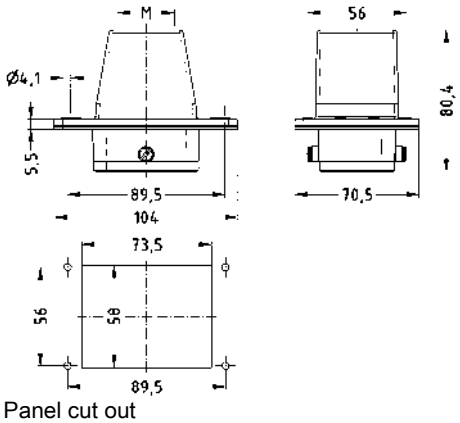
# Standard hoods/housings Han® 6 B

Size 6 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>IP65<br> | | 09 30 006 5405 | 09 30 006 5405 |  |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 006 5425 | 09 30 006 5425 |  |
| Han® B,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 006 5427 | 09 30 006 5427 |  |

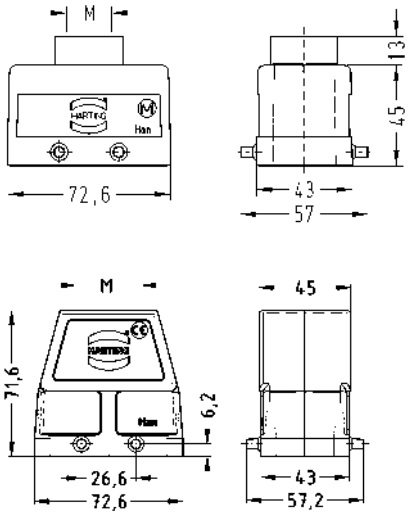
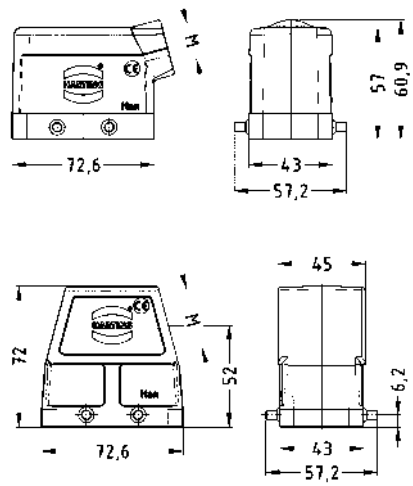
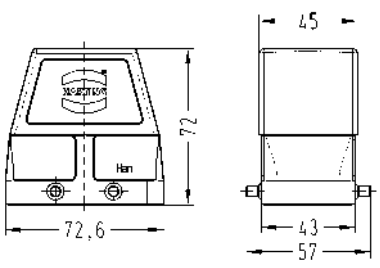
Standard hoods/housings for industrial connectors
Central locking lever (on the hood)



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Side entry,<br>IP65  | 1x M25<br>1x M32 | | 19 30 006 0586<br>19 30 006 0587 |  |
| Han® B,<br>Bulkhead mounted housing,<br>IP65  | | 09 30 006 0381 | |  Panel cut out |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>IP65  | 1x M25<br>1x M32 | | 19 30 006 1141<br>19 30 006 1142 |  Panel cut out |

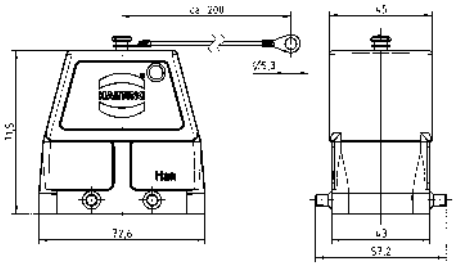
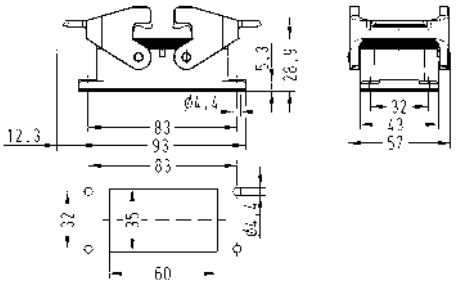
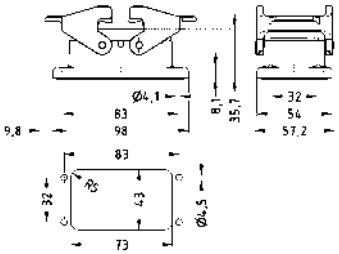
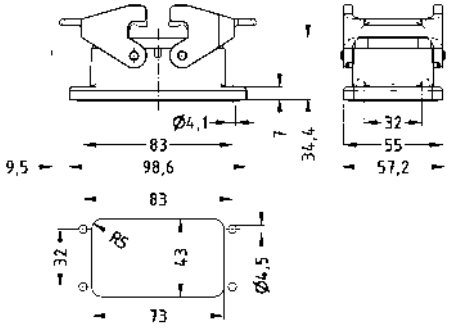
Standard hoods/housings for industrial connectors
Double locking lever



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67 | 1x M20<br>1x M25<br>1x M32<br>1x M40<br>2x M20 | 19 30 010 1420<br>19 30 010 1421 | 19 30 010 0427<br>19 30 010 0428<br>19 30 010 0465 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67 | 1x M20<br>1x M25<br>1x M32<br>1x M40 | 19 30 010 1520<br>19 30 010 1521 | 19 30 010 0526<br>19 30 010 0527<br>19 30 010 0528 |  |
| Han® B,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67 | | | 09 30 010 0801 |  |

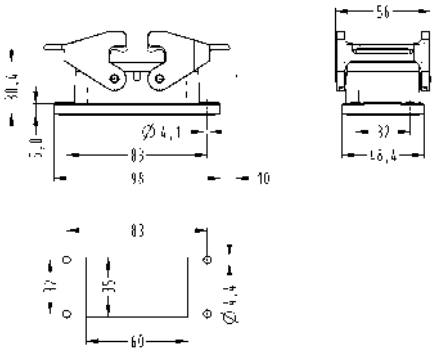
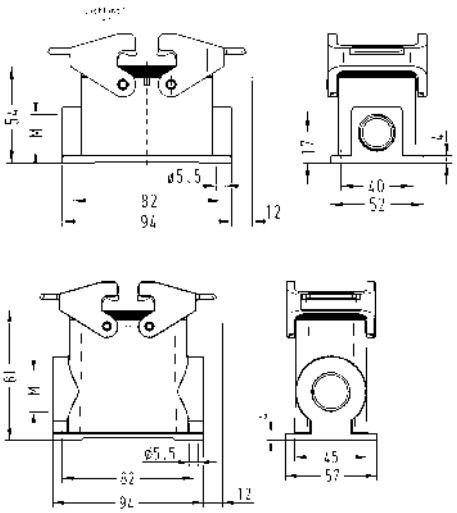
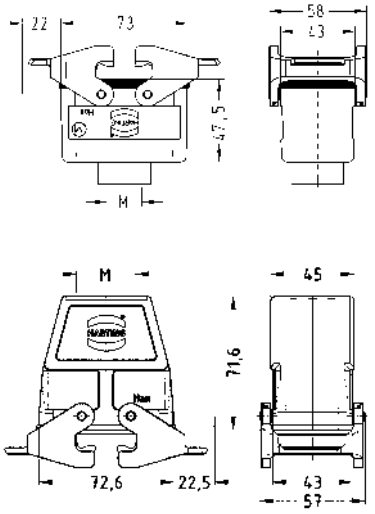
# Standard hoods/housings Han® 10 B

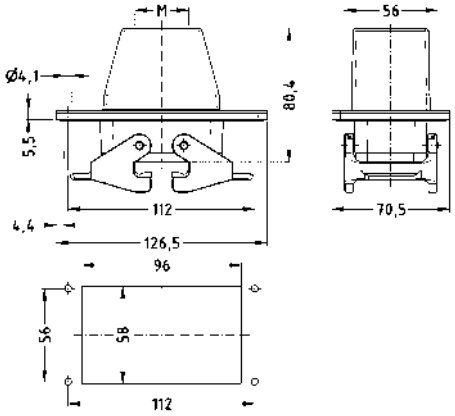
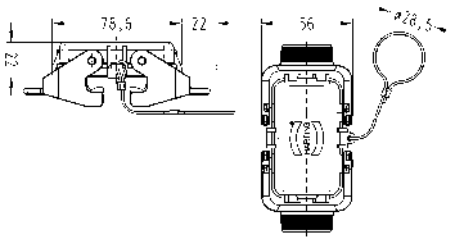
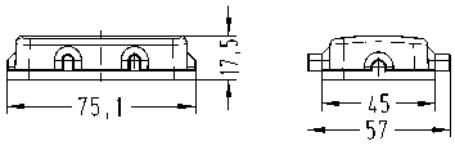
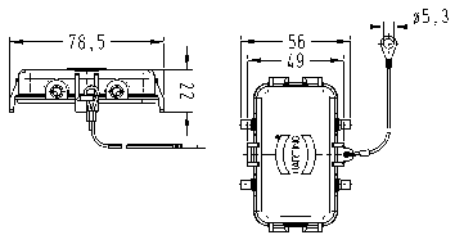
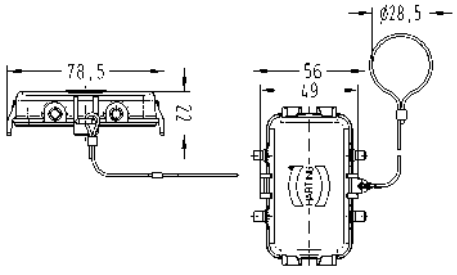
Size 10 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>With fixing cord,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67<br> | | | 09 30 010 0802 |  |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 010 0301 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 30 010 0391 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br> | | 09 30 010 0392 | | <br>Panel cut out |

# Standard hoods/housings Han® 10 B

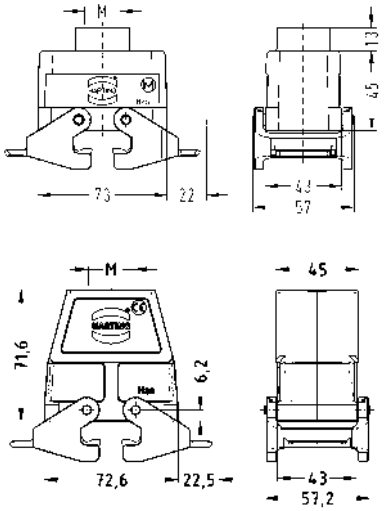
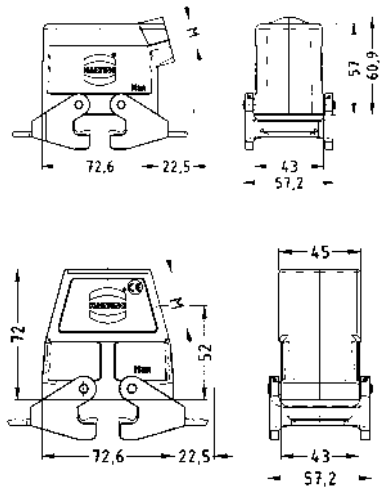
Size 10 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 010 1301 | | <br>Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>1x M25<br>2x M20<br>2x M25<br>2x M32 | 19 30 010 1230<br>19 30 010 1231<br>19 30 010 1270<br>19 30 010 1271 | 19 30 010 0231<br><br>19 30 010 0271<br>19 30 010 0272 |  |
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32<br>1x M40 | 19 30 010 1730 | 19 30 010 0736<br>19 30 010 0737<br>19 30 010 0738 |  |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | | 19 30 010 1121<br>19 30 010 1122 | <br>Panel cut out |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 010 5423 | 09 30 010 5423 |  |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>IP65<br> | | 09 30 010 5407 | 09 30 010 5407 |  |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 010 5425 | 09 30 010 5425 |  |
| Han® B,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 010 5427 | 09 30 010 5427 |  |

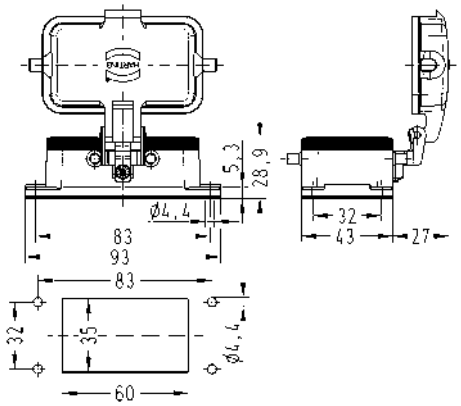
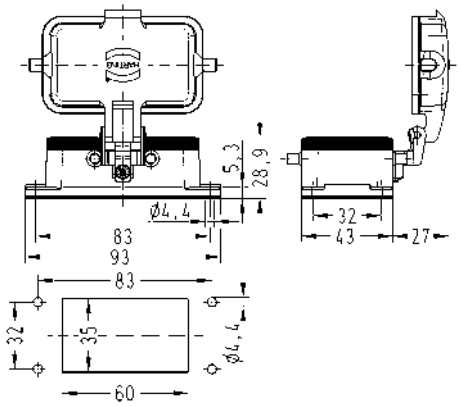
Standard hoods/housings for industrial connectors
Double locking lever (on the hood)

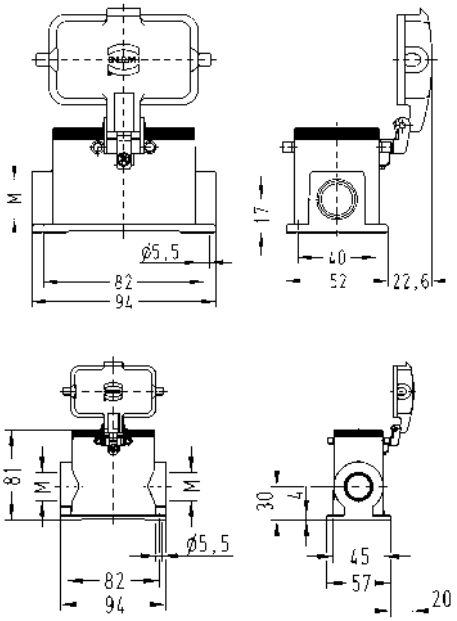
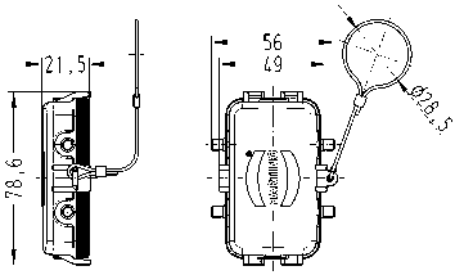


| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>Han-Easy Lock®,<br>IP65,<br>IP66,<br>IP67<br> | 1x M20<br>1x M25 | 19 30 010 1430 | 19 30 010 0436 |  |
| Han® B,<br>Hood,<br>Side entry,<br>Han-Easy Lock®,<br>IP65,<br>IP66,<br>IP67<br> | 1x M20<br>1x M25<br>1x M32 | 19 30 010 1530<br>19 30 010 1531 | 19 30 010 0537 |  |

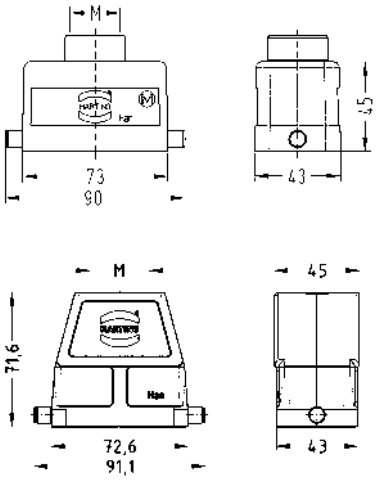
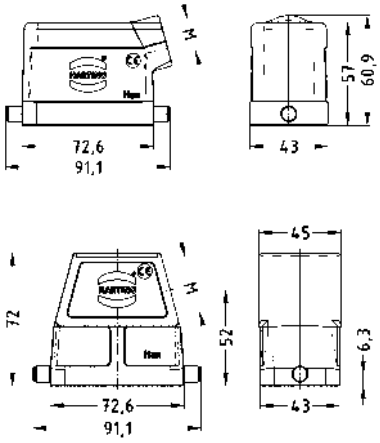
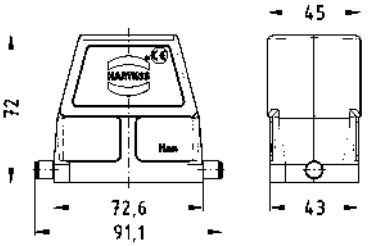
# Standard hoods/housings Han® 10 B

Size 10 B

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | 09 30 010 0302 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65<br> | | 09 30 010 0317 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With self-closing cover,<br>IP65,<br>IP67<br><br>IP44 for self-closing covers in unlocked position | | 09 30 010 1314 | | |

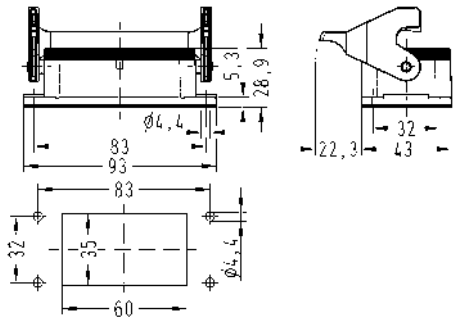
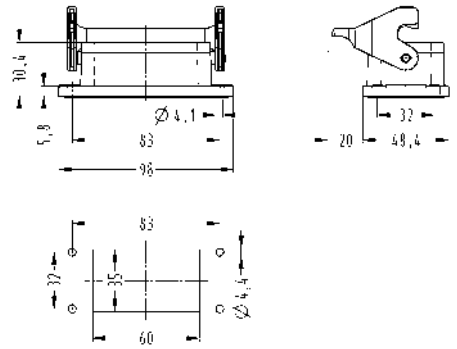
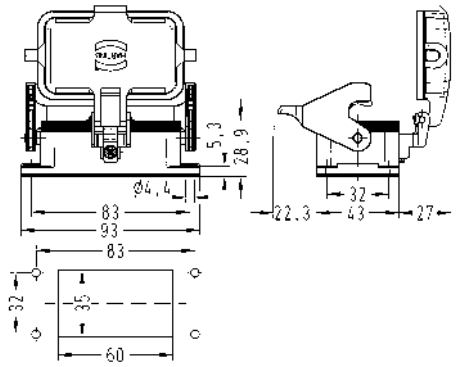
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>IP65<br> | 1x M20<br>2x M20<br>2x M25 | 19 30 010 1225<br>19 30 010 1265 | 19 30 010 0266 |  |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 010 5457 | 09 30 010 5457 |  |

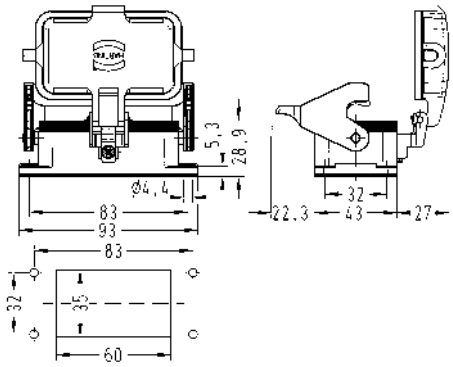
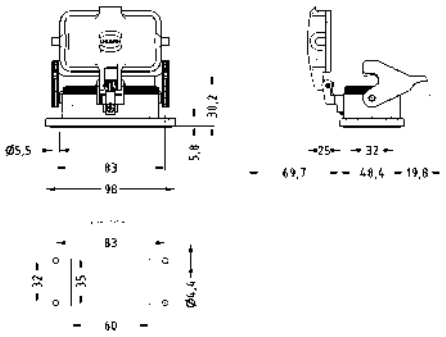
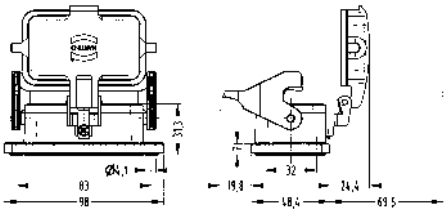
Standard hoods/housings for industrial connectors
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32<br>1x M40<br>2x M20 | 19 30 010 1440<br>19 30 010 1441 | 19 30 010 0447<br>19 30 010 0448<br>19 30 010 0495 |   |
| Han® B,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32 | 19 30 010 1540<br>19 30 010 1541 | 19 30 010 0547 |   |
| Han® B,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67  | | | 09 30 010 0803 |   |

# Standard hoods/housings Han® 10 B

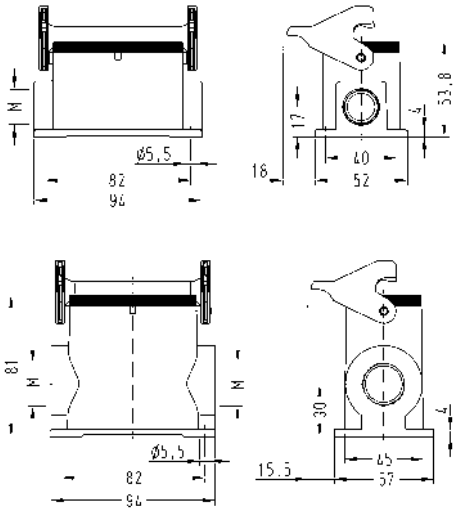
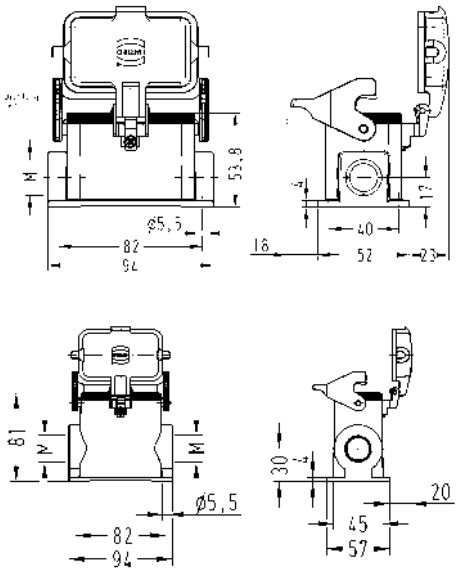
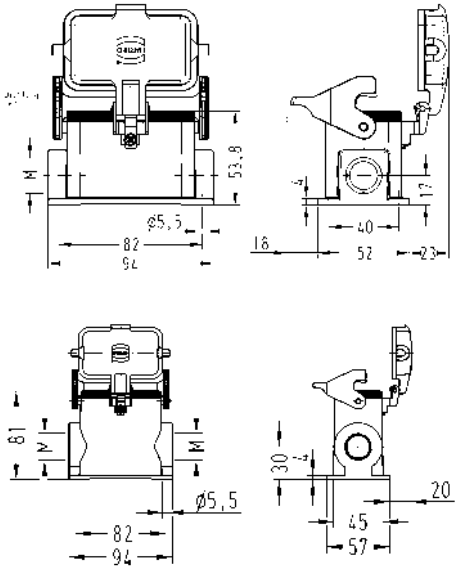
Size 10 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 010 0305 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 010 1305 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 010 0303 | | <br>Panel cut out |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 010 0318 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With self-closing cover,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br><br>IP44 for self-closing covers in unlocked position | | 09 30 010 1306 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 010 1308 | |  |

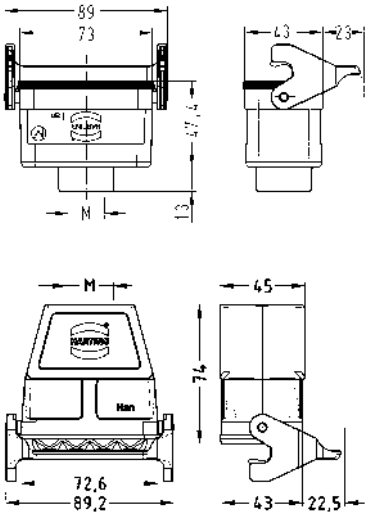
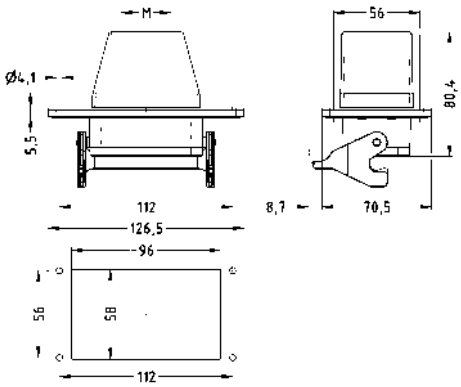
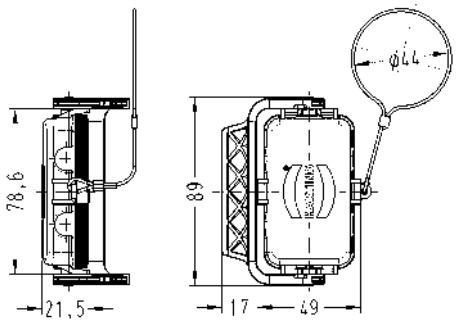
# Standard hoods/housings Han® 10 B

Size 10 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65 | 1x M20<br>2x M20<br>2x M25<br>2x M32 | 19 30 010 1250<br>19 30 010 1290 | 19 30 010 0291<br>19 30 010 0292 |  |
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65 | 1x M20<br>2x M20<br>2x M25<br>2x M32 | 19 30 010 1255<br>19 30 010 1295 | 19 30 010 0296<br>19 30 010 0297 |  |
| Han® B,<br>Surface mounted housing,<br>With metal cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65 | 2x M20<br>2x M25<br>2x M32 | 19 30 010 2295 | 19 30 010 7296<br>19 30 010 7297 |  |

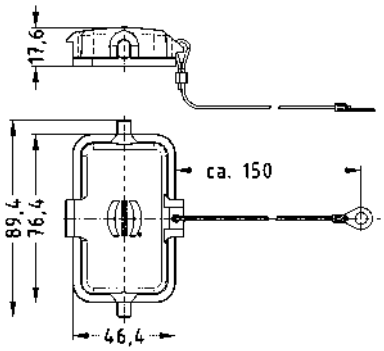
# Standard hoods/housings Han® 10 B

Size 10 B

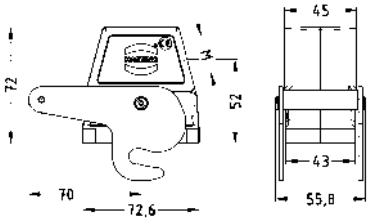
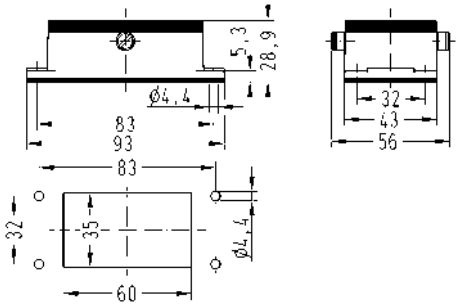
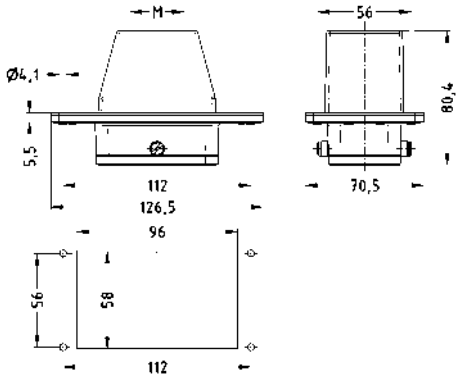
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 30 010 1750 | 19 30 010 0756<br>19 30 010 0757 |  |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | | 19 30 010 1131<br>19 30 010 1132 | <br>Panel cut out |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 010 5432 | 09 30 010 5432 |  |

# Standard hoods/housings Han® 10 B

Size 10 B

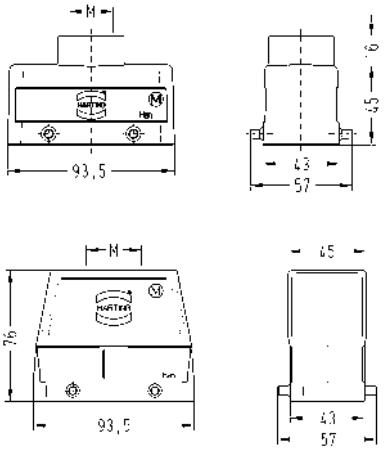
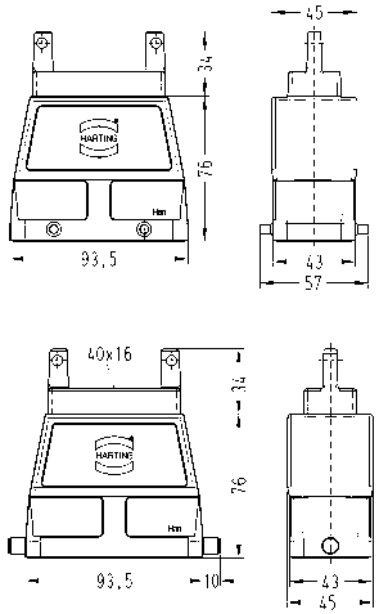
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Thermoplastic,<br>With fixing cord,<br>IP65<br> | | 09 30 010 5412 | 09 30 010 5412 |  |

Standard hoods/housings for industrial connectors
Central locking lever (on the hood)

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M25 | | 19 30 010 0586 |  |
| Han® B,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 30 010 0381 | | <br>Panel cut out |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>IP65<br> | 1x M25<br>1x M32 | | 19 30 010 1141<br>19 30 010 1142 | <br>Panel cut out |

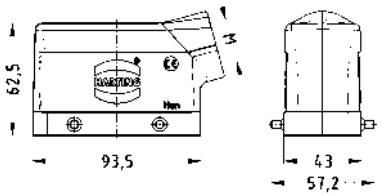
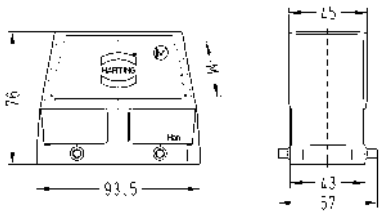
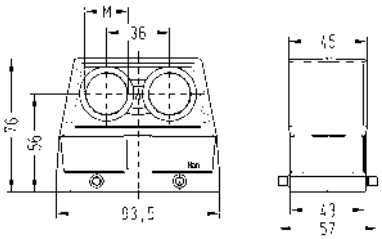
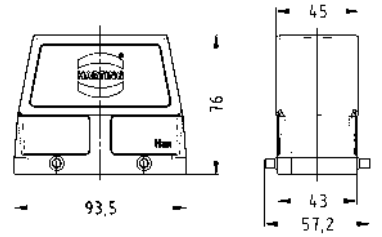
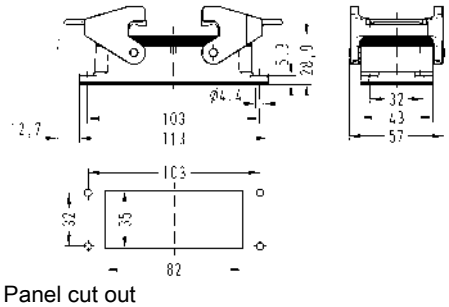
Standard hoods/housings for industrial connectors
Double locking lever



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67 | 1x M25<br>1x M32<br>1x M40<br>2x M25 | 19 30 016 1421<br>19 30 016 1422 | 19 30 016 0427<br>19 30 016 0428<br>19 30 016 0466 |  |
| Han® B,<br>Hood,<br>Flat cable entry,<br>Top entry,<br>IP65 | | | 09 30 016 4411<br>09 30 016 4441 |  |

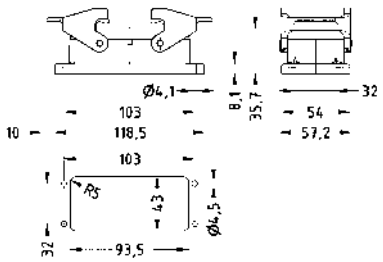
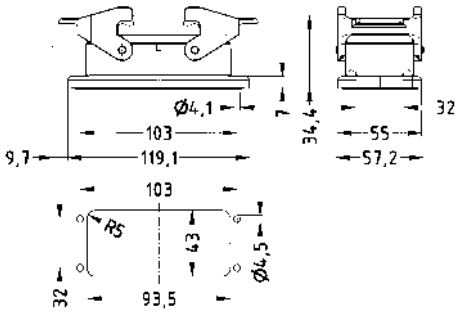
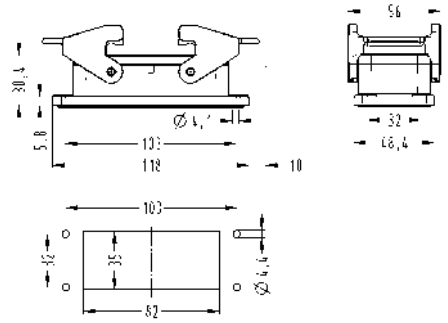
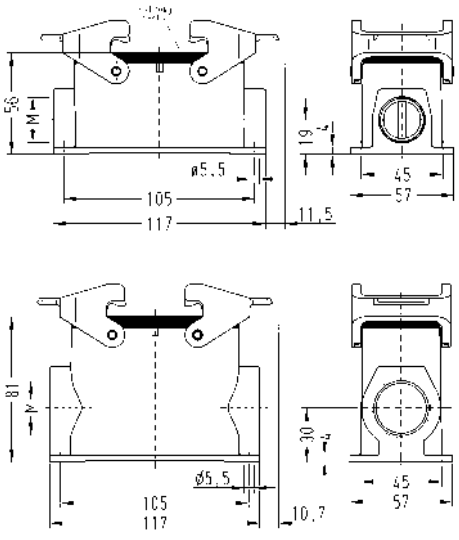
# Standard hoods/housings Han® 16 B

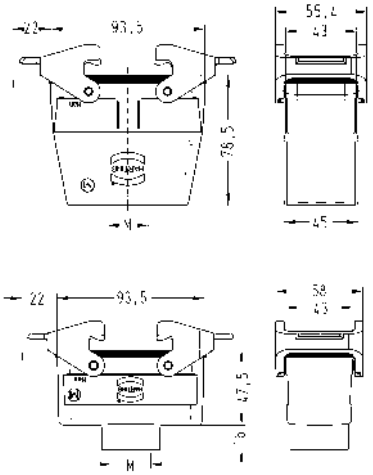
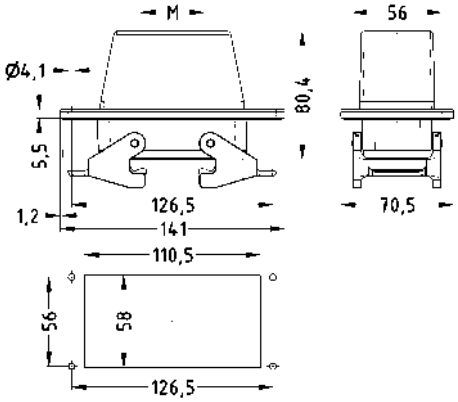
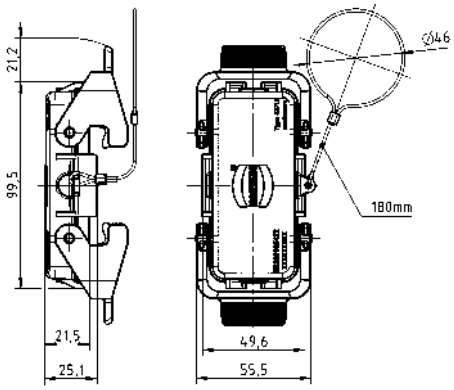
Size 16 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40 | 19 30 016 1521<br>19 30 016 1522 | 19 30 016 0527<br>19 30 016 0528 | <br> |
| Han® B,<br>Hood,<br>Angled entry,<br>IP65,<br>IP66,<br>IP67<br> | 2x M25 | | 19 30 016 0666 |  |
| Han® B,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67<br> | | | 09 30 016 0801 |  |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 016 0301 | | <br>Panel cut out |

# Standard hoods/housings Han® 16 B

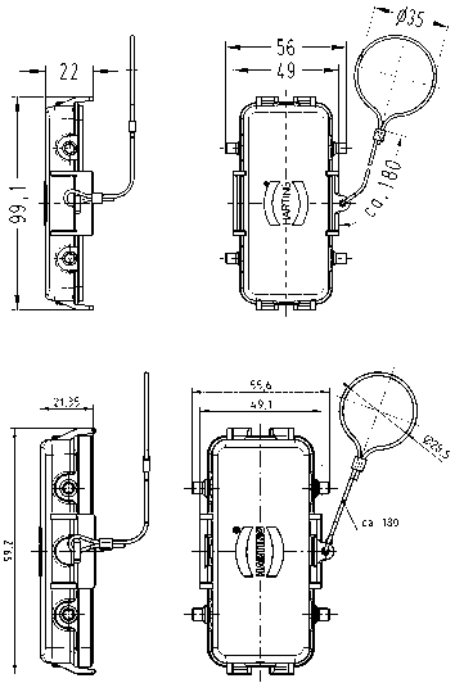
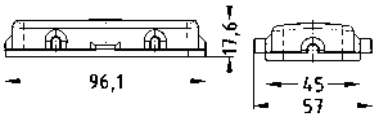
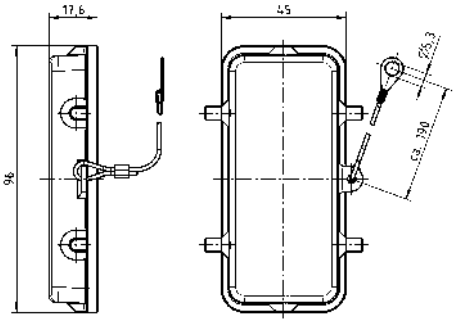
Size 16 B

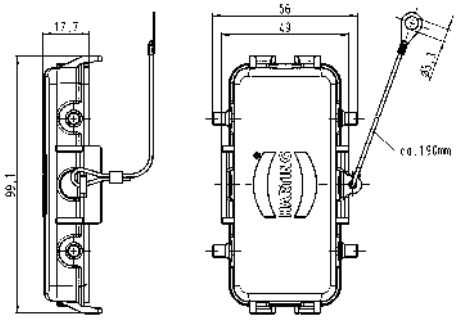
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 30 016 0391 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br> | | 09 30 016 0392 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 016 1301 | | <br>Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32<br>2x M25<br>2x M32<br>2x M40 | 19 30 016 1231<br>19 30 016 1271 | 19 30 016 0232<br>19 30 016 0271<br>19 30 016 0272<br>19 30 016 0273 |  |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32<br>1x M40 | 19 30 016 1731<br>19 30 016 1732 | 19 30 016 0736<br>19 30 016 0737<br>19 30 016 0738 |  |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32<br>1x M40 | | 19 30 016 1121<br>19 30 016 1122 | <br>Panel cut out |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 016 5422 | 09 30 016 5422 |  |

# Standard hoods/housings Han® 16 B

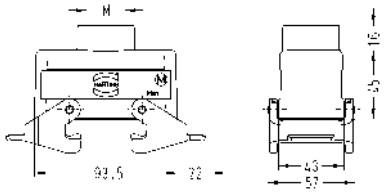
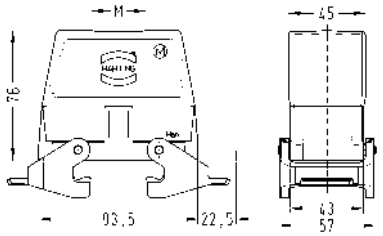
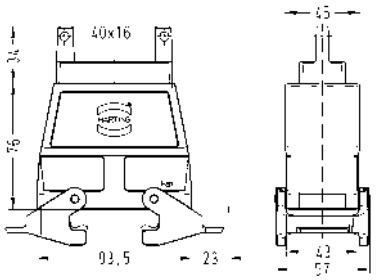
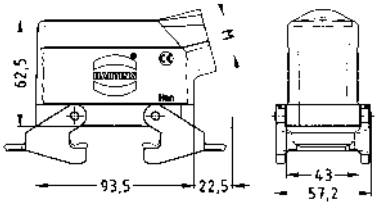
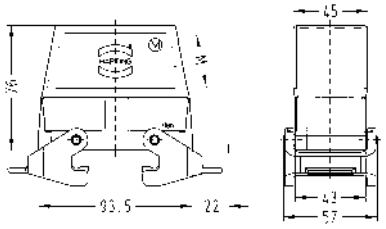
Size 16 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 016 5426<br>09 30 016 5457 | 09 30 016 5426<br>09 30 016 5457 |  |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>IP65<br> | | 09 30 016 5405 | 09 30 016 5405 |  |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With fixing cord,<br>IP65<br> | | 09 30 016 5417 | 09 30 016 5417 |  |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 016 5425 | 09 30 016 5425 |  |

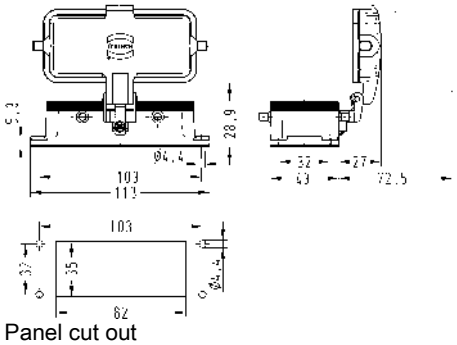
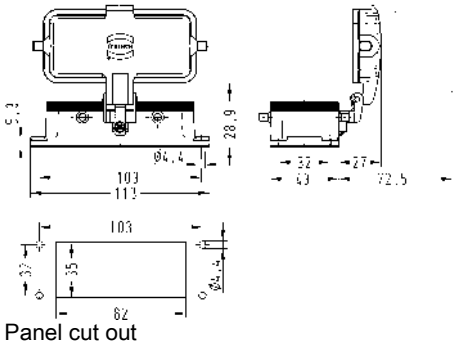
Standard hoods/housings for industrial connectors
Double locking lever (on the hood)



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>Han-Easy Lock®,<br>IP65,<br>IP66,<br>IP67  | 1x M25<br>1x M32<br>1x M40 | 19 30 016 1431<br>19 30 016 1432 | 19 30 016 0437<br>19 30 016 0438 |   |
| Han® B,<br>Hood,<br>Flat cable entry,<br>Top entry,<br>Han-Easy Lock®,<br>IP65  | | | 09 30 016 4431 |  |
| Han® B,<br>Hood,<br>Side entry,<br>Han-Easy Lock®,<br>IP65,<br>IP66,<br>IP67  | 1x M25<br>1x M32<br>1x M40 | 19 30 016 1531 | 19 30 016 0537<br>19 30 016 0538 |   |

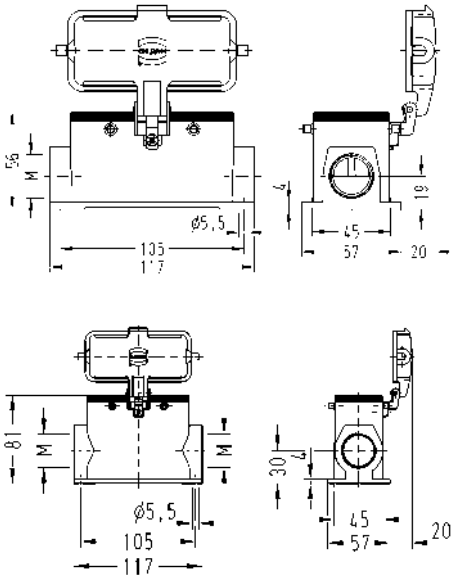
# Standard hoods/housings Han® 16 B

Size 16 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | 09 30 016 0302 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65<br> | | 09 30 016 0317 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With self-closing cover,<br>IP65,<br>IP67<br><br>IP44 for self-closing covers in unlocked position | | 09 30 016 1314 | | |

# Standard hoods/housings Han® 16 B

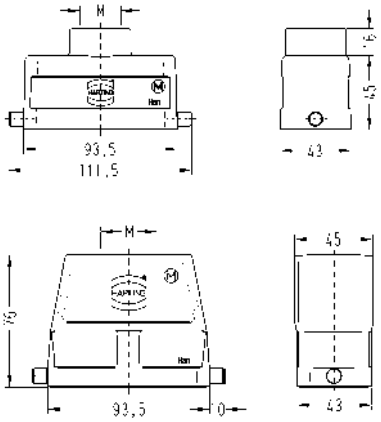
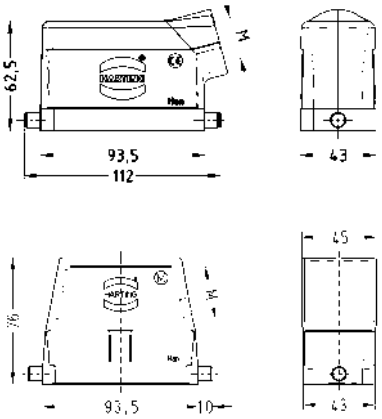
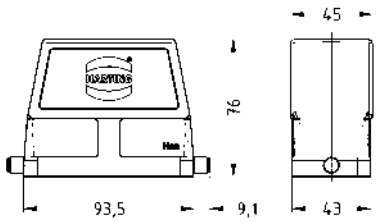
Size 16 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>IP65<br> | 1x M25<br>2x M25<br>2x M32 | 19 30 016 1226<br>19 30 016 1266 | 19 30 016 0267 |  |

# Standard hoods/housings Han® 16 B

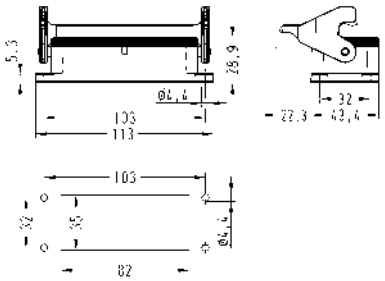
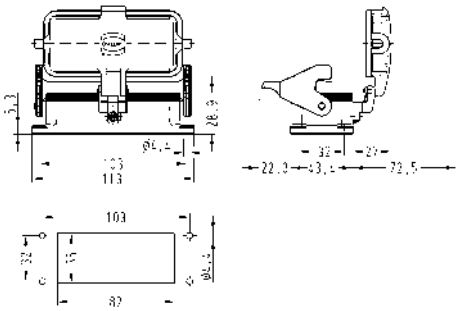
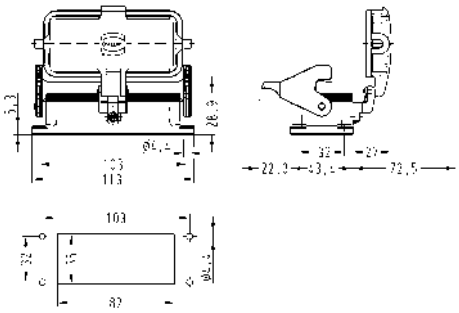
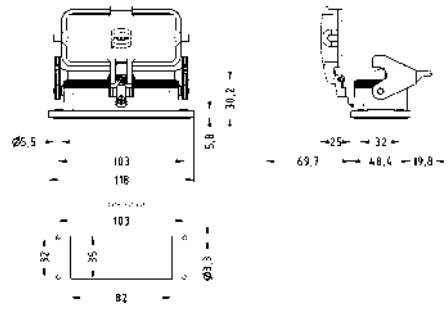
Size 16 B

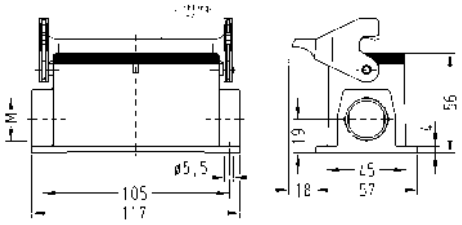
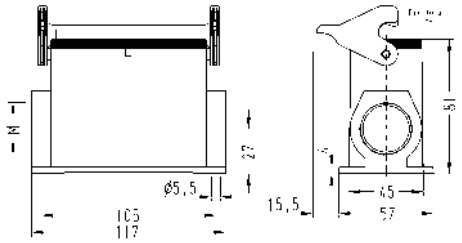
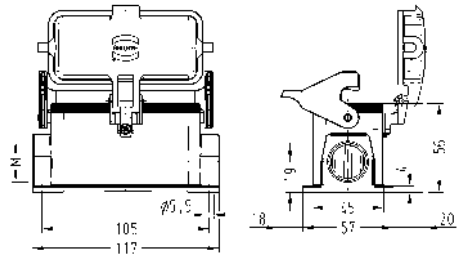
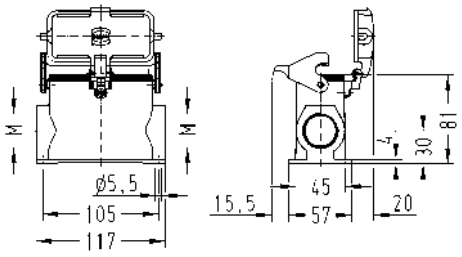
Standard hoods/housings for industrial connectors
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67 | 1x M25<br>1x M32<br>1x M40<br>2x M25 | 19 30 016 1441<br>19 30 016 1442 | 19 30 016 0446<br>19 30 016 0447<br>19 30 016 0448<br>19 30 016 0456 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67 | 1x M25<br>1x M32<br>1x M40 | 19 30 016 1541<br>19 30 016 1542 | 19 30 016 0547<br>19 30 016 0548 |  |
| Han® B,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67 | | | 09 30 016 0803 |  |

# Standard hoods/housings Han® 16 B

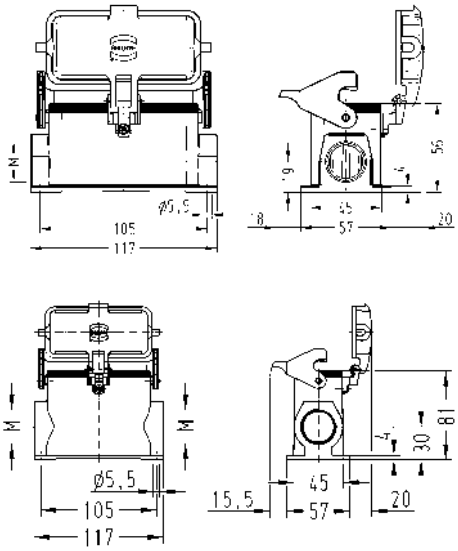
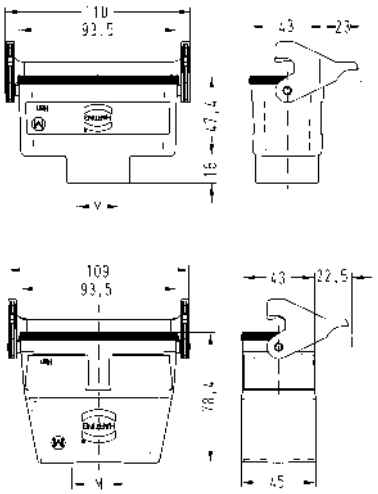
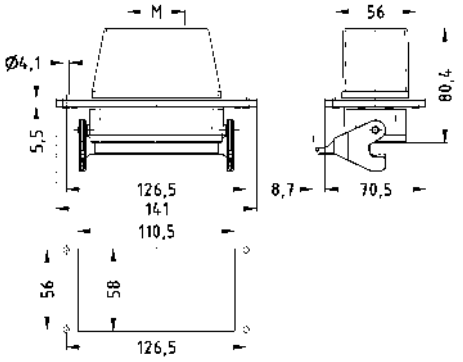
Size 16 B

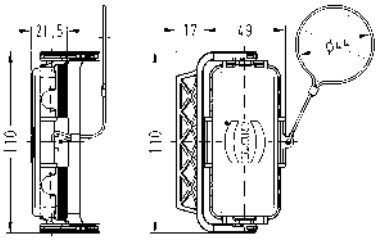
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65  | | 09 30 016 0307 | |  Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65,<br>IP67 | | 09 30 016 1307 | | |
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65  | | 09 30 016 0306 | |  Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>Han-Easy Lock®,<br>IP65  | | 09 30 016 0318 | |  Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With self-closing cover,<br>Han-Easy Lock®,<br>IP65  IP44 for self-closing covers in unlocked position | | 09 30 016 1306 | |  Panel cut out |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 016 1308 | | |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32<br>2x M25<br>2x M32 | 19 30 016 1251<br><br>19 30 016 1291 | 19 30 016 0252<br>19 30 016 0291<br>19 30 016 0292 | <br> |
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>2x M25<br>2x M32 | 19 30 016 1256<br>19 30 016 1296 | 19 30 016 0297 | <br> |

# Standard hoods/housings Han® 16 B

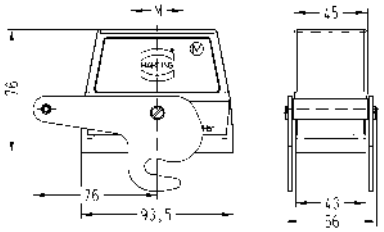
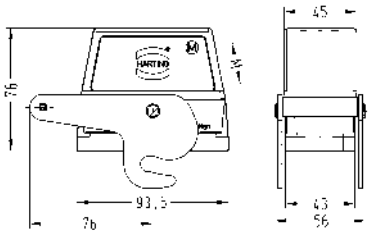
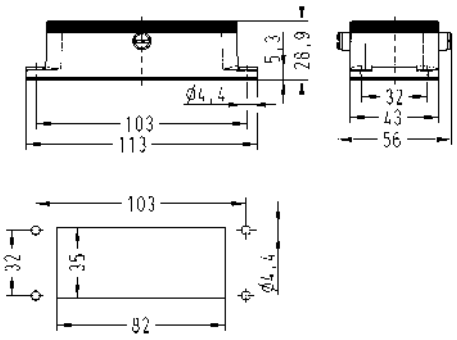
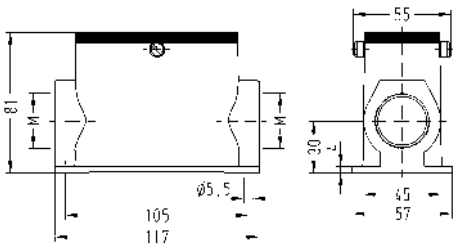
Size 16 B

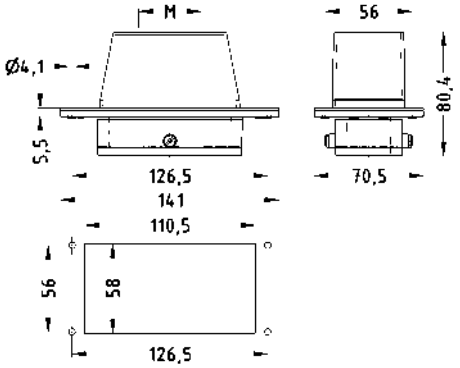
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Surface mounted housing,<br>With metal cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M25<br>2x M32 | 19 30 016 2296 | 19 30 016 7297 |  |
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | 19 30 016 1751<br>19 30 016 1752 | 19 30 016 0757 |  |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32<br>1x M40 | | 19 30 016 1131<br>19 30 016 1132 | <br>Panel cut out |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>Han-Easy Lock®,<br>IP65  | | 09 30 016 5432 | 09 30 016 5432 |   |

Standard hoods/housings for industrial connectors
Central locking lever (on the hood)

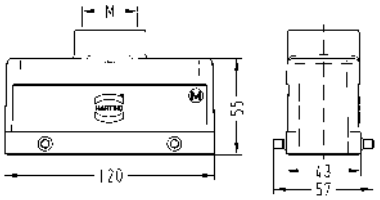
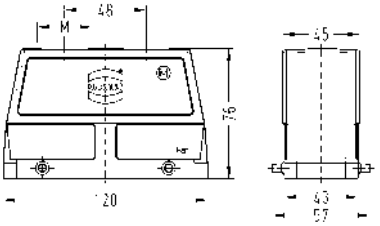
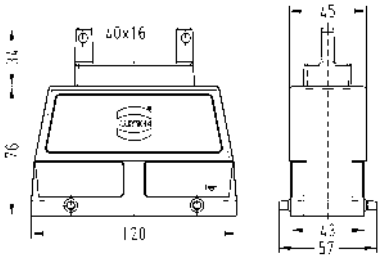
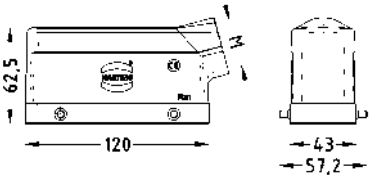
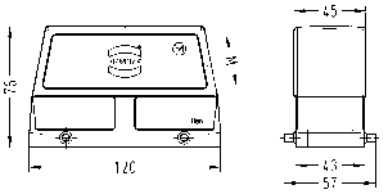


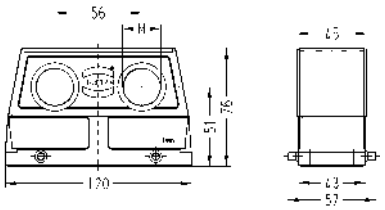
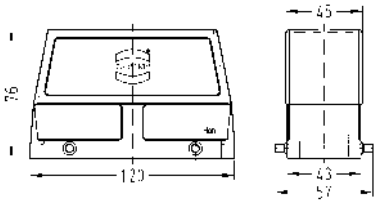
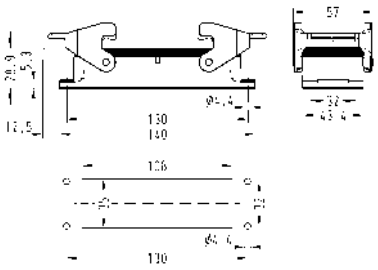
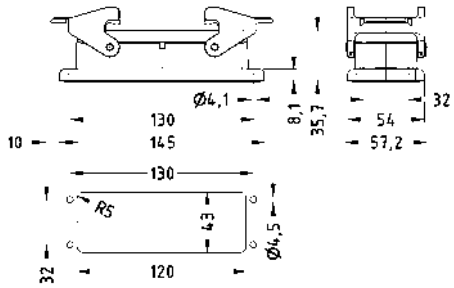
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65  | 1x M32 | | 19 30 016 0487 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65  | 1x M25<br>1x M32 | | 19 30 016 0586<br>19 30 016 0587 |  |
| Han® B,<br>Bulkhead mounted housing,<br>IP65  | | 09 30 016 0381 | | <br>Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>IP65  | 2x M32 | | 19 30 016 0282 |  |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>IP65<br> | 1x M32<br>1x M40 | | 19 30 016 1141<br>19 30 016 1142 | <br>Panel cut out |

Standard hoods/housings for industrial connectors
Double locking lever

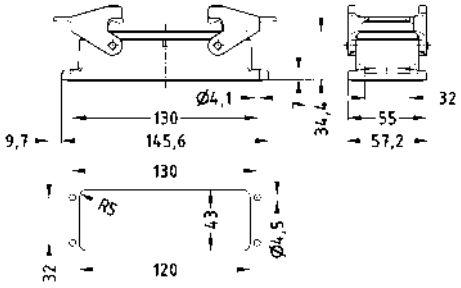
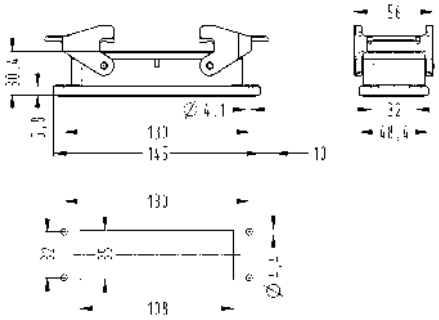
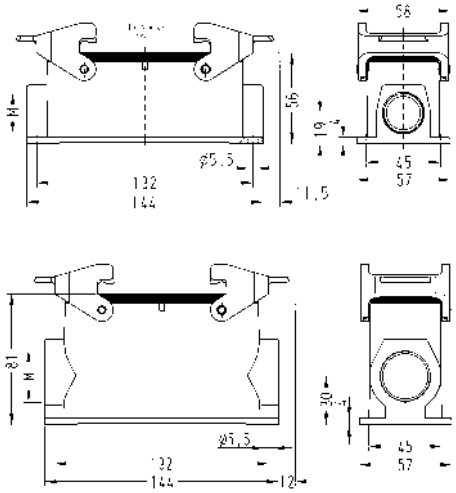


| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67  | 1x M32<br>1x M40<br>2x M25<br>2x M32 | 19 30 024 1422 | 19 30 024 0427<br>19 30 024 0428<br>19 30 024 0466<br>19 30 024 0467 |   |
| Han® B,<br>Hood,<br>Flat cable entry,<br>Top entry,<br>IP65  | | | 09 30 024 4411 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67  | 1x M25<br>1x M32<br>1x M40<br>1x M40 | 19 30 024 1521<br>19 30 024 1522 | 19 30 024 0527<br>19 30 024 0523<br>19 30 024 0528 |   |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Angled entry,<br>IP65,<br>IP66,<br>IP67<br> | 2x M25 | | 19 30 024 0666 |  |
| Han® B,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67<br> | | | 09 30 024 0801 |  |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 024 0301 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 30 024 0391 | | <br>Panel cut out |

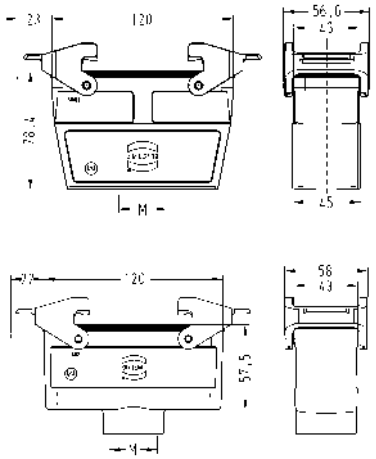
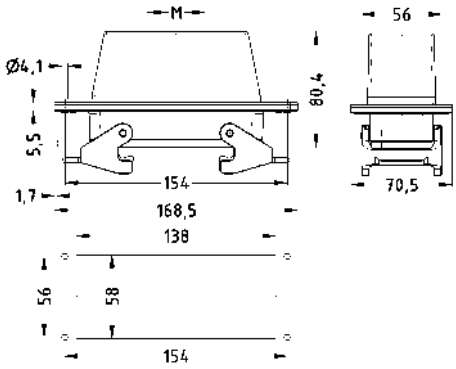
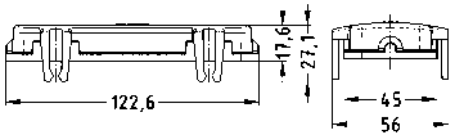
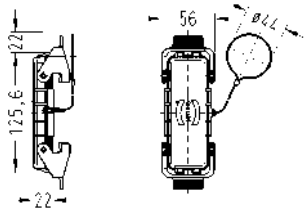
# Standard hoods/housings Han® 24 B

Size 24 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>Han-Easy Lock®,<br>IP66<br> | | 09 30 024 0392 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 024 1301 | | <br>Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32<br>2x M25<br>2x M32<br>2x M40 | 19 30 024 1231<br><br>19 30 024 1271 | 19 30 024 0232<br><br>19 30 024 0272<br>19 30 024 0273 |  |

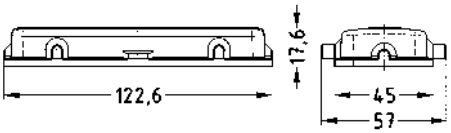
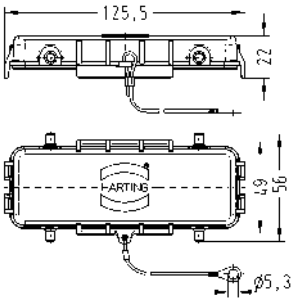
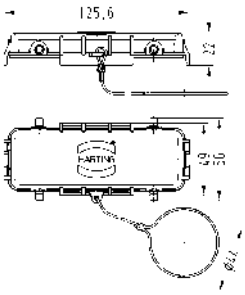
# Standard hoods/housings Han® 24 B

Size 24 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65  | 1x M32<br>1x M40 | 19 30 024 1732 | 19 30 024 0737<br>19 30 024 0738 |  |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65  | 1x M32<br>1x M40 | | 19 30 024 1121<br>19 30 024 1122 | <br>Panel cut out |
| Han® B,<br>Protection cover,<br>for hoods,<br>Thermoplastic,<br>With board locks,<br>IP65  | | 09 30 024 5401 | 09 30 024 5401 |  |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP65  | | 09 30 024 5422 | 09 30 024 5422 |  |

# Standard hoods/housings Han® 24 B

Size 24 B

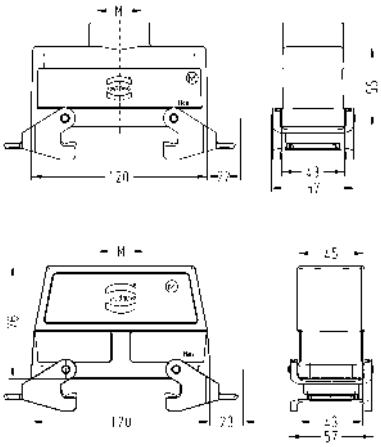
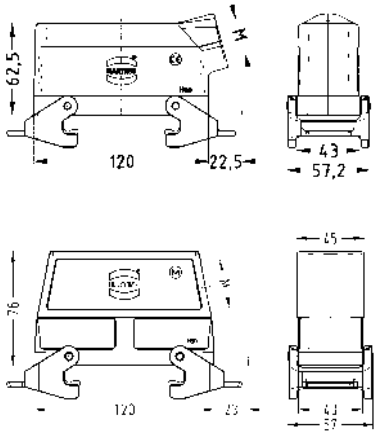
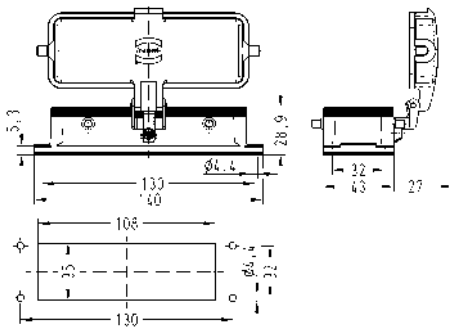
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>IP65<br> | | 09 30 024 5405 | 09 30 024 5405 |  |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 024 5425 | 09 30 024 5425 |  |
| Han® B,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 024 5426 | 09 30 024 5426 |  |

# Standard hoods/housings Han® 24 B

Size 24 B

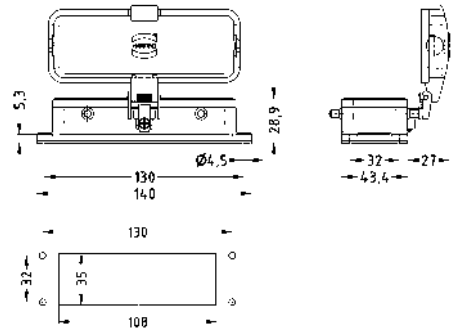
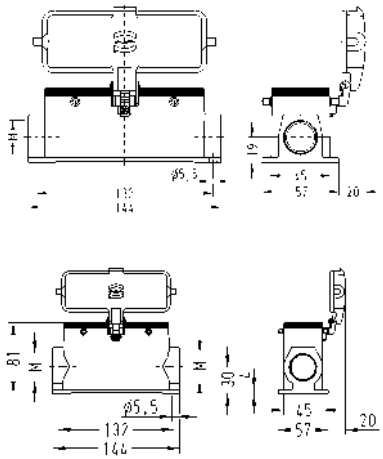
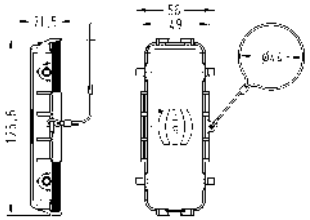
Standard hoods/housings for industrial connectors
Double locking lever (on the hood)



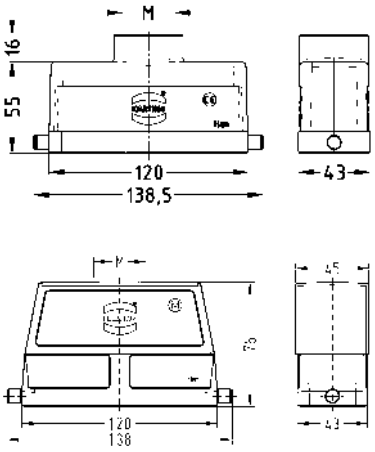
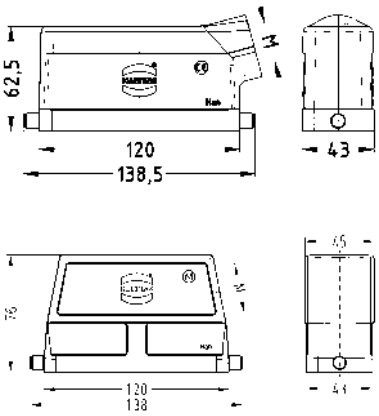
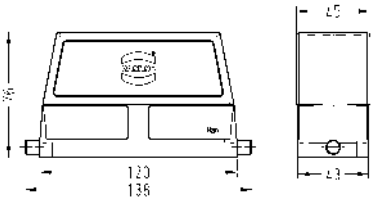
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>Han-Easy Lock®,<br>IP65,<br>IP66,<br>IP67<br> | 1x M32<br>1x M40 | 19 30 024 1432 | 19 30 024 0437<br>19 30 024 0438 |  |
| Han® B,<br>Hood,<br>Side entry,<br>Han-Easy Lock®,<br>IP65,<br>IP66,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40 | 19 30 024 1531 | 19 30 024 0537<br>19 30 024 0538 |  |
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | 09 30 024 0302 | | <br>Panel cut out |

# Standard hoods/housings Han® 24 B

Size 24 B

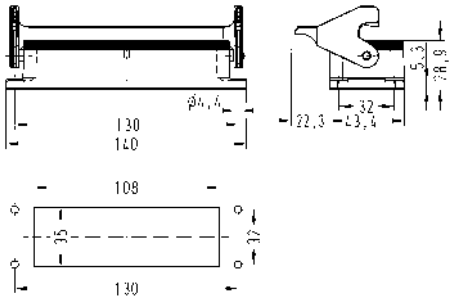
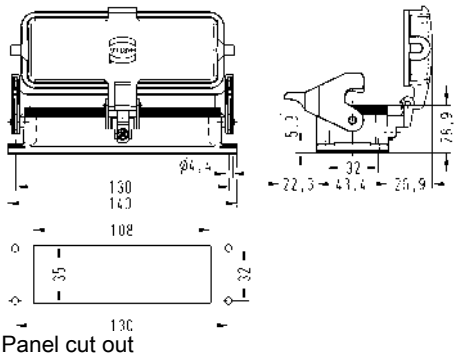
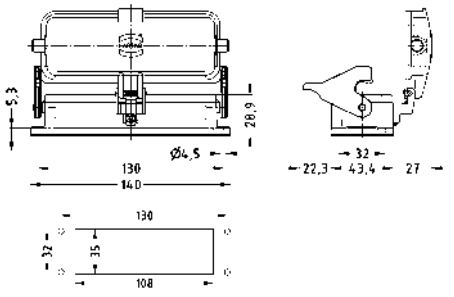
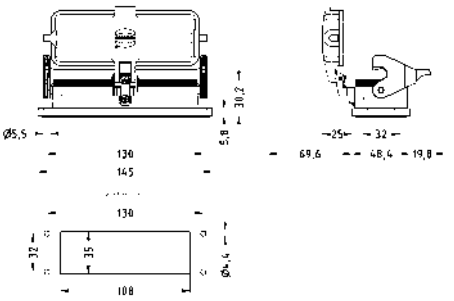
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65<br> | | 09 30 024 0317 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With self-closing cover,<br>IP65,<br>IP67<br><br>IP44 for self-closing covers in unlocked position | | 09 30 024 1314 | | |
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>IP65<br> | 1x M25<br>2x M25<br>2x M32 | 19 30 024 1226<br>19 30 024 1266 | 19 30 024 0267 |  |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 024 5442 | 09 30 024 5442 |  |

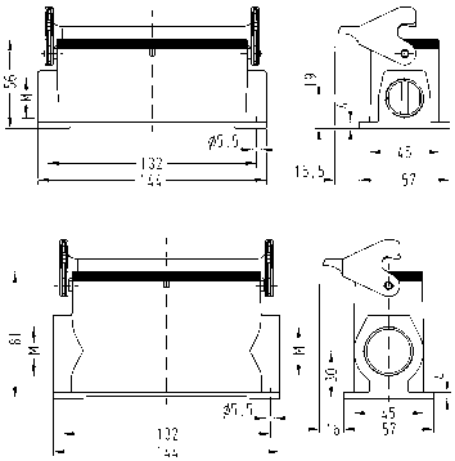
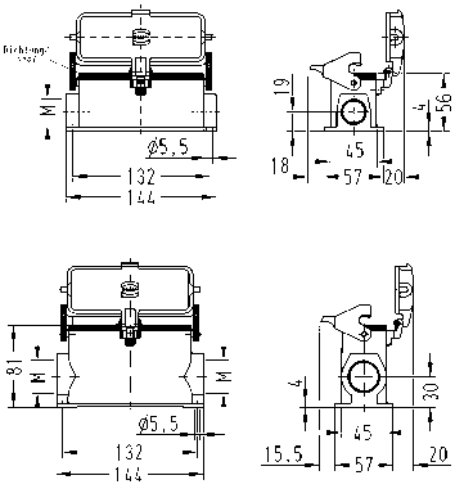
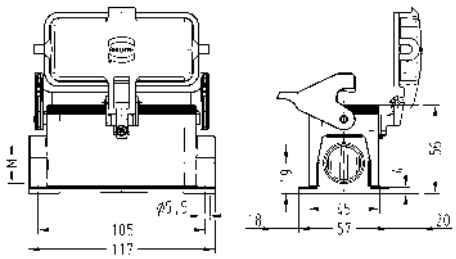
Standard hoods/housings for industrial connectors
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67  | 1x M32<br>1x M40<br>2x M25<br>2x M32 | 19 30 024 1442 | 19 30 024 0447<br>19 30 024 0448<br>19 30 024 0456<br>19 30 024 0457 |   |
| Han® B,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67  | 1x M25<br>1x M32<br>1x M40 | 19 30 024 1541<br>19 30 024 1542 | 19 30 024 0547<br>19 30 024 0548 |   |
| Han® B,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP66,<br>IP67  | | | 09 30 024 0803 |  |

# Standard hoods/housings Han® 24 B

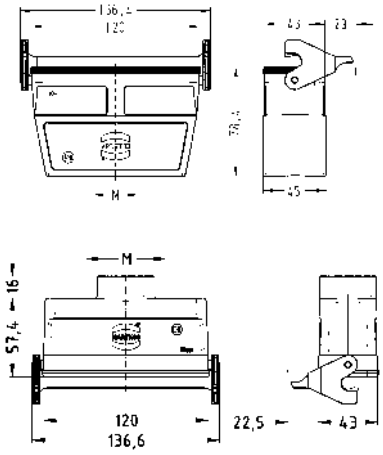
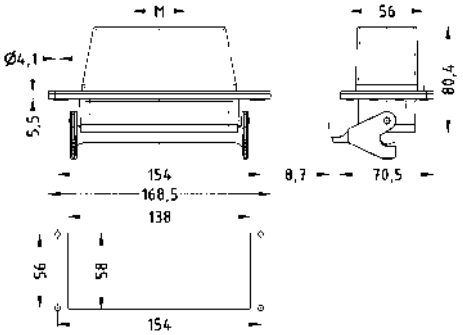
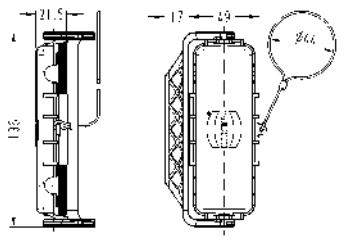
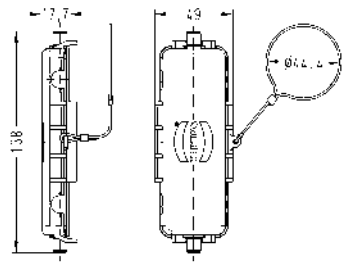
Size 24 B

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 024 0307 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65,<br>IP67 | | 09 30 024 1307 | | |
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 024 0304 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 024 0318 | | <br>Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With self-closing cover,<br>Han-Easy Lock®,<br>IP65<br><br>IP44 for self-closing covers in unlocked position | | 09 30 024 1306 | | <br>Panel cut out |

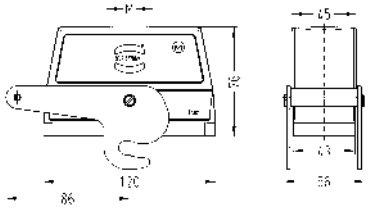
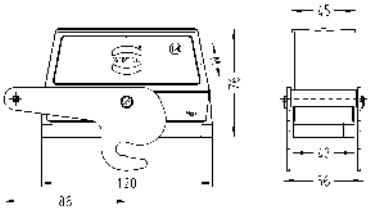
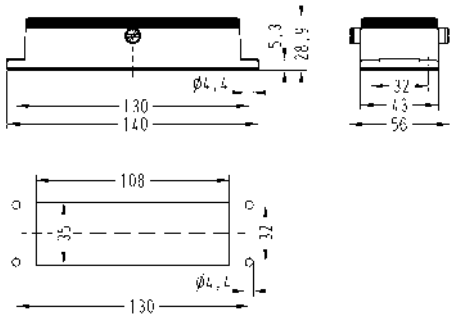
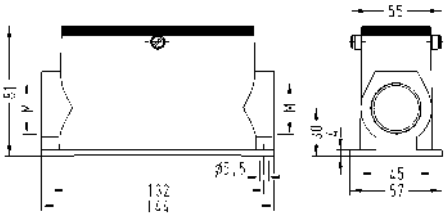
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65,<br>IP67<br> | | 09 30 024 1308 | | |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>2x M25<br>2x M32 | 19 30 024 1251<br>19 30 024 1291 | 19 30 024 0292 |  |
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>2x M25<br>2x M32 | 19 30 024 1256<br>19 30 024 1296 | 19 30 024 0297 |  |
| Han® B,<br>Surface mounted housing,<br>With metal cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M25<br>2x M32 | 19 30 024 2296 | 19 30 024 7297 |  |

# Standard hoods/housings Han® 24 B

Size 24 B

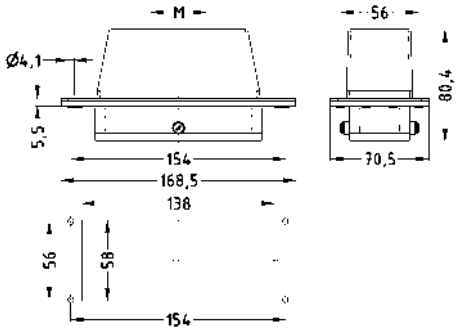
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32 | 19 30 024 1752 | 19 30 024 0757 |  |
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32<br>1x M40 | | 19 30 024 1131<br>19 30 024 1132 | <br>Panel cut out |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 024 5432 | 09 30 024 5432 |  |
| Han® B,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 30 024 5436 | 09 30 024 5436 |  |

Standard hoods/housings for industrial connectors
Central locking lever (on the hood)

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65  | 1x M32 | | 19 30 024 0487 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65  | 1x M25<br>1x M32<br>1x M40 | | 19 30 024 0586<br>19 30 024 0587<br>19 30 024 0588 |  |
| Han® B,<br>Bulkhead mounted housing,<br>IP65  | | 09 30 024 0381 | | <br>Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>IP65  | 2x M32 | | 19 30 024 0282 |  |

# Standard hoods/housings Han® 24 B

Size 24 B

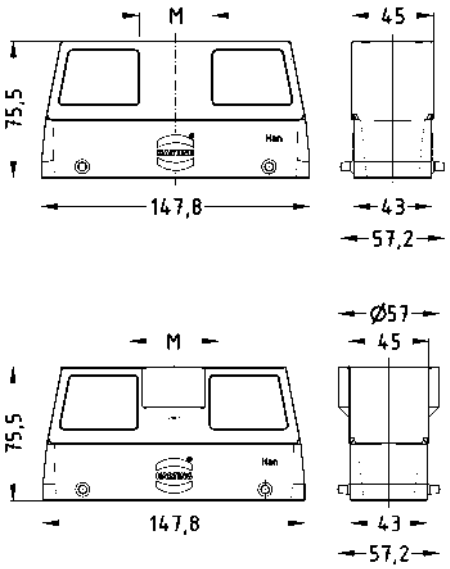
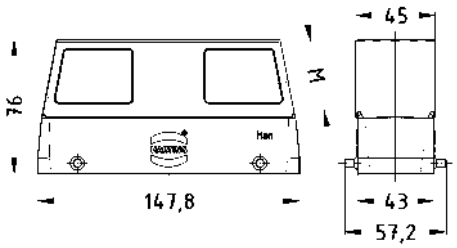
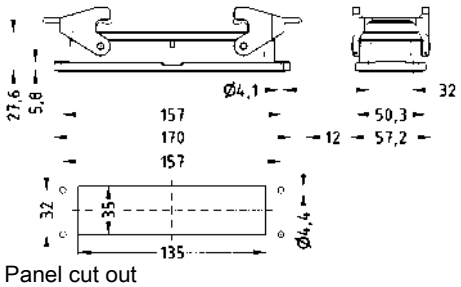
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>IP65<br> | 1x M32<br>1x M40 | | 19 30 024 1141<br>19 30 024 1142 | <br>Panel cut out |

# Standard hoods/housings Han® L32 B

Size L32 B

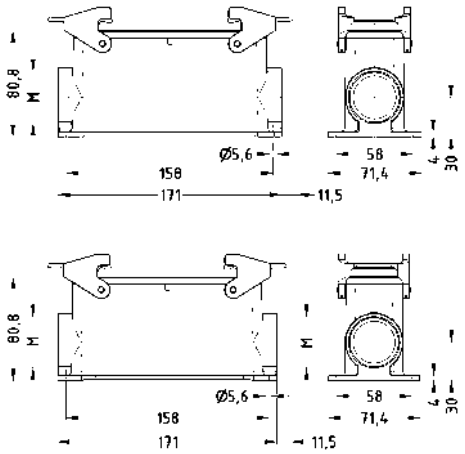
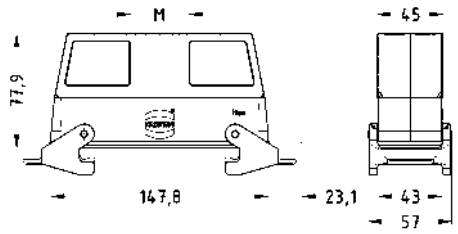


Standard hoods/housings for industrial connectors
Double locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M40<br>1x M50 | 19 30 132 0428<br>19 30 132 0429 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M40 | 19 30 132 0528 |  |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 30 132 0301 | <br>Panel cut out |

# Standard hoods/housings Han® L32 B

Size L32 B

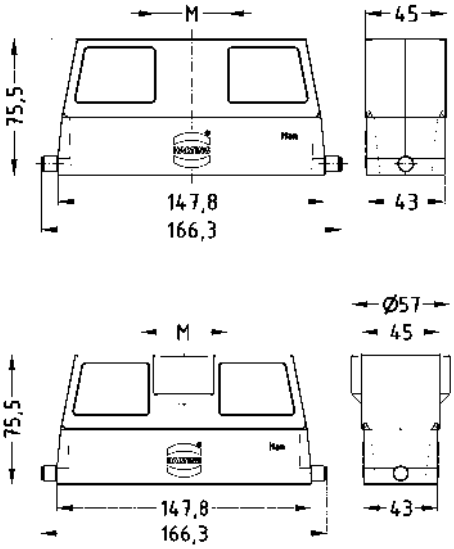
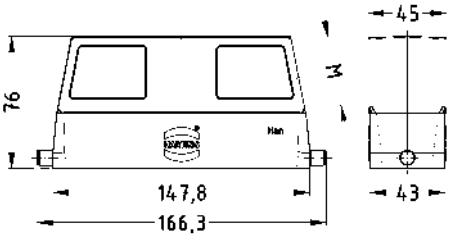
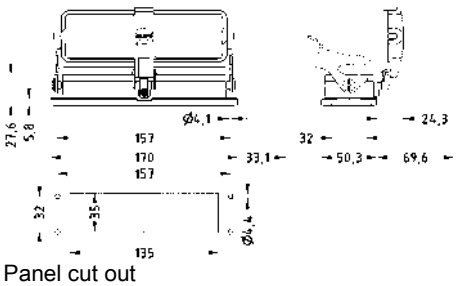
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M40<br>2x M40 | 19 30 132 0271<br>19 30 132 0272 |  |
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M40 | 19 30 132 0728 |  |

# Standard hoods/housings Han® L32 B

Size L32 B

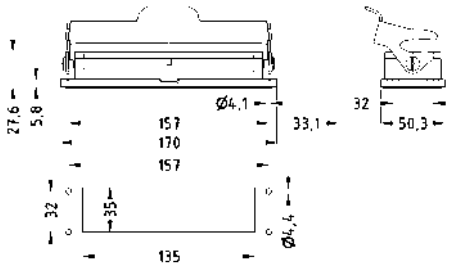
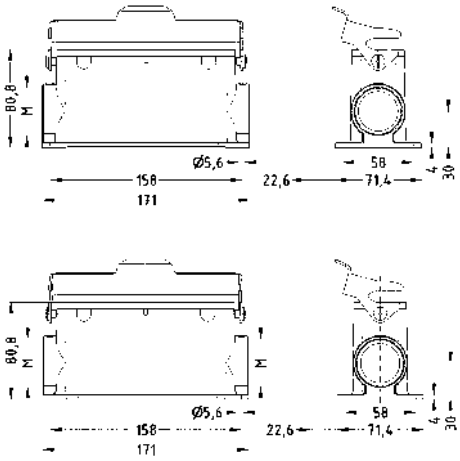
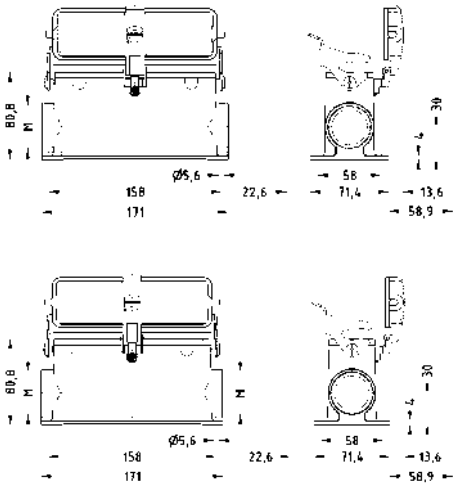
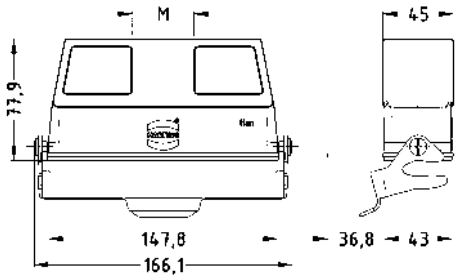


Standard hoods/housings for industrial connectors
Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65  | 1x M40<br>1x M50 | 19 30 132 0441<br>19 30 132 0449 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65 | 1x M40 | 19 30 132 0541 |  |
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65  | | 09 30 132 0304 ML | <br>Panel cut out |

# Standard hoods/housings Han® L32 B

Size L32 B

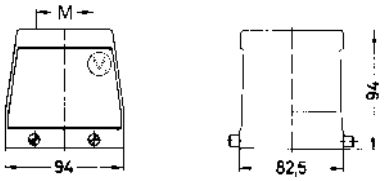
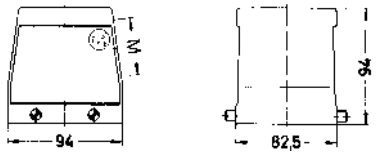
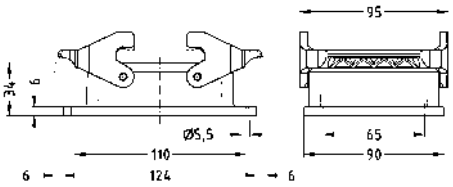
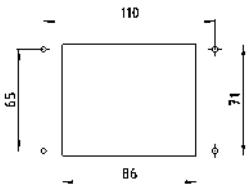
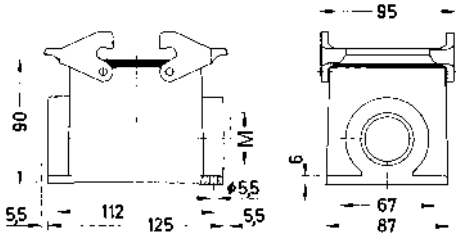
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 30 132 0307 ML | <br>Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>IP65 | 1x M40<br>2x M40 | 19 30 132 0275 ML<br>19 30 132 0276 ML |  |
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>IP65 | 1x M40<br>2x M40 | 19 30 132 2275 ML<br>19 30 132 2276 ML |  |
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>IP65<br> | 1x M40 | 19 30 132 0738 ML |  |

# Standard hoods/housings Han® 32 B

Size 32 B

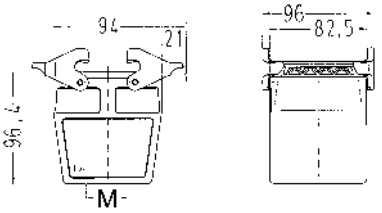
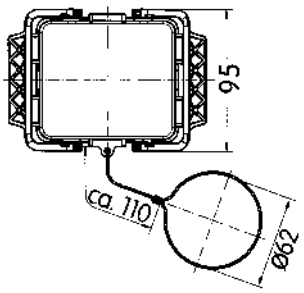
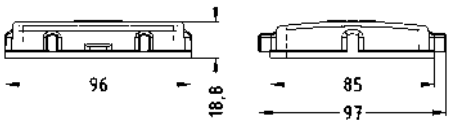
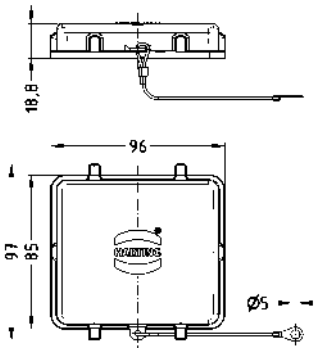
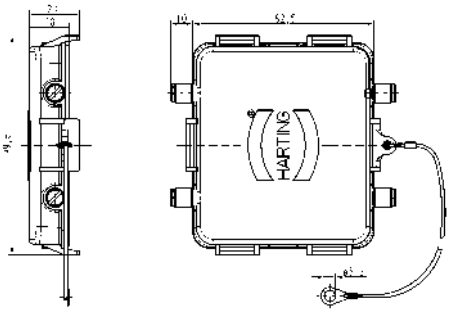


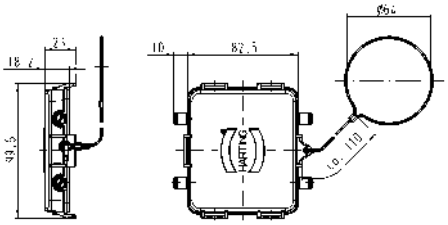
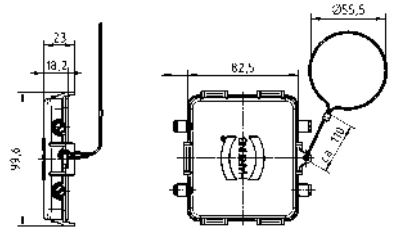
Standard hoods/housings for industrial connectors
Double locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65  | 1x M32<br>1x M40<br>1x M50 | | 19 30 032 0427<br>19 30 032 0428<br>19 30 032 0429 |   |
| Han® B,<br>Hood,<br>Side entry,<br>IP65  | 1x M32<br>1x M40<br>1x M50 | | 19 30 032 0527<br>19 30 032 0528<br>19 30 032 0529 |   |
| Han® B,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65  | | 09 30 032 0301 | |     Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65  | 1x M32<br>2x M32<br>2x M40 | | 19 30 032 0232<br>19 30 032 0272<br>19 30 032 0273 |   |

# Standard hoods/housings Han® 32 B

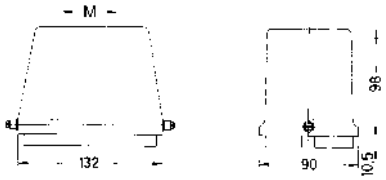
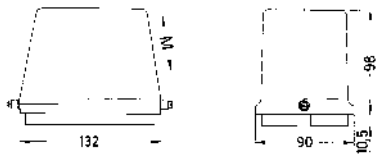
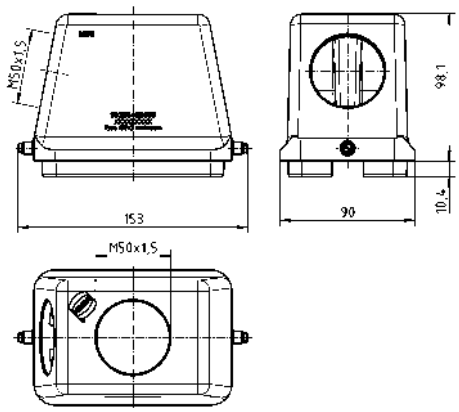
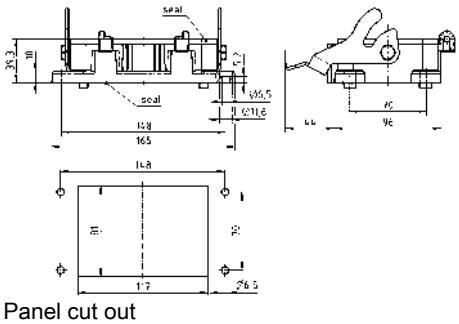
Size 32 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65  | 1x M40 | | 19 30 032 0738 |   |
| Han® B,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65  | | 09 30 032 5420 | 09 30 032 5420 |   |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>IP65  | | 09 30 032 5405 | 09 30 032 5405 |   |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Thermoplastic,<br>With fixing cord,<br>IP65  | | 09 30 032 5406 | 09 30 032 5406 |   |
| Han® B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65  | | 09 30 032 5425 | 09 30 032 5425 |   |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>for Pg 42,<br>IP65<br> | | 09 30 032 5426 | 09 30 032 5426 |  |
| Han® B,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>for Pg 36,<br>IP65 | | 09 30 032 5427 | 09 30 032 5427 |  |

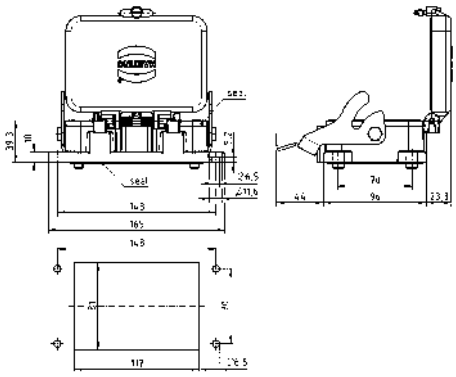
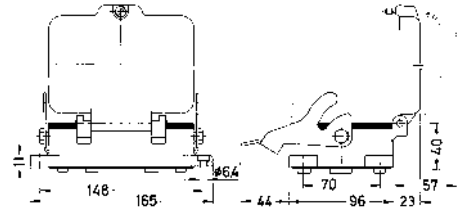
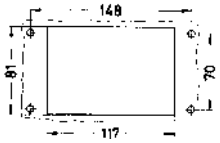
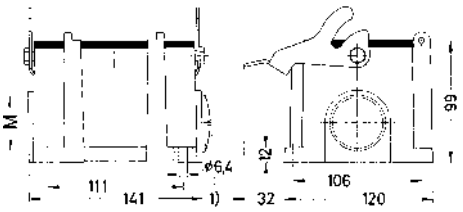
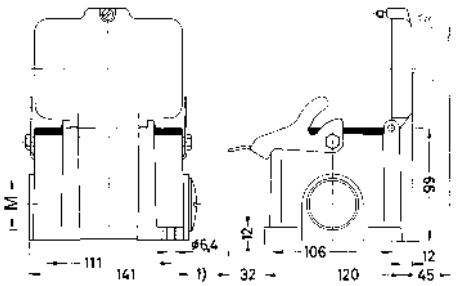
Standard hoods/housings for industrial connectors
Single locking lever



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M40<br>1x M50<br>1x M63 | | 19 30 048 0448<br>19 30 048 0449<br>19 30 048 0450 |  |
| Han® B,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M40<br>1x M50 | | 19 30 048 0548<br>19 30 048 0549 |  |
| Han® B,<br>Hood,<br>Top/side entry,<br>IP65<br> | 1x M50, 1x M50 | | 19 30 048 0599 |  |
| Han® B,<br>Bulkhead mounted housing,<br>O-Ring seal,<br>IP65<br> | | 09 30 048 0302 | | <br>Panel cut out |

# Standard hoods/housings Han® 48 B

Size 48 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>O-Ring seal,<br>IP65  | | 09 30 048 0301 | |  Panel cut out |
| Han® B,<br>Bulkhead mounted housing,<br>With metal cover,<br>O-Ring seal,<br>IP65  | | 09 30 048 0317 | |   Panel cut out |
| Han® B,<br>Surface mounted housing,<br>Side entry,<br>IP65  | 2x M32<br>2x M40 | | 19 30 048 0292<br>19 30 048 0293 |  |
| Han® B,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>IP65  | 2x M40 | | 19 30 048 0298 |  |

## Features

- Hoods/housings for industrial applications

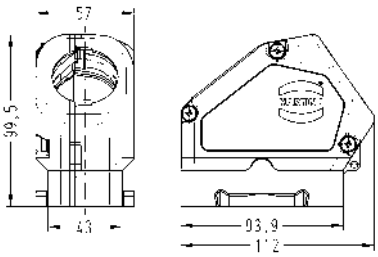
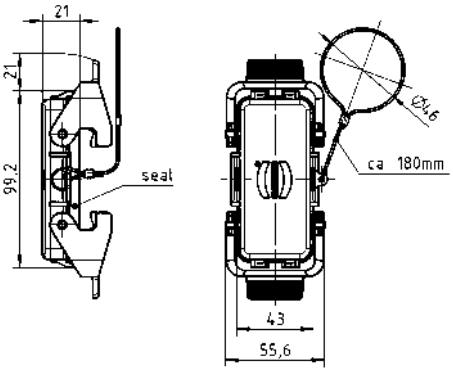
## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP54 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel |
| Colour (locking) | RAL 7037 (dust grey) |
| RoHS | compliant |

## Specifications and approvals

DNV GL

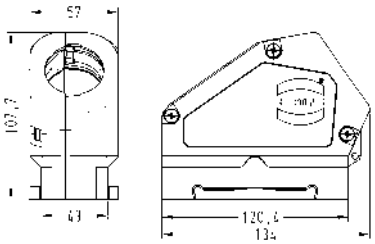
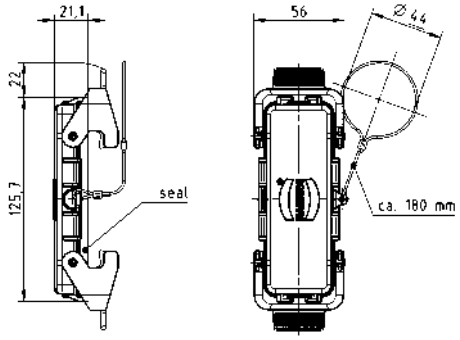
Double locking lever

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Easy Hood,<br>Hood,<br>Side entry,<br>IP54  | 1x Integrated | 20 ... 34 | 11 30 016 0520 |   |
| Han® Easy Hood,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>Han-Easy Lock®,<br>IP54  | | | 11 30 016 5422 |   |

# Han® Easy Hood hoods/housings

Size 24 B

Double locking lever

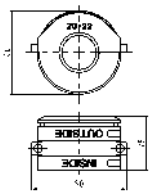
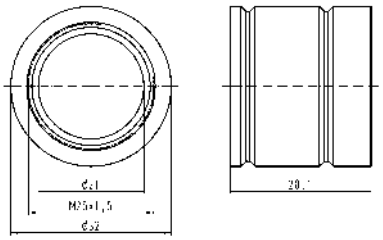
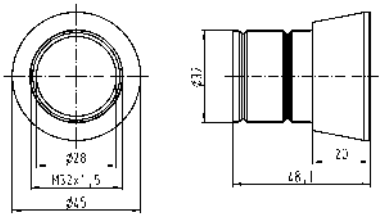
| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Easy Hood,<br>Hood,<br>Side entry,<br>IP54  | 1x Integrated | 20 ... 34 | 11 30 024 0520 |  |
| Han® Easy Hood,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP54  | | | 11 30 024 5422 |   |

## Technical characteristics

| | |
|---|---|
| Material (cable glands) | Thermoplastic |
| Material (accessories) | Thermoplastic |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | Black |
| RoHS | compliant |

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Cable seal, Han® Easy Hood  | | 20 ... 22 | 11 30 000 9955 |  |
| | | 23 ... 25 | 11 30 000 9956 | |
| | | 26 ... 28 | 11 30 000 9957 | |
| | | 29 ... 31 | 11 30 000 9958 | |
| | | 32 ... 34 | 11 30 000 9959 | |
| Han® Easy Hood, Thread adapter  | M25 | | 11 30 000 9961 |  |
| | M32 | | 11 30 000 9962 |  |

## Features

- Angled housing replaces the terminal box
- Compact design saves space
- The position of the terminal housing can be switched by 90°
- Compatible with standard hoods for single lever size 10 B
- Locking levers: Han-Easy Lock®
- Star and delta circuits can be realised in the female connector Han® ESS
- Suitable for standard inserts

## Technical characteristics

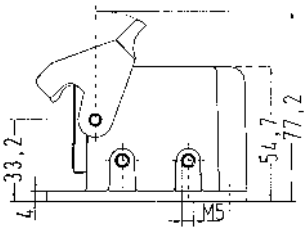
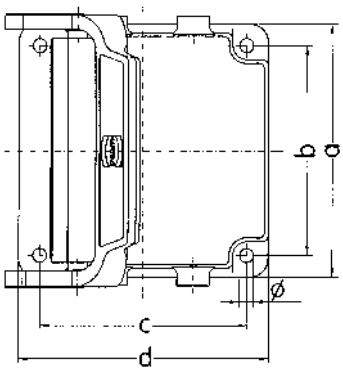
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Uncoated, Powder-coated |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel |
| Colour (locking) | RAL 7037 (dust grey) |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

## Specifications and approvals

DNV GL

CE

Single locking lever

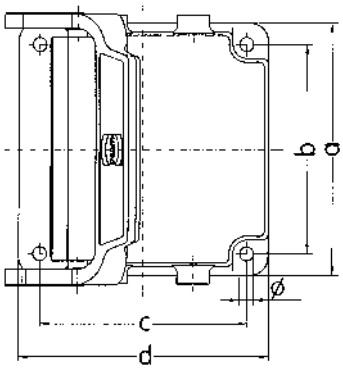
| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Drive®,<br>Housing for motor application,<br>Han-Easy Lock®,<br>IP65  | 09 30 410 0901<br>09 30 410 0909<br>09 30 410 0921 |  |
| Han-Drive®,<br>Housing for motor application,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65  | 09 30 410 0951<br>09 30 410 0960<br>09 30 410 0970<br>09 30 410 0971<br>09 30 410 0974<br>09 30 410 0983 |  |
| Han-Drive®,<br>Housing for motor application,<br>Powder-coated,<br>Han-Easy Lock®,<br>IP65  | 09 30 010 0901<br>09 30 010 0902 | |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Drive®,<br>Housing for motor application,<br>Powder-coated,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65 | 09 30 010 0961 | |



| | a | b | c | d | ∅ |
|---|---|---|---|---|---|
| 09 30 010 0901 | 82 | 68 | 68 | 82 | 4,5 |
| 09 30 010 0902 | 98 | | | 98 | |
| 09 30 010 0961 | 82 | 70 | 70 | 82 | |
| 09 30 410 0901 | 82 | 68 | 68 | 82 | 4,5 |
| 09 30 410 0909 | 98 | | | 98 | |
| 09 30 410 0921 | 85 | 73 | 73 | 85 | |
| 09 30 410 0951 | 82 | 68 | 68 | 82 | 4,5 |
| 09 30 410 0960 | 98 | 70 | 70 | 98 | 4,3 |
| 09 30 410 0970 | 92 | 77 | 77 | 92 | 4,3 |
| 09 30 410 0971 | 85 | 73 | 73 | 85 | 5,5 |
| 09 30 410 0974 | 92 | 70 | 70 | 92 | 4,3 |
| 09 30 410 0983 | 92 | 80 | 80 | 92 | 5,1 |
| 09 62 810 0901 | 82 | 68 | 68 | 82 | 4,5 |
| 09 62 810 0974 | 92 | 70 | 70 | 92 | 4,1 |

Single locking lever

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Han-Drive®,<br>Housing for motor application,<br>EMC version,<br>Han-Easy Lock®,<br>IP65  | 09 62 810 0901 |  |
| Han-Drive®,<br>Housing for motor application,<br>EMC version,<br>With thermo-plastic cover,<br>Han-Easy Lock®,<br>IP65  | 09 62 810 0974 | |

| | a | b | c | d | ∅ |
|---|---|---|---|---|---|
| 09 30 010 0901 | 82 | 68 | 68 | 82 | 4,5 |
| 09 30 010 0902 | 98 | | | 98 | |
| 09 30 010 0961 | 82 | 70 | 70 | 82 | |
| 09 30 410 0901 | 82 | 68 | 68 | 82 | 4,5 |
| 09 30 410 0909 | 98 | | | 98 | |
| 09 30 410 0921 | 85 | 73 | 73 | 85 | |
| 09 30 410 0951 | 82 | 68 | 68 | 82 | 4,5 |
| 09 30 410 0960 | 98 | 70 | 70 | 98 | 4,3 |
| 09 30 410 0970 | 92 | 77 | 77 | 92 | 4,3 |
| 09 30 410 0971 | 85 | 73 | 73 | 85 | 5,5 |
| 09 30 410 0974 | 92 | 70 | 70 | 92 | 4,3 |
| 09 30 410 0983 | 92 | 80 | 80 | 92 | 5,1 |
| 09 62 810 0901 | 82 | 68 | 68 | 82 | 4,5 |
| 09 62 810 0974 | 92 | 70 | 70 | 92 | 4,1 |

## Features

- Hoods/housings for rough environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Locking lever made of high-quality stainless steel

## Technical characteristics

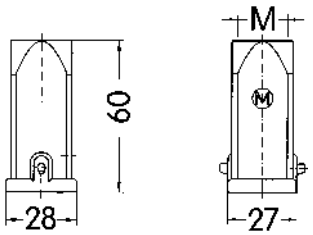
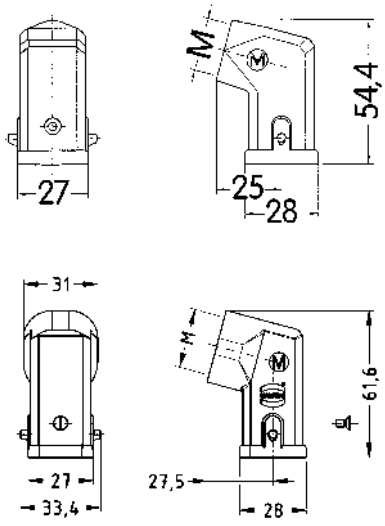
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | FPM, NBR |
| Colour (seal) | Black |
| Material (locking) | Stainless steel, Steel |
| Surface (locking) | Zinc plated |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

DNV GL

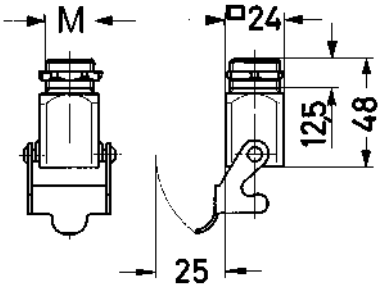
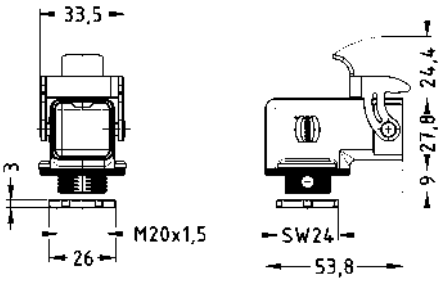
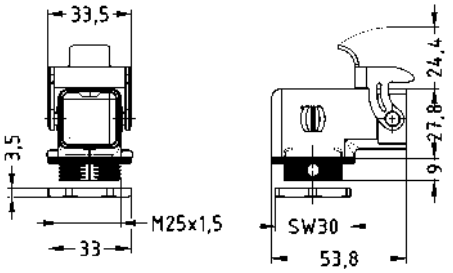
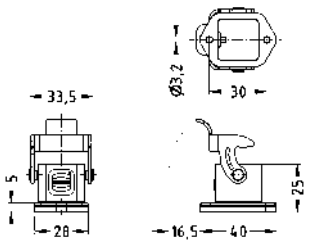
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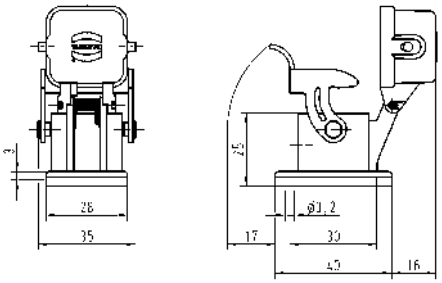
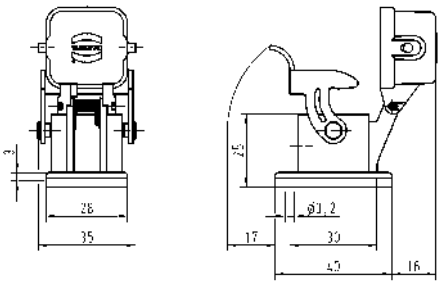
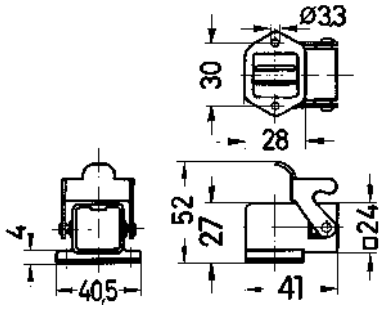
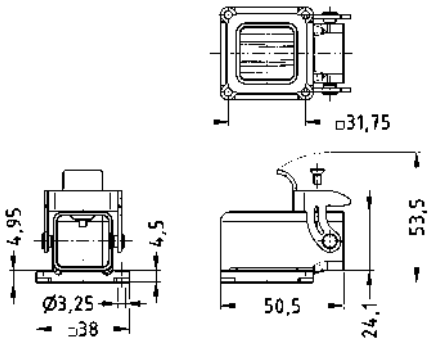
Hoods/housings for rough environments
Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw  | 1x M20<br>1x M25 | 19 37 003 1440<br>19 37 003 1445 |   |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw  | 1x M20<br>1x M25 | 19 37 003 1640<br>19 37 003 1645 |   |
| Han® M,<br>Hood,<br>for Han-Brid®,<br>With glued seal,<br>Side entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw  | 1x M25 | 19 37 003 1647 | |

# Han® 3 M hoods/housings

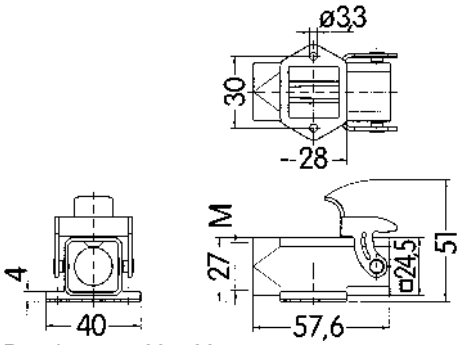
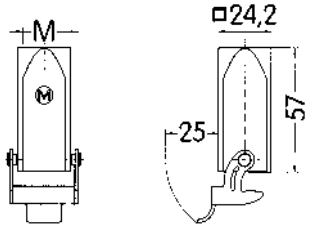
Size 3 A

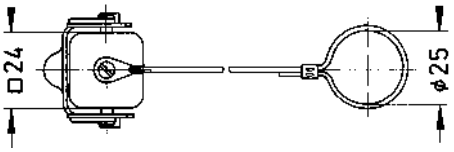
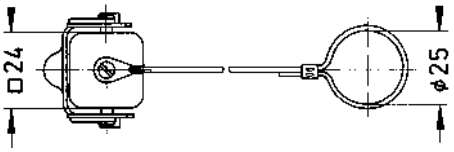
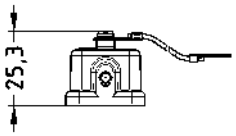
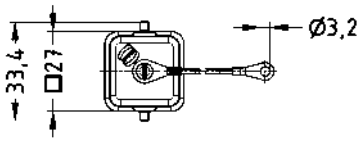
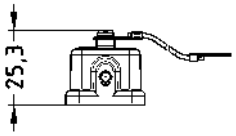
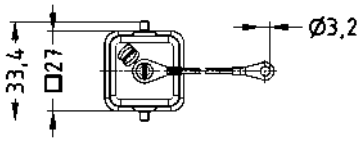
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Screw mounted housing,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 37 003 1150 |  |
| Han® M,<br>Screw mounted housing,<br>Angled,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 37 003 1160<br>19 37 003 1165 | <br> |
| Han® M,<br>Bulkhead mounted housing,<br>Straight,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | | 09 37 003 0301 | <br>Panel cut out 22 x 22 mm |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Bulkhead mounted housing,<br>Straight,<br>With metal cover,<br>With seal,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br><br>for male inserts | | 09 37 003 0305 |  |
| Han® M,<br>Bulkhead mounted housing,<br>Straight,<br>With metal cover,<br>With seal,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br><br>for female inserts | | 09 37 003 0306 |  |
| Han® M,<br>Bulkhead mounted housing,<br>Angled,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | | 09 37 003 0801 | <br>Panel cut out 22 x 22 mm |
| Han® M,<br>Bulkhead mounted housing,<br>Angled,<br>Square mounting flange,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | | 09 37 003 0811 |  |

# Han® 3 M hoods/housings

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Surface mounted housing,<br>With seal,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 37 003 1250 | <br>Panel cut out 22 x 22 mm |
| Han® M,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 37 003 1252 | |
| Han® M,<br>Cable to cable housing,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 37 003 1750<br>19 37 003 1755 |  |
| Han® M,<br>Panel feed through housing,<br>With seal,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 37 003 1120 | |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted female insert | | 09 37 003 5401 |  |
| Han® M,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted male insert | | 09 37 003 5402 |  |
| Han® M,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted female insert | | 09 37 003 5405 | <br> |
| Han® M,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted male insert | | 09 37 003 5406 | <br> |

## Features

- Hoods/housings for rough environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Locking lever made of high-quality stainless steel

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65, IP66, IP67 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | FPM |
| Material (locking) | Stainless steel, Polycarbonate (PC) |
| Colour (locking) | RAL 7037 (dust grey) |
| Material (accessories) | Polyamide (PA), Stainless steel |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

## Specifications and approvals

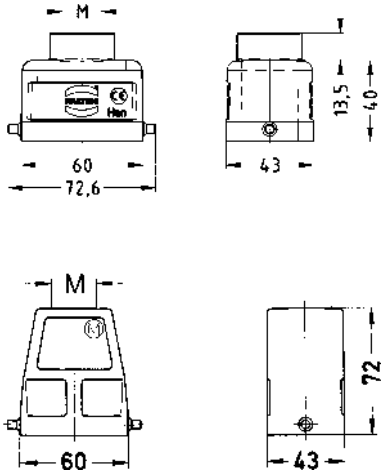
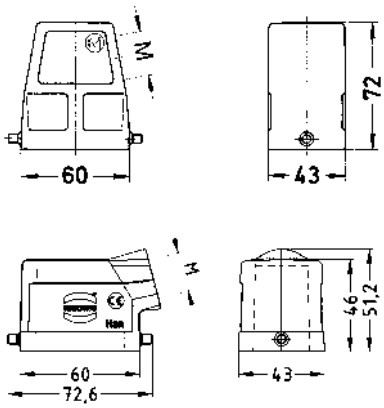
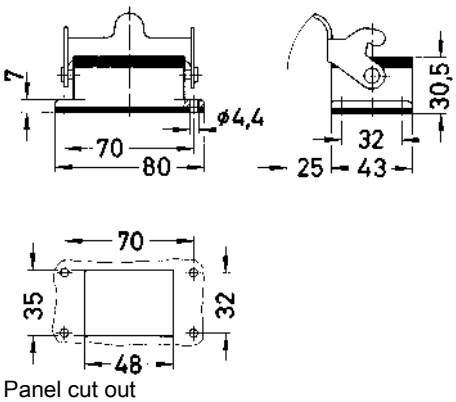
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DNV GL

CE

# Han® M hoods/housings

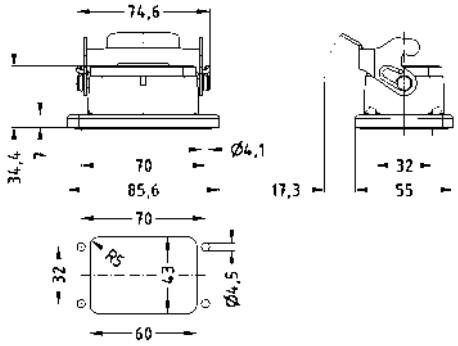
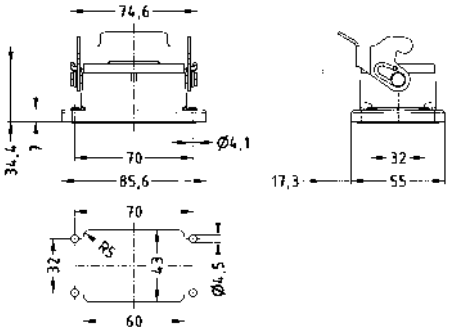
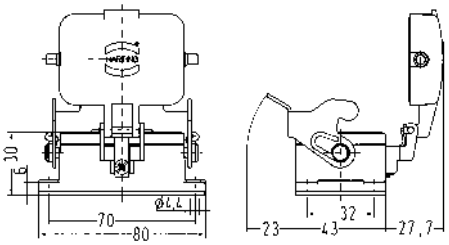
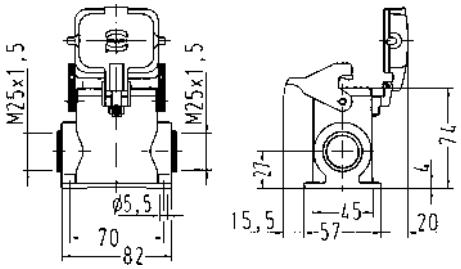
Size 6 B

Hoods/housings for rough environments
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32 | 19 37 006 1440 | 19 37 006 0445<br>19 37 006 0446<br>19 37 006 0447 |   |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32 | 19 37 006 1540 | 19 37 006 0545<br>19 37 006 0546<br>19 37 006 0547 |   |
| Han® M,<br>Bulkhead mounted housing,<br>IP65  | | 09 37 006 0301 | |   Panel cut out |

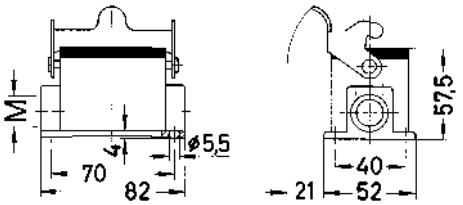
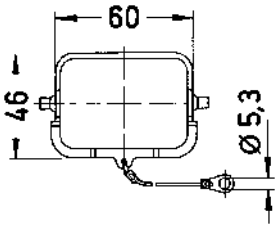
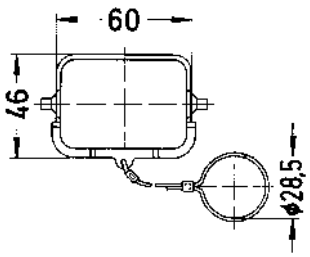
# Han® M hoods/housings

Size 6 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 37 006 0391 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br> | | 09 37 006 0392 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65<br> | | 09 37 006 0318 | |  |
| Han® M,<br>Surface mounted housing,<br>With thermo-plastic cover,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M25 | | 19 37 006 0296 |  |

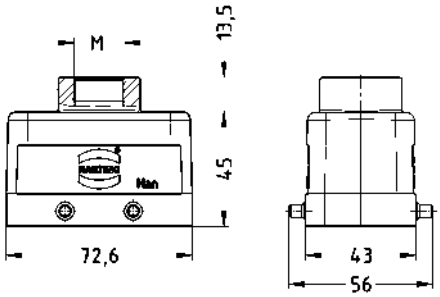
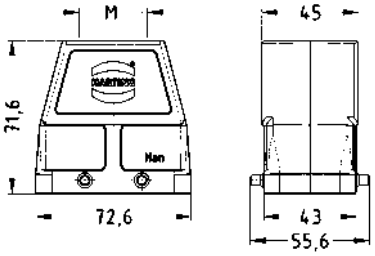
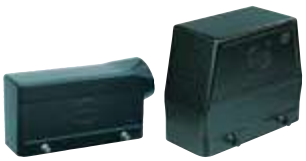
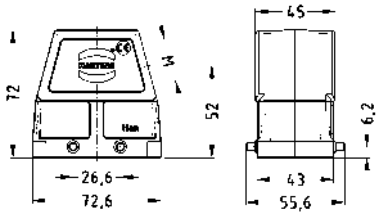
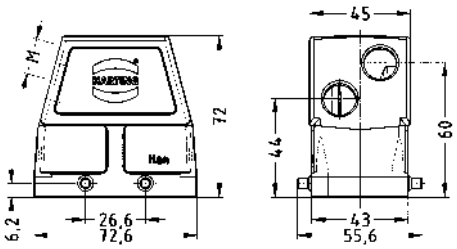
# Han® M hoods/housings

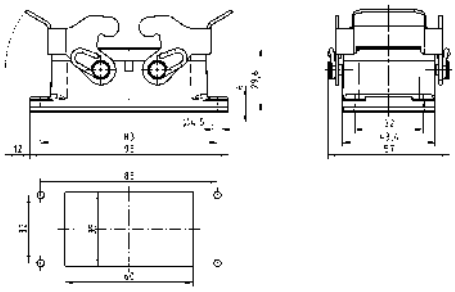
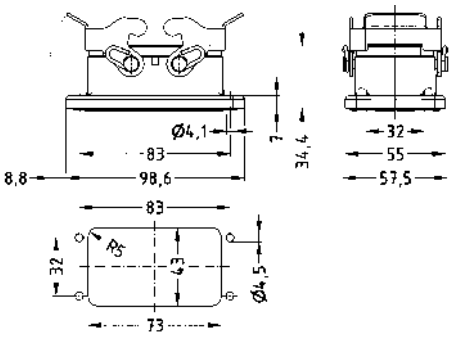
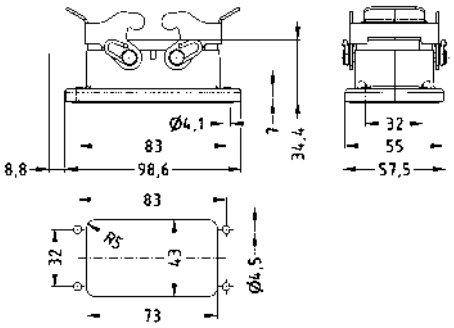
Size 6 B

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Surface mounted housing,<br>Side entry,<br>IP65<br> | 2x M20 | 19 37 006 1290 | |  |
| Han® M,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>IP65<br> | | 09 37 006 5405 | 09 37 006 5405 |  |
| Han® M,<br>Protection cover,<br>for cable to cable housing,<br>Metal,<br>IP65<br> | | 09 37 006 5407 | 09 37 006 5407 |  |

Hoods/housings for rough environments
Double locking lever

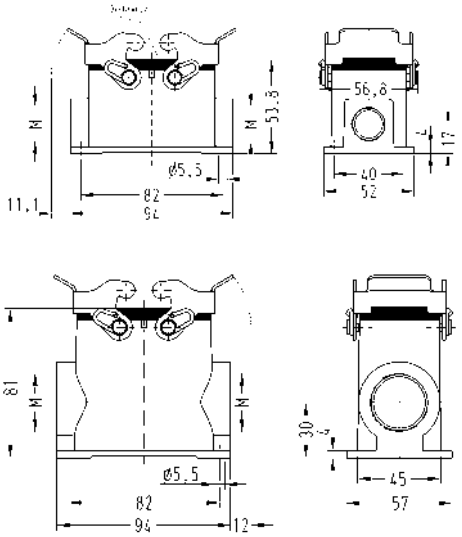
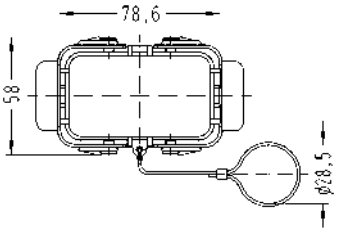
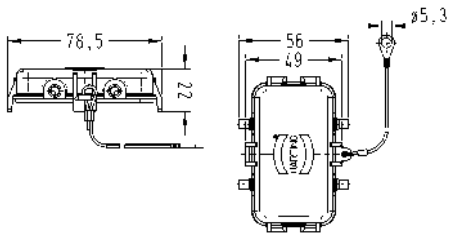


| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32<br>2x M20 | 19 37 010 1420 | 19 37 010 0426<br>19 37 010 0427<br>19 37 010 0465 |     |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67  | 1x M20<br>1x M25<br>1x M32<br>1x M40<br>2x M16 | 19 37 010 1520 | 19 37 010 0526<br>19 37 010 0527<br>19 37 010 0528<br>19 37 010 0564 |     |

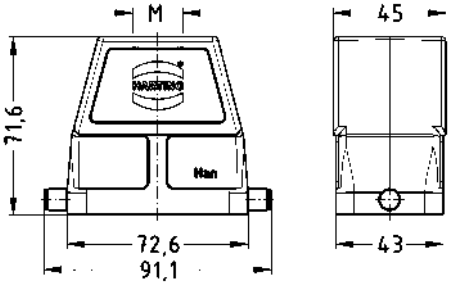
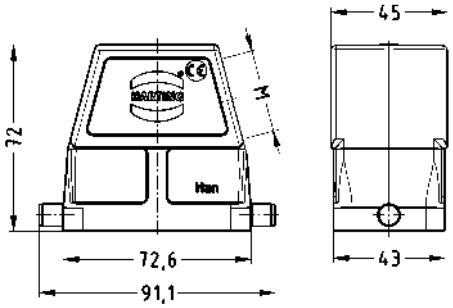
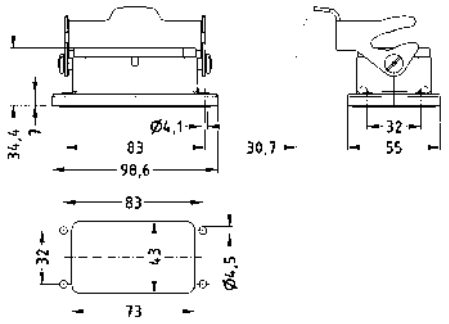
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 37 010 0301 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 37 010 0391 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br> | | 09 37 010 0392 | | <br>Panel cut out |

# Han® M hoods/housings

Size 10 B

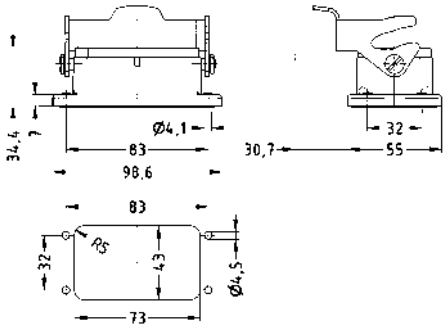
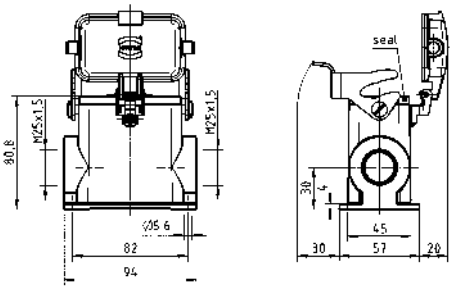
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Surface mounted housing,<br>Side entry,<br>IP65<br> | 2x M20<br>2x M32 | 19 37 010 1270 | 19 37 010 0272 |  |
| Han® M,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 37 010 5403 | 09 37 010 5403 |  |
| Han® M,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 37 010 5405 | 09 37 010 5405 |  |

Hoods/housings for rough environments
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M20<br>1x M32 | | 19 37 010 0445<br>19 37 010 0447 |  |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M32<br>1x M40 | | 19 37 010 0547<br>19 37 010 0548 |  |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 37 010 0397 | | <br>Panel cut out |

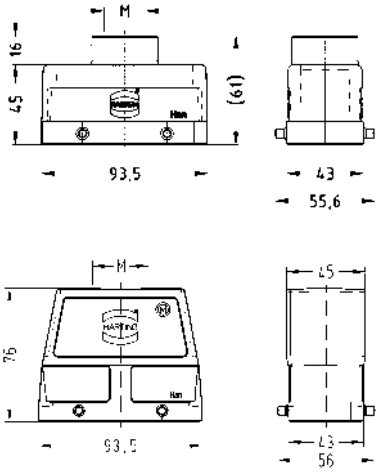
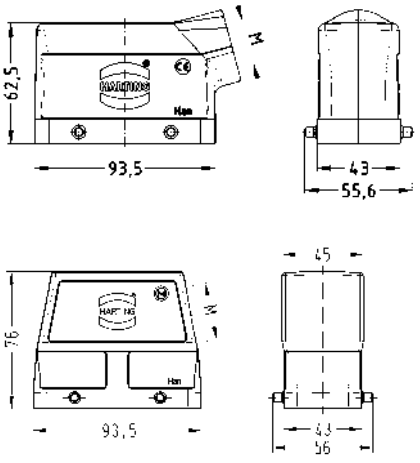
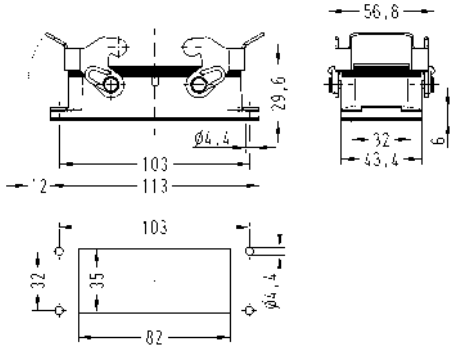
# Han® M hoods/housings

Size 10 B

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br> | | 09 37 010 0398 | | <br>Panel cut out |
| Han® M,<br>Surface mounted housing,<br>Side entry,<br>IP65<br> | 2x M25 | | 19 37 010 0296 |  |

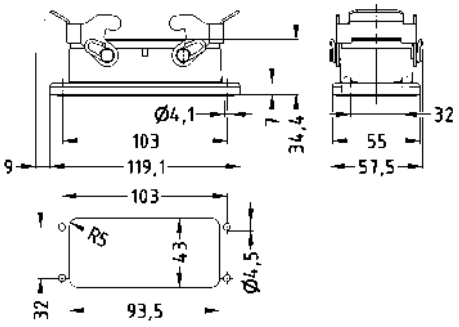
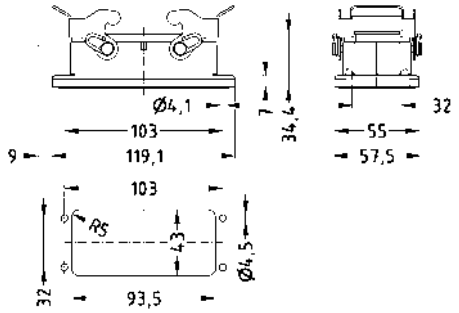
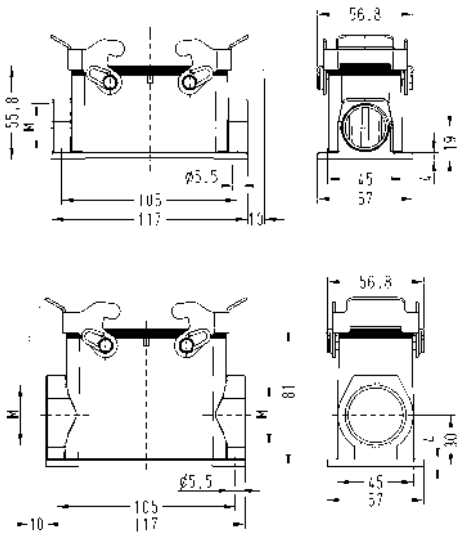
Hoods/housings for rough environments
Double locking lever

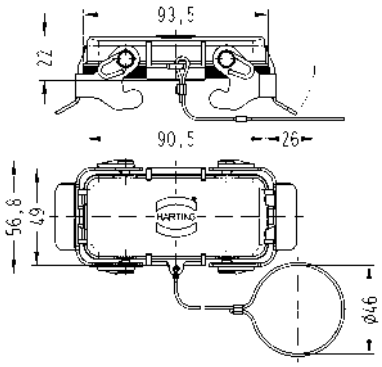
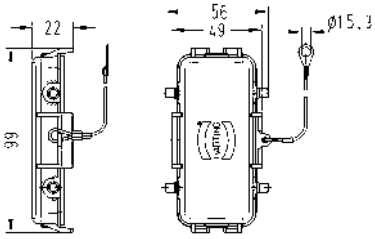


| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40 | 19 37 016 1421 | 19 37 016 0427<br>19 37 016 0428 |  |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40 | 19 37 016 1521 | 19 37 016 0527<br>19 37 016 0528 |  |
| Han® M,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 37 016 0301 | | <br>Panel cut out |

# Han® M hoods/housings

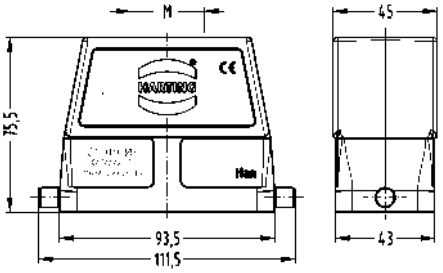
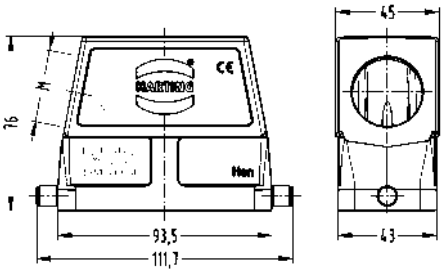
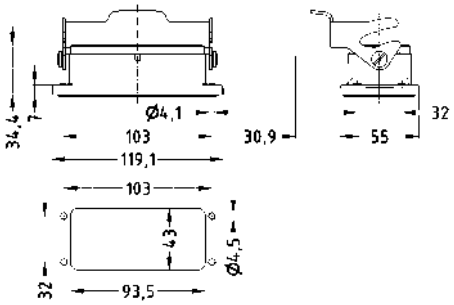
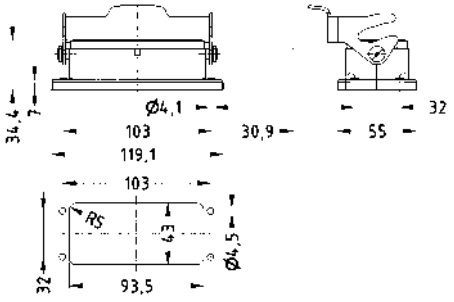
Size 16 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 37 016 0391 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br> | | 09 37 016 0392 | | <br>Panel cut out |
| Han® M,<br>Surface mounted housing,<br>Side entry,<br>IP65<br> | 1x M25<br>2x M25<br>2x M32<br>2x M40 | 19 37 016 1231<br>19 37 016 1271 | 19 37 016 0272<br>19 37 016 0273 |  |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 37 016 5402 | 09 37 016 5402 |  |
| Han® M,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 37 016 5405 | 09 37 016 5405 |  |

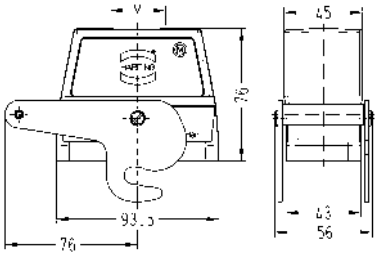
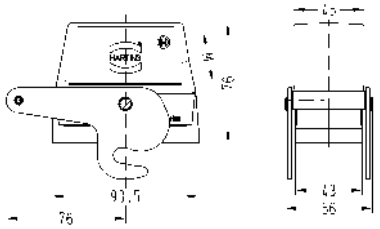
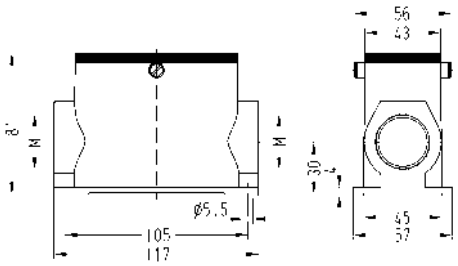
Hoods/housings for rough environments
Single locking lever



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M32 | | 19 37 016 0447 |  |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M32<br>1x M40 | | 19 37 016 0547<br>19 37 016 0548 |  |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 37 016 0397 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br> | | 09 37 016 0398 | | <br>Panel cut out |

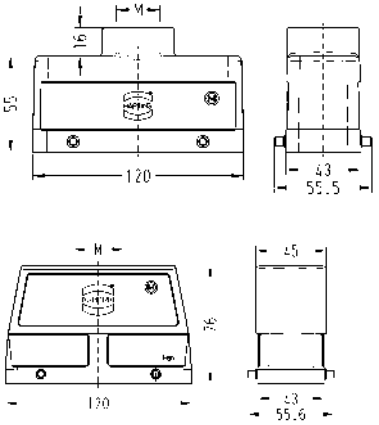
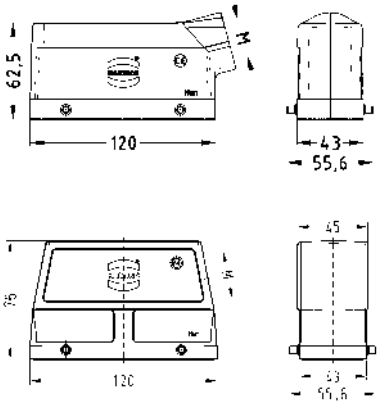
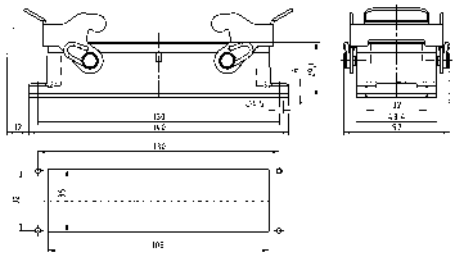
Hoods/housings for rough environments
Central locking lever (on the hood)

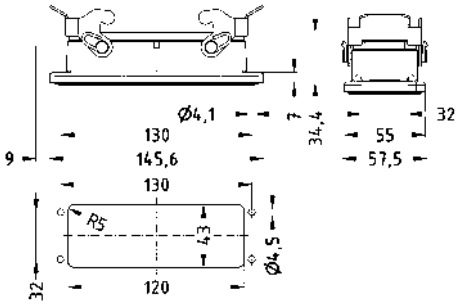
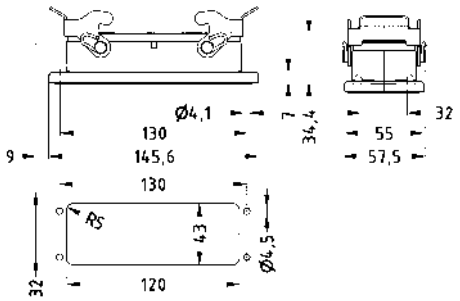
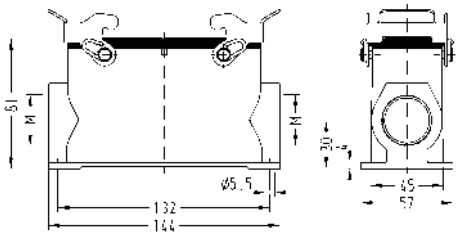
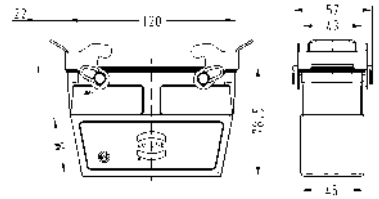
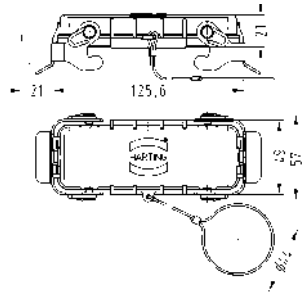


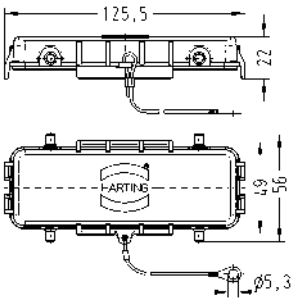
| Identification | Cable entry | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65  | 1x M32 | 19 37 016 0487 |  |
| Han® M,<br>Hood,<br>Side entry,<br>IP65  | 1x M32 | 19 37 016 0587 |  |
| Han® M,<br>Surface mounted housing,<br>Side entry,<br>IP65  | 2x M32 | 19 37 016 0282 |  |

Hoods/housings for rough environments
Double locking lever

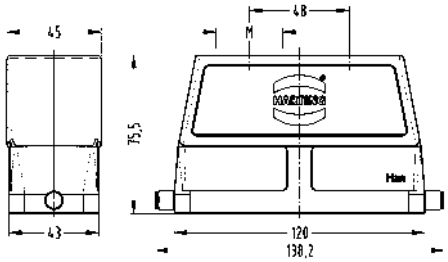
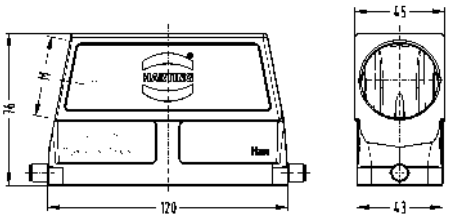
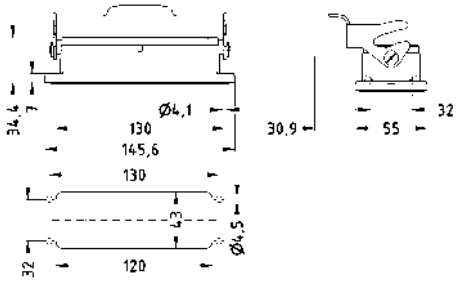
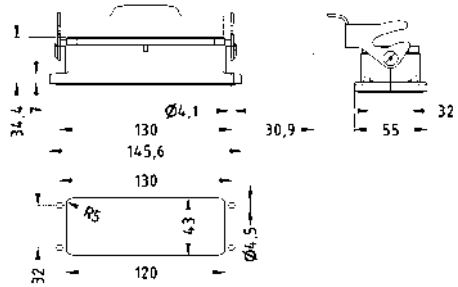


| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40<br>2x M25<br>2x M32 | 19 37 024 1421 | 19 37 024 0427<br>19 37 024 0428<br>19 37 024 0466<br>19 37 024 0467 |  |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M25<br>1x M32<br>1x M40 | 19 37 024 1521 | 19 37 024 0527<br>19 37 024 0528 |  |
| Han® M,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 37 024 0301 | | <br>Panel cut out |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br>Pack contents:<br>Mounting frame is included with-in the delivery<br> | | 09 37 024 0391 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br> | | 09 37 024 0392 | | <br>Panel cut out |
| Han® M,<br>Surface mounted housing,<br>Side entry,<br>IP65<br> | 2x M32<br>2x M40 | | 19 37 024 0272<br>19 37 024 0273 |  |
| Han® M,<br>Cable to cable housing,<br>Side entry,<br>IP65<br> | 1x M40 | | 19 37 024 0733 |  |
| Han® M,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 37 024 5402 | 09 37 024 5402 |  |

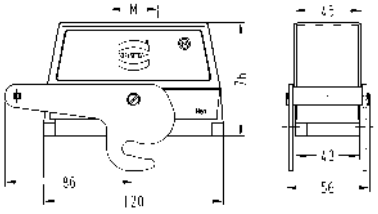
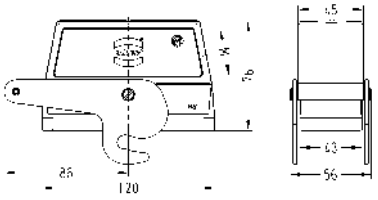
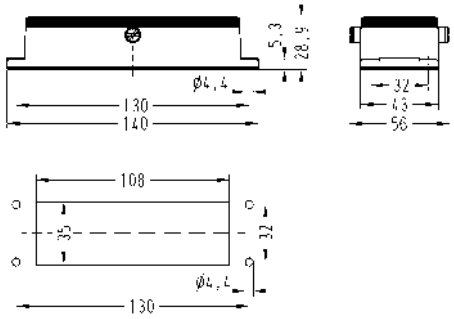
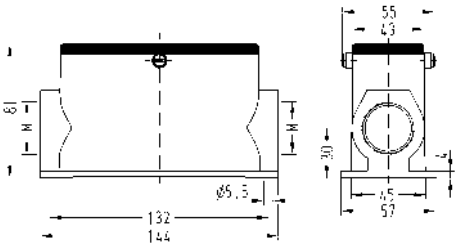
| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65<br> | | 09 37 024 5405 | 09 37 024 5405 |  |

Hoods/housings for rough environments
Single locking lever

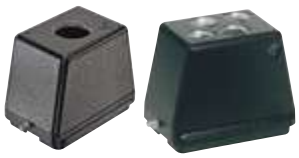
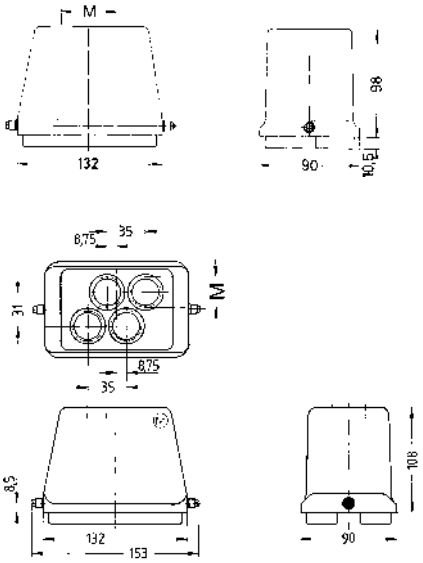
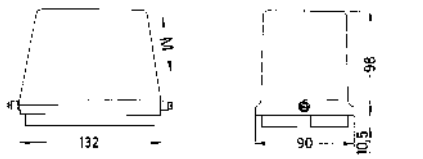
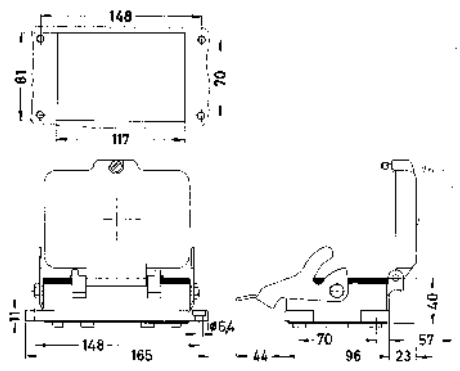
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65,<br>IP66,<br>IP67<br> | 2x M32 | | 19 37 024 0457 |  |
| Han® M,<br>Hood,<br>Side entry,<br>IP65,<br>IP66,<br>IP67<br> | 1x M40 | | 19 37 024 0548 |  |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 37 024 0397 | | <br>Panel cut out |
| Han® M,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP66<br> | | 09 37 024 0398 | | <br>Panel cut out |

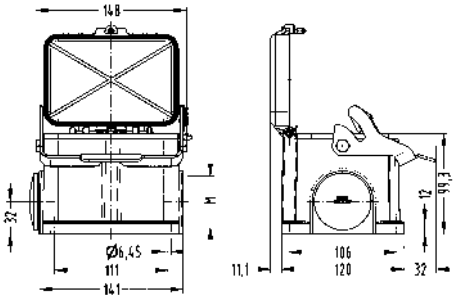
Hoods/housings for rough environments
Central locking lever (on the hood)



| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M, Hood, Top entry, IP65  | 1x M32 | | 19 37 024 0487 |  |
| Han® M, Hood, Side entry, IP65  | 1x M32 | | 19 37 024 0587 |  |
| Han® M, Bulkhead mounted housing, IP65  | | 09 37 024 0381 | |  Panel cut out |
| Han® M, Surface mounted housing, Side entry, IP65  | 2x M32 | | 19 37 024 0282 |  |

Hoods/housings for rough environments
Single locking lever

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M40<br>1x M50<br>4x M25 | | 19 37 048 0448<br>19 37 048 0449<br>19 37 048 0401 |  |
| Han® M,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M40<br>1x M50 | | 19 37 048 0548<br>19 37 048 0549 |  |
| Han® M,<br>Bulkhead mounted housing,<br>With thermo-plastic cover,<br>IP65<br> | | 09 37 048 0301 | |  |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® M,<br>Surface mounted housing,<br>With metal cover,<br>Side entry,<br>IP65<br>Pack contents:<br>Blind way for one cable entry<br> | 2x M50 | | 19 37 048 0299 |  |

# Han® 3 EMC hoods/housings



## Features

- Hoods/Housings for higher EMC requirements
- Continuous shield connection using conductive surface and conductive seal
- Metal hoods / housings with high shielding efficiency
- Field of application: for sensitive interconnections that have to be shielded against electrical, magnetic or electro-magnetic interferences
- Distinguishing feature: Electrically conductive surface, internal seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP44, IP65 / IP67, with seal screw 09 20 000 9918 |
| Type rating acc. to UL 50 / UL 50E | 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | PTFE, NBR |
| Material (locking) | Steel |
| Surface (locking) | Zinc plated |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

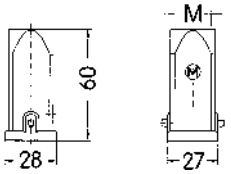
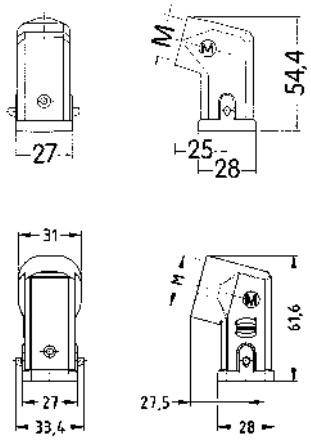
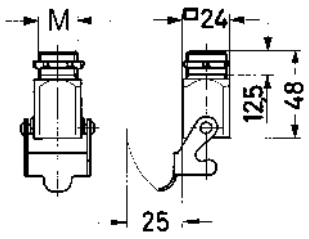
DNV GL
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

CE

# Han® 3 EMC hoods/housings

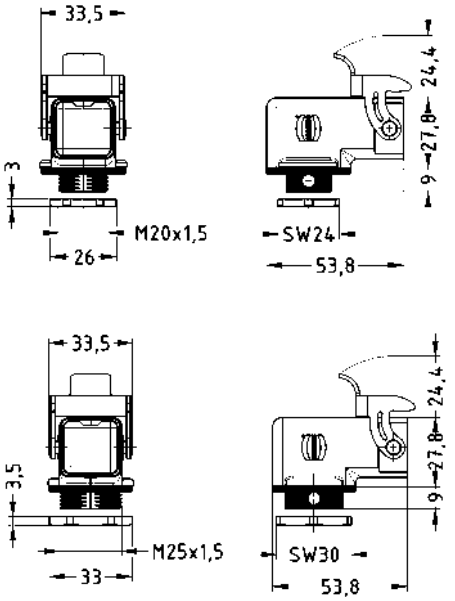
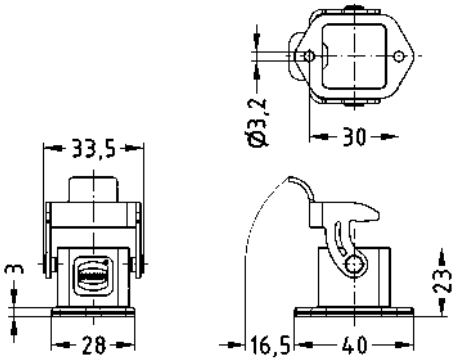
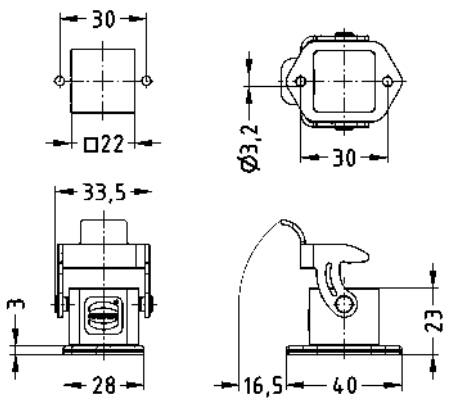
Size 3 A

Hoods/Housings for higher EMC requirements
Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Hood,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20<br>1x M25 | 19 62 003 1440<br>19 62 003 1445 |  |
| Han® EMC,<br>Hood,<br>Side entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20<br>1x M25 | 19 62 003 1640<br>19 62 003 1645 |  |
| Han® EMC,<br>Screw mounted housing,<br>Straight,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | 19 62 003 1150 |  |

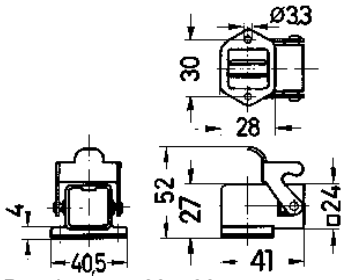
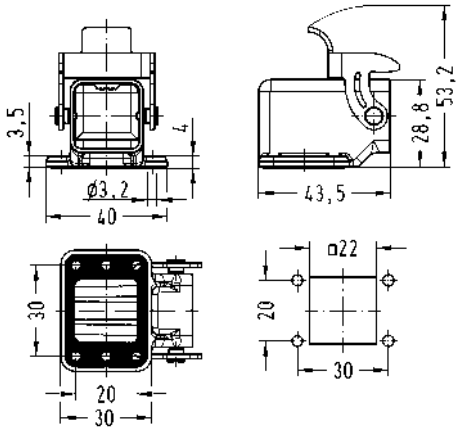
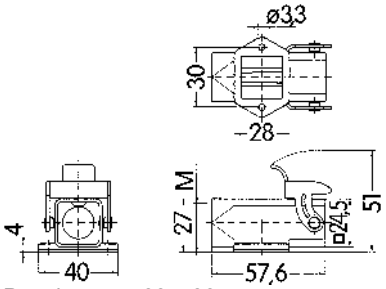
# Han® 3 EMC hoods/housings

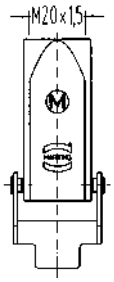
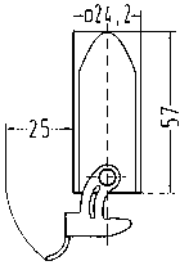
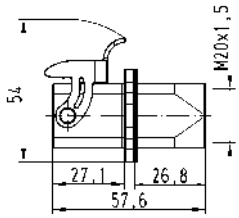
Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Screw mounted housing,<br>Angled,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | 1x M20<br>1x M25 | 19 62 003 1160<br>19 62 003 1165 |  |
| Han® EMC,<br>Bulkhead mounted housing,<br>Straight,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | | 09 62 003 0301 | <br>Panel cut out 22 x 22 mm |
| Han® EMC,<br>Bulkhead mounted housing,<br>Straight,<br>for PCB termination with Han® Q 5/0,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918  | | 09 62 003 0304 |  |

# Han® 3 EMC hoods/housings

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Bulkhead mounted housing,<br>With metal cover,<br>With seal (NBR),<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br><br>for female inserts | | 09 62 003 0306 | |
| Han® EMC,<br>Bulkhead mounted housing,<br>Angled,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | 09 62 003 0801 | <br>Panel cut out 22 x 22 mm |
| Han® EMC,<br>Bulkhead mounted housing,<br>Angled,<br>4 fixing screws,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | | 09 62 003 0810 |  |
| Han® EMC,<br>Surface mounted housing,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | 19 62 003 1250 | <br>Panel cut out 22 x 22 mm |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Surface mounted housing,<br>Bottom closed,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918 | 1x M20 | 19 62 003 1252 | |
| Han® EMC,<br>Cable to cable housing,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20<br>1x M25 | 19 62 003 1750<br>19 62 003 1755 | <br> |
| Han® EMC,<br>Panel feed through housing,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | 19 62 003 1120 | <br>Panel cut out |
| Han® EMC,<br>Panel feed through housing,<br>Fixing hole for M4 screw,<br>Top entry,<br>IP44,<br>IP65 / IP67 with seal screw 09 20 000 9918<br> | 1x M20 | 19 62 003 1121 | |

# Han® EMC hoods/housings

## Features

- Hoods/Housings for higher EMC requirements
- Continuous shield connection using conductive surface
- Metal hoods / housings with high shielding efficiency
- Field of application: for sensitive interconnections that have to be shielded against electrical, magnetic or electro-magnetic interferences
- Distinguishing feature: Electrically conductive surface, internal seal

## Technical characteristics

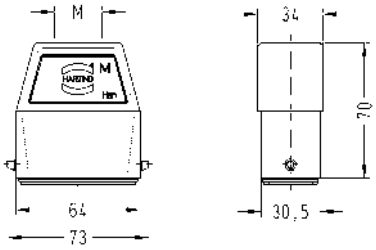
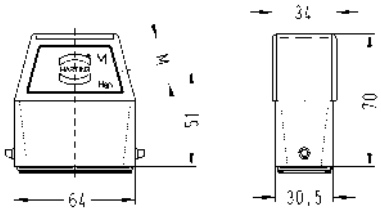
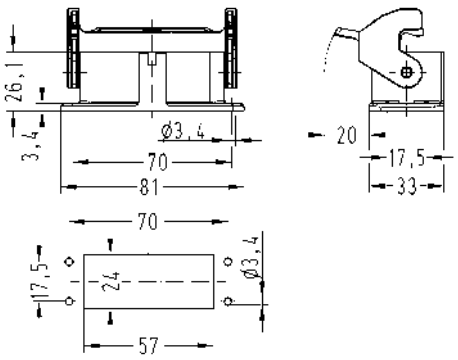
| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel |
| Colour (locking) | RAL 7037 (dust grey) |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

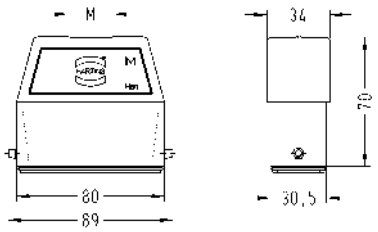
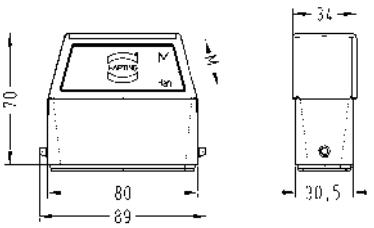
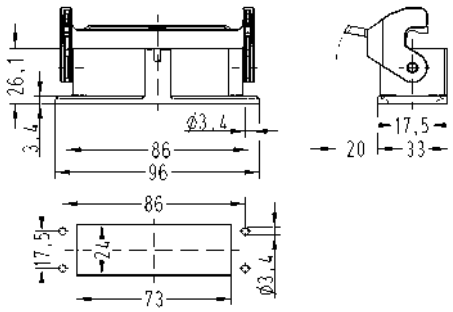
Hoods/Housings for higher EMC requirements
Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Hood,<br>Top entry,<br>IP65  | 1x M25 | 19 62 015 0446 |   |
| Han® EMC,<br>Hood,<br>Side entry,<br>IP65  | 1x M25 | 19 62 015 0546 |   |
| Han® EMC,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65  | | 09 62 015 0301 |   Panel cut out |

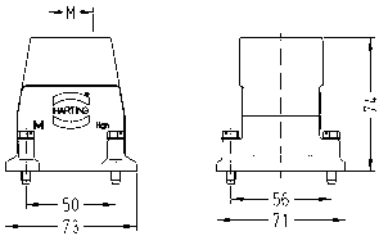
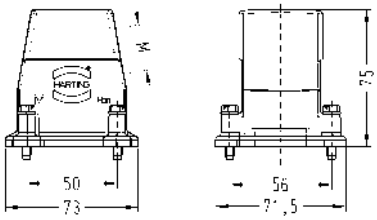
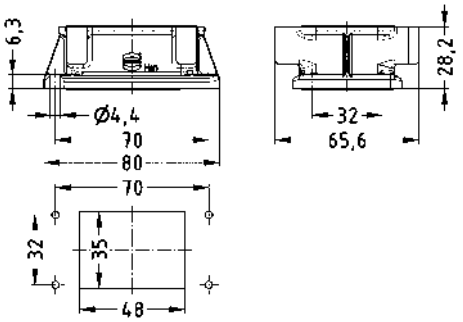
# Han® EMC hoods/housings

Size 16 A

Hoods/Housings for higher EMC requirements
Single locking lever

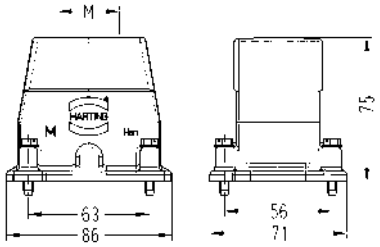
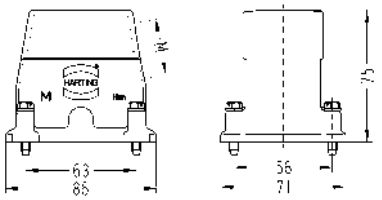
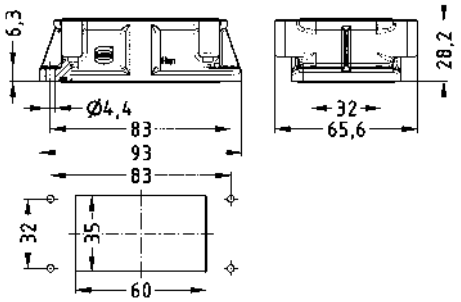
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M25 | 19 62 025 0446 |  |
| Han® EMC,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M25 | 19 62 025 0546 |  |
| Han® EMC,<br>Bulkhead mounted housing,<br>Han-Easy Lock®,<br>IP65<br> | | 09 62 025 0301 | <br>Panel cut out |

Hoods/Housings for higher EMC requirements
Screw locking

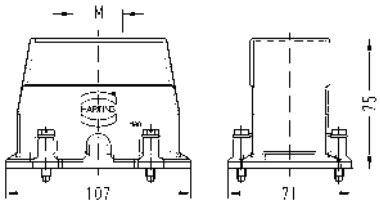
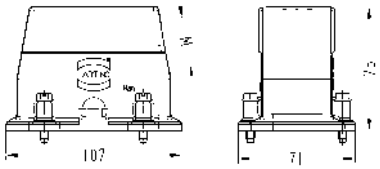
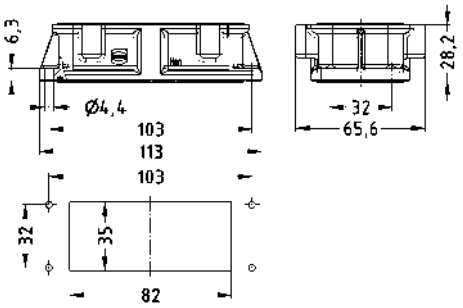
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Hood,<br>Top entry,<br>IP65  | 1x M25<br>1x M32 | 19 62 006 0441<br>19 62 006 0442 |   |
| Han® EMC,<br>Hood,<br>Side entry,<br>IP65  | 1x M25<br>1x M32 | 19 62 006 0541<br>19 62 006 0542 |   |
| Han® EMC,<br>Bulkhead mounted housing,<br>IP65  | | 09 62 006 0301 |   Panel cut out |

Hoods/Housings for higher EMC requirements
Screw locking



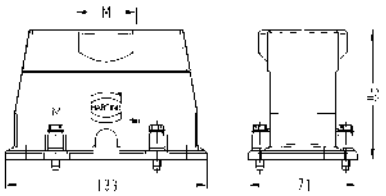
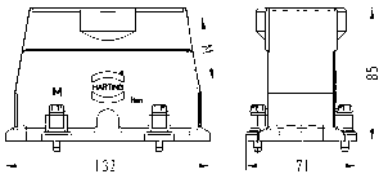
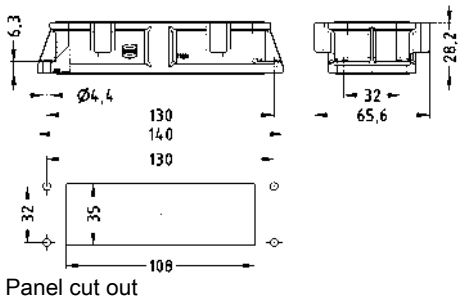
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC, Hood, Top entry, IP65  | 1x M32 | 19 62 010 0442 |   |
| Han® EMC, Hood, Side entry, IP65  | 1x M32<br>1x M40 | 19 62 010 0542<br>19 62 010 0543 |   |
| Han® EMC, Bulkhead mounted housing, IP65  | | 09 62 010 0301 |   Panel cut out |

Hoods/Housings for higher EMC requirements
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M32<br>1x M40 | 19 62 040 0442<br>19 62 040 0443 |  |
| Han® EMC,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M32<br>1x M40 | 19 62 040 0542<br>19 62 040 0543 |  |
| Han® EMC,<br>Bulkhead mounted housing,<br>IP65<br> | | 09 62 040 0301 | <br>Panel cut out |

Hoods/Housings for higher EMC requirements
Screw locking



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® EMC, Hood, Top entry, IP65  | 1x M40 | 19 62 064 0443 |  |
| Han® EMC, Hood, Side entry, IP65  | 1x M40 | 19 62 064 0543 |  |
| Han® EMC, Bulkhead mounted housing, IP65  | | 09 62 064 0301 |  Panel cut out |

# Han® EMC/B hoods/housings



## Features

- Hoods/Housings for higher EMC requirements
- Continuous shield connection using conductive surface
- Metal hoods / housings with high shielding efficiency
- Field of application: for sensitive interconnections that have to be shielded against electrical, magnetic or electro-magnetic interferences
- Locking levers: Han-Easy Lock®
- Distinguishing feature: Electrically conductive surface, internal seal
- for front and rear wall mounting

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C, -40 ... +200 °C With Han® High Temp components |
| Degree of protection acc. to IEC 60529 | IP65, IP66 |
| Type rating acc. to UL 50 / UL 50E | 4, 12 |
| Material (hood/housing) | Aluminium die-cast |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | NBR |
| Material (locking) | Polycarbonate (PC), Stainless steel, Steel, zinc plated |
| Colour (locking) | RAL 7037 (dust grey) |
| Material (accessories) | Polyamide (PA), Stainless steel |
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

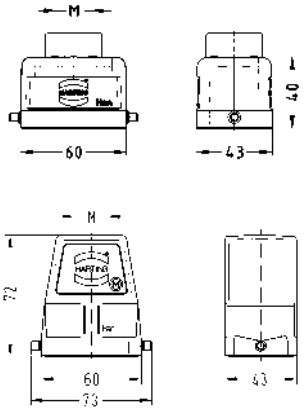
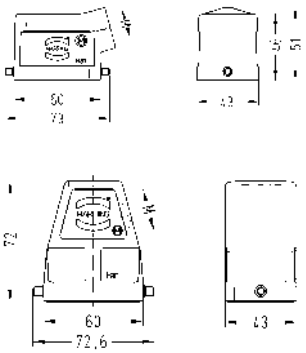
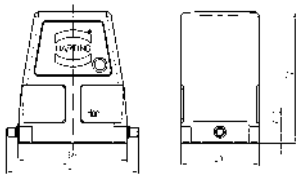
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CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

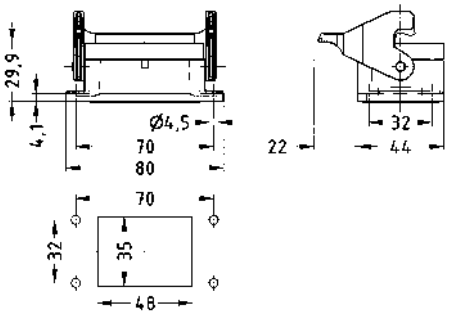
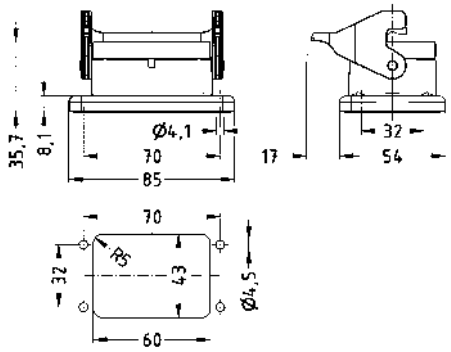
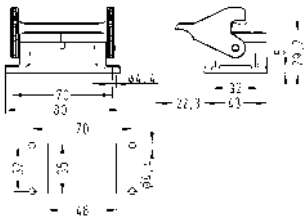
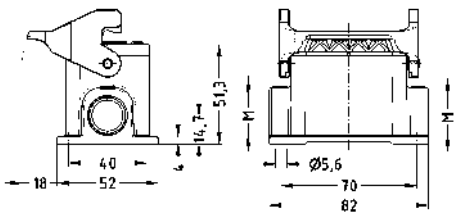
CE

# Han® EMC/B hoods/housings

Size 6 B

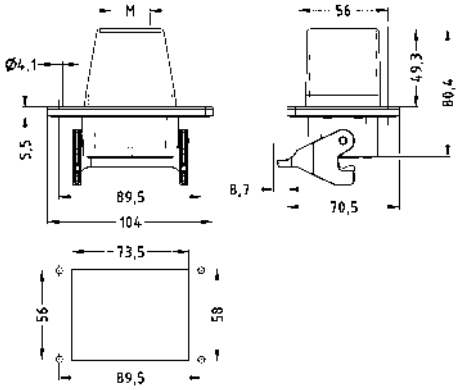
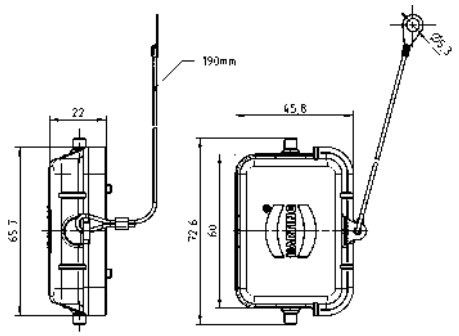
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 62 806 1440 | 19 62 806 0446<br>19 62 806 0447 |  |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 62 806 1540<br>19 62 806 1541 | 19 62 806 0546<br>19 62 806 0547 |  |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Without cable entry,<br>IP65<br> | | | 09 62 806 0801 |  |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 806 0392 | | |

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Bulkhead mounted housing,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 806 2301 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 62 806 0315 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>Han-Easy Lock®,<br>IP65<br> | | 09 62 806 0301 | | <br>Panel cut out |
| Han® EMC/B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M20 | 19 62 806 1290 | |  |

# Han® EMC/B hoods/housings

Size 6 B

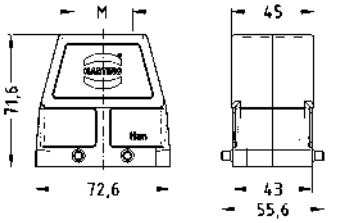
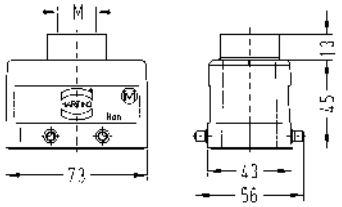
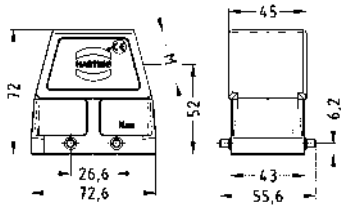
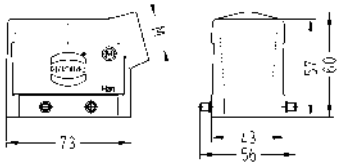
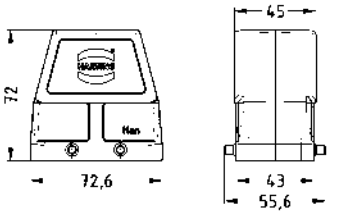
| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | | 19 62 806 1121<br>19 62 806 1122 | <br>Panel cut out |
| Han® EMC/B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br><br>Not suitable for housings with external seals. | | 09 62 806 5425 | 09 62 806 5425 |  |

Hoods/Housings for higher EMC requirements
Single locking lever (on the hood)

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Hood,<br>Top entry,<br>Han-Easy Lock®,<br>IP65  | 1x M32 | | 19 62 806 0757 | |
| Han® EMC/B,<br>Hood,<br>Han-Easy Lock®,<br>IP65  | 1x M32 | | 19 62 806 0557 | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>IP65  | | 09 62 806 0303 | | |

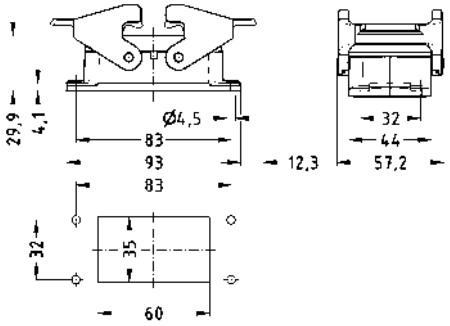
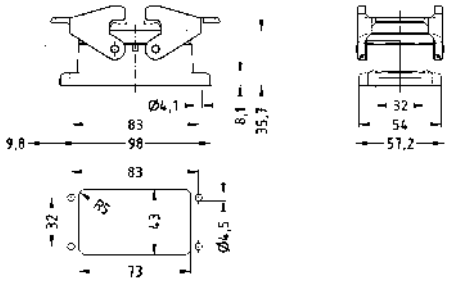
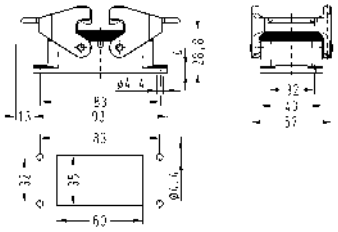
Double locking lever



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32<br>1x M40 | 19 62 810 1420<br>19 62 810 1421 | 19 62 810 0426<br>19 62 810 0427<br>19 62 810 0428 |  |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 62 810 1520 | 19 62 810 0526<br>19 62 810 0527 |  |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Without cable entry,<br>IP65<br> | | | 09 62 810 0801 |  |

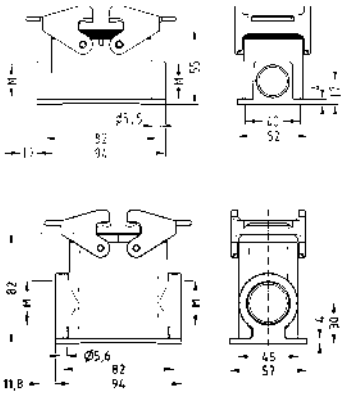
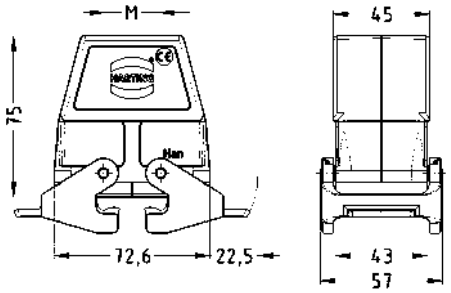
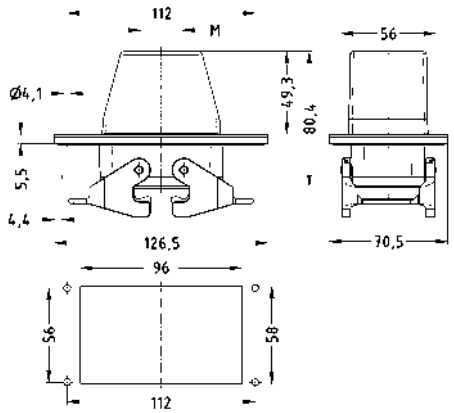
# Han® EMC/B hoods/housings

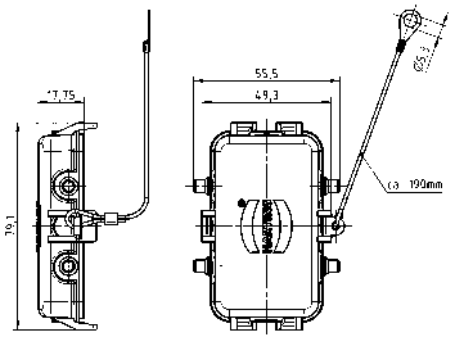
Size 10 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 810 0392 | | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 810 2301 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 62 810 0315 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>Han-Easy Lock®,<br>IP65<br> | | 09 62 810 0301 | | <br>Panel cut out |

# Han® EMC/B hoods/housings

Size 10 B

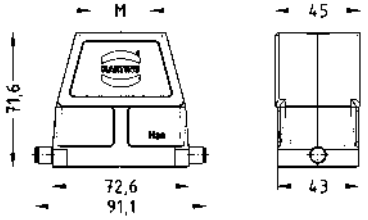
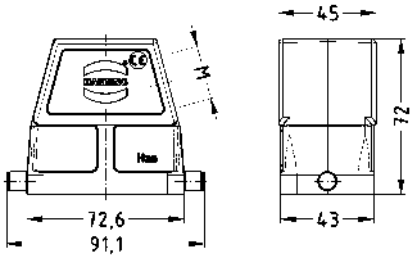
| Identification | Cable entry | Part number Low construc-tion | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M25<br>2x M32 | 19 62 810 1271 | 19 62 810 0272 |  |
| Han® EMC/B,<br>Cable to cable housing,<br>Top entry,<br>IP65 | 2x M20 | | 19 62 810 0765 ML | |
| Han® EMC/B,<br>Cable to cable housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | | 19 62 810 0766<br>19 62 810 0757 |  |
| Han® EMC/B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M25<br>1x M32 | | 19 62 810 1121<br>19 62 810 1122 | <br>Panel cut out |

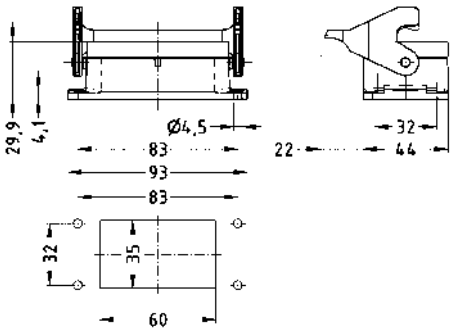
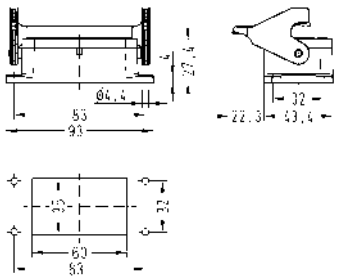
| Identification | Cable entry | Part number Low construc-tion | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br><br>Not suitable for housings with external seals. | | 09 62 810 5425 | 09 62 810 5425 |  |

# Han® EMC/B hoods/housings

Size 10 B

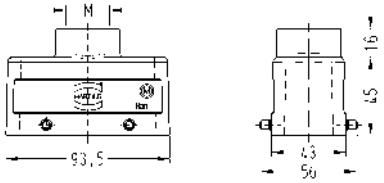
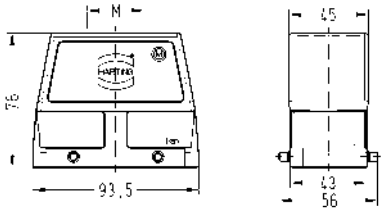
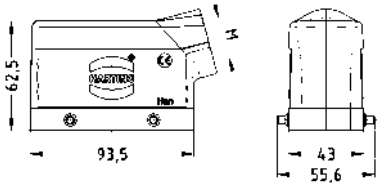
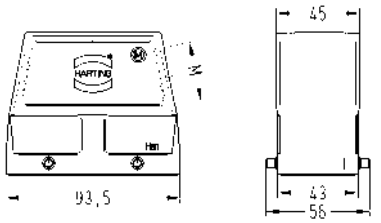
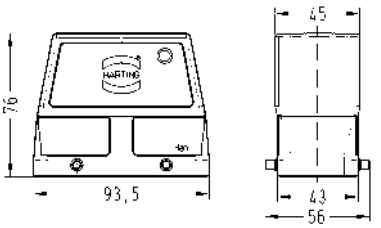
Hoods/Housings for higher EMC requirements
Single locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M25<br>1x M32 | | 19 62 810 0446<br>19 62 810 0447 |  |
| Han® EMC/B,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M25<br>1x M32 | | 19 62 810 0546<br>19 62 810 0547 |  |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 62 810 0397 | | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 810 0398 | | |

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Bulkhead mounted housing,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 810 2305 | | <br><br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>Han-Easy Lock®,<br>IP65<br> | | 09 62 810 0305 | | <br><br>Panel cut out |

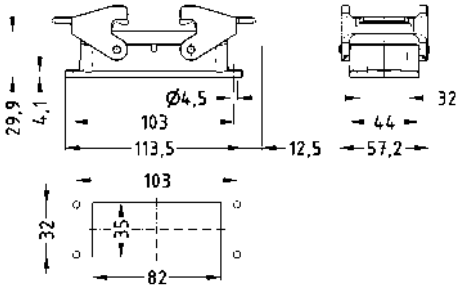
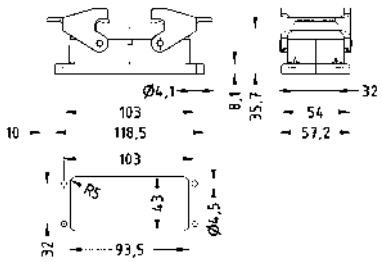
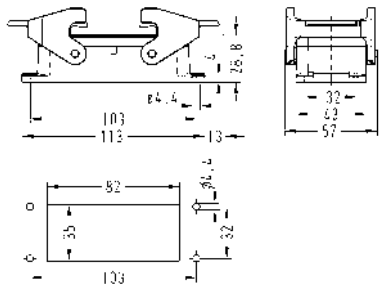
Double locking lever



| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M25<br>1x M32<br>1x M40 | 19 62 816 1421 | 19 62 816 0427<br>19 62 816 0428 | <br> |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M25<br>1x M32<br>1x M40 | 19 62 816 1521 | 19 62 816 0527<br>19 62 816 0528 | <br> |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Without cable entry,<br>IP65<br> | | | 09 62 816 0801 |  |

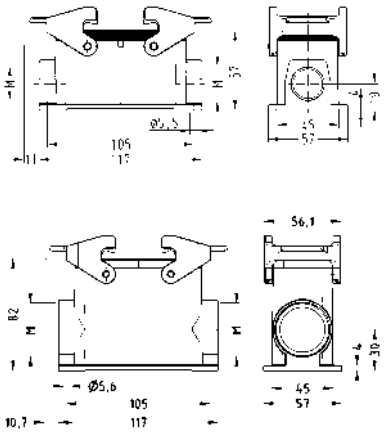
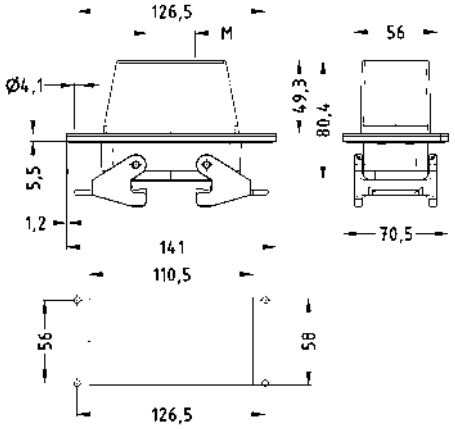
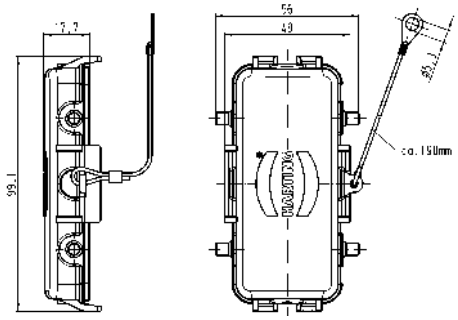
# Han® EMC/B hoods/housings

Size 16 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Bulkhead mounted housing,<br>IP65<br> | | | | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 816 0392 | | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | | 09 62 816 2301 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 62 816 0315 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>Han-Easy Lock®,<br>IP65<br> | | 09 62 816 0301 | | <br>Panel cut out |

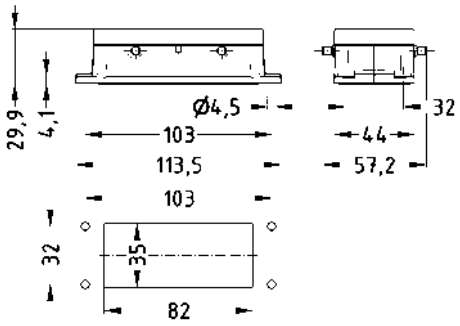
# Han® EMC/B hoods/housings

Size 16 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M25<br>2x M40 | 19 62 816 1271 | 19 62 816 0273 |  |
| Han® EMC/B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32<br>1x M40 | | 19 62 816 1121<br>19 62 816 1122 | <br>Panel cut out |
| Han® EMC/B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br><br>Not suitable for housings with external seals. | | 09 62 816 5425 | 09 62 816 5425 |  |

Hoods/Housings for higher EMC requirements
Double locking lever (on the hood)



| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Hood,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M40 | | 19 62 816 0538 | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>External seal,<br>IP66<br> | | 09 62 816 2303 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>IP65<br> | | 09 62 816 0303 | | |

# Han® EMC/B hoods/housings

Size 16 B

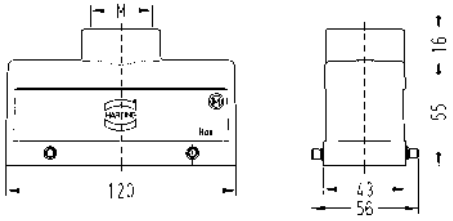
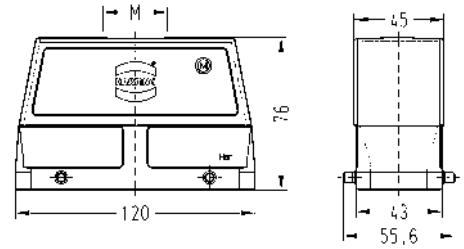
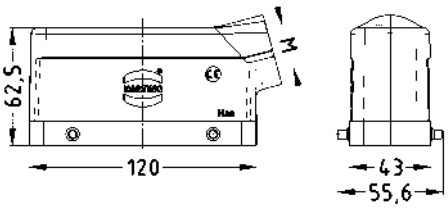
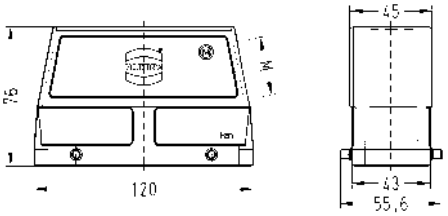
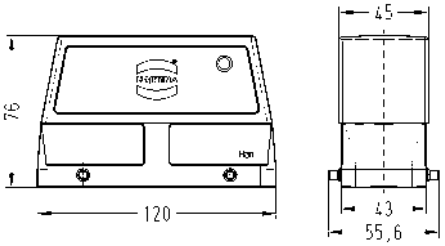
Hoods/Housings for higher EMC requirements
Single locking lever

| Identification | Part number Low construc-tion | Drawing (dimensions in mm) |
|---|---|---|
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery<br> | 09 62 816 0397 | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br> | 09 62 816 0398 | |

# Han® EMC/B hoods/housings

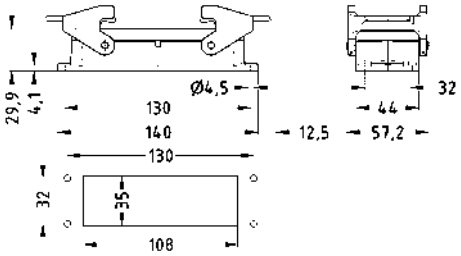
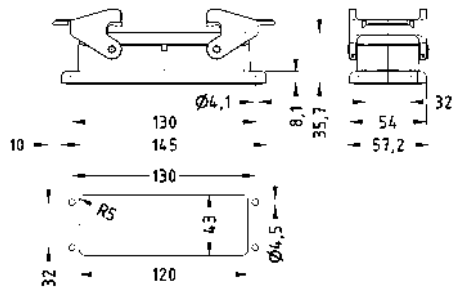
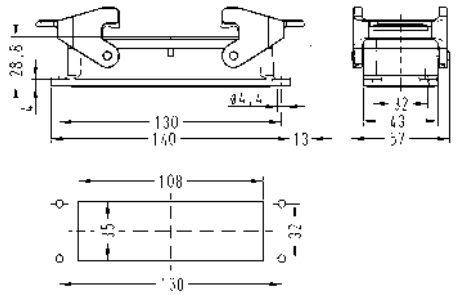
Size 24 B

Double locking lever

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65  | 1x M32<br>1x M40<br>1x M50 | 19 62 824 1422 | 19 62 824 0427<br>19 62 824 0428<br>19 62 824 0429 |   |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Side entry,<br>IP65  | 1x M25<br>1x M32<br>1x M40 | 19 62 824 1521 | 19 62 824 0527<br>19 62 824 0528 |   |
| Han® EMC/B,<br>Han® High Temp,<br>Hood,<br>Without cable entry,<br>IP65  | | | 09 62 824 0801 |  |

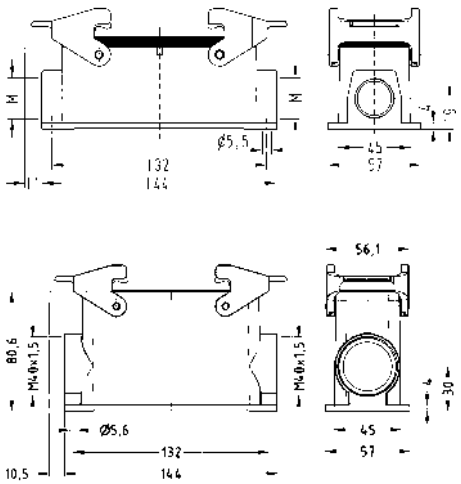
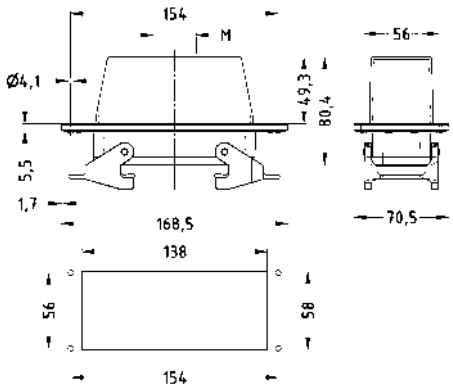
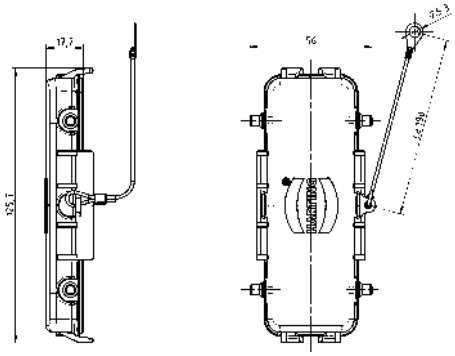
# Han® EMC/B hoods/housings

Size 24 B

| Identification | Cable entry | Part number Low construction | Part number High construction | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66 | | 09 62 824 0392 | | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>External seal,<br>Han-Easy Lock®,<br>IP66 | | 09 62 824 2301 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Rear mounting,<br>External seal,<br>Han-Easy Lock®,<br>IP66<br>Pack contents:<br>Mounting frame is included within the delivery | | 09 62 824 0315 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>Han-Easy Lock®,<br>IP65 | | 09 62 824 0301 | | <br>Panel cut out |

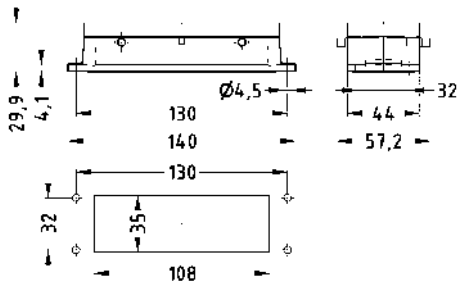
# Han® EMC/B hoods/housings

Size 24 B

| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Surface mounted housing,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 2x M25<br>2x M40 | 19 62 824 1271 | 19 62 824 0273 |  |
| Han® EMC/B,<br>Panel feed through housing,<br>Top entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M32<br>1x M40 | | 19 62 824 1121<br>19 62 824 1122 | <br>Panel cut out |
| Han® EMC/B,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>Metal,<br>With fixing cord,<br>IP65<br><br>Not suitable for housings with external seals. | | 09 62 824 5425 | 09 62 824 5425 |  |

Hoods/Housings for higher EMC requirements
Double locking lever (on the hood)



| Identification | Cable entry | Part number Low construc-tion | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® EMC/B,<br>Hood,<br>Side entry,<br>Han-Easy Lock®,<br>IP65<br> | 1x M40<br>1x M40<br>2x M40 | | 19 62 824 0538<br>19 62 824 0748<br>19 62 824 0578 | |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>External seal,<br>IP66<br> | | 09 62 824 2306 | | <br>Panel cut out |
| Han® EMC/B,<br>Bulkhead mounted housing,<br>Internal seal,<br>IP65<br> | | 09 62 824 0306 | | |

# Han® 3 HPR hoods/housings



## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Screw locking M4
- Field of application: for external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded
- Distinguishing feature: colour-coded black, internal seal

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 2 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Zinc die-cast |
| Surface (hood/housing) | Powder-coated, Chromated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| RoHS | compliant, not compliant |

## Specifications and approvals

UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

CE

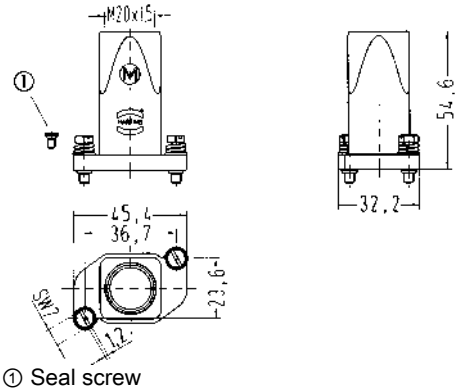
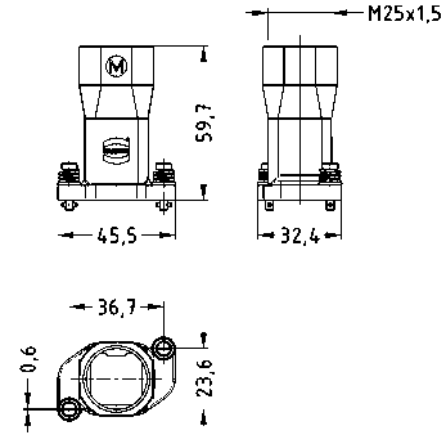
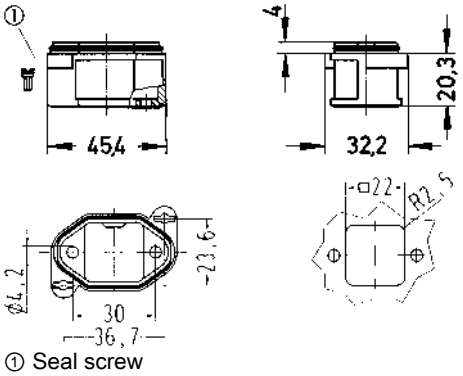
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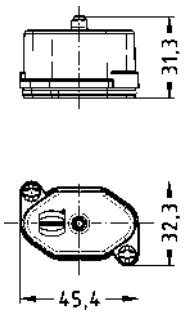
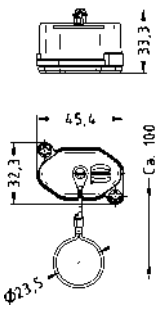
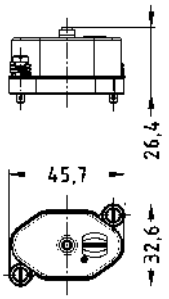
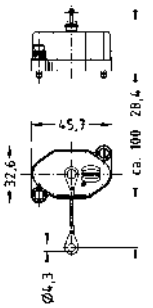
By using the inserts of Han® Q and Han A® series, the sealing on the insert has to be removed. The sealing screw of the insert must be replaced by the sealing screw of the hood/housing.

By using the angled bulkhead and surface mounted housings with through holes in the mounting flanges, it has to be ensured by the customer that the fixing screws appropriately sealed from the inside of the housing.

Hoods/housings for harsh outdoor environments
Toggle locking

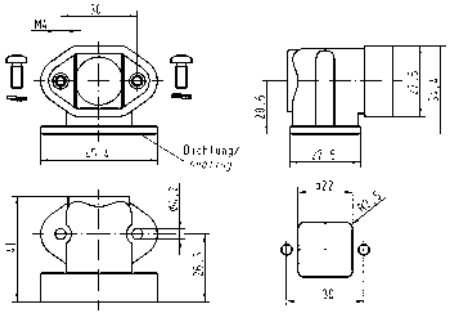
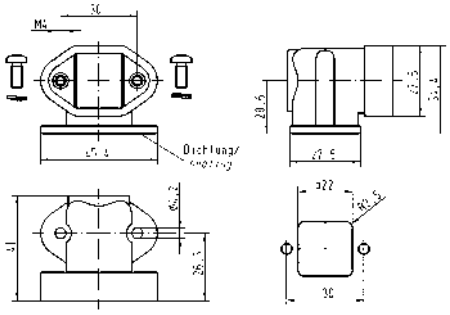


| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68<br>Pack contents:<br>With seal screw  | 1x M20<br>1x M25 | 19 40 703 0400<br>19 40 703 0401 |  ① Seal screw  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Straight,<br>IP65,<br>IP68<br>Pack contents:<br>With seal screw  | | 09 40 703 0301 |  ① Seal screw |

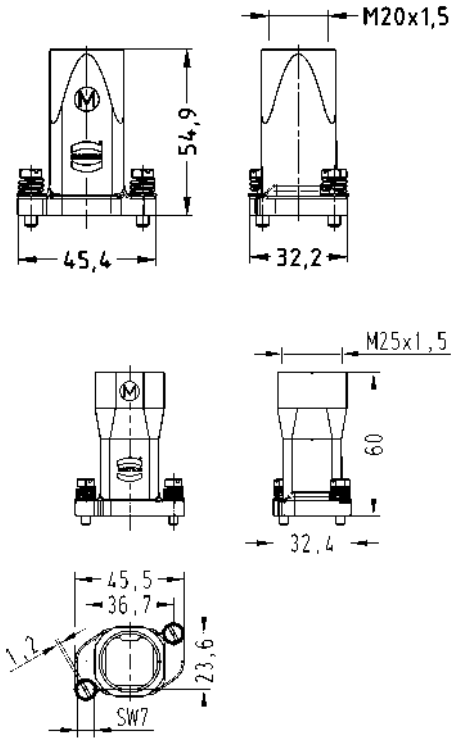
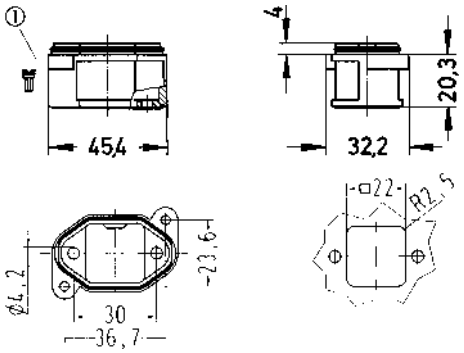
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68  | | 09 40 703 5403 |   |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>With fixing cord,<br>IP65,<br>IP68  | | 09 40 703 5404 |   |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68  | | 09 40 703 5401 |   |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>With fixing cord,<br>IP65,<br>IP68  | | 09 40 703 5402 |   |

# Han® 3 HPR - powder-coated

Size 3 A

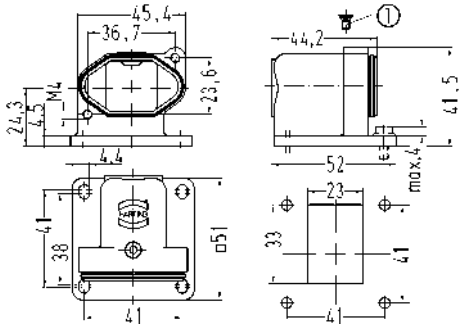
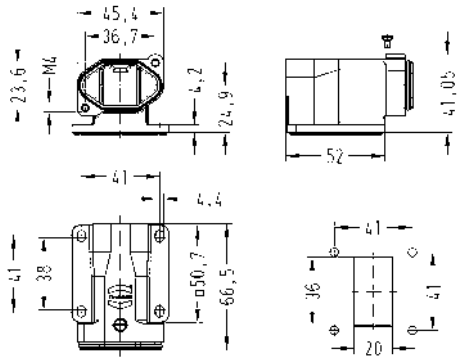
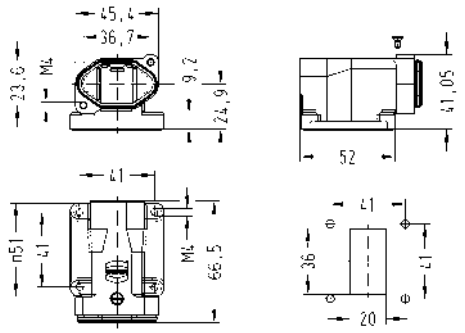
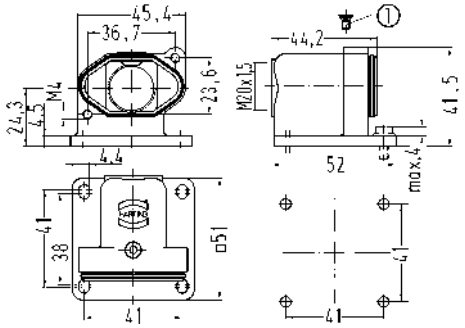
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulkhead mounted position,<br>Top entry,<br>IP65,<br>IP68<br> | 1x M20 | 19 40 703 0900 |  |
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulkhead mounted position,<br>IP65,<br>IP68<br> | | 09 40 703 0902 |  |

Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 40 703 0410<br>19 40 703 0411 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Straight,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 703 0311 | <br>① Seal screw |

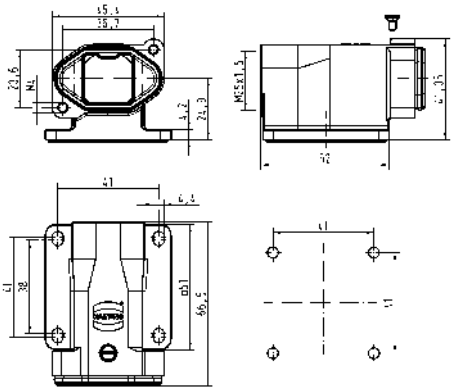
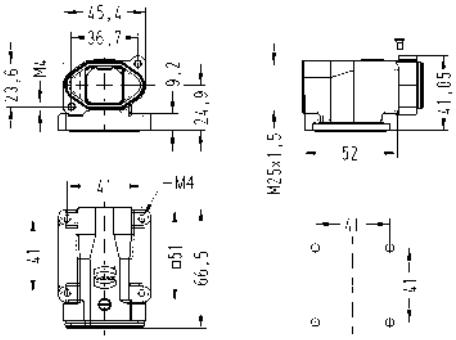
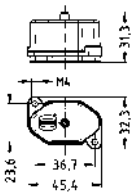
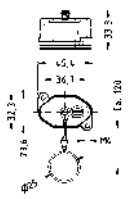
# Han® 3 HPR - powder-coated

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Angled,<br>Open bottom,<br>Feed through hole for fixing screws,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 703 0950 | <br>① Seal screw |
| Han® HPR,<br>Bulkhead mounted housing,<br>Angled,<br>Open bottom,<br>Long version,<br>Feed through hole for fixing screws,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 703 0951 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Angled,<br>Open bottom,<br>Long version,<br>Tapped blind hole for fixing screws,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 703 0953 |  |
| Han® HPR,<br>Surface mounted housing,<br>Angled,<br>Bottom closed,<br>Feed through hole for fixing screws,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 40 703 0950 | <br>① Seal screw |

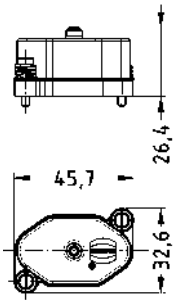
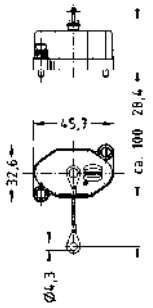
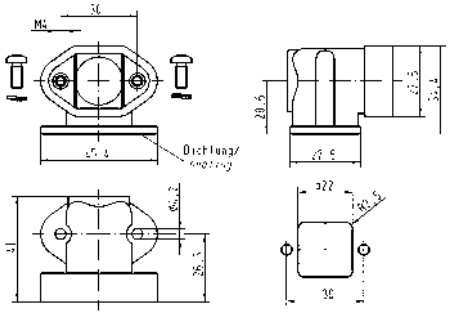
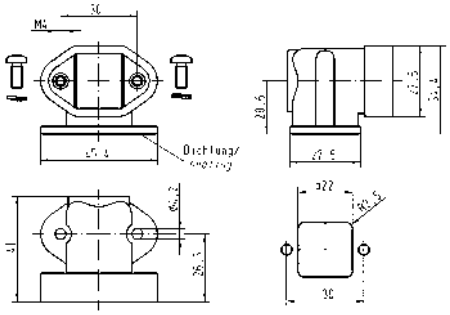
# Han® 3 HPR - powder-coated

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Surface mounted housing,<br>Angled,<br>Bottom closed,<br>Long version,<br>Bottom closed,<br>Feed through hole for fixing screws,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M25 | 19 40 703 0951 |  |
| Han® HPR,<br>Surface mounted housing,<br>Angled,<br>Bottom closed,<br>Long version,<br>Bottom closed,<br>Tapped blind hole for fixing screws,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M25 | 19 40 703 0953 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 703 5413 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>With fixing cord,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 703 5414 |  |

# Han® 3 HPR - powder-coated

Size 3 A

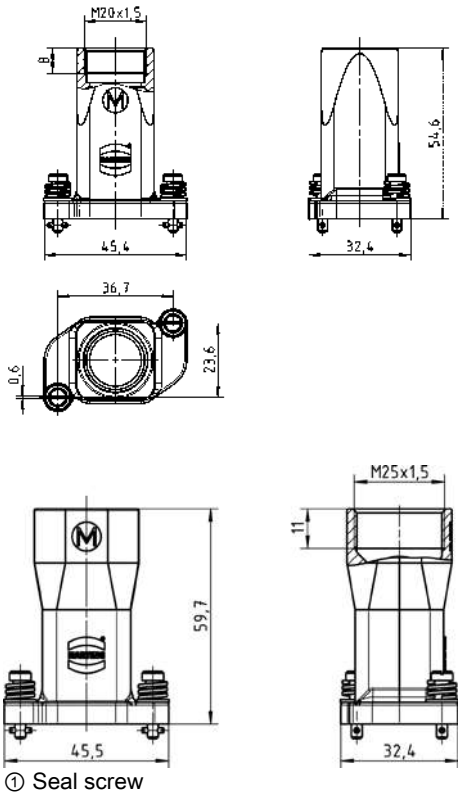
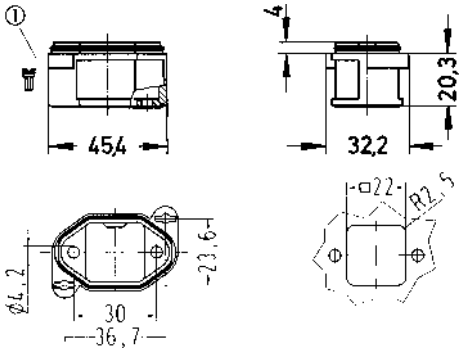
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 703 5411 |  |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>With fixing cord,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 703 5412 |  |
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulkhead mounted position,<br>Top entry,<br>IP65,<br>IP68<br> | 1x M20 | 19 40 703 0900 |  |
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulkhead mounted position,<br>IP65,<br>IP68<br> | | 09 40 703 0902 |  |

# Han® 3 HPR - chromated

Size 3 A

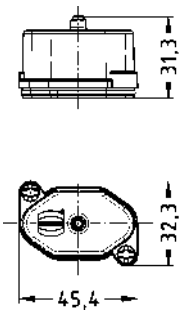
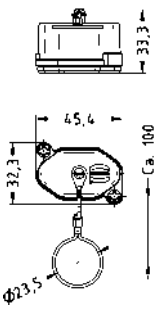
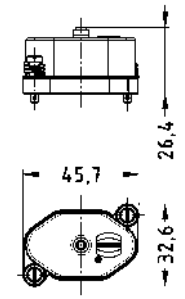
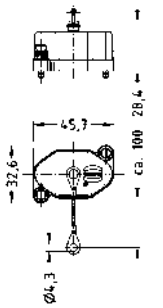
Hoods/housings for harsh outdoor environments
Toggle locking



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68<br>Pack contents:<br>With seal screw  | 1x M20<br>1x M25 | 19 40 003 0400<br>19 40 003 0401 |  ① Seal screw |
| Han® HPR,<br>Bulkhead mounted housing,<br>Straight,<br>IP65,<br>IP68<br>Pack contents:<br>With seal screw  | | 09 40 003 0301 |  ① Seal screw |

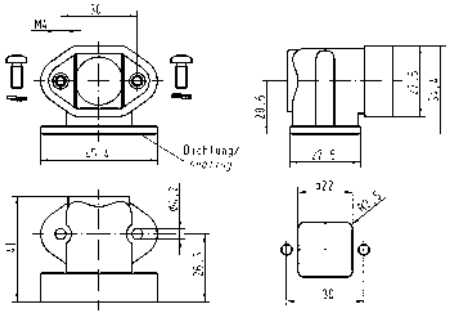
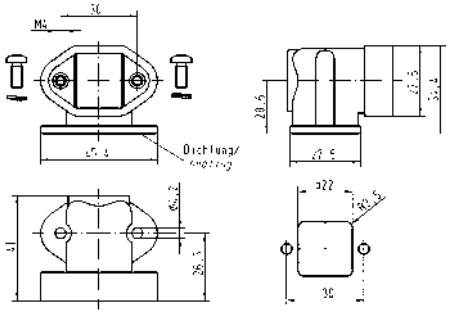
# Han® 3 HPR - chromated

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68  | | 09 40 003 5403 |   |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>With fixing cord,<br>IP65,<br>IP68  | | 09 40 003 5404 |   |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68  | | 09 40 003 5401 |   |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>With fixing cord,<br>IP65,<br>IP68  | | 09 40 003 5402 |   |

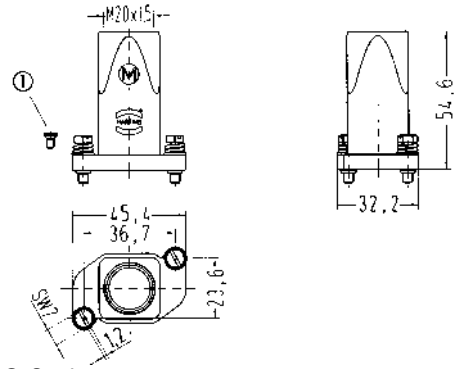
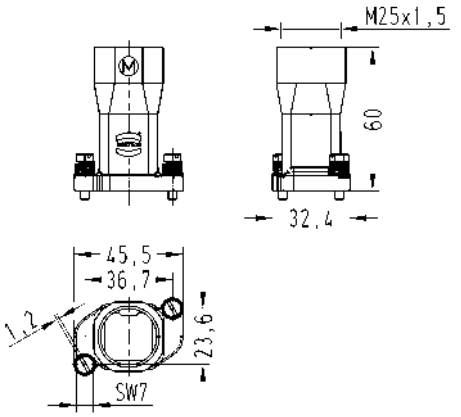
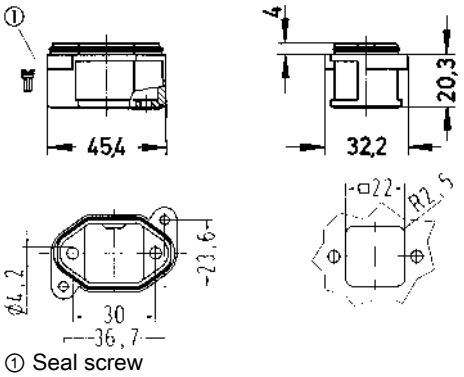
# Han® 3 HPR - chromated

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulk-head mounted position,<br>Top entry,<br>IP65,<br>IP68<br> | 1x M20 | 19 40 003 0900 |  |
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulk-head mounted position,<br>IP65,<br>IP68<br> | | 09 40 003 0902 |  |

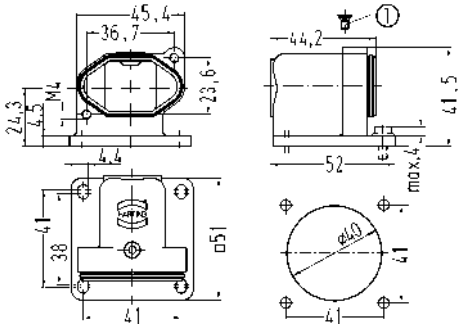
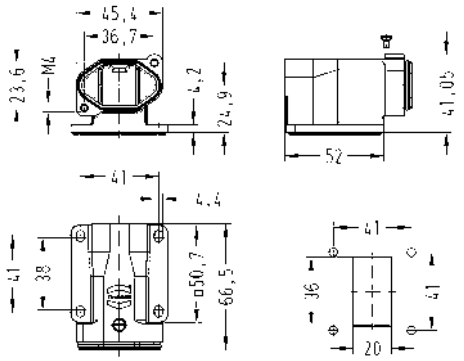
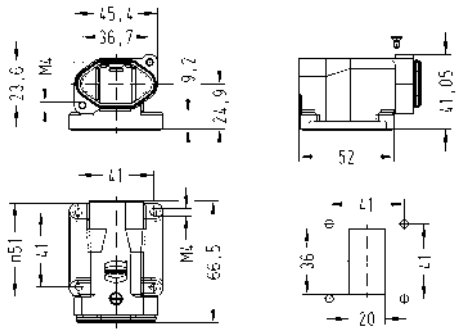
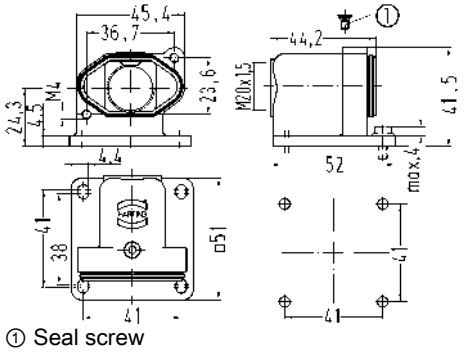
Hoods/housings for harsh outdoor environments
Screw locking



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M20<br>1x M25 | 19 40 003 0410<br>19 40 003 0411 | <br>① Seal screw<br> |
| Han® HPR,<br>Bulkhead mounted housing,<br>Straight,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 003 0311 | <br>① Seal screw |

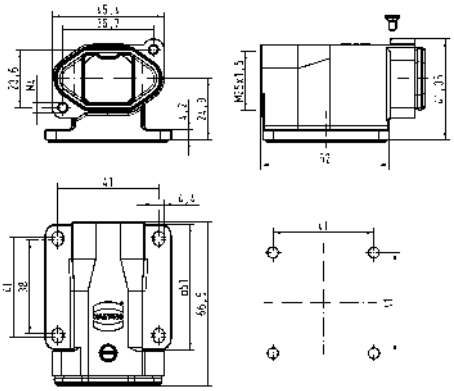
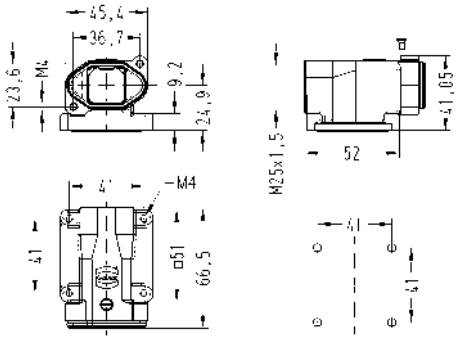
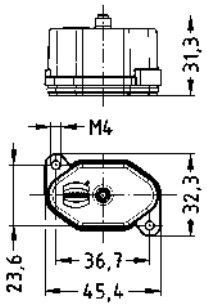
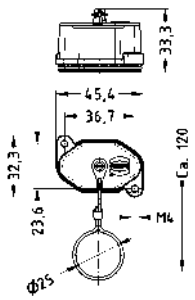
# Han® 3 HPR - chromated

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Angled,<br>Open bottom,<br>Feed through hole for fixing screws,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 003 0950 | <br>① Seal screw |
| Han® HPR,<br>Bulkhead mounted housing,<br>Angled,<br>Long version,<br>Open bottom,<br>Feed through hole for fixing screws,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 003 0951 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Angled,<br>Long version,<br>Open bottom,<br>Tapped blind hole for fixing screws,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | | 09 40 003 0953 |  |
| Han® HPR,<br>Surface mounted housing,<br>Bottom closed,<br>Feed through hole for fixing screws,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 40 003 0950 | <br>① Seal screw |

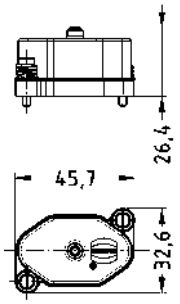
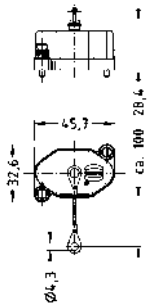
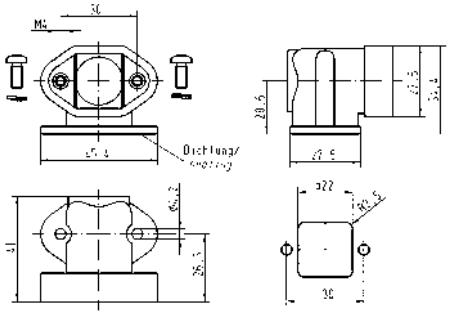
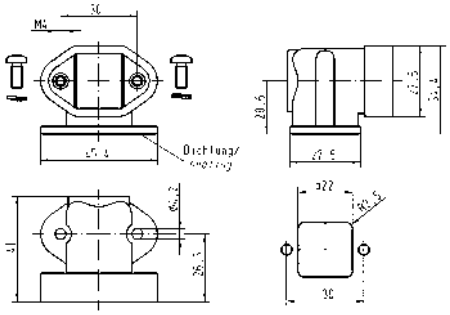
# Han® 3 HPR - chromated

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Surface mounted housing,<br>Long version,<br>Bottom closed,<br>Feed through hole for fixing screws,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M25 | 19 40 003 0951 |  |
| Han® HPR,<br>Surface mounted housing,<br>Long version,<br>Bottom closed,<br>Tapped blind hole for fixing screws,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>With seal screw<br> | 1x M25 | 19 40 003 0953 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 003 5413 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>With fixing cord,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 003 5414 |  |

# Han® 3 HPR - chromated

Size 3 A

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 003 5411 |   |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>With fixing cord,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 003 5412 |   |
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulkhead mounted position,<br>Top entry,<br>IP65,<br>IP68  | 1x M20 | 19 40 003 0900 |   |
| Han® HPR,<br>Adapter,<br>Open bottom,<br>for assembly of bulkhead mounted bulkhead mounted position,<br>IP65,<br>IP68  | | 09 40 003 0902 |   |

# Han® HPR hoods/housings

## Features

- Hoods/housings for harsh outdoor environments
- Metal hoods and housings with excellent corrosion resistance
- Corrosion resistance ASTM B117-09 (500 h)
- Excellent EMC characteristics
- Screw locking M6
- Field of application: for external electrical interconnections in vehicles, in highly demanding environments and wet areas, as well as for sensitive interconnections that have to be shielded
- Distinguishing feature: colour-coded black, internal seal
- Option of connecting a cable for a functional earth externally
- Large space for cables

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Tightening torque (screw locking) | 4 Nm |
| Degree of protection acc. to IEC 60529 | IP65, IP68, IP69 / IPX9K acc. to ISO 20653, IP66 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Aluminium die-cast, Corrosion resistant |
| Surface (hood/housing) | Powder-coated |
| Colour (hood/housing) | RAL 9005 (jet black) |
| Material (seal) | NBR |
| Material (locking) | Stainless steel |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

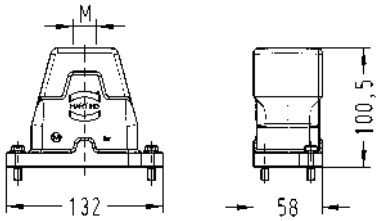
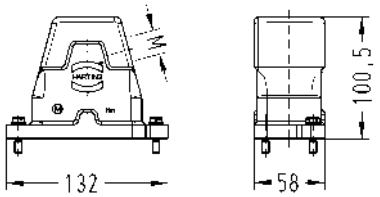
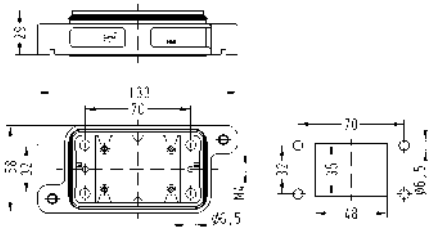
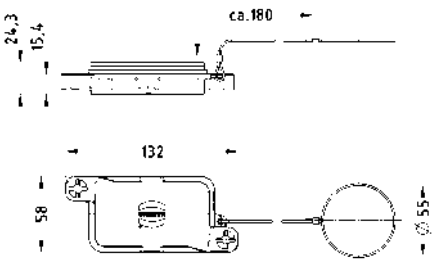
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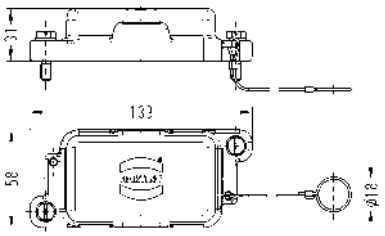
CE

# Han® HPR hoods/housings

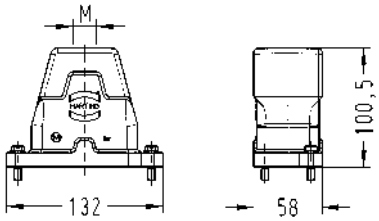
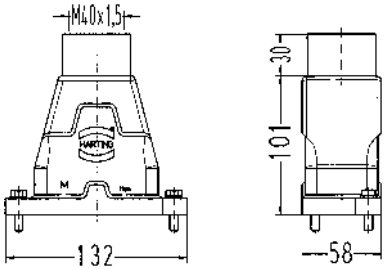
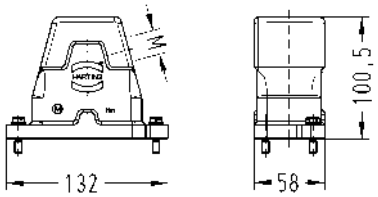
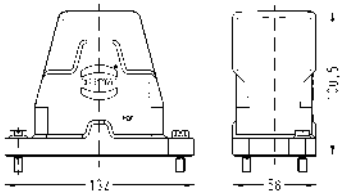
Size 6 B

Hoods/housings for harsh outdoor environments
Toggle locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68  | 1x M25 | 19 40 006 0401 |  |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68  | 1x M25 | 19 40 006 0501 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68  | | 09 40 006 0301 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68  | | 09 40 006 5404 |  |

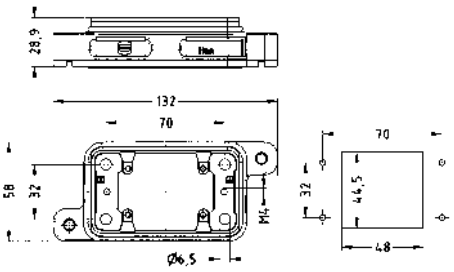
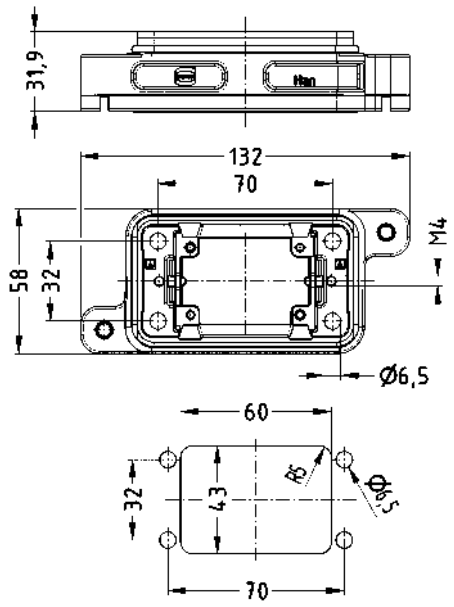
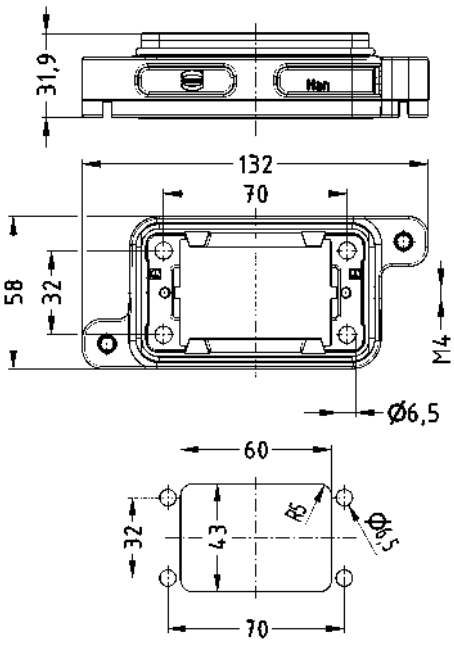
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68<br> | | 09 40 006 5401 |  |

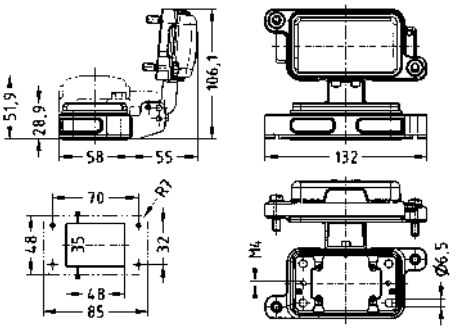
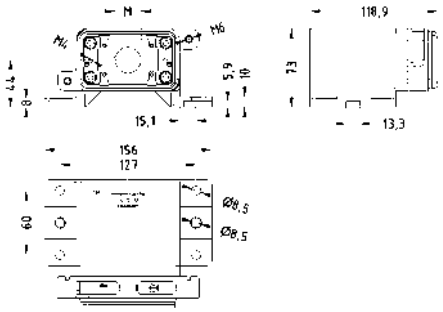
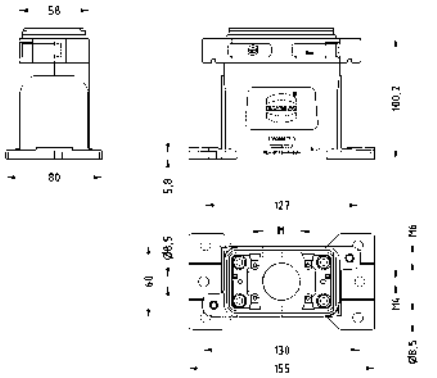
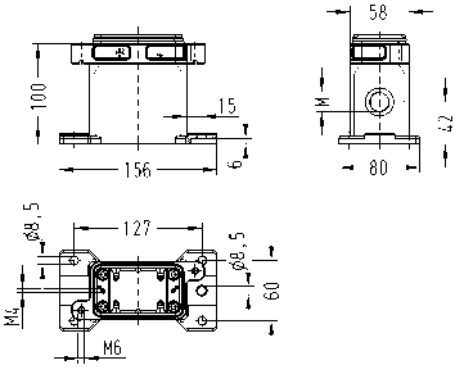
Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M20<br>1x M25<br>1x M32<br>1x M40 | 19 40 006 0410<br>19 40 006 0411<br>19 40 006 0412<br>19 40 006 0413 |  |
| Han® HPR,<br>Hood,<br>With adapter,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M40 | 19 40 006 0418 |  |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M20<br>1x M25<br>1x M32<br>1x M40 | 19 40 006 0510<br>19 40 006 0511<br>19 40 006 0512<br>19 40 006 0513 |  |
| Han® HPR,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 006 0811 |  |

# Han® HPR hoods/housings

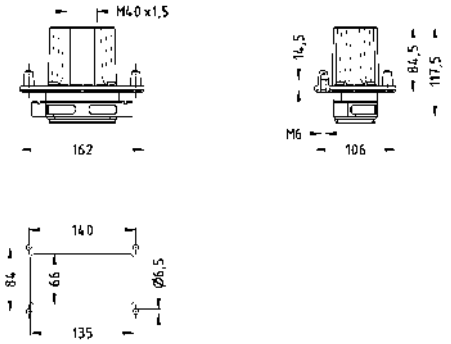
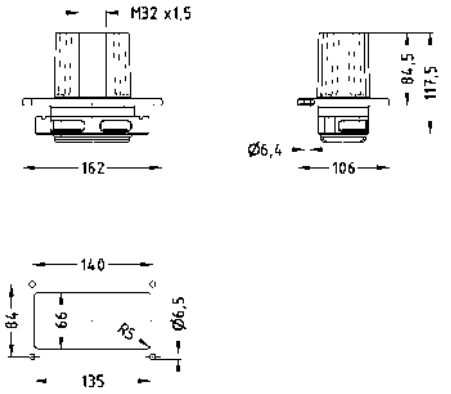
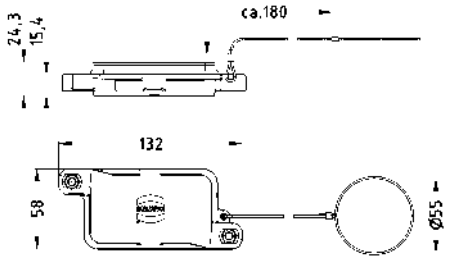
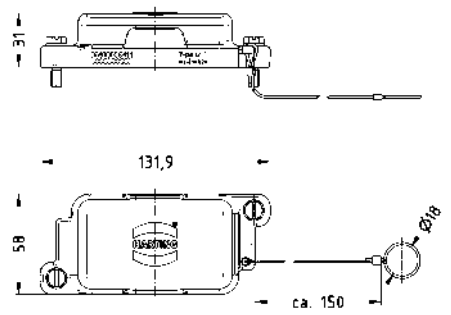
Size 6 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 006 0311 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 40 006 0391 | <br>Panel cut out |
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Please order mounting frame separately.<br> | | 09 40 006 0392 | <br>Panel cut out |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 006 0317 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M25<br>1x M40 | 19 40 006 0911<br>19 40 006 0913 |  |
| Han® HPR,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M32<br>1x M40 | 19 40 006 1212<br>19 40 006 1213 |  |
| Han® HPR,<br>Surface mounted housing,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | 1x M20<br>1x M25<br>1x M32<br>2x M25 | 19 40 006 1260<br>19 40 006 1261<br>19 40 006 1262<br>19 40 006 1271 |  |

# Han® HPR hoods/housings

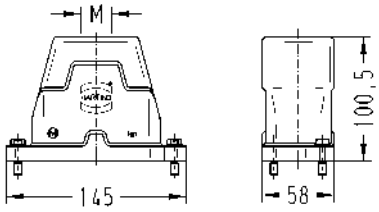
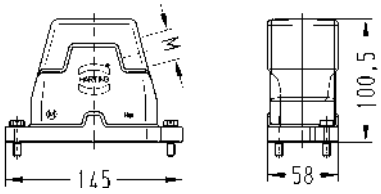
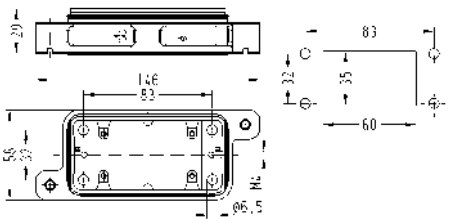
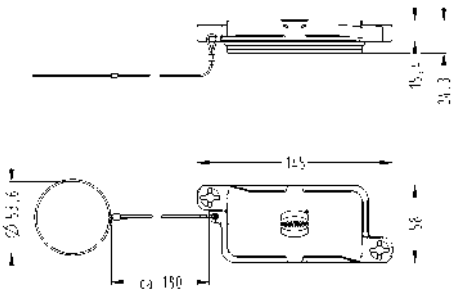
Size 6 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Panel feed through housing,<br>for mounting from inside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M32<br>1x M40 | 19 40 006 1112<br>19 40 006 1113 |  |
| Han® HPR,<br>Panel feed through housing,<br>for mounting from outside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>The fixing screws must be sealed separately to reach the given degree of protection. | 1x M32<br>1x M40 | 19 40 006 1117<br>19 40 006 1118 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 006 5414 |  |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 006 5411 |  |

# Han® HPR hoods/housings

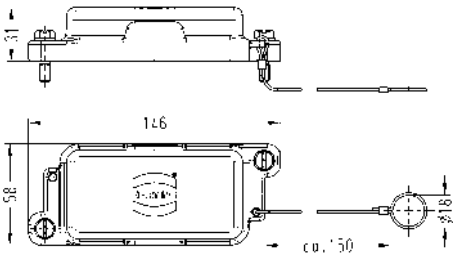
Size 10 B

Hoods/housings for harsh outdoor environments
Toggle locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68  | 1x M25 | 19 40 010 0401 |   |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68  | 1x M25 | 19 40 010 0501 |   |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68  | | 09 40 010 0301 |   |
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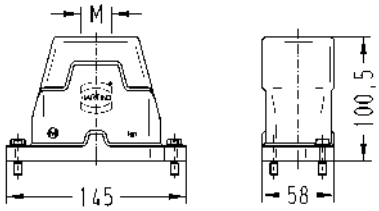
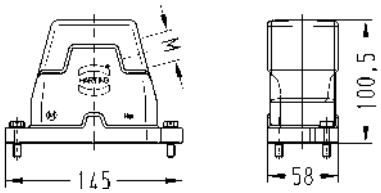
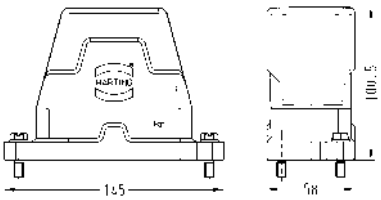
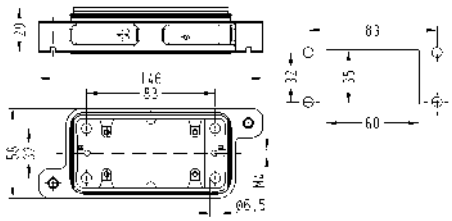
# Han® HPR hoods/housings

Size 10 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68<br> | | 09 40 010 5401 |  |

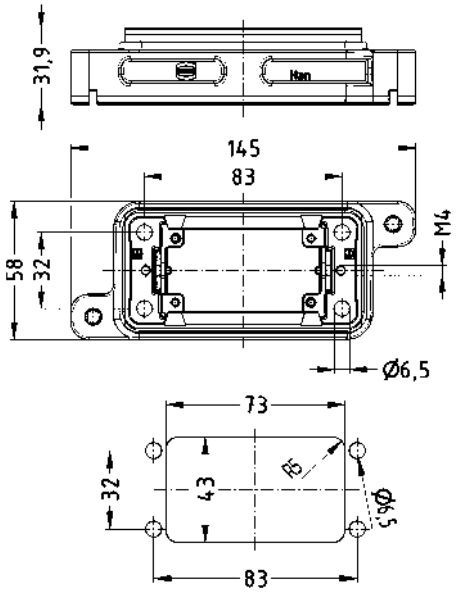
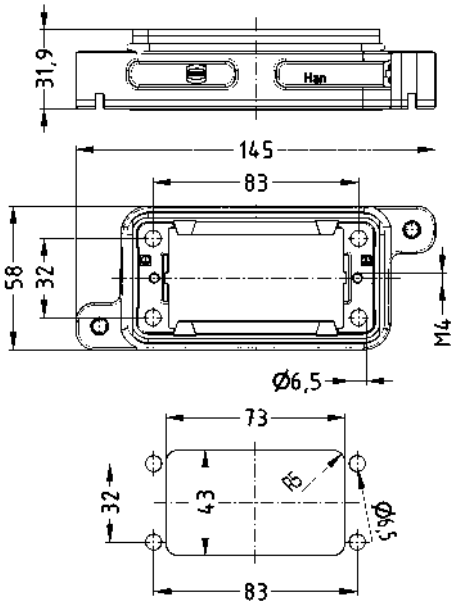
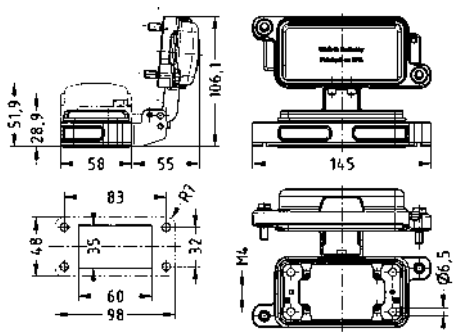
Hoods/housings for harsh outdoor environments
Screw locking



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M25<br>1x M32<br>1x M40<br>2x M20 | 19 40 010 0411<br>19 40 010 0412<br>19 40 010 0413<br>19 40 010 0430 |   |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M25<br>1x M32<br>1x M40 | 19 40 010 0511<br>19 40 010 0512<br>19 40 010 0513 |   |
| Han® HPR,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 010 0811 |   |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 010 0311 |   |

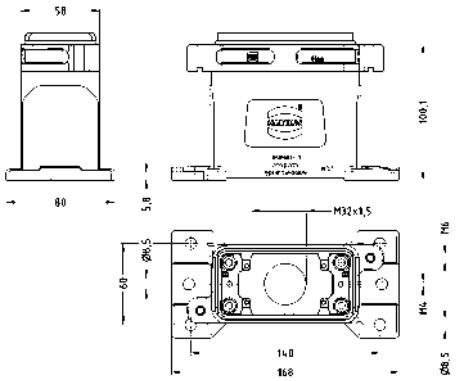
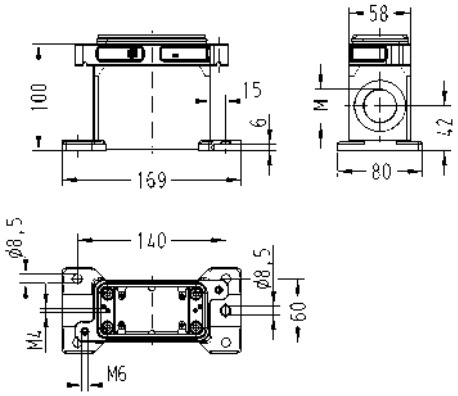
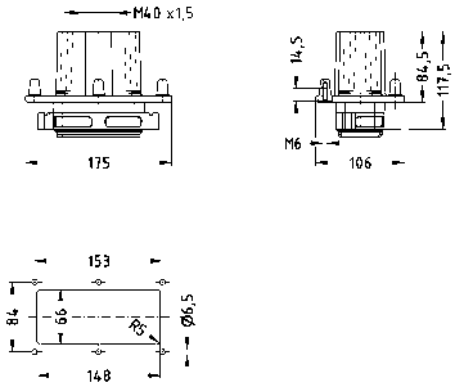
# Han® HPR hoods/housings

Size 10 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 40 010 0391 | <br>Panel cut out |
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Please order mounting frame separately.<br> | | 09 40 010 0392 | <br>Panel cut out |
| Han® HPR,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 010 0317 |  |

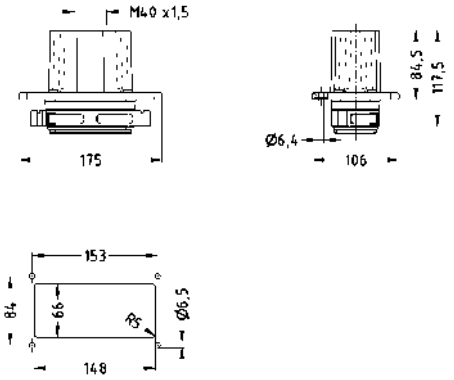
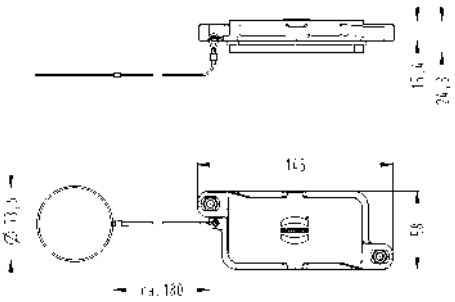
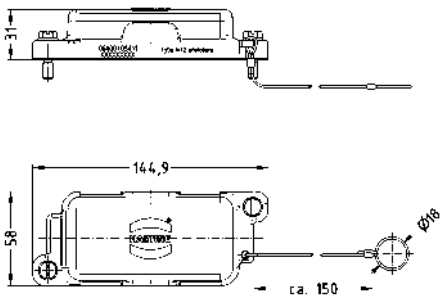
# Han® HPR hoods/housings

Size 10 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M32 | 19 40 010 1212 |  |
| Han® HPR,<br>Surface mounted housing,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M20<br>1x M32<br>1x M40<br>2x M25<br>2x M32 | 19 40 010 1260<br>19 40 010 1262<br>19 40 010 1263<br>19 40 010 1271<br>19 40 010 1272 |  |
| Han® HPR,<br>Panel feed through housing,<br>for mounting from inside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M40 | 19 40 010 1113 |  |

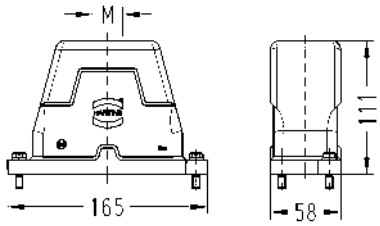
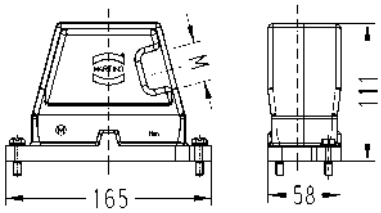
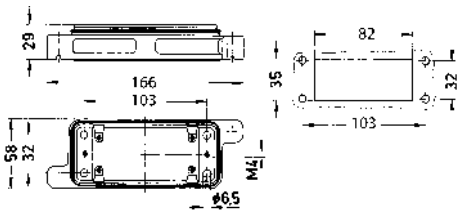
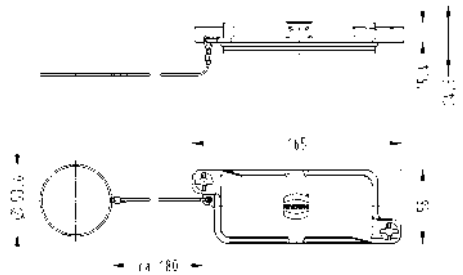
# Han® HPR hoods/housings

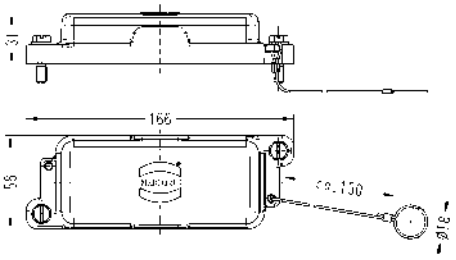
Size 10 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Panel feed through housing,<br>for mounting from outside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>The fixing screws must be sealed separately to reach the given degree of protection. | 1x M40 | 19 40 010 1118 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 010 5414 |  |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 010 5411 |  |

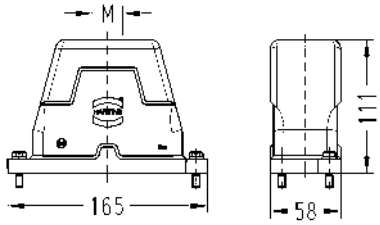
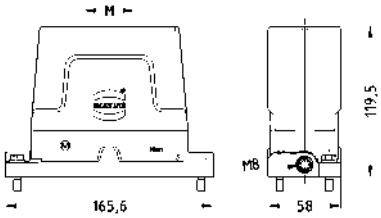
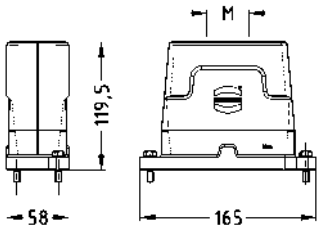
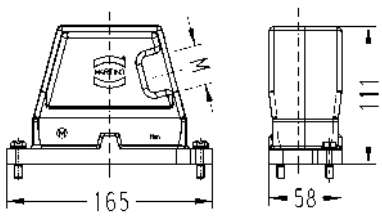
Hoods/housings for harsh outdoor environments
Toggle locking



| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68  | 1x M32 | 19 40 016 0402 |   |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68  | 1x M32 | 19 40 016 0502 |   |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68  | | 09 40 016 0301 |   |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68  | | 09 40 016 5404 |  |

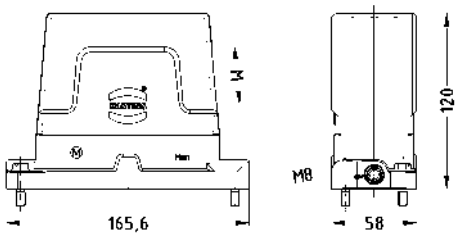
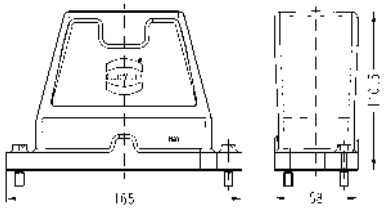
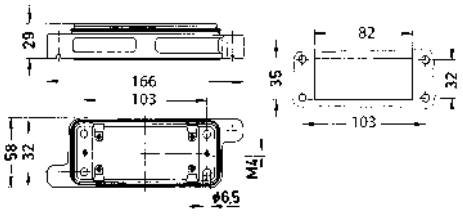
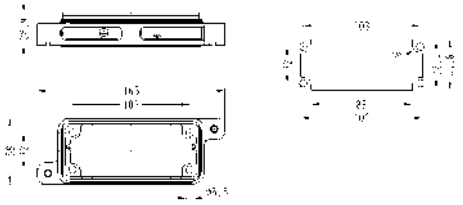
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68<br> | | 09 40 016 5401 |  |

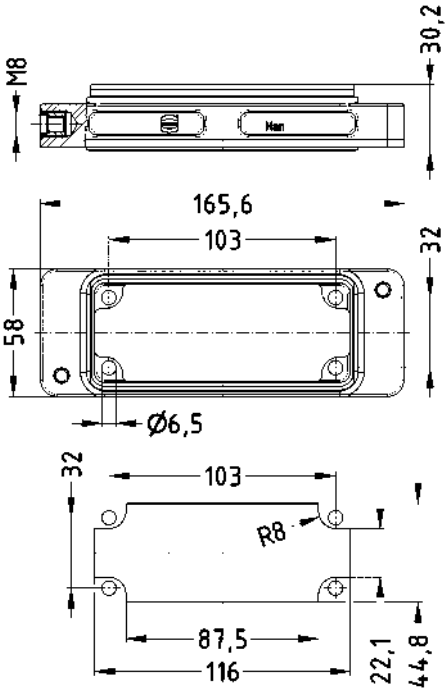
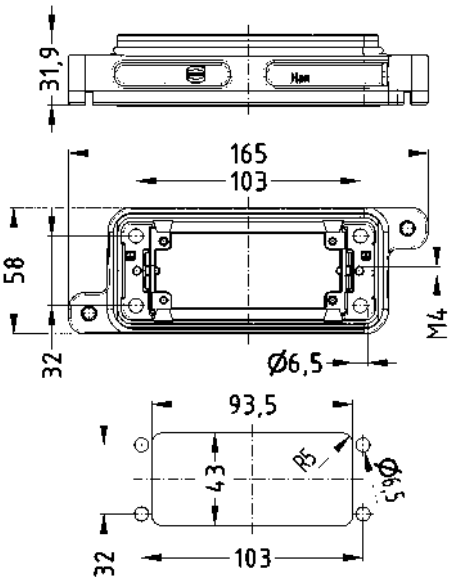
Hoods/housings for harsh outdoor environments
Screw locking

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M25<br>1x M32<br>1x M40<br>1x M50<br>2x M25 | 19 40 016 0411<br>19 40 016 0412<br>19 40 016 0413<br>19 40 016 0414<br>19 40 016 0431 |   |
| Han® HPR,<br>Hood,<br>Enlarged,<br>with functional earth,<br>Top entry,<br>IP66,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M32<br>1x M40 | 19 40 016 0442<br>19 40 016 0443 |   |
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M40<br>1x M50<br>2x M40<br>3x M25<br>4x M25 | 19 40 016 0468<br>19 40 016 0469<br>19 40 016 0471<br>19 40 016 0477<br>19 40 016 0478 |   |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M20<br>1x M25<br>1x M32<br>1x M40<br>1x M50 | 19 40 016 0510<br>19 40 016 0511<br>19 40 016 0512<br>19 40 016 0513<br>19 40 016 0514 |   |

# Han® HPR hoods/housings

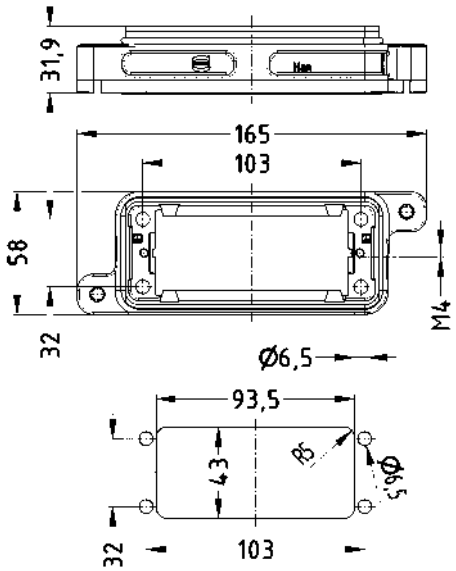
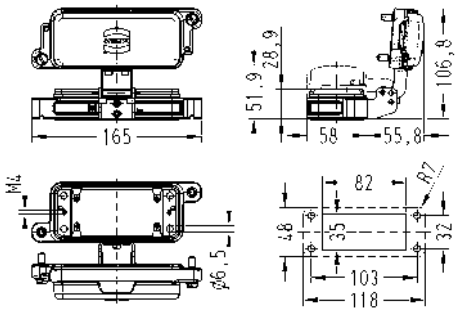
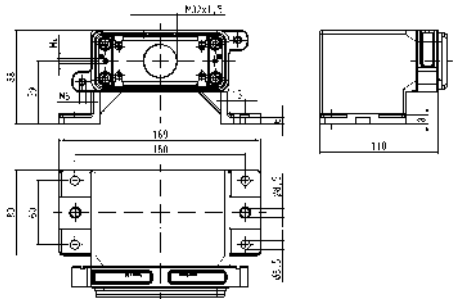
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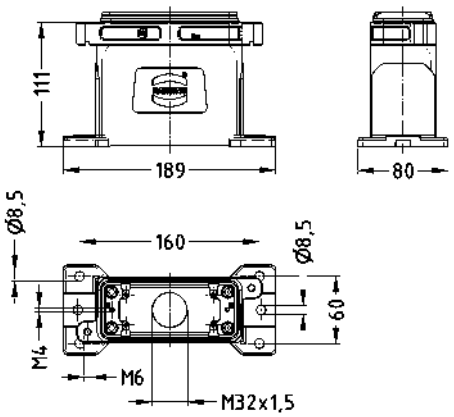
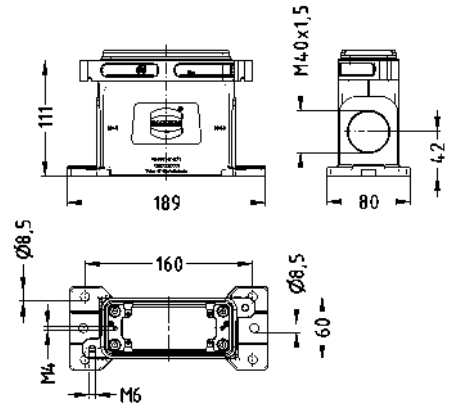
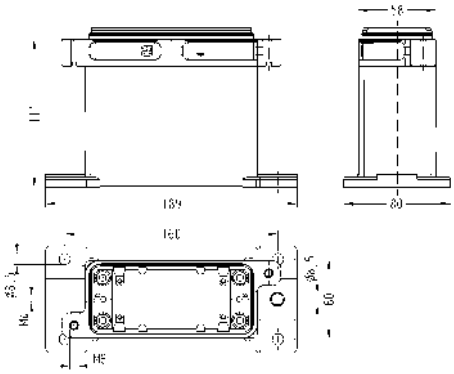
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>with functional earth,<br>Side entry,<br>IP66,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M32<br>1x M40 | 19 40 016 0552<br>19 40 016 0553 |   |
| Han® HPR,<br>Hood,<br>Enlarged,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M40<br>1x M50 | 19 40 016 0568<br>19 40 016 0569 | |
| Han® HPR,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 016 0811 |   |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 016 0311 |   |
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 016 0368 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>with functional earth,<br>IP66,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 016 0371 | <br>Panel cut out |
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 40 016 0391 | <br>Panel cut out |

# Han® HPR hoods/housings

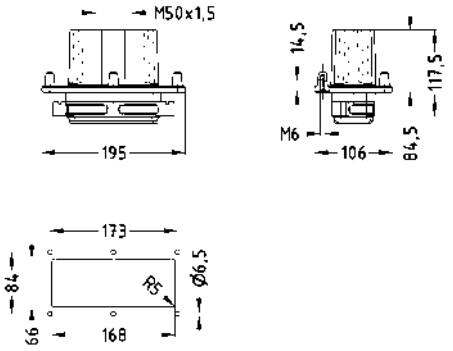
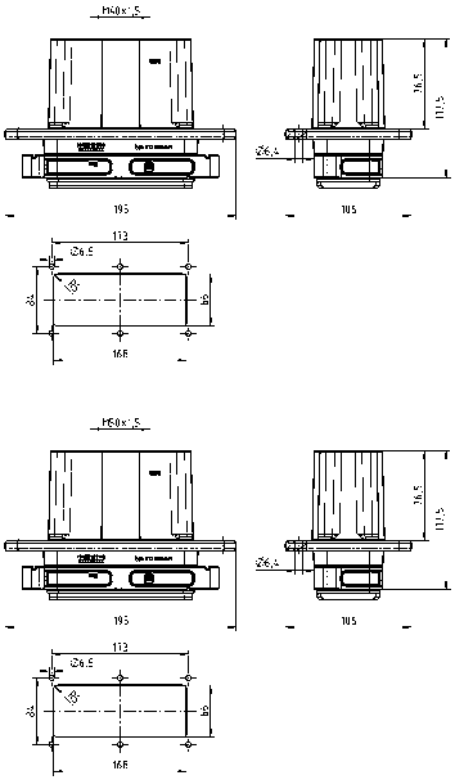
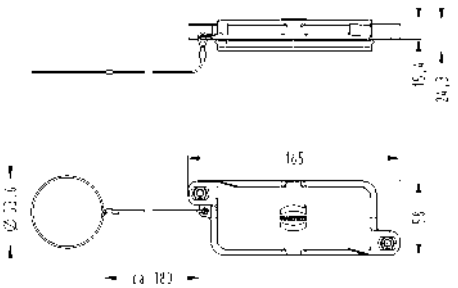
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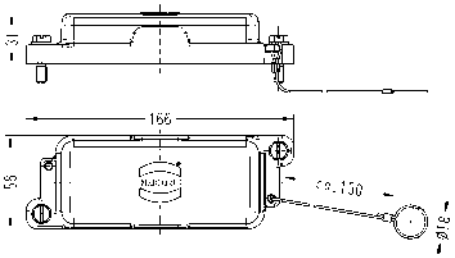
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Please order mounting frame separately.<br> | | 09 40 016 0392 | <br>Panel cut out |
| Han® HPR,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 016 0317 |  |
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M32<br>2x M32 | 19 40 016 0912<br>19 40 016 0922 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M32<br>2x M32 | 19 40 016 1223<br>19 40 016 1222 |   |
| Han® HPR,<br>Surface mounted housing,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | 1x M20, 1x M25<br>1x M25<br>1x M32<br>1x M40<br>2x M40 | 19 40 016 1225<br>19 40 016 1261<br>19 40 016 1262<br>19 40 016 1263<br>19 40 016 1273 |   |
| Han® HPR,<br>Surface mounted housing,<br>Without cable entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 016 1201 |  |

# Han® HPR hoods/housings

Size 16 B

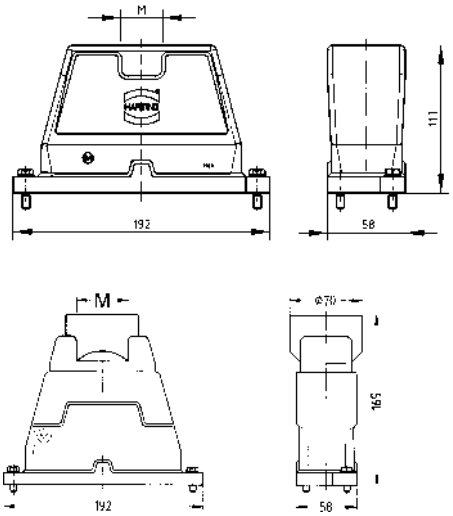
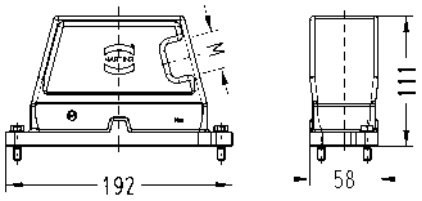
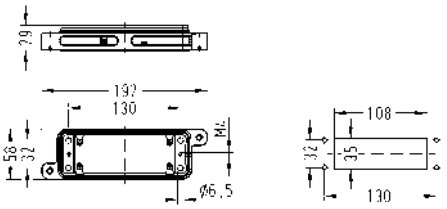
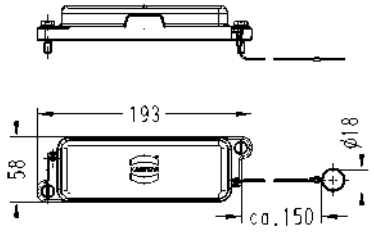
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Panel feed through housing,<br>for mounting from inside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M40<br>1x M50 | 19 40 016 1113<br>19 40 016 1114 |  |
| Han® HPR,<br>Panel feed through housing,<br>for mounting from outside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>The fixing screws must be sealed separately to reach the given degree of protection. | 1x M40<br>1x M50<br>2x M25 | 19 40 016 1118<br>19 40 016 1119<br>19 40 016 1134 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 016 5414 |  |

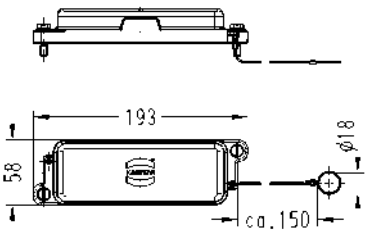
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 016 5411 |  |

# Han® HPR hoods/housings

Size 24 B

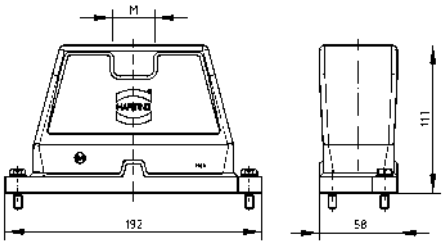
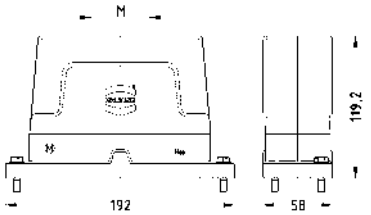
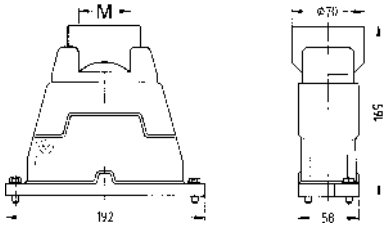
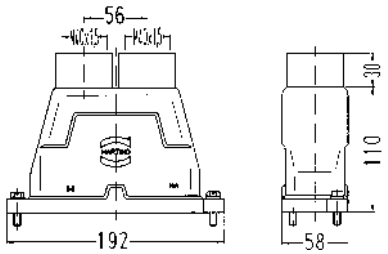
Hoods/housings for harsh outdoor environments
Toggle locking

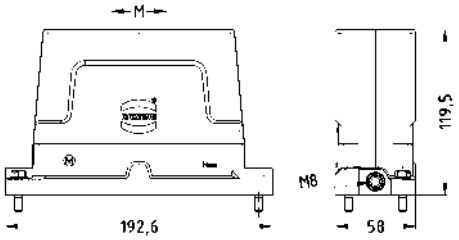
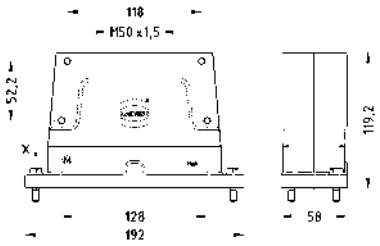
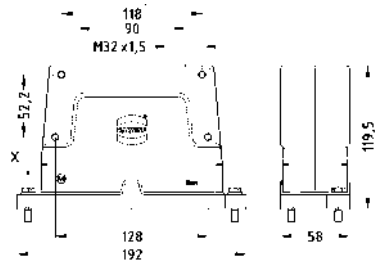
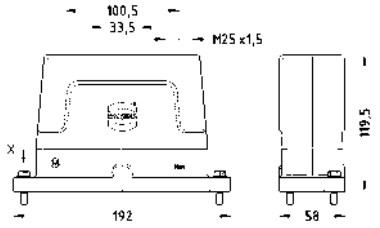
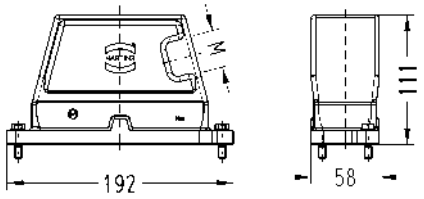
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68<br> | 1x M32<br>1x M63 | 19 40 024 0402<br>19 40 024 0410 |  |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68<br> | 1x M40 | 19 40 024 0503 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68<br> | | 09 40 024 0301 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68<br> | | 09 40 024 5404 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68<br> | | 09 40 024 5401 |  |

Hoods/housings for harsh outdoor environments
Screw locking

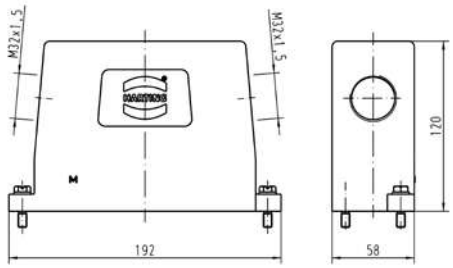
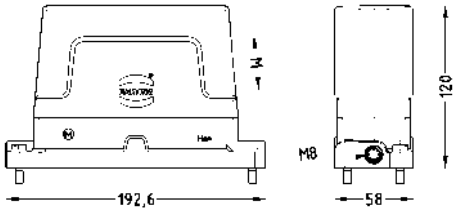
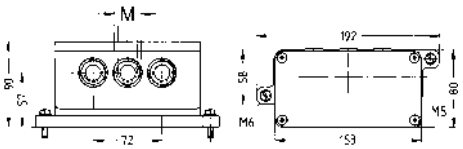
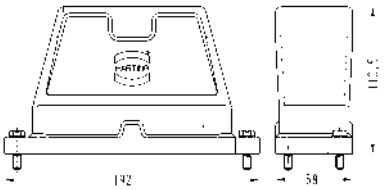


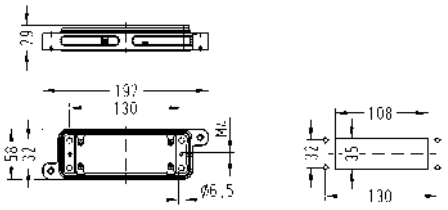
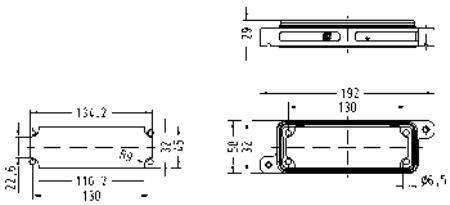
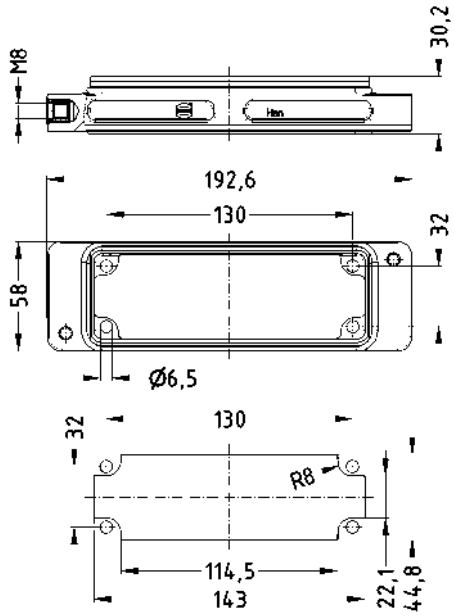
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | 1x M32<br>1x M40<br>1x M50<br>2x M25<br>2x M32<br>2x M40<br>3x M25<br>3x M25, 1x M20<br>4x M20<br>4x M25 | 19 40 024 0412<br>19 40 024 0413<br>19 40 024 0414<br>19 40 024 0431<br>19 40 024 0432<br>19 40 024 0433<br>19 40 024 0461<br>19 40 024 0471<br>19 40 024 0473<br>19 40 024 0474 |  |
| Han® HPR,<br>Hood,<br>Top entry,<br>High construction,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | 1x M50<br>3x M32<br>4x M25 | 19 40 024 0419<br>19 40 024 0467<br>19 40 024 0477 |  |
| Han® HPR,<br>Hood,<br>Special type,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | 1x M63 | 19 40 024 0420 |  |
| Han® HPR,<br>Hood,<br>With adapter,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | 2x M40 | 19 40 024 0438 |  |

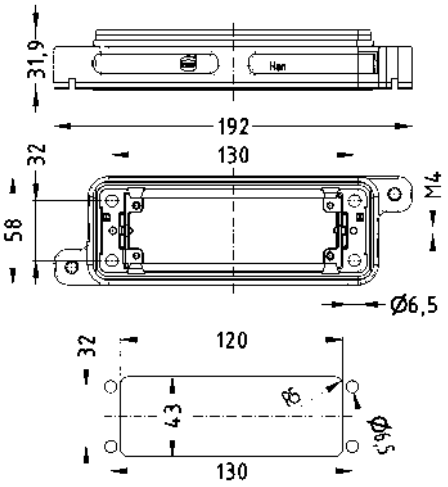
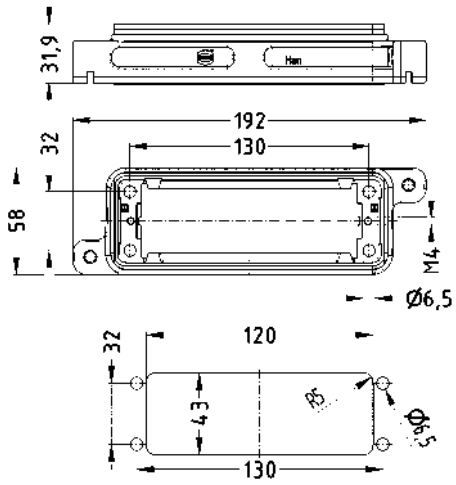
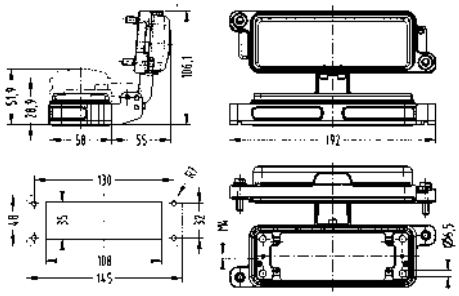
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Enlarged,<br>with functional earth,<br>Top entry,<br>IP66,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M32<br>1x M40 | 19 40 024 0442<br>19 40 024 0443 |  |
| Han® HPR,<br>Hood,<br>Enlarged,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M50<br>3x M32<br>4x M25 | 19 40 024 0469<br>19 40 024 0468<br>19 40 024 0478 | <br><br> |
| Han® HPR,<br>Hood,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M32<br>1x M40<br>1x M50 | 19 40 024 0512<br>19 40 024 0513<br>19 40 024 0514 |  |

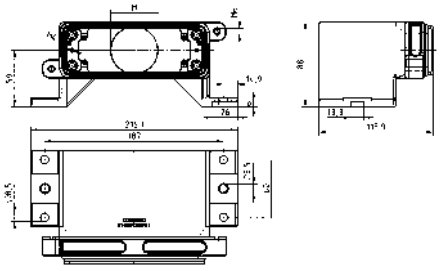
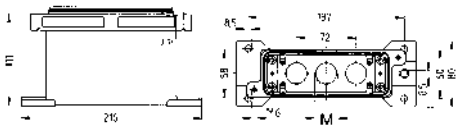
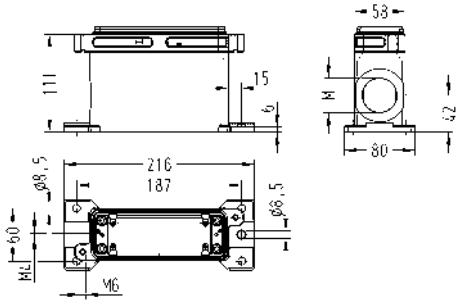
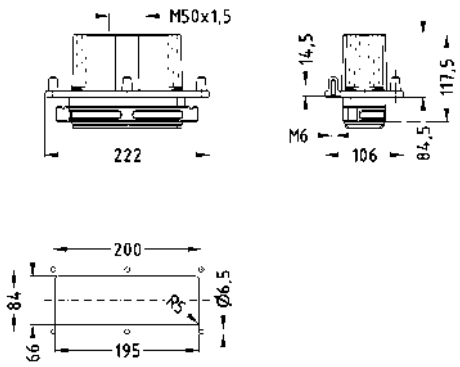
# Han® HPR hoods/housings

Size 24 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Hood,<br>Side entry,<br>High construction,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 2x M32 | 19 40 024 0537 |  |
| Han® HPR,<br>Hood,<br>Enlarged,<br>with functional earth,<br>Side entry,<br>IP66,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M32<br>1x M40 | 19 40 024 0552<br>19 40 024 0553 |  |
| Han® HPR,<br>Hood,<br>Enlarged,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M40<br>1x M50 | 19 40 024 0568<br>19 40 024 0569 | |
| Han® HPR,<br>Hood,<br>Special type,<br>Angled entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25 | 19 40 024 0631 |  |
| Han® HPR,<br>Hood,<br>Without cable entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 0811 |  |

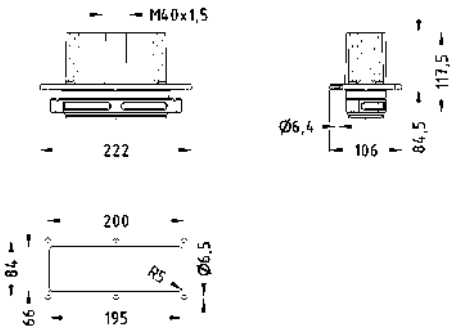
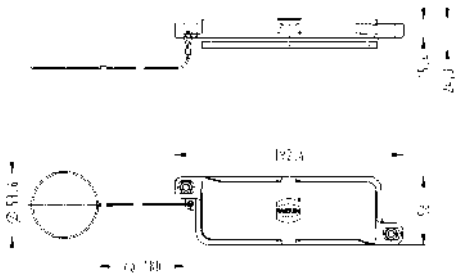
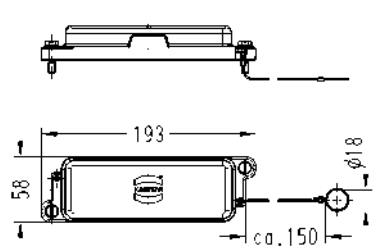
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 024 0311 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 024 0368 |  |
| Han® HPR,<br>Bulkhead mounted housing,<br>Enlarged,<br>with functional earth,<br>IP66,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653  | | 09 40 024 0371 | <br>Panel cut out |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Mounting frame is included within the delivery<br> | | 09 40 024 0391 | <br>Panel cut out |
| Han® HPR,<br>Bulkhead mounted housing,<br>Rear mounting,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br>Pack contents:<br>Please order mounting frame separately.<br> | | 09 40 024 0392 | <br>Panel cut out |
| Han® HPR,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 0317 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Surface mounted housing,<br>Horizontal version,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M50<br>2x M32<br>3x M25<br>3x M25, 1x M20<br>4x M25 | 19 40 024 0914<br>19 40 024 0925<br>19 40 024 0931<br>19 40 024 0971<br>19 40 024 0941 |  |
| Han® HPR,<br>Surface mounted housing,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 3x M25<br>3x M25, 1x M20<br>4x M25 | 19 40 024 1231<br>19 40 024 1271<br>19 40 024 1242 |  |
| Han® HPR,<br>Surface mounted housing,<br>Side entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M40<br>2x M40<br>2x M50 | 19 40 024 1263<br>19 40 024 1273<br>19 40 024 1274 |  |
| Han® HPR,<br>Panel feed through housing,<br>for mounting from inside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | 1x M40<br>1x M50 | 19 40 024 1113<br>19 40 024 1114 |  |

# Han® HPR hoods/housings

Size 24 B

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR,<br>Panel feed through housing,<br>for mounting from outside,<br>Top entry,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br><br>The fixing screws must be sealed separately to reach the given degree of protection. | 1x M40<br>1x M50<br>2x M32 | 19 40 024 1118<br>19 40 024 1119<br>19 40 024 1135 |  |
| Han® HPR,<br>Protection cover,<br>for hoods,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 5414 |  |
| Han® HPR,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>IP65,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | | 09 40 024 5411 |  |

# Han-INOX® hoods/housings

## Features

- Hoods/housings for harsh environments
- Extremely resistant to chemicals and other aggressive influences
- Made completely from high-quality stainless steel
- Extremely resistant to corrosion

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C, -40 ... +200 °C With Han® High Temp components |
| Degree of protection acc. to IEC 60529 | IP65, IP67 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Stainless steel |
| Surface (hood/housing) | Uncoated |
| Colour (hood/housing) | Unpainted |
| Material (seal) | NBR, FPM |
| Material (locking) | Stainless steel |
| RoHS | compliant |

## Specifications and approvals

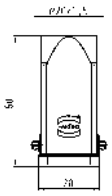
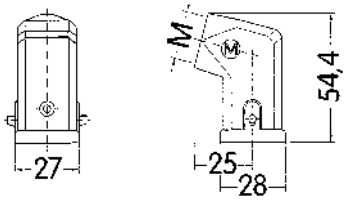
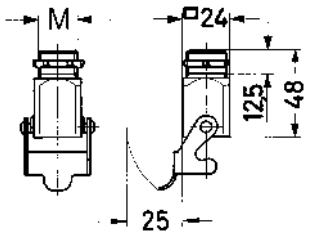
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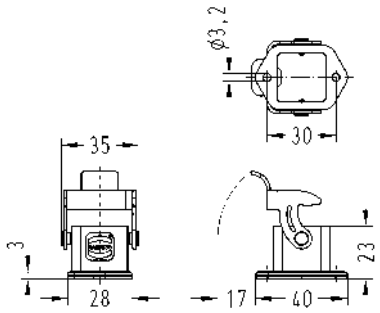
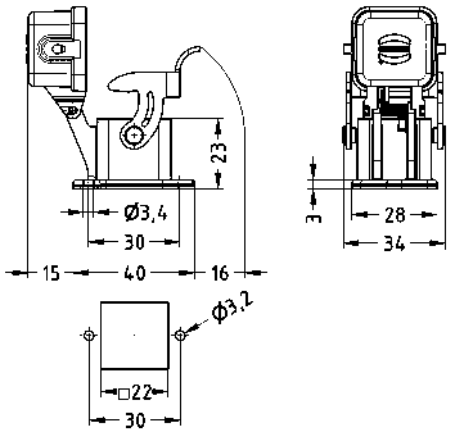
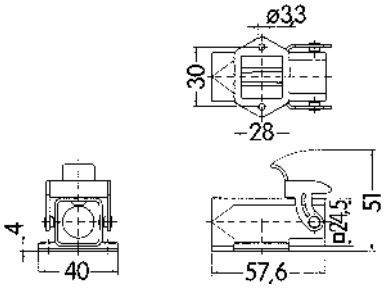
CE

# Han-INOX® hoods/housings

Size 3 A

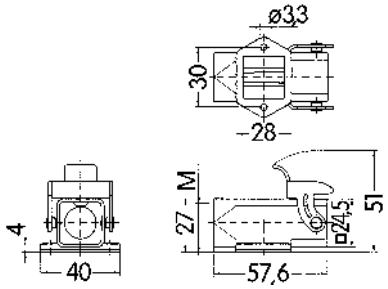
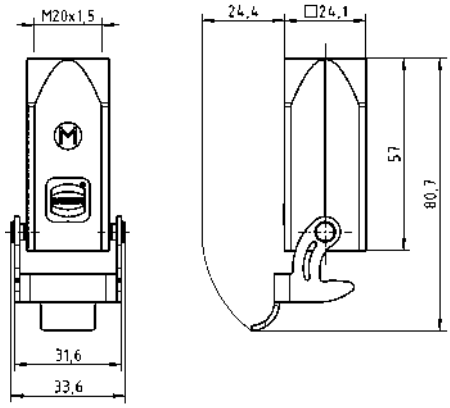
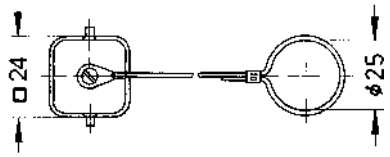
Hoods/housings for harsh environments
Single locking lever

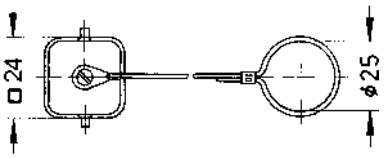
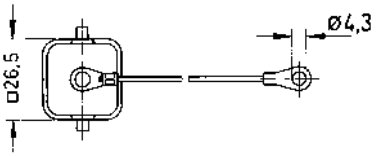
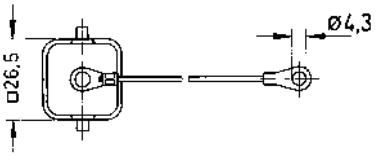
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Han® High Temp,<br>Hood,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 44 003 1440 |  |
| Han-INOX®,<br>Hood,<br>Side entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 44 003 1640 |  |
| Han-INOX®,<br>Screw mounted housing,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw,<br>1x M20 stainless steel screw nut<br> | 1x M20 | 19 44 003 1150 |  |

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Han® High Temp,<br>Bulkhead mounted housing,<br>Straight,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | | 19 44 003 0301 | <br>Panel cut out 22 x 22 mm |
| Han-INOX®,<br>Bulkhead mounted housing,<br>Straight,<br>With metal cover,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br><br>for mounted male insert | | 19 44 003 0305 | <br>Panel cut out 22 x 22 mm |
| Han-INOX®,<br>Bulkhead mounted housing,<br>Straight,<br>With metal cover,<br>With seal,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br><br>for mounted female insert or for mounted Han-Brid® insert | | 19 44 003 0306 | |
| Han-INOX®,<br>Bulkhead mounted housing,<br>Angled,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | | 19 44 003 0801 | <br>Panel cut out 22 x 22 mm |

# Han-INOX® hoods/housings

Size 3 A

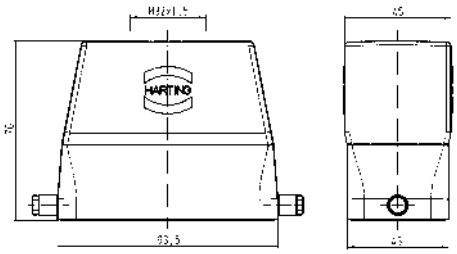
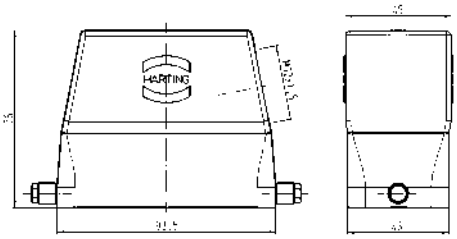
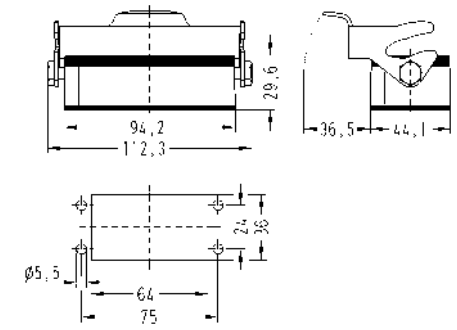
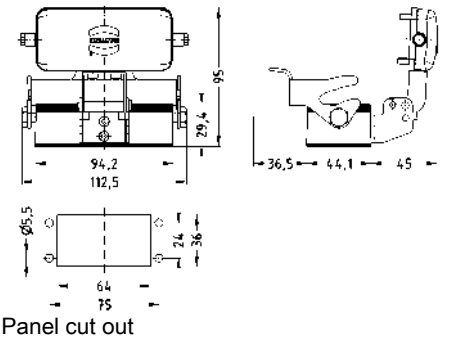
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Surface mounted housing,<br>With seal (NBR),<br>Side entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 44 003 1250 |  |
| Han-INOX®,<br>Surface mounted housing,<br>With seal (FPM),<br>Side entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 44 003 1251 | |
| Han-INOX®,<br>Cable to cable housing,<br>Top entry,<br>IP65,<br>IP67<br>Pack contents:<br>With seal screw<br> | 1x M20 | 19 44 003 1750 |  |
| Han-INOX®,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted female insert or for mounted Han-Brid® insert | | 19 44 003 5421 |  |

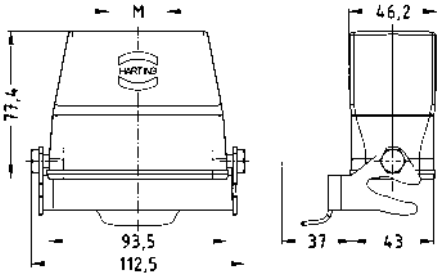
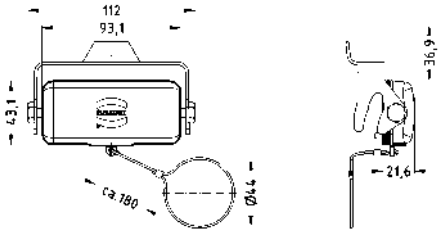
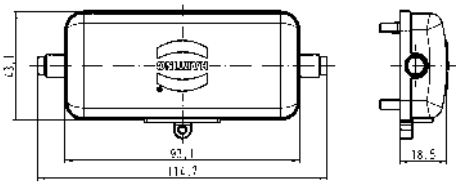
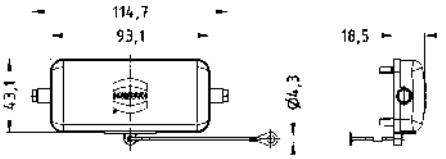
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted male insert | | 19 44 003 5422 |  |
| Han-INOX®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted female insert or for mounted Han-Brid® insert | | 19 44 003 5425 |  |
| Han-INOX®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for surface mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65,<br>IP67<br><br>for mounted male insert | | 19 44 003 5426 |  |

# Han-INOX® hoods/housings

Size 10 B

Hoods/housings for harsh environments
Single locking lever

| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Hood,<br>Top entry,<br>IP65<br> | 1x M32 | 19 44 310 0447 |  |
| Han-INOX®,<br>Hood,<br>Side entry,<br>IP65<br> | 1x M20<br>1x M25<br>1x M32 | 19 44 310 0545<br>19 44 310 0546<br>19 44 310 0547 |  |
| Han-INOX®,<br>Bulkhead mounted housing,<br>IP65<br> | | 19 44 310 0305<br>19 44 310 0306 | <br>Panel cut out |
| Han-INOX®,<br>Bulkhead mounted housing,<br>With metal cover,<br>IP65<br> | | 19 44 310 0303 | <br>Panel cut out |

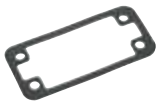
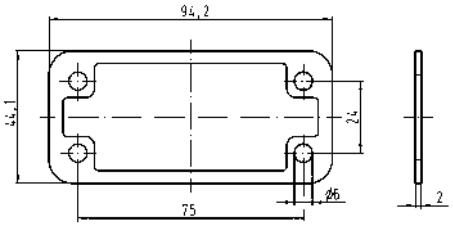
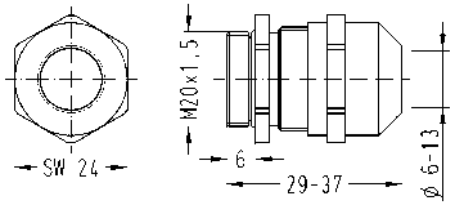
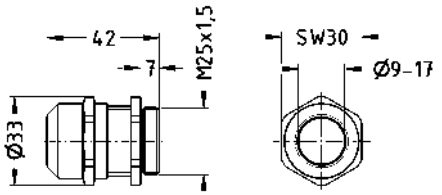
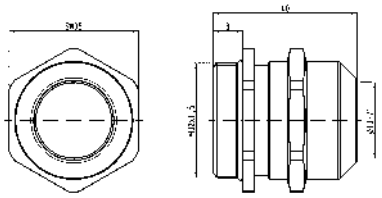
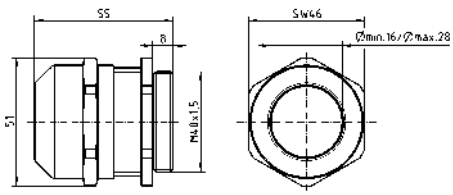
| Identification | Cable entry | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-INOX®,<br>Cable to cable housing,<br>Top entry,<br>IP65  | 1x M32 | 19 44 310 0757 |   |
| Han-INOX®,<br>Protection cover,<br>for hoods,<br>Metal,<br>With fixing cord,<br>IP65  | | 19 44 310 5422 |   |
| Han-INOX®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for cable to cable housing,<br>Metal,<br>IP65  | | 19 44 310 5421 |   |
| Han-INOX®,<br>Protection cover,<br>for bulkhead mounted housings,<br>for cable to cable housing,<br>Metal,<br>With fixing cord,<br>IP65  | | 19 44 310 5423 |   |

## Technical characteristics

| | |
|---|---|
| Material (seal) | NBR |
| Colour (seal) | Black |

## Technical characteristics

| | |
|---|---|
| Material (cable glands) | Stainless steel |
| Material (clamping ring) | Polyamide (PA) |
| RoHS | compliant |

| Identification | Size | Clamping range (mm) | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|---|
| Han-INOX®, Flange gasket  | | | 10 B | 19 44 000 9902 |   |
| Han-INOX®, Cable gland   | M20<br>M25<br>M32<br>M40 | 6 ... 13<br>9 ... 17<br>13 ... 21<br>16 ... 28 | | 19 44 000 5082<br>19 44 000 5083<br>19 44 000 5084<br>19 44 000 5085 |        |

# Han® Thermocouple

| Contents | Page |
|---|---|
| Han D® crimp contacts ..... | **Han 41.2** |
| Han E® crimp contacts ..... | **Han 41.3** |
| Han A® screw termination..... | **Han 41.4** |
| Han E® screw termination ..... | **Han 41.6** |

# Han D® crimp contacts

## Features

- Suitable for Han D® / DD® inserts
- Can be combined with standard crimp contacts in one connector if needed
- Iron and constantan contacts according to IEC 60584 type J
- According to EUROMAP 14, Part 1

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Material (contacts) | Iron, Constantan |
| RoHS | compliant |

## Specifications and approvals

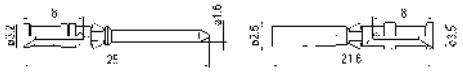
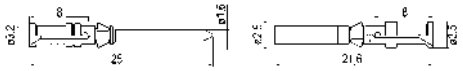
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han D®, Crimp contact, Iron<br>Contact surface: Gold plated<br> | 0.14 ... 0.37 | 09 15 000 6171 | 09 15 000 6271 | <br>Stripping length 8 mm |
| Han D®, Crimp contact, Constantan<br> | 0.14 ... 0.37 | 09 15 000 6161 | 09 15 000 6261 | <br>Stripping length 8 mm |

# Han E® crimp contacts



## Features

- Suitable for Han E®, Han® EE / EEE, Han® Q and Han A® inserts
- Can be combined with standard crimp contacts in one connector if needed
- Iron and constantan contacts according to IEC 60584 type J
- According to EUROMAP 14, Part 1

## Technical characteristics

| | |
|---|---|
| Contact resistance | ≤1 mΩ |
| Material (contacts) | Iron, Constantan |
| RoHS | compliant |

## Specifications and approvals

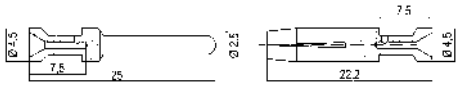
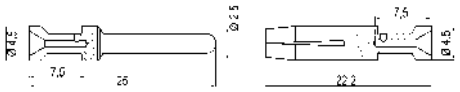
EN 60664-1
IEC 61984

## Details

**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han E®, Crimp contact, Iron<br>Contact surface: Gold plated<br> | 0.14 ... 0.37<br>0.5 | 09 33 000 6173<br>09 33 000 6172 | 09 33 000 6273<br>09 33 000 6272 | <br>Stripping length 7.5 mm |
| Han E®, Crimp contact, Constantan<br> | 0.14 ... 0.37<br>0.5 | 09 33 000 6163<br>09 33 000 6162 | 09 33 000 6263<br>09 33 000 6262 | <br>Stripping length 7.5 mm |

# Han A® screw termination

Ther-
mo

## Features

- Connector for temperature measurement conductors - suitable for injection moulding machines
- Iron and constantan contacts according to IEC 60584 type J
- According to EUROMAP 14, Part 1

## Technical characteristics

| | |
|---|---|
| Number of contacts | 16 |
| Rated current | 16 A |
| Rated voltage | 250 V |
| Rated impulse voltage | 4 kV |
| Pollution degree | 3 |
| Rated voltage acc. to UL | 600 V |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

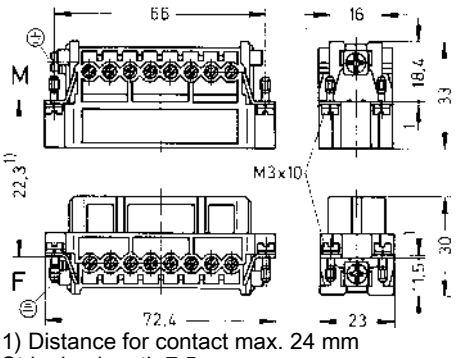
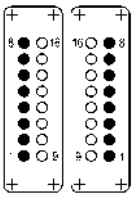
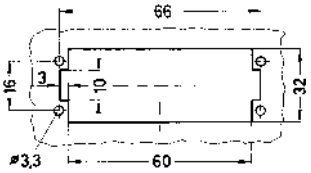
## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

Number of contacts

16+ ⏚

16 A 250 V 4 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Thermocouple,<br>Han A®,<br>Screw termination  | 1 ... 2.5 | 09 20 016 2691 | 09 20 016 2891 |  1) Distance for contact max. 24 mm<br>Stripping length 7.5 mm<br>Tightening torque 0.5 Nm<br> ◆ Fe<br>○ CuNi<br> Panel cut out<br>for use without Hoods/Housings |

# Han E® screw termination

Ther-
mo

## Features

- Connector for temperature measurement conductors - suitable for injection moulding machines
- Iron and constantan contacts according to IEC 60584 type J
- According to EUROMAP 14, Part 1

## Technical characteristics

| | |
|---|---|
| Number of contacts | 10, 16, 24 |
| Rated current | 16 A |
| Rated voltage | 400 V |
| Rated impulse voltage | 6 kV |
| Pollution degree | 3 |
| Insulation resistance | $>10^{10}$ Ω |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | RAL 7032 (pebble grey) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant with exemption, compliant |

## Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

## Details

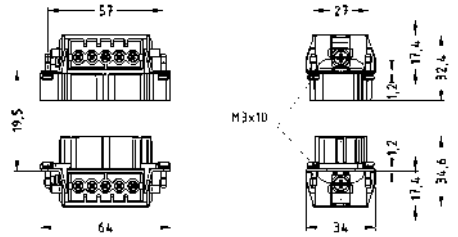
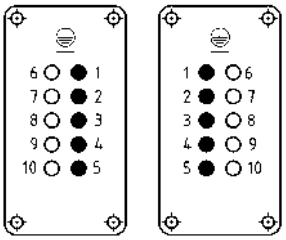
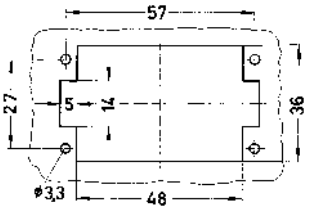
Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm

Number of contacts

10+ ⏚

16 A 400 V 6 kV 3

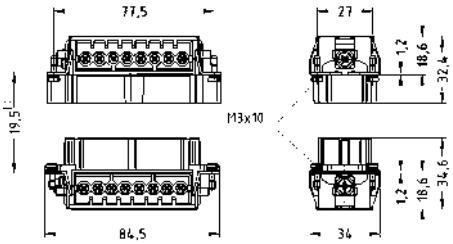
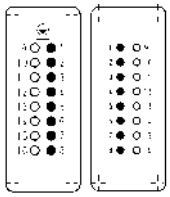
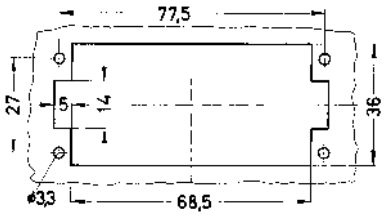
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Thermocouple,<br>Han E®,<br>Screw termination,<br>With wire protection  | 1 ... 2.5 | 09 33 010 2691 | 09 33 010 2791 |  1) distance for contact max. 21 mm  ◆ Fe<br>○ CuNi  Panel cut out |

Ther-
mo

Number of contacts

16+ ⏚

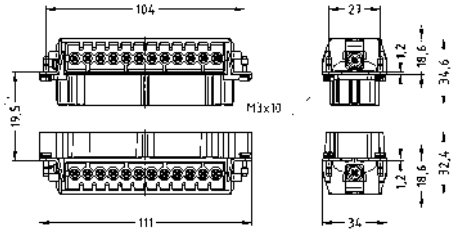
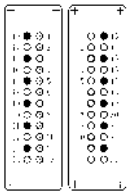
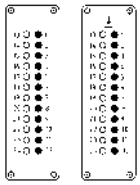
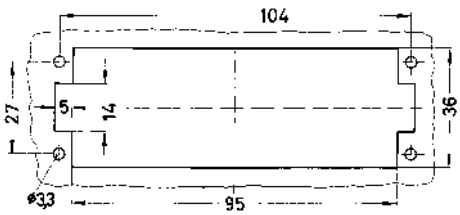
16 A 400 V 6 kV 3

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Thermocouple,<br>Han E®,<br>Screw termination,<br>With wire protection<br> | 1 ... 2.5 | 09 33 016 2691 | 09 33 016 2791 | <br><br>1) distance for contact max. 21 mm<br><br>◆ Fe<br>○ CuNi<br><br><br>Panel cut out |

Number of contacts

24+ ⏚

16 A 400 V 6 kV 3

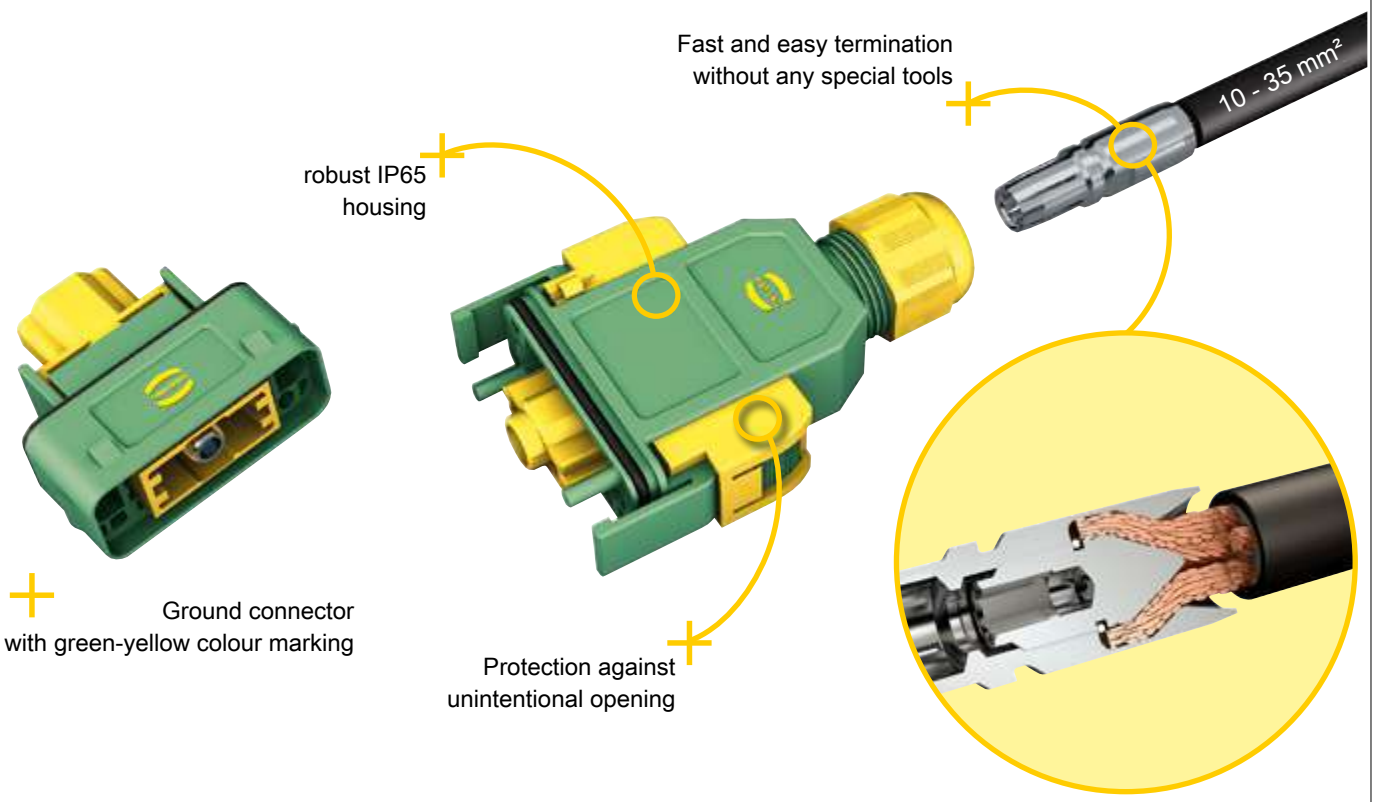
| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® Thermocouple,<br>Han E®,<br>Screw termination,<br>With wire protection<br><br>Also suitable for standard contacts | 1 ... 2.5 | 09 33 024 2689 | 09 33 024 2789 | <br>1) distance for contact max. 21 mm<br><br>Standard contacts<br>◆ Fe<br>○ CuNi |
| Han® Thermocouple,<br>Han E®,<br>Screw termination,<br>With wire protection<br> | 1 ... 2.5 | 09 33 024 2691 | 09 33 024 2791 | <br>◆ Fe<br>○ CuNi<br><br>Panel cut out |

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| Modules ..... | **Han 42.5** |
| Hoods/Housings ..... | **Han 42.7** |

# Han® GND – Mateable Potential Equalization

The new Han® GND series now enables pluggable grounding systems.
Han® GND (Han® Ground) is the innovative HARTING solution for potential equalization. The new connector series makes it possible to execute grounding systems in a pluggable design for the first time.

The use of connectors has been well-established in the electrical cabling of machines and systems for many years. The advantage is quick and error-free commissioning. Potential equalization lines are still being permanently connected, which is relatively time-consuming and can be subject to errors. HARTING's remedy: the Han® GND. The single-pole connector in the robust IP65 plastic housing is designed for stranded wires from 10 - 35 mm² and is optionally available in crimp or axial screw termination. The latter has the advantage that the lines can be connected without a special tool. A simple screwdriver is all it takes to achieve a quick and easy reliable connection. Extra connector mating security can be provided by the use of additional locking elements that prevent unintentional opening.



## Assembly and construction



Assembly

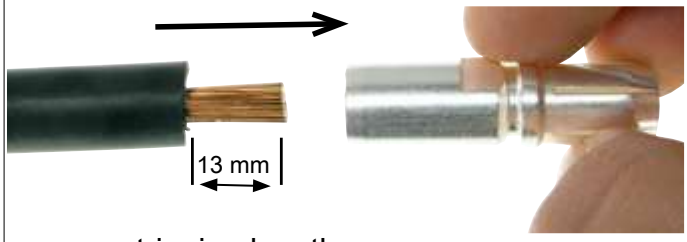
Please use fine stranded wire (Class 5) which is recommend for the axial screw termination.



Do not twist the stripped wire!

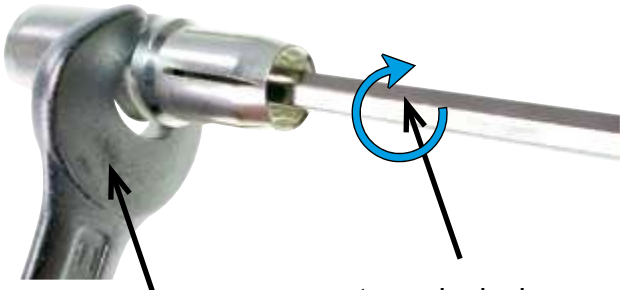
1.

Please strip the wire. All suitable wire gauges have to be stripped with a length of 13 mm (acc. to Class 5).
Insert stripped wire into the terminal and push fully inside. Pay attention that all fine stranded wires are inserted in the contact chamber.




stripping length





turn clockwise

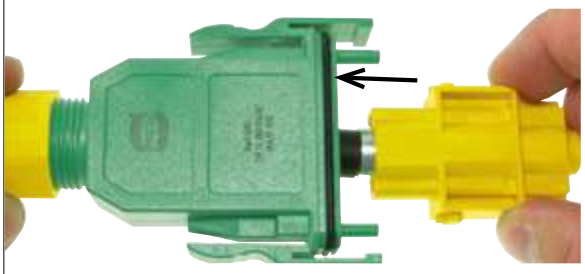
secure axial screw

2.

Please insert suitable torque key (SW 4) into the contact from mating side and turn the axial screw clockwise. For that purpose secure the axial screw with a spanner (SW 11).
Tighten the screw to the specified torque value.

## Assembly and construction





3. Insert the installed cable through the cable gland into the Han® GND housing! Push the axial screw contact into the module until you hear an audible click, which is the indicator that the contact snaps into position.

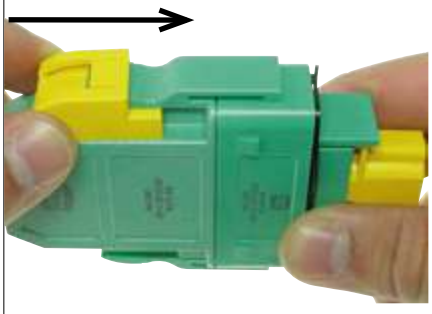


4. Push the module back into the housing and turn the cable gland clockwise.

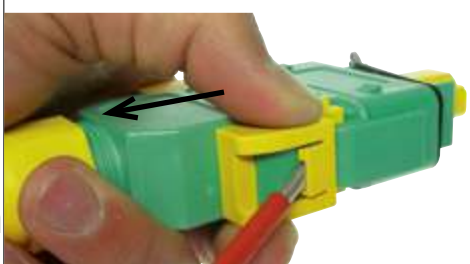


5. Mount the module in the housing with the enclosed screws.

Protection against unintentional opening (option)



1. Push the unlocking protection over the opening latches to prevent an unintentional opening (the connector can only be unmated with a separate tool).



2. The removal of the unlocking protection can be done with a screwdriver for slotted screws (e.g. size 0.8 x 4.0). Insert the screwdriver in the unlocking protection slot and release the plastic latch until you are able to remove the unlocking protection with your fingers.

## Features

- First connector for potential equalisation
- Slim, space saving construction type
- Low cost plastic hoods and housings
- Colours: green and yellow
- Crimp or axial screw termination available

## Technical characteristics

| | |
|---|---|
| Number of contacts | 1 |
| Insulation resistance | >$10^{10}$ Ω |
| Contact resistance | ≤0.3 mΩ |
| Limiting temperature | -40 ... +125 °C |
| Mating cycles | ≥500 |
| Material (insert) | Polycarbonate (PC) |
| Colour (insert) | Yellow |
| Material (contacts) | Copper alloy |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

## Details

**Hex key (A/F 4)** see chapter Han 90

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

**Remarks on the axial screw technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

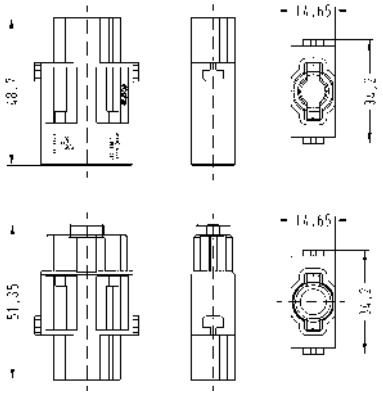
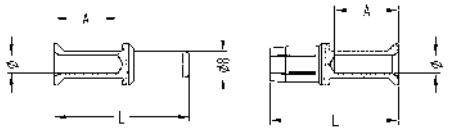
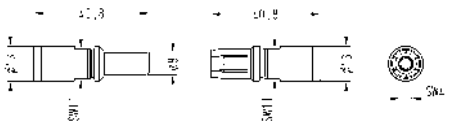
**Crimping tools** see chapter Han 90

**Remarks on the crimp technique**

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Number of contacts

# 1

| Identification | Conductor cross-section (mm²) | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® GND,<br>Crimp termination,<br>Axial screw termination<br><br>Please order contacts separately. | 10 ... 35 | 09 14 001 3032 | 09 14 001 3132 |  |
| TC 100,<br>Crimp contact,<br>Contact surface:<br>Silver plated<br> | 10<br>16<br>25<br>35 | 09 11 000 6114<br>09 11 000 6116<br>09 11 000 6125<br>09 11 000 6135 | 09 11 000 6214<br>09 11 000 6216<br>09 11 000 6225<br>09 11 000 6235 | <br>Conductor cross-section / ø / Stripping length<br>10 mm² / 4.3 / 19 mm<br>16 mm² / 5.5 / 19 mm<br>25 mm² / 7 / 19 mm<br>35 mm² / 8.2 / 16 mm<br>for stranded wire according to IEC 60 228 Class 5 |
| TC 100,<br>Axial screw contact,<br>Contact surface:<br>Silver plated<br> | 10 ... 25<br>16 ... 35 | 09 11 000 6112<br>09 11 000 6113 | 09 11 000 6212<br>09 11 000 6213 | <br>Stripping length 13 mm<br><br>Tightening torque<br>mm² / 10 / 16 / 25 / 35<br>Nm / 6 / 6 / 7 / 8 |

## Features

- First connector for potential equalisation
- Slim, space saving construction type
- Low cost plastic hoods and housings
- Colours: green and yellow

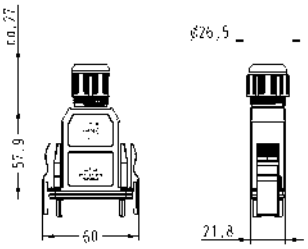
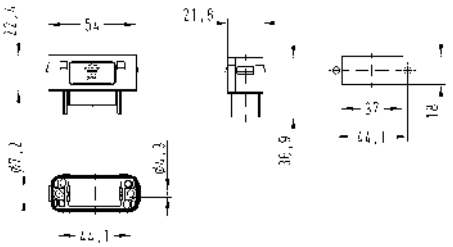
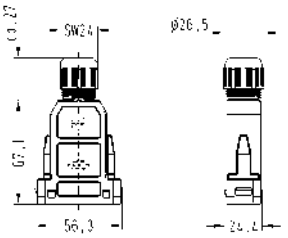
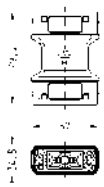
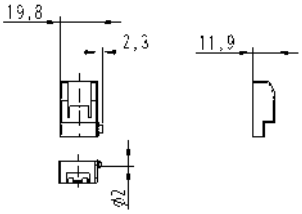
## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +85 °C |
| Mating cycles | ≥500 |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | Green, Yellow |
| Material (seal) | NBR |
| Material (cable glands) | Polyamide (PA) |
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant, compliant with exemption |

## Specifications and approvals

EN 60664-1
IEC 61984

Snap-in latches

| Identification | Cable entry | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® GND,<br>Hood,<br>Top entry,<br>IP65<br> | 1x Integrated | 7.5 ... 14 | 09 14 001 0430 |  |
| Han® GND,<br>Bulkhead mounted housing,<br>IP65<br> | | | 09 14 001 0330 |  |
| Han® GND,<br>Cable to cable housing,<br>Top entry,<br>IP65<br> | 1x Integrated | 7.5 ... 14 | 09 14 001 0730 |  |
| Han® GND,<br>Adapter,<br>Male / male<br> | | | 09 14 001 9901 |  |
| Han® GND,<br>Unlocking protection<br> | | | 09 14 000 9938 |  |

# Accessories



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| Seals | **Han 80.10** |
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| Panel feed through housings | **Han 80.13** |
| Accessories for flat cable entry | **Han 80.19** |
| Cable glands | **Han 80.20** |
| Shielding frame | **Han 80.26** |
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| Screws | **Han 80.43** |
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| Further accessories | **Han 80.47** |

# D-Sub adapter

Size 10 A

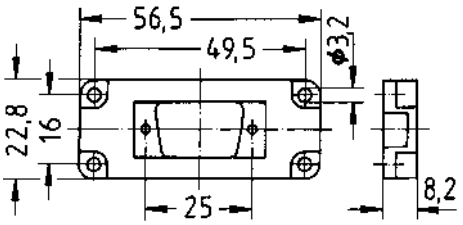
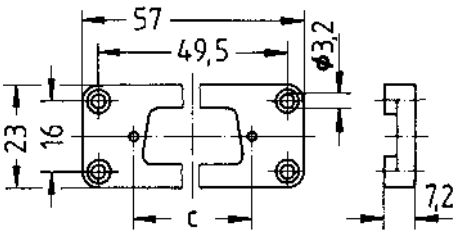


## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic, Metal |
| RoHS | compliant |

## Details

Not suitable for D-Sub High Density!

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| D-Sub 1,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 20 000 9932 | <br>D-Sub 1 |
| D-Sub 2,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 20 000 9928 | <br>D-Sub 2 c= 33.3 mm<br>D-Sub 3 c= 47 mm |
| D-Sub 3,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 20 000 9929 | |



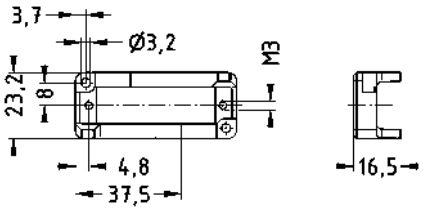




# D-Sub adapter

Size 10 A



| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| D-Sub 3 in the Han® 10 A,<br>D-Sub 4 in the Han® 16 A,<br>Adapter plate,<br>for 1 x D-Sub,<br>Metal,<br>Pack contents:<br>Two-piece adapter,<br>2 fixing screws for adapter,<br>2 fixing screws for D-Sub connector<br> | 09 20 000 9925 |  |

# D-Sub adapter

Size 16 A

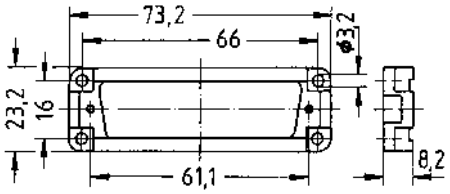
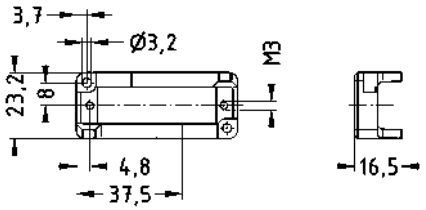


## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic, Metal |
| RoHS | compliant |

## Details

Not suitable for D-Sub High Density!

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| D-Sub 5,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 20 000 9931 |  |
|  | | |
| D-Sub 3 in the Han® 10 A,<br>D-Sub 4 in the Han® 16 A,<br>Adapter plate,<br>for 1 x D-Sub,<br>Metal,<br>Pack contents:<br>Two-piece adapter,<br>2 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 20 000 9925 |  |
|  | | |

# D-Sub adapter

Size 6 B



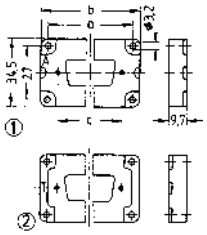
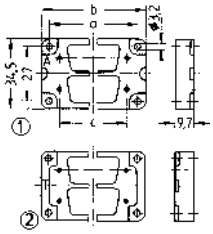


## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic |
| RoHS | compliant |

## Details

Not suitable for D-Sub High Density!

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| D-Sub 1,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 30 000 9965 | <br>① Mounting in housing: character A visible<br>② Mounting in hood: character T visible<br>D-Sub 1: a=44; b=51.5; c=25<br>D-Sub 2: a=44; b=51.5; c=33.3 |
| D-Sub 2,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 30 000 9966 | |
| D-Sub 1,<br>Adapter plate,<br>for 2x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>4 fixing screws for D-Sub connector | 09 30 000 9970 | <br>① Mounting in housing: character A visible<br>② Mounting in hood: character T visible<br>D-Sub 2x 1: a=44; b=51.5; c=25<br>D-Sub 2x 2: a=44; b=51.5; c=33.3 |
| D-Sub 2,<br>Adapter plate,<br>for 2x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>4 fixing screws for D-Sub connector | 09 30 000 9971 | |



# D-Sub adapter

Size 10 B

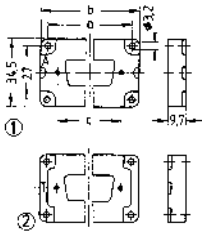
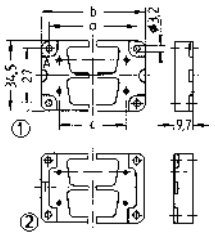


## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic |
| RoHS | compliant |

## Details

Not suitable for D-Sub High Density!

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| D-Sub 3,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 30 000 9967 | <br>① Mounting in housing: character A visible<br>② Mounting in hood: character T visible<br>D-Sub 3: a=57; b=64.5; c=47 |
| D-Sub 3,<br>Adapter plate,<br>for 2x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>4 fixing screws for D-Sub connector<br> | 09 30 000 9972 | <br>① Mounting in housing: character A visible<br>② Mounting in hood: character T visible<br>D-Sub 2x 3: a=57; b=64.5; c=47 |

# D-Sub adapter

Size 16 B

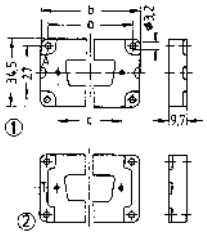
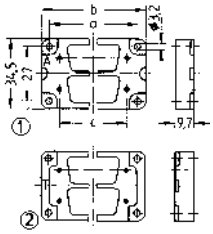


## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic |
| RoHS | compliant |

## Details

Not suitable for D-Sub High Density!

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| D-Sub 4,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 30 000 9968 | <br>① Mounting in housing: character A visible<br>② Mounting in hood: character T visible<br>D-Sub 4: a=77.5; b=85; c=63.5<br>D-Sub 5: a=77.5; b=85; c=61.1 |
| D-Sub 5,<br>Adapter plate,<br>for 1 x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>2 fixing screws for D-Sub connector | 09 30 000 9969 | |
| D-Sub 4,<br>Adapter plate,<br>for 2x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>4 fixing screws for D-Sub connector | 09 30 000 9973 | <br>① Mounting in housing: character A visible<br>② Mounting in hood: character T visible<br>D-Sub 2x 4: a=77.5; b=85; c=63.5<br>D-Sub 2x 5: a=77.5; b=85; c=61.1 |
| D-Sub 5,<br>Adapter plate,<br>for 2x D-Sub,<br>Pack contents:<br>1 adapter,<br>4 fixing screws for adapter,<br>4 fixing screws for D-Sub connector | 09 30 000 9974 | |



# Locking levers

Double locking lever

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Polycarbonate (PC), Stainless steel |
| Colour (accessories) | RAL 7037 (dust grey) |

## Technical characteristics

| | |
|---|---|
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han A®, Han-Easy Lock®, Locking levers, RAL 7037 (dust grey)  | 32 A | 09 00 000 5223 | |
| Han® B, Han-Easy Lock®, Locking levers, RAL 7037 (dust grey)  | 10/16/24 B<br>32 B | 09 00 000 5221<br>09 00 000 5231 | |

# Locking levers

Single locking lever

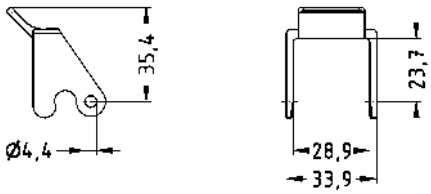


## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic, Polycarbonate (PC), Stainless steel |
| Colour (accessories) | RAL 7032 (pebble grey), Black, RAL 7037 (dust grey) |

## Technical characteristics

| | |
|---|---|
| Material flammability class acc. to UL 94 (locking levers) | V-0 |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Locking levers, RAL 7032 (pebble grey)  | 3 A | 09 00 000 5241 | |
| Locking levers, Black  | 3 A | 09 00 000 5242 | |
| Locking levers, Han® Q 8/0, Black  | Han-Compact® | 09 00 000 5244 |   |
| Han A®, Han-Easy Lock®, Locking levers, RAL 7037 (dust grey)  | 10 A<br>16 A | 09 00 000 5224<br>09 00 000 5225 | |
| Han® B, Han-Easy Lock®, Locking levers, RAL 7037 (dust grey)  | 06 B<br>10 B<br>16 B<br>24 B | 09 00 000 5222<br>09 00 000 5228<br>09 00 000 5229<br>09 00 000 5230 | |

# Seals

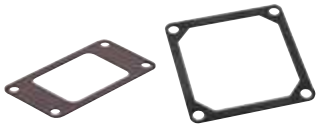


## Technical characteristics

| | |
|---|---|
| Material (seal) | NBR, FPM |
| Colour (seal) | Black, Light grey |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption, compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han A®, Flange gasket  | 03 A<br>10 A<br>16 A<br>32 A | 09 20 000 9991<br>09 20 000 9992<br>09 20 000 9993<br>09 20 000 9994 | |
| Han® B, Flange gasket  | 06 B<br>10 B<br>16 B<br>24 B | 09 30 000 9991<br>09 30 000 9992<br>09 30 000 9993<br>09 30 000 9994 | |
| Han® B, Flange gasket, Self-retaining  | 06 B<br>10 B<br>16 B<br>24 B | 09 30 000 9801<br>09 30 000 9802<br>09 30 000 9803<br>09 30 000 9804 | |
| Flange gasket  | 48 HPR<br>Han-Drive®<br>Modular Compact | 09 30 000 9996<br>09 30 000 9903<br>09 14 000 9940 | |
| Flange gasket, Han® HPR  | 03 HPR<br>06 HPR<br>10 HPR<br>16 HPR<br>24 HPR | 09 40 000 9980<br>09 40 000 9801<br>09 40 000 9802<br>09 40 000 9803<br>09 40 000 9804 | |
| Han A®, Flange gasket, FPM  | 3 A | 09 37 000 9912 | |
| Han® M, Flange gasket, FPM | 06 B<br>10 B<br>16 B<br>24 B | 09 37 000 9946<br>09 37 000 9947<br>09 37 000 9948<br>09 37 000 9949 | |

## Technical characteristics

| | |
|---|---|
| Material (seal) | NBR, FPM |

## Technical characteristics

| | |
|---|---|
| Colour (seal) | Black, RAL 7001 (silver-grey) |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han A®, Profile gasket  | 03 A<br>10 A<br>16 A | 09 70 000 9991<br>09 20 000 9996<br>09 20 000 9997 | |
| Han® B, Profile gasket  | 06 B<br>10 B<br>16 B<br>24 B<br>32 B<br>48 B | 09 30 000 9941<br>09 30 000 9942<br>09 30 000 9943<br>09 30 000 9944<br>09 30 000 9963<br>09 30 000 9995 | |
| Han® HPR, O-ring rubber seal  | 03 HPR<br>06 HPR<br>10 HPR<br>16 HPR<br>24 HPR | 09 40 000 9910<br>09 40 000 9911<br>09 40 000 9912<br>09 40 000 9913<br>09 40 000 9914 | |
| L-seal  | 06 B<br>10 B<br>16 B<br>24 B | 09 30 000 9936<br>09 30 000 9935<br>09 30 000 9934<br>09 30 000 9933 | |
| Profile gasket, FPM  | 03 A<br>06 B<br>10 B<br>16 B<br>24 B | 09 21 000 9906<br>09 30 000 9951<br>09 30 000 9952<br>09 30 000 9953<br>09 30 000 9954 | |

## Features

- Cable to cable connection simple to realise and easy to mount
- Resistant elastomer
- Locking as well as seal combined in one system
- for two lever locking system

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +85 °C |
| Degree of protection acc. to IEC 60529 | IP65, locked condition |
| Colour (hood/housing) | Black |
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Locking element,<br>for hoods,<br>IP65 locked condition  | 09 30 016 9901 | |

# Panel feed through housings

Standard hoods/housings for industrial connectors
Double locking lever





## Features

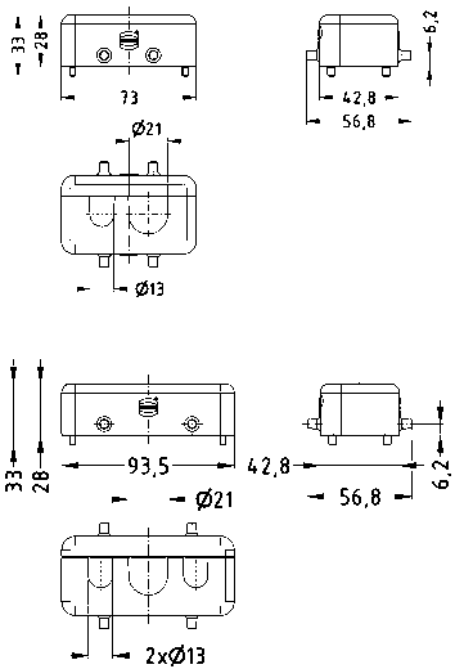
- Allows the entry of pre-assembled cables into a switch cabinet
- Robust design
- High pole cable entry seals for up to 10 different cables
- For sealing and feed through of pre-assembled cables

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Material (hood/housing) | Aluminium die-cast |
| Material (seal) | NBR |
| RoHS | compliant |

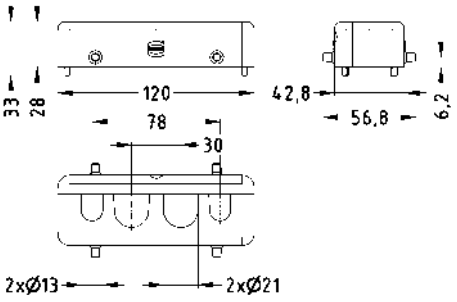
## Specifications and approvals

CE

| Identification | Cable entry | Size | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>IP65<br>Pack contents:<br>2 split hood halves,<br>2x M4 screw<br><br>Please order cable entry seals separately. | 2x<br>3x | 10 B<br>16 B | 09 30 010 0498<br>09 30 016 0498 |  |

# Panel feed through housings



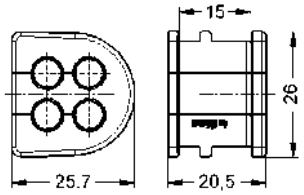
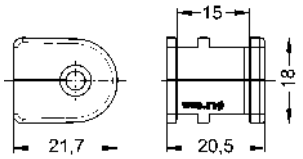
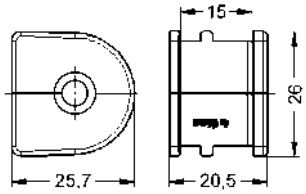
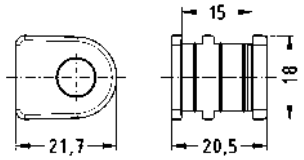
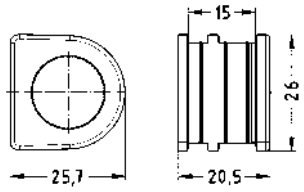
| Identification | Cable entry | Size | Part number High construc-tion | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>IP65<br>Pack contents:<br>2 split hood halves,<br>3x M4 screw<br><br>Please order cable entry seals separately. | 4x | 24 B | 09 30 024 0498 |  |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | NBR |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | Black |
| RoHS | compliant |

| Identification | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Cable entry seal, 4 cable entries, Wide version  | ... 6 | 09 00 000 6004 |   |
| Cable entry seal, 1 cable entry, Narrow version  | 4.5 ... 6<br>6 ... 7.5<br>7.5 ... 9 | 09 00 000 6005<br>09 00 000 6006<br>09 00 000 6007 |   |
| Cable entry seal, 1 cable entry, Wide version  | 9 ... 10.5<br>10.5 ... 12<br>12 ... 13.5<br>13.5 ... 15<br>15 ... 16 | 09 00 000 6008<br>09 00 000 6009<br>09 00 000 6010<br>09 00 000 6011<br>09 00 000 6012 |   |
| Dummy plugs, Narrow version  | | 09 00 000 6101 |   |
| Dummy plugs, Wide version  | | 09 00 000 6102 |   |

# Panel feed through housings

Standard hoods/housings for industrial connectors
Double locking lever



## Features

- Allows the entry of pre-assembled cables into a switch cabinet
- Use of identification strips is possible
- No special tools required
- Standard screw driver (5 x 1 mm) necessary to open split hood
- IP54 due to continuos contoured seal

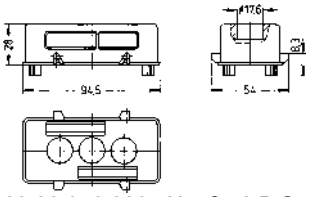
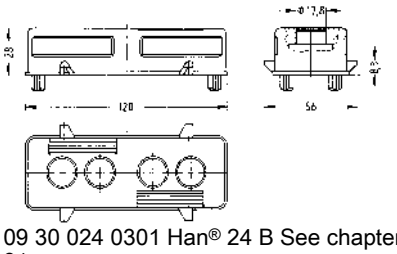
## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |
| Type rating acc. to UL 50 / UL 50E | 4, 4X, 12 |
| Material (hood/housing) | Polycarbonate (PC) |
| Colour (hood/housing) | RAL 7037 (dust grey) |
| RoHS | compliant |

## Specifications and approvals

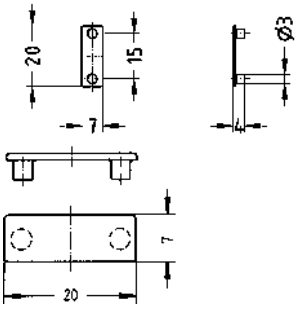
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

CE

| Identification | Cable entry | Cable diameter (mm) | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|---|
| Han® B,<br>Panel feed through housing,<br>Top entry,<br>IP65<br>Pack contents:<br>2 split hood halves<br><br>Please order cable entry seals separately.<br>IP54 when mounted vertically | 3x Integrated<br>4x Integrated | 17.6<br>17.8 | 16 B<br>24 B | 09 30 016 0408<br>09 30 024 0408 | <br>09 30 016 0301 Han® 16 B See chapter Han 31<br><br>09 30 024 0301 Han® 24 B See chapter Han 31 |

# Panel feed through housings



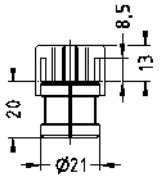
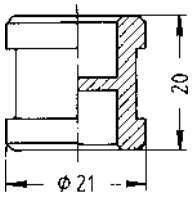
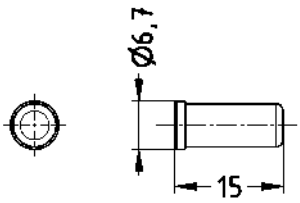
| Identification | Cable entry | Cable diame-ter (mm) | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|---|
| Han-Snap®, Identification strip  | | | | 09 33 000 9981 |   |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic, NBR |

## Technical characteristics

| | |
|---|---|
| Colour (accessories) | Black |
| RoHS | compliant |

| Identification | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Cable entry seal  | 3 ... 4<br>4 ... 5<br>5 ... 6<br>6 ... 7<br>7 ... 8<br>8 ... 9<br>9 ... 10 | 09 00 000 5351<br>09 00 000 5352<br>09 00 000 5353<br>09 00 000 5354<br>09 00 000 5355<br>09 00 000 5356<br>09 00 000 5357 | |
| Cable entry seal,<br>Additional strain relief can be provided by cable ties (max. width 8 mm)  | 10 ... 11<br>11 ... 12<br>12 ... 13<br>13 ... 14<br>14 ... 15<br>15 ... 16 | 09 00 000 5358<br>09 00 000 5359<br>09 00 000 5360<br>09 00 000 5361<br>09 00 000 5362<br>09 00 000 5363 | |
| Cable entry seal,<br>for ASI cable  | | 09 00 000 5364 |  |
| Dummy plugs  | 4.5 ... 6 | 09 00 000 5350<br>09 00 000 6103 | <br> |

# Accessories for flat cable entry

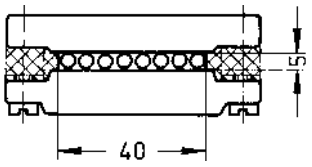
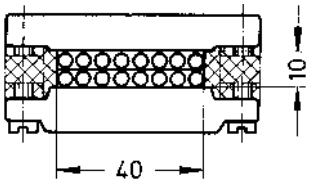
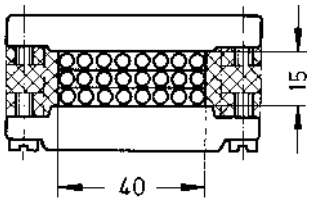
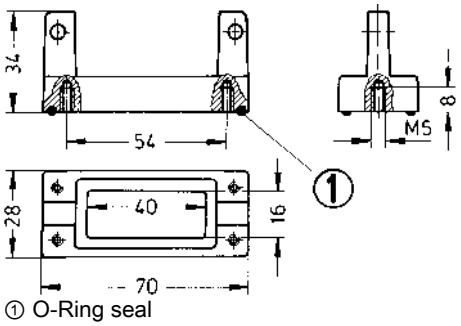


## Technical characteristics

| | |
|---|---|
| Material (seal) | NBR |

## Technical characteristics

| | |
|---|---|
| Colour (seal) | Black |
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Set of seals for ribbon cable entry,<br>With strain relief clamp,<br>for 1 flat cable  | 09 00 000 5315 |  |
| Set of seals for ribbon cable entry,<br>With strain relief clamp,<br>for 2 flat cables  | 09 00 000 5316 |  |
| Set of seals for ribbon cable entry,<br>With strain relief clamp,<br>for 3 flat cables  | 09 00 000 5317 |  |
| Holder for ribbon cable entry,<br>for separate mounting  | 09 00 000 5325 | <br>① O-Ring seal |

## Technical characteristics

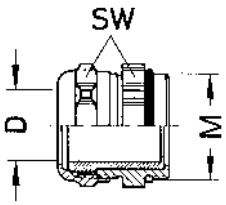
| | |
|---|---|
| Limiting temperature | -40 ... +100 °C |
| Degree of protection acc. to IEC 60529 | IP68, IP69 / IPX9K acc. to ISO 20653 |
| Material (seal) | NBR |
| Material (cable glands) | Polyamide (PA) |
| Colour (accessories) | RAL 5012 (light blue), RAL 9005 (jet black), RAL 7032 (pebble grey), RAL 7035 (light grey) |

## Technical characteristics

| | |
|---|---|
| Material flammability class acc. to UL 94 | V-0 |
| RoHS | compliant |

## Specifications and approvals

DNV GL
UL 514B QCRV.E479780
CSA-C22.2 No. 18.3 QCRV7.E479780

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® CGM-Ex i,<br>Cable gland,<br>Intrinsically safe electric circuits,<br>Blue,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | M20<br>M20<br>M25<br>M32<br>M40 | 5 ... 9<br>6 ... 12<br>9 ... 16<br>13 ... 20<br>22 ... 32 | 19 00 000 7101<br>19 00 000 7102<br>19 00 000 7104<br>19 00 000 7106<br>19 00 000 7109 |  |
| Han® CGM-P,<br>Cable gland,<br>Grey,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | M20<br>M20<br>M20<br>M25<br>M25<br>M32<br>M32<br>M40<br>M40 | 5 ... 9<br>6 ... 12<br>10 ... 14<br>9 ... 16<br>13 ... 18<br>13 ... 18<br>18 ... 25<br>20 ... 26<br>22 ... 32 | 19 00 000 5180<br>19 00 000 5182<br>19 00 000 5184<br>19 00 000 5190<br>19 00 000 5192<br>19 00 000 5194<br>19 00 000 5196<br>19 00 000 5197<br>19 00 000 5198 | |
| Han® CGM-P,<br>Cable gland,<br>Black,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653<br> | M20<br>M20<br>M20<br>M25<br>M25<br>M32<br>M32<br>M40<br>M40 | 5 ... 9<br>6 ... 12<br>10 ... 14<br>9 ... 16<br>13 ... 18<br>13 ... 20<br>18 ... 25<br>20 ... 26<br>22 ... 32 | 19 00 000 5181<br>19 00 000 5183<br>19 00 000 5185<br>19 00 000 5191<br>19 00 000 5193<br>19 00 000 5186<br>19 00 000 5187<br>19 00 000 5188<br>19 00 000 5189 | |

| Clamping range Ø | SW | E | Nm |
|---|---|---|---|
| 5 ... 9 mm | 24 | 26.4 | 4.5 |
| 6 ... 12 mm | 24 | 26.4 | 4.5 |
| 10 ... 14 mm | 27 | 29.8 | 4.5 |
| 9 ... 16 mm | 33 | 33.5 | 5 |
| 13 ... 18 mm | 33 | 36.5 | 5 |
| 13 ... 20 mm | 42 | 46.8 | 6.5 |
| 18 ... 25 mm | 42 | 46.8 | 6.5 |
| 20 ... 26 mm | 53 | 58.8 | 10 |
| 22 ... 32 mm | 53 | 58.8 | 10 |

## Technical characteristics

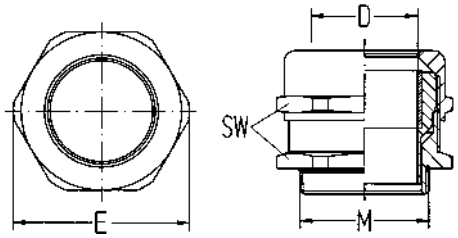
| | |
|---|---|
| Limiting temperature | -40 ... +100 °C |
| Degree of protection acc. to IEC 60529 | IP68, IP69 / IPX9K acc. to ISO 20653 |
| Material (seal) | NBR, EPDM |
| Material (cable glands) | Brass |
| Material (clamping ring) | Polyamide (PA) |
| Surface (accessories) | Nickel plated |
| RoHS | compliant with exemption |

## Specifications and approvals

UL 514B QCRV.E479780
CSA-C22.2 No. 18.3 QCRV7.E479780
DNV GL

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® CGM-M,<br>Cable gland,<br>IP68,<br>IP69 / IPX9K acc. to ISO 20653 | M20<br>M20<br>M20<br>M20<br>M25<br>M25<br>M25<br>M32<br>M32<br>M32<br>M40<br>M40<br>M40<br>M50 | 5 ... 9<br>5 ... 12<br>6 ... 12<br>10 ... 14<br>9 ... 16<br>9 ... 18<br>13 ... 18<br>13 ... 20<br>13 ... 25<br>18 ... 25<br>20 ... 26<br>20 ... 32<br>22 ... 32<br>32 ... 38 | 19 00 000 5080<br>19 00 000 5081<br>19 00 000 5082<br>19 00 000 5084<br>19 00 000 5090<br>19 00 000 5091<br>19 00 000 5092<br>19 00 000 5094<br>19 00 000 5095<br>19 00 000 5096<br>19 00 000 5097<br>19 00 000 5099<br>19 00 000 5098<br>19 00 000 5086 | |

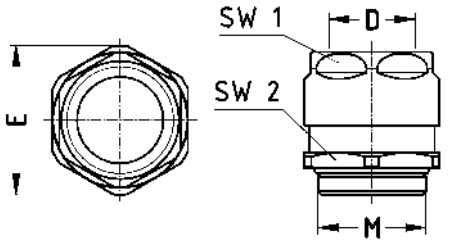





| Outer cable Ø | SW | E | Nm |
|---|---|---|---|
| 5 ... 9 mm | 22 | 24.4 | 10 |
| 5 ... 12 mm | 22 | 24.4 | 10 |
| 6 ... 12 mm | 22 | 24.4 | 10 |
| 10 ... 14 mm | 24 | 26.4 | 10 |
| 9 ... 16 mm | 30 | 33.5 | 12 |
| 9 ... 18 mm | 30 | 33.5 | 12 |
| 13 ... 18 mm | 30 | 33.5 | 12 |
| 13 ... 20 mm | 40 | 44 | 15 |
| 13 ... 25 mm | 40 | 44 | 15 |
| 18 ... 25 mm | 40 | 44 | 15 |
| 20 ... 26 mm | 50 | 55 | 15 |
| 22 ... 32 mm | 50 | 55 | 15 |
| 20 ... 32 mm | 50 | 55 | 15 |
| 32 ... 38 mm | 57 | 60 | 24 |

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han® CGM-M-Rail,<br>Cable gland,<br>Railway version,<br>IP68 | M20<br>M20<br>M25<br>M25<br>M32<br>M32<br>M40<br>M40 | 7 ... 10<br>10 ... 14<br>11 ... 14.5<br>14.5 ... 18<br>16 ... 20.5<br>20.5 ... 25<br>21 ... 26.5<br>26.5 ... 32 | 19 00 000 7120<br>19 00 000 7121<br>19 00 000 7122<br>19 00 000 7123<br>19 00 000 7124<br>19 00 000 7125<br>19 00 000 7126<br>19 00 000 7127 | |






| Outer cable ø | SW | E | Nm |
|---|---|---|---|
| 7 ... 10 mm | 22/24 | 26.4 | 6 |
| 10 ... 14 mm | 22/24 | 26.4 | 6 |
| 11 ... 14.5 mm | 27/30 | 32.8 | 7 |
| 14.5 ... 18 mm | 27/30 | 32.8 | 7 |
| 16 ... 20.5 mm | 36/40 | 43.9 | 8 |
| 20.5 ... 35 mm | 36/40 | 43.9 | 8 |
| 21 ... 26.5 mm | 46/50 | 54.9 | 8 |
| 26.5 ... 32 mm | 46/50 | 54.9 | 8 |





## Technical characteristics

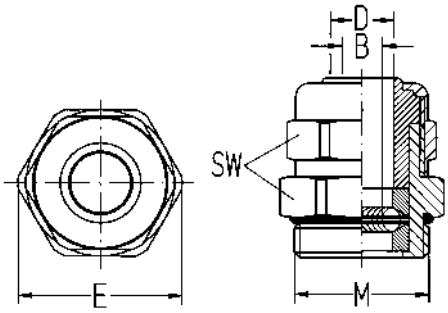
Degree of protection acc. to IEC 60529 IP68

## Technical characteristics

Material (cable glands) Metal
RoHS compliant with exemption

| Identification | Size | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Cable gland, EMC version, IP68 | M20 | 4 ... 6.5 | 19 62 000 5081 | |
| | M20 | 6.5 ... 9.5 | 19 62 000 5080 | |
| | M20 | 7 ... 10.5 | 19 62 000 5082 | |
| | M20 | 9 ... 13 | 19 62 000 5084 | |
| | M25 | 6.5 ... 9.5 | 19 62 000 5090 | |
| | M25 | 9 ... 13 | 19 62 000 5092 | |
| | M32 | 11.5 ... 15.5 | 19 62 000 5094 | |
| | M32 | 14 ... 18 | 19 62 000 5096 | |
| | M40 | 17 ... 20.5 | 19 62 000 5097 | |
| | M40 | 20 ... 25 | 19 62 000 5098 | |

| Outer cable Ø | SW | E | Shielding Ø B |
|---|---|---|---|
| 6.5 ... 9.5 | 22 | 24.4 | 3.5 ... 8.5 |
| 4 ... 6.5 | 22 | 24.4 | 2.5 ... 6.5 |
| 7 ... 10.5 | 22 | 24.4 | 6.5 ... 10.5 |
| 9 ... 13 | 22 | 24.4 | 6.5 ... 10.5 |
| 6.5 ... 9.5 | 22 | 31.2 | 3 ... 8 |
| 9 ... 13 | 28 | 31.2 | 4.8 ... 8 |
| 11.5 ... 15.5 | 35 | 38.5 | 8 ... 13.5 |
| 14 ... 18 | 35 | 38.5 | 9 ... 14.5 |
| 17 ... 20.5 | 43 | 47.3 | 15 ... 20 |
| 20 ... 25 | 43 | 47.3 | 15 ... 20 |

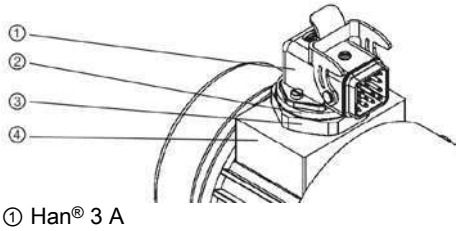
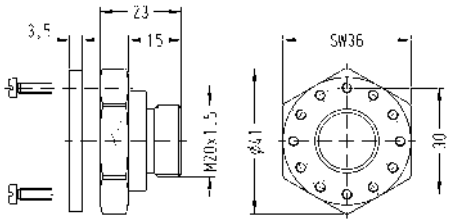


## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic, Metal |
| Colour (accessories) | Black |

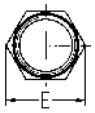
## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption, compliant |

| Identification | Size | Reduced size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Han A®, Adapter, for motor connection  | M20 | | 19 20 000 9962 |  ① Han® 3 A ② Seal ③ Adapter Han® 3 A ④ Housing for motor application   |
| Dummy plugs  | M32<br>M40 | | 19 00 000 5172<br>19 00 000 5173 |  M32: Ø 35 mm M40: Ø 46.2 mm |
| Reduced size  | M20<br>M32<br>M32 | M16<br>M20<br>M25 | 19 00 000 5060<br>19 00 000 5067<br>19 00 000 5068 | |

# Cable glands



| Identification | Size | Reduced size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|---|
| Reduced size,<br>With O-ring<br> | M32<br>M32 | M20<br>M25 | 19 00 000 5066<br>19 00 000 5069 | |
| Dummy plugs,<br>With O-ring<br> | M20<br>M25<br>M32<br>M40 | | 19 00 000 5070<br>19 00 000 5071<br>19 00 000 5072<br>19 00 000 5073 | <br><br>M20: SW 22; E 25.4<br>M25: SW 28; E 32.3<br>M32: SW 35; E 40.4<br>M40: SW 44; E 50.8 |

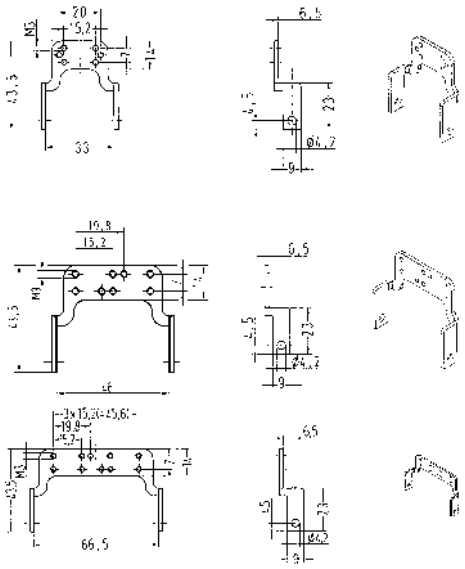
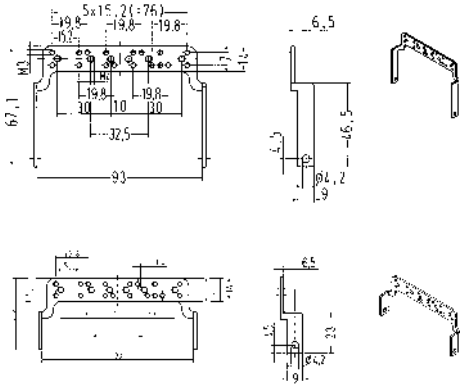
# Shielding frame

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Steel, zinc plated |

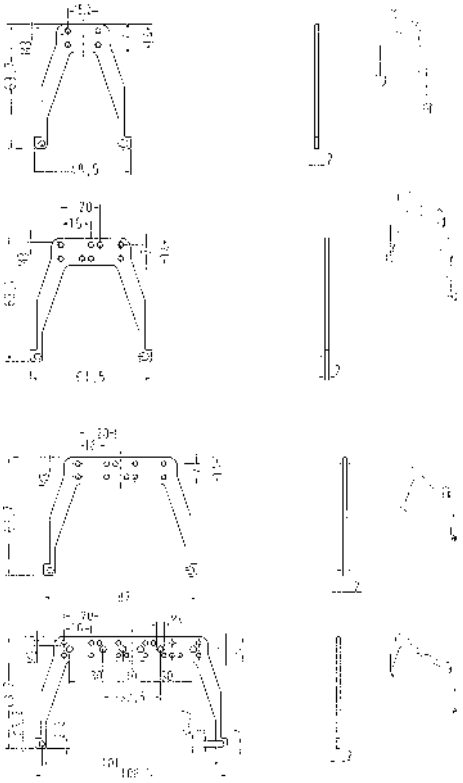
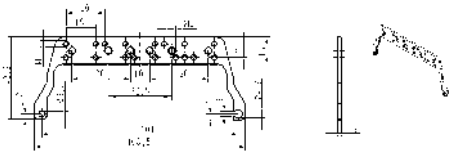
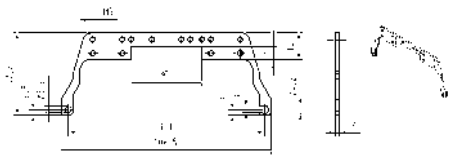
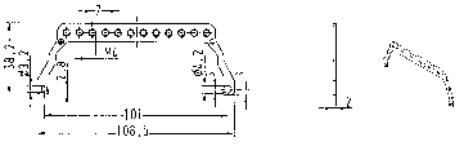
## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han E®,<br>Han® EE,<br>Han DD®,<br>Han-Snap®,<br>Shielding frame,<br>for bulkhead mounted housings,<br>for hoods, high construction,<br>Pack contents:<br>Ground terminal frame with M4 screws for fixing at insert<br> | 06 B<br>10 B<br>16 B | 09 00 000 5206<br>09 00 000 5207<br>09 00 000 5208 |  |
| Han E®,<br>Han® EE,<br>Han DD®,<br>Han-Snap®,<br>Shielding frame,<br>for bulkhead mounted housings,<br>for hoods, high construction,<br>24 B,<br>Pack contents:<br>Ground terminal frame with M4 screws for fixing at insert<br> | 24 B<br>24 B | 09 00 000 5210<br>09 00 000 5280 |  |

# Shielding frame



| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Shielding frame,<br>for bulkhead mounted housings<br> | 06 B<br>10 B<br>16 B<br>24 B<br>L32 B | 09 00 000 5256<br>09 00 000 5257<br>09 00 000 5258<br>09 00 000 5211<br>09 00 032 5201 |  |
| Han-Modular®,<br>Shielding frame,<br>for bulkhead mounted housings,<br>for hoods, high construction<br> | 24 B | 09 00 000 5298 |  |
| Han-Quintax®,<br>Shielding frame,<br>for bulkhead mounted housings,<br>for hoods, high construction<br> | 24 B | 09 00 000 5235 |  |
| Han-Modular®,<br>PE bracket,<br>for bulkhead mounted housings,<br>for hoods, high construction<br> | 24 B | 09 00 000 5209 |  |

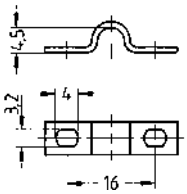
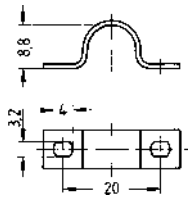
# Shielding frame

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Steel, zinc plated |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

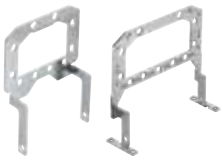
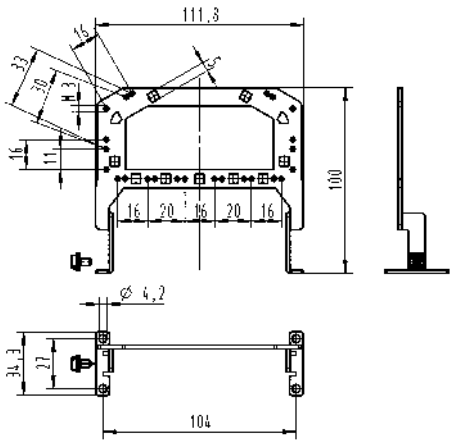
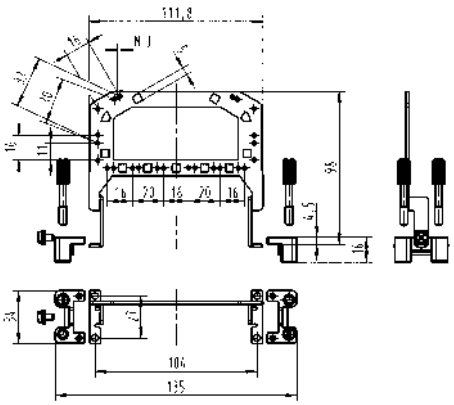
| Identification | Cable diameter (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Clamp, for shield frames  | 5<br>10 | 09 00 000 5341<br>09 00 000 5342 |  Cable diameter 5 mm<br> Cable diameter 10 mm |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Metal |

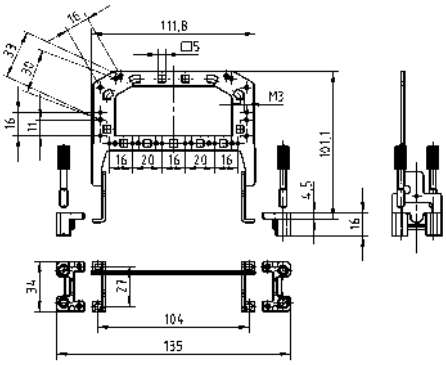
## Technical characteristics

| | |
|---|---|
| Surface (accessories) | Zinc plated |
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Grip frame<br><br>Can only be used with screw adapter! | 16 B<br>24 B | 09 00 016 5603<br>09 00 024 5601 |  |
| Grip frame,<br>With screw adapter and screw to use in connection with 09 00 000 5602<br> | 16 B<br>24 B | 09 00 016 5612<br>09 00 024 5611 |  |

# Grip frames



| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Grip frame,<br>With screw adapter and screw to use in connection with 09 00 000 5602  | 06 B<br>10 B<br>16 B<br>24 B | 09 00 006 5605<br>09 00 010 5605<br>09 00 016 5605<br>09 00 024 5605 |   |

# Grip frames

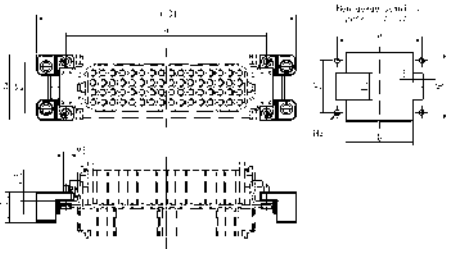
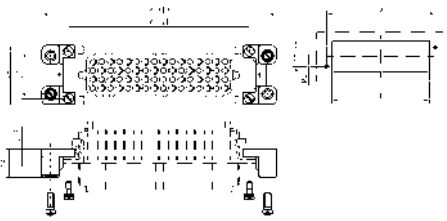


## Features

- Grip frame suitable for Han® 64 D / Han® 108 DD / Han® 24 E / Han® 24 ES / Han® 24 ESS / Han® 46 EE
- Multiple shield connections via grip frame
- Cable can be fixed with clamps or cable tie

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Zinc die-cast |
| Surface (accessories) | Copper-plated, Nickel plated |
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Screw adapter,<br>Top part,<br>With fixing screw  | 09 00 000 5601 | |
| Screw adapter,<br>Bottom part  | 09 00 000 5602 | <br>a: 6 B 44, 10 B 57, 16 B 77,5, 24 B 104<br>b: 6 B 35, 10 B 48, 16 B 68,5, 24 B 95 |
| Screw adapter,<br>Bottom part,<br>With fixing screw  | 09 00 000 5603 | <br>a: 6 B 65, 10 B 78, 16 B 98,5, 24 B 125<br>b: 6 B 52, 10 B 65, 16 B 85,5, 24 B 112 |

# Grip frames

## Features

- Use of standard inserts or Han-Modular® hinged frames
- Pre-assembled fixing brackets
- Simple and quick assembly
- 36 coding options

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Metal, Thermoplastic |
| Surface (accessories) | Zinc plated |
| RoHS | compliant with exemption |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Grip frame,<br>with fixing brackets  | 06 B<br>10 B<br>16 B<br>24 B<br>32 B | 09 00 006 5610<br>09 00 010 5610<br>09 00 016 5610<br>09 00 024 5610<br>09 00 032 5610 | |
| Panel mounting parts,<br>Pack contents:<br>Supplied as a pair  | | 09 00 000 5614 | |

# Coding of inserts in hoods/housings

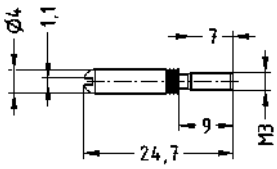
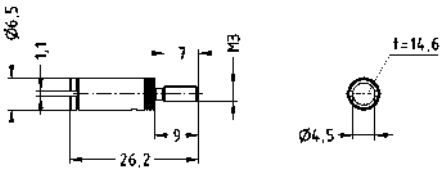
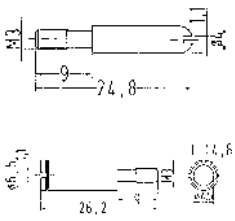


## Features

- Guide pins and bushes for secure mating of hood and housing
- Can also be used for coding
- Are used in the hinged frame instead of M6 fixing screws

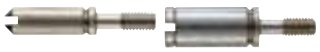
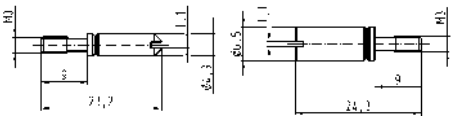
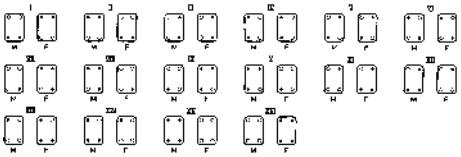
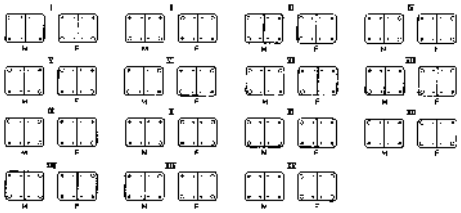
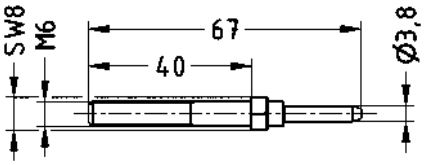
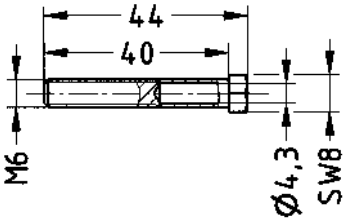
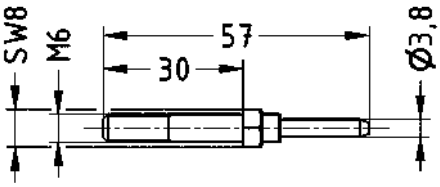
## Technical characteristics

| | |
|---|---|
| Material (accessories) | Steel, zinc plated, Stainless steel |
| RoHS | compliant with exemption, compliant |

| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Coding,<br>With guide pins/bushes,<br>for application “insert with screw adapter” with/ without grip frame<br> | 09 33 000 9808 | 09 33 000 9809 | <br> |
| Coding,<br>With guide pins/bushes,<br>for application “insert in hood/housing”<br> | 09 33 000 9908 | 09 33 000 9909 |  |
| Han-Modular®,<br>Coding,<br>With guide pins/bushes,<br>for application “insert with screw adapter” with/ without grip frame<br><br>Please order 4 pieces for one connector. | 09 14 000 9981 | 09 14 000 9982 | |

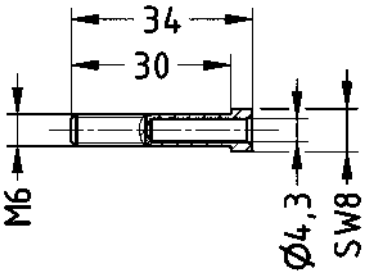
# Coding of inserts in hoods/housings



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular®,<br>Coding,<br>With guide pins/bushes,<br>for application “insert in hood/housing”<br><br>Please order 4 pieces for one connector. | 09 14 000 9908 | 09 14 000 9909 | <br><br>for hoods/housings with one insert/one frame<br><br>for hoods/housings with tho inserts/two frames<br>◆ Guide pin<br>○ Guide bush<br>+ Fixing screw<br>M - male insert<br>F - female insert |
| Han® HPR enlarged,<br>Guide pin,<br>for bulkhead mounted housings<br> | 09 40 000 9811 | |  |
| Han® HPR enlarged,<br>Guide bush,<br>for bulkhead mounted housings<br> | | 09 40 000 9812 |  |
| Han® HPR enlarged,<br>Guide pin,<br>for hoods<br> | 09 40 000 9906 | |  |

# Coding of inserts in hoods/housings



| Identification | Part number Male | Part number Female | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® HPR enlarged,<br>Guide bush,<br>for hoods  | | 09 40 000 9907 |   |

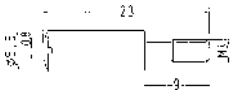
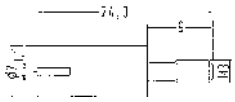
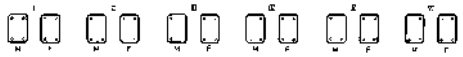
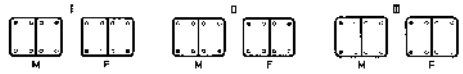
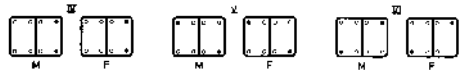
# Coding of inserts in hoods/housings

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Steel, zinc plated |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Coding,<br>With code pins,<br>Han® B<br><br>Please order 4 pieces for one connector. | 09 30 000 9901 |  |
| Han-Modular®,<br>Coding,<br>With code pins<br><br>Please order 4 pieces for one connector. | 09 14 000 9901 | <br><br>for hoods/housings with one insert/one frame<br><br><br>for hoods/housings with tho inserts/two frames<br>◆ Code pin<br>+ Fixing screw<br>M - male insert<br>F - female insert |

# Coding of inserts in hoods/housings



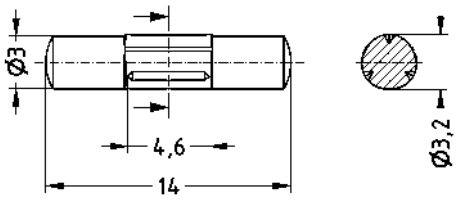
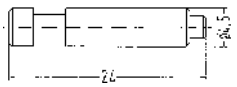
## Technical characteristics

| | |
|---|---|
| Material (accessories) | Thermoplastic |
| RoHS | compliant, compliant with exemption |

## Details

**Coding pin**

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

| Identification | Part number Female | Drawing (dimensions in mm) |
|---|---|---|
| Han D®,<br>Han DD®,<br>Han® DDD,<br>Coding pin<br><br><br><br>Only for crimp termination<br>With loss of one contact | 09 33 000 9915 |  |
| Han E®,<br>Han® EE,<br>Han® EEE,<br>Coding pin<br><br><br><br>for crimp inserts only<br>With loss of one contact | 09 33 000 9954 |  |

# Han® docking frame

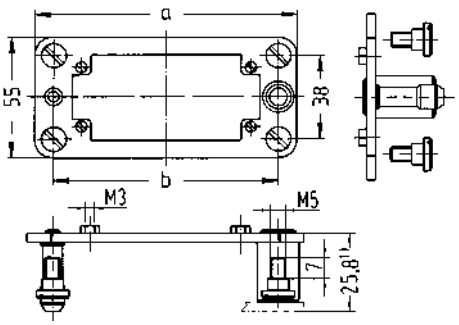
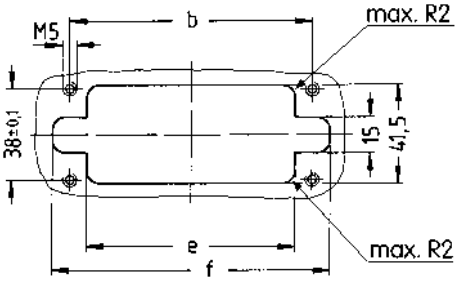


## Features

- Suitable for all inserts of the series Han E®, Han E® HMC, Han EE®, Han EE® HMC, Han EEE®, Han EEE® HMC, Han® ES, Han D® (size B), Han D® HMC, Han DD®, Han DD® HMC, Han-Com®, Han® HsB, Han-Modular®
- Due to the floating system of the docking frame the PE connection of the mounting base has to be installed separately.
- Inserts are protected against mechanical damage

## Technical characteristics

| | |
|---|---|
| Mating cycles | ≥500 |
| Mating cycles with other HMC components | ≥10000 |
| Material (accessories) | Stainless steel |
| RoHS | compliant with exemption |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Docking frame,<br>Pack contents:<br>1 frame,<br>4 cheese head shoulder screws (Steel, zinc plated) to fix the docking frame<br><br>Pull-in-range x-axis: ± 1.5 mm<br>Pull-in-range y-axis: ± 1.5 mm | 06 B<br>10 B<br>16 B<br>24 B | 09 30 006 1704<br>09 30 010 1704<br>09 30 016 1704<br>09 30 024 1704 | <br><br>Distance for electrical and FO contacts max. 27 mm; for Han-Modular® series max. 26.5 mm<br>6 B: a=86; b=69<br>10 B: a=99; b=82<br>16 B: a= 119.5 ; b= 102.5<br>24 B: a=146; b=129<br><br><br>6 B: b= 69; e= 54.5; f= 84<br>10 B: b= 82; e= 67.5; f= 97<br>16 B: b= 102.5; e= 88; f= 117.5<br>24 B: b= 129; e= 114.5; f= 144 |

# Han® docking frame

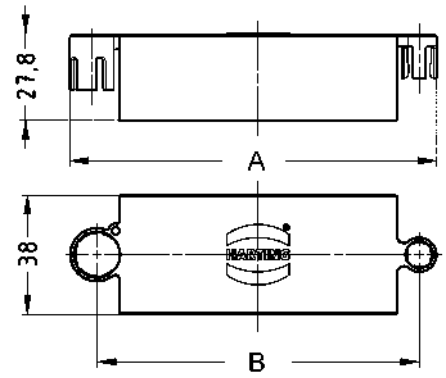


## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP20 |
| Material (accessories) | Thermoplastic |
| Material flammability class acc. to UL 94 | V-0 |

## Specifications and approvals

DIN EN 45545-2 R22: HL1, HL2, HL3
DIN EN 45545-2 R23: HL1, HL2, HL3

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Protection cover, for Han® docking frame, IP20  | 06 B<br>10 B<br>16 B<br>24 B | 09 30 006 5418<br>09 30 010 5418<br>09 30 016 5418<br>09 30 024 5418 |   |

| | A | B |
|---|---|---|
| 6 B | 83.3 mm | 69 mm |
| 10 B | 96.3 mm | 82 mm |
| 16 B | 116.8 mm | 102.5 mm |
| 24 B | 143.3 mm | 129 mm |

# PE Multiple ground connection

Number of contacts

3+ ⏚





## Features

- 3 PE-terminations
- Screws with ± head
- Self lifting washer
- Suitable for use with all inserts of the Han® 6 B to 24 B size (except Han® ESS-inserts)
- Suitable in hoods high construction

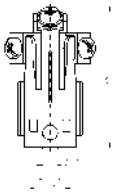
## Technical characteristics

| | |
|---|---|
| Number of contacts | 3 |
| Contact resistance | ≤3 mΩ |
| Material (contacts) | Copper alloy |
| RoHS | compliant |

## Details

The PE-multiple ground connection may be used to terminate three PE-wires on one connector. Each PE-wire can be terminated and removed separately.

(acc. VDE 0113 EN 60204 Pt. 14.1.1)

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| PE Multiple ground connection,<br>Pack contents:<br>Distributor,<br>Fixing screw M4 with washer<br>Contact surface:<br>Nickel plated<br> | 0.5 ... 2.5 | 09 33 000 9992 |  |

# Strain relief clamp



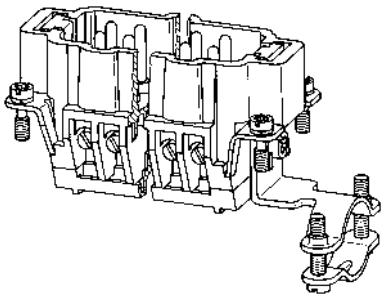
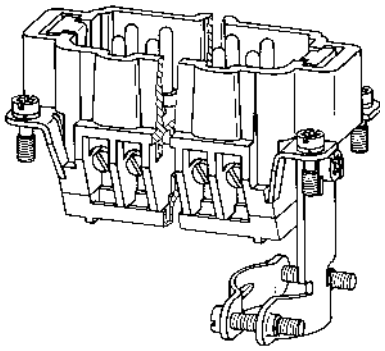
## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

## Details

When using inserts without hoods or housings and requiring a strain relief this system is suitable for all rectangular connectors of series Han DD®, Han® 40-64 D, Han E®, Han® ES, Han Hv E®, Han® Hv ES, Han® EE, Han® K 8/24.

Fitted at the opposite end to the PE-termination.

| Identification | Clamping range (mm) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Strain relief clamp,<br>Angled,<br>Pack contents:<br>Strain relief clamp with 2 screws M3,<br>Fixing screw M4 with washer<br> | 9 ... 19 | 09 00 000 5339 |  |
| Strain relief clamp,<br>Straight,<br>Pack contents:<br>Strain relief clamp with 2 screws M3,<br>Fixing screw M4 with washer<br> | 9 ... 19 | 09 00 000 5340 |  |

# Special insert fixing screws

## Features

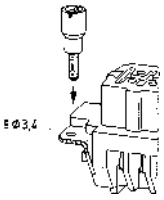
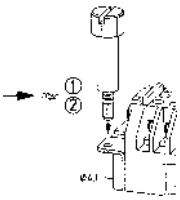
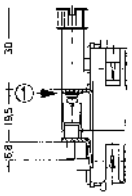
- Useable for inserts without hoods or housings and requiring a strain relief
- Suitable for all rectangular connectors of the Han® series Han® 6 B, 10 B, 16 B, 24 B

## Technical characteristics

| | |
|---|---|
| RoHS | compliant with exemption |

## Details

When using inserts without hoods or housings and requiring a locking facility this system is suitable for all rectangular connectors of the Han® series size 6 ... 24 B. For each connector we recommend two screw pins and two bushes as shown which are fitted diagonally to the inserts instead of the ordinary fixing screws. Holes for fixing to be drilled as shown.

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Bush<br><br>Order 2 pieces for one connector. | 09 33 000 9912 |  |
| Knurled screw<br><br>Order 2 pieces for one connector. | 09 33 000 9910 | <br><br>Mounting example |

# Screws



## Technical characteristics

| | |
|---|---|
| Material (accessories) | Stainless steel |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant, compliant with exemption |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han-Modular® Compact, Fixing screws  | ST 2.9x9.5 F-H | 09 12 000 9921 | |
| Fixing screws  | M3 | 09 16 000 9903 | |
| Fixing screws, With seal, Han® 3 A  | M3 | 09 20 000 9918 | |
| Fixing screws, Han® 3 A  | M3 | 09 20 000 9995 | |
| Toggle locking screw, Han® 6/10/16/24 HPR  | | 09 40 000 9931 | |
| Toggle locking screw, 3 HPR  | | 09 40 000 9933 | |

# Screws

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Contact screw, Han A®<br><br>for PE in Han® Q 5/0, Q 7/0 | | 09 30 000 9997 | |
| PE screw, Han-Modular® hinged frames<br> | M3<br>M4 | 09 14 000 9953<br>09 14 000 9954 | |
| PE screw, Han A®, Han® 15 D, Han® 25 D<br> | M3.5 | 09 20 000 9919 | |
| PE screw<br> | M4 | 09 33 000 9925 | |
| PE screw, Han-Com®, Han® HsB<br> | M5 | 09 33 000 9926 | |
| Countersunk flat<br> | | 09 70 000 9902 | |
| Countersunk flat, With seal<br> | | 09 70 000 9905 | |

# Screws



| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Locking screw, 3 HPR  | M4 | 09 40 000 9929 | |
| Locking screw, Han® 6/10/16/24 HPR  | M6 | 09 40 000 9932 | |
| Locking screw, 48 HPR  | M6 | 09 40 000 9937 | |

# Bearing pedestal and covers

## Technical characteristics

| | |
|---|---|
| Limiting temperature | -40 ... +125 °C |
| Degree of protection acc. to IEC 60529 | IP65 |

## Technical characteristics

| | |
|---|---|
| Material (accessories) | Steel, zinc plated, Thermoplastic, Metal |
| RoHS | compliant, compliant with exemption |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Bearing pedestal, for Han® 10 A, 16 A, 32 A, 6 B, 10 B, 16 B, 24 B  | | 09 30 000 9964 | |
| Han A®, Protection cover, for bearing pedestal, Thermoplastic, IP65  | 10 A<br>16 A | 09 20 010 5410<br>09 20 016 5410 | |
| Han® B, Protection cover, for bearing pedestal, Metal, IP65  | 06 B<br>10 B<br>16 B<br>24 B | 09 30 006 5403<br>09 30 010 5404<br>09 30 016 5404<br>09 30 024 5404 | |
| Han® B, Protection cover, for bearing pedestal, Thermoplastic, IP65  | 06 B<br>10 B<br>16 B<br>24 B | 09 30 006 5410<br>09 30 010 5410<br>09 30 016 5410<br>09 30 024 5410 | |

# Further accessories

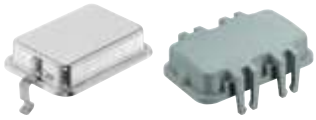
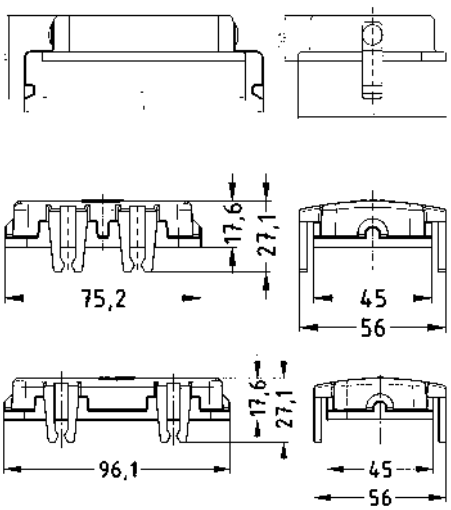
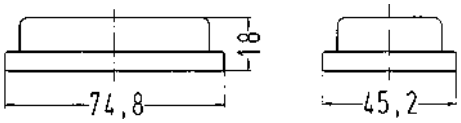


## Technical characteristics

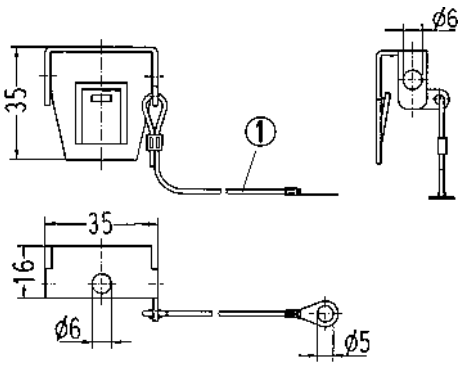
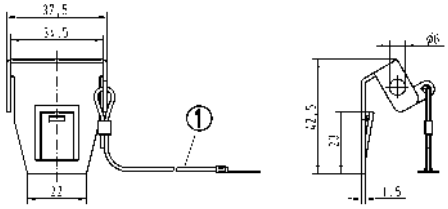
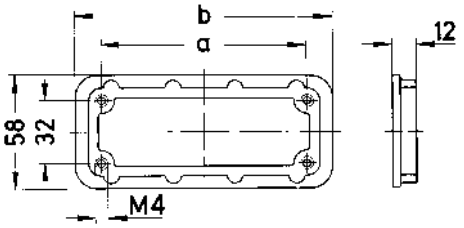
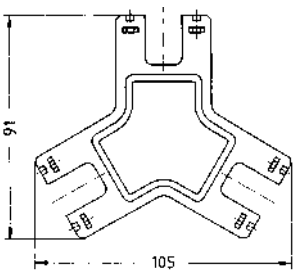
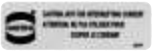
| | |
|---|---|
| Material (accessories) | Metal, Thermoplastic |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Han® B,<br>Dust protection cover,<br>for hoods,<br>With board locks  | 06 B<br>10 B<br>16 B | 09 30 006 5401<br>09 30 010 5401<br>09 30 016 5401 |  |
| Han® B,<br>Dust protection cover,<br>for housings  | 10 B<br>16 B<br>24 B | 09 30 010 5406<br>09 30 016 5406<br>09 30 024 5406 |  |
| Han® HPR,<br>Dust protection cover,<br>for housings  | 03 HPR<br>06 HPR<br>10 HPR<br>16 HPR<br>24 HPR | 09 40 003 5406<br>09 40 006 5406<br>09 40 010 5406<br>09 40 016 5406<br>09 40 024 5406 | |

# Further accessories

| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Locking element,<br>With cord,<br>for Han® 10/16/24 B housings bulkhead mounting with Han-Easy Lock® double levers<br> | | 09 30 000 9986 | <br>① Length 120 mm |
| Locking element,<br>With cord,<br>for Han® 10/16/24 B with double metal levers<br> | | 09 30 000 9987 | <br>① Length 120 mm |
| Mounting frames,<br>for standard hoods/housings<br> | 06 B<br>10 B<br>16 B<br>24 B | 09 40 000 9921<br>09 40 000 9922<br>09 40 000 9923<br>09 40 000 9924 | <br>6 B: a=70; b=96<br>10 B: a=83; b=109<br>16 B: a=103; b=129<br>24 B: a=130; b=156 |
| Frame,<br>for custom test adapters,<br>Pack contents:<br>2 assembly plates,<br>12 nuts for insertion<br> | | 09 38 000 9901 |  |
| Label,<br>According to CSA-approval,<br>Pack contents:<br>50 labels per sheet<br> | | 09 30 000 9958 | |

# Further accessories



| Identification | Size | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Contact lubricant DvDA, for Han® contacts,<br>Pack contents:<br>Vaporizer (40 ml),<br>Handling instruction<br><br>Applicable onto Han® contacts to reduce mating and unmating forces.<br>Content: Preperation of perfluorpolyethers | | 09 99 000 0829 | |

# Han® tools



| Contents | Page |
|---|---|
| Hand crimping tools for Han® standard contacts | **Han 90.4** |
| Hand crimping tools for fibre optic contacts | **Han 90.10** |
| Hand crimping tools for Han-Fast® Lock contacts | **Han 90.11** |
| Hand crimping tools for wire end ferrules | **Han 90.12** |
| Hand crimping tools for D-Sub contacts | **Han 90.13** |
| Hand crimping tools for coaxial contacts | **Han 90.14** |
| Pneumatic crimping tool for Han® standard contacts | **Han 90.16** |
| Battery crimping cool for Han® standard contacts | **Han 90.17** |
| Hydraulic crimping tools for Han® TC high current contacts | **Han 90.18** |
| Crimping machine TC-C01 | **Han 90.20** |
| Crimping machine TK-M | **Han 90.22** |
| Crimping machine BK | **Han 90.24** |
| Hydraulic Punch Driver | **Han 90.26** |
| Assembly tools | **Han 90.27** |
| Removal tools | **Han 90.31** |
| Stripping tools | **Han 90.34** |

# Overview Han® crimping tools

| Crimp contacts Series | Part number | | | | mm² | AWG | Crimping tools | | | | | | | Tools |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | male contact silver plated | female contact silver plated | male contact gold plated | female contact gold plated | | | 09 99 000 0888 | 09 99 000 0110 | 09 99 000 0021 | 09 99 000 0001 | 09 99 000 0377 | 09 99 000 0990 | 20 99 000 1035 | removal tools |
| Han D® Signal contacts 09 15 000 ....  | 6107 | 6207 | 6127 | 6227 | 0.14 - 0.37 | 26 - 22 | x | | | x | | | | 09 99 000 0012 |
| | 6104 | 6204 | 6124 | 6224 | | | | x | x | | | x | | |
| | 6103 | 6203 | 6123 | 6223 | 0.5 | 20 | x | x | x | x | | x | | |
| | 6105 | 6205 | 6125 | 6225 | 0.75 | 18 | x | x | x | x | | x | | |
| | 6102 | 6202 | 6122 | 6222 | 1.0 | 18 | x | x | x | x | | x | | |
| | 6101 | 6201 | 6121 | 6221 | 1.5 | 16 | x | x | x | x | | x | | |
| | 6106 | 6206 | 6126 | 6226 | 2.5 | 14 | x | | | x | | | | |
| Han D® F.O. contacts 20 10 001 .... | Male contact 3211 3212 / 3213 | | Female contact 3221 3222 | | 1 mm POF | | | | | | | | x | |
| Han E® Power contacts 09 33 000 ....  | 6127 | 6227 | 6117 | 6217 | 0.14 - 0.37 | 26 - 22 | x | | | x | | | | 09 99 000 0319 |
| | 6121 | 6220 | 6122 | 6222 | 0.5 | 20 | x | x | x | x | | x | | |
| | 6114 | 6214 | 6115 | 6215 | 0.75 | 18 | x | x | x | x | | x | | |
| | 6105 | 6205 | 6118 | 6218 | 1.0 | 18 | x | x | x | x | | x | | |
| | 6104 | 6204 | 6116 | 6216 | 1.5 | 16 | x | x | x | x | | x | | |
| | 6102 | 6202 | 6123 | 6223 | 2.5 | 14 | x | x | x | x | | x | | |
| | 6106 | 6206 | | | 3.0 | 12 | x | x | | x | | x | | |
| | 6107 | 6207 | 6119 | 6221 | 4.0 | 12 | x | x | | x | | x | | |
| Han E® F.O. contacts 20 10 001 .... | Male contact 3311 | | Female contact 3321 | | 1 mm POF | | | | | | | | x | |
| Han® C Power contacts 09 32 000 ....  | 6104 | 6204 | | | 1.5 | 16 | x | x | | x | | x | | 09 99 000 0305 / 09 99 000 0381 |
| | 6105 | 6205 | | | 2.5 | 14 | x | x | | x | | x | | |
| | 6107 | 6207 | | | 4.0 | 12 | x | x | | x | x | x | | |
| | 6108 | 6208 | | | 6.0 | 10 | | | | | x | | | |
| | 6109 | 6209 | | | 10.0 | 8 | | | | | x | | | |
| Han-*Yellock*® Power contacts 11 05 000 ....  | 6101 | 6201 | 6121 | 6221 | 0.14 - 0.37 | 26 - 22 | x | | | x | | | | 09 99 000 0319 |
| | 6102 | 6202 | 6122 | 6222 | 0.5 | 20 | x | x | x | x | | | | |
| | 6103 | 6203 | 6123 | 6223 | 0.75 | 18 | x | x | x | x | | | | |
| | 6104 | 6204 | 6124 | 6224 | 1.0 | 18 | x | x | x | x | | | | |
| | 6105 | 6205 | 6125 | 6225 | 1.5 | 16 | x | x | x | x | | | | |
| | 6106 | 6206 | 6126 | 6226 | 2.5 | 14 | x | x | x | x | | | | |
| | 6107 | 6207 | 6127 | 6227 | 3.0 | 12 | x | x | | x | | | | |
| | 6108 | 6208 | 6128 | 6228 | 4.0 | 12 | x | x | | x | | | | |
| Description | | | | | | | | | | | | | | |
| Locator Han D® | 09 99 000 0311 | | | | | | | | | x | | | | |
| Locator Han E® | 09 99 000 0310 | | | | | | | | | x | | | | |
| Locator Han® C | 09 99 000 0308 | | | | | | | | | x | | | | |
| Locator Han-*Yellock*® | 09 99 000 0341 | | | | | | | x | | | | | | |
| | 09 99 000 0343 | | | | | | | | x | | | | | |
| | 09 99 000 0342 | | | | | | | | | x | | | | |

# Overview Han® crimping tools



| Crimp contacts Series | Part number | | | | mm² | AWG | Crimping machines | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | male contact silver plated | female contact silver plated | male contact gold plated | female contact gold plated | | | 09 99 000 0314 | 09 99 000 0307 | 09 98 000 6901 1) | 09 98 000 6902 1) | 09 98 000 6903 1) | 09 98 000 6907 1) | 09 98 000 9001 | 09 98 000 9002 | 09 98 000 9003 |
| Han D® Signal contacts 09 15 000 ....  | 6107 | 6207 | 6127 | 6227 | 0.14 - 0.37 | 26 - 22 | x | | x2) | | | | x | | |
| | 6103 | 6203 | 6123 | 6223 | 0.5 | 20 | x | | x | | | | x | | |
| | 6105 | 6205 | 6125 | 6225 | 0.75 | 18 | x | | x | | | | x | | |
| | 6102 | 6202 | 6122 | 6222 | 1.0 | 18 | x | | x | | | | x | | |
| | 6101 | 6201 | 6121 | 6221 | 1.5 | 16 | x | | x | | | | x | | |
| | 6106 | 6206 | 6126 | 6226 | 2.5 | 14 | | | x | | | | x | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Han E® Power contacts 09 33 000 ....  | 6127 | 6227 | 6117 | 6217 | 0.14 - 0.37 | 26 - 22 | x | | | x2) | | | | x | |
| | 6121 | 6220 | 6122 | 6222 | 0.5 | 20 | x | | | x | | | | x | |
| | 6114 | 6214 | 6115 | 6215 | 0.75 | 18 | x | | | x | | | | x | |
| | 6105 | 6205 | 6118 | 6218 | 1.0 | 18 | x | | | x | | | | x | |
| | 6104 | 6204 | 6116 | 6216 | 1.5 | 16 | x | | | x | | | | x | |
| | 6102 | 6202 | 6123 | 6223 | 2.5 | 14 | x | | | x | | | | x | |
| | 6106 | 6206 | | | 3.0 | 12 | x | | | x | | | | x | |
| | 6107 | 6207 | 6119 | 6221 | 4.0 | 12 | x | | | x | | | | x | |
| Han-*Yellock*® Power contacts 11 05 000 ....  | 6101 | 6201 | 6121 | 6221 | 0.14 - 0.37 | 26 - 22 | | | | | | x | | | |
| | 6102 | 6202 | 6122 | 6222 | 0.5 | 20 | | | | | | x | | | |
| | 6103 | 6203 | 6123 | 6223 | 0.75 | 18 | | | | | | x | | | |
| | 6104 | 6204 | 6124 | 6224 | 1.0 | 18 | | | | | | x | | | |
| | 6105 | 6205 | 6125 | 6225 | 1.5 | 16 | | | | | | x | | | |
| | 6106 | 6206 | 6126 | 6226 | 2.5 | 14 | | | | | | x | | | |
| | 6107 | 6207 | 6127 | 6227 | 3.0 | 12 | | | | | | x3) | | | |
| | 6108 | 6208 | 6128 | 6228 | 4.0 | 12 | | | | | | x3) | | | |
| Han® C Power contacts 09 32 000 ....  | 6104 | 6204 | | | 1.5 | 16 | x | x | | | x | | | | x |
| | 6105 | 6205 | | | 2.5 | 14 | x | x | | | x | | | | x |
| | 6107 | 6207 | | | 4.0 | 12 | x | x | | | x | | | | x |
| | 6108 | 6208 | | | 6.0 | 10 | | x | | | x | | | | x |
| | 6109 | 6209 | | | 10.0 | 8 | | x | | | | | | | x |

1) TK-M basic machine 09 98 000 6900 is required
2) depending on the wire
3) only with modification 09 98 503 6900

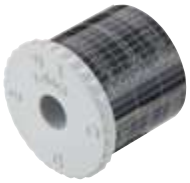
# Hand crimping tools for Han® standard contacts

## Details

The high end tool with best performance.

## Details

for wire gauges from 0.14 und 0.25 mm² please use the contacts 09 15 000 6107, 6207, 6127 or 6227.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>Han D®: 0.14 ... 2.5 mm²,<br>Han E®: 0.14 ... 4 mm²,<br>Han-*Yellock*®: 0.14 ... 4 mm²,<br>Han® C: 1.5 ... 4 mm²,<br>Pack contents:<br>incl. locator,<br>Handling instruction | | 09 99 000 0888 |  |
| Check gauge,<br>for crimping tool 09 99 000 0888,<br>for optional testing | | 09 99 000 0889 |  |
| Locator,<br>Spare part,<br>for crimping tool 09 99 000 0888 | | 09 99 000 0887 |  |
| Locator,<br>Han E®,<br>Relay contacts | 0.14 ... 4 | 09 99 000 0978 | |

## Details

for wire gauges from 0.14 und 0.25 mm² please use the contacts 09 15 000 6107, 6207, 6127 or 6227.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>Han D®: 0.14 ... 2.5 mm²,<br>Han E®: 0.14 ... 4 mm²,<br>Han-*Yellock*®: 0.14 ... 4 mm²,<br>Han® C: 1.5 ... 4 mm²<br>Please order locator separately. | 0.14 ... 4 | 09 99 000 0001 |  |
| Locator,<br>Han D® | 0.14 ... 2.5 | 09 99 000 0311 |  |
| Locator,<br>Han E® | 0.14 ... 4 | 09 99 000 0310 | |
| Locator,<br>Han® C | 1.5 ... 4 | 09 99 000 0308 | |
| Locator,<br>Han E®,<br>Relay contacts | 0.14 ... 4 | 09 99 000 0345 | |
| Adjustment gauge,<br>for four-indent crimping tools,<br>Han D®,<br>Han E®,<br>Han® C,<br>Han-*Yellock*® | | 09 99 000 0379 |  |

# Hand crimping tools for Han® standard contacts

## Details

Robust allrounder with very good performance.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>Han D®: 0.14 ... 1.5 mm²,<br>Han E®: 0.5 ... 4 mm²,<br>Han-*Yellock*®: 0.5 ... 4 mm²,<br>Han® C: 1.5 ... 4 mm²,<br>Pack contents:<br>Locator Han® C,<br>Locator Han E®,<br>Locator Han D®,<br>Please order Han-*Yellock*® separately. | 0.14 ... 4 | 09 99 000 0110 |  |
| Locator,<br>Han-*Yellock*® | | 09 99 000 0341 |  |
| Locator,<br>Spare part,<br>Han D®,<br>Han E®,<br>Han® C | | 09 99 000 0376 | |

## Details

The service tool for on-site maintenance.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Service crimping tool,<br>Han D®: 0.14 ... 1.5 mm²,<br>Han E®: 0.5 ... 2.5 mm²,<br>Han-*Yellock*®: 0.5 ... 2.5 mm²,<br>Pack contents:<br>incl. locator,<br>Please order Han-*Yellock*® separately. | 0.14 ... 2.5 | 09 99 000 0021 |  |
| Locator,<br>Han-*Yellock*® | | 09 99 000 0343 |  |
| Locator,<br>Spare part,<br>Han D®,<br>Han E® | | 09 99 000 0022 | |

## Details

The professional tool for big cross-sections.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>Han® C: 4 ... 10 mm²,<br>Pack contents:<br>incl. locator | 4 ... 10 | 09 99 000 0377 |  |
| Locator,<br>Spare part,<br>for part number 09 99 000 0377,<br>Han® C: 4 ... 10 mm² | | 09 99 000 0963 | |
| Locator,<br>for part number 09 99 000 0377,<br>Han® HsB: 4 ... 10 mm² | | 09 99 000 0985 |  |

## Details

The professional tool for crimping Han® HsB contacts.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>Han® HsB: 1.5 ... 4 mm²,<br>Pack contents:<br>incl. locator | 1.5 ... 4 | 09 99 000 0986 |  |

# Hand crimping tools for fibre optic contacts

| Identification | Part number | |
|---|---|---|
| Crimping tool,<br>for FO connector (glass fibre),<br>SC, F-SMA F-ST,<br>A/F 3.8 mm, A/F 4.3 mm, A/F 4.95 mm<br>for crimping of the strain relief | 20 99 000 1031 |  |
| Crimping tool,<br>for FO connector (plastic fibre),<br>SC, F-SMA F-ST,<br>A/F 3 mm, A/F 4.95 mm, A/F 6.5 mm<br>for crimping of the strain relief | 20 99 000 1033 |  |
| Crimping tool,<br>for following 1 mm POF contacts,<br>Han D®, Han E®, DIN 41626, Ferrule, F-SMA, -ST | 20 99 000 1035 |  |

# Hand crimping tools for Han-Fast® Lock contacts



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>Angled,<br>for Han-Fast® Lock single contact | 1.5 ... 2.5<br>4 ... 10 | 09 99 000 0876<br>09 99 000 0877 |  |
| Crimping tool,<br>for Han-Fast® Lock single contact,<br>incl. locator | 1.5 ... 2.5<br>4 ... 10 | 09 99 000 0881<br>09 99 000 0831 |  |

## Details

The tool for the professional processing of wire end ferrules according to DIN 46228.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>for wire end ferrules,<br>acc. to DIN 46228 | 0.14 ... 2.5<br>4 ... 16 | 09 99 000 0970<br>09 99 000 0971 |  |

# Hand crimping tools for D-Sub contacts



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>for 500 bandoliered standard contacts | 0.09 ... 0.56 | 09 99 000 0169 |  |
| Crimping tool,<br>for single stamped D-Sub contact | 0.09 ... 0.56 | 09 99 000 0175 |  |
| Crimping tool,<br>for turned male and female contact,<br>4 indent crimp in acc. to MIL 22 520/2-01 | 0.09 ... 0.82 | 09 99 000 0501 |  |
| Locator,<br>for single D-Sub standard contacts | | 09 99 000 0531 |  |
| Locator,<br>for single D-Sub standard contacts,<br>09 93 000 5576 + 09 93 000 5476 | | 09 99 000 0897 |  |

# Hand crimping tools for coaxial contacts



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping tool,<br>for turned male and female contact,<br>4 indent crimp in acc. to MIL 22 520/2-01 | 0.09 ... 0.82 | 09 99 000 0501 |  |
| D-Sub,<br>Locator,<br>for inner contact die | | 09 99 000 0507 | <br>Contacts<br>09 69 182 x140 + 09 69 282 x140<br>09 69 182 x230 + 09 69 282 x230 |

# Hand crimping tools for coaxial contacts



| Identification | Part number | |
|---|---|---|
| Crimping tool,<br>for coaxial contact,<br>acc. to DIN 41626,<br>for outer ferrule<br>Please order crimp dies separately. | 09 99 000 0503 |  |
| Crimp die,<br>for D-Sub | 09 99 000 0508 | <br>Contacts<br>09 69 182 x140 + 09 69 282 x140<br>09 69 182 x230 + 09 69 282 x230<br>09 69 181 x140 + 09 69 281 x140<br>09 69 181 x141 + 09 69 281 x141<br>09 69 181 x230 + 09 69 281 x230 |
| Crimp die,<br>for D-Sub mixed | 09 99 000 0515 | <br>Contacts<br>09 69 181 x143 + 09 69 281 x143 |
| Crimping tool,<br>Crimp die included,<br>for coaxial contact,<br>acc. to DIN 41626 | 09 99 000 0194 | <br>Contacts<br>09 14 000 6211 + 09 14 000 6111<br>09 14 000 6221 + 09 14 000 6121 |

# Pneumatic crimping tool for Han® standard contacts

| Identification | Part number | |
|---|---|---|
| Pneumatic crimping tool,<br>Han D®: 0.14 ... 2.5 mm²,<br>Han E®: 0.14 ... 4 mm²,<br>Han® C: 1.5 ... 4 mm²,<br>Pack contents:<br>In plastic case,<br>Locator Han® C,<br>Locator Han E®,<br>Locator Han D®,<br>Adjustment gauge,<br>Pneumatic tube,<br>Operating instructions | 09 99 000 0314 |  |
| Pneumatic crimping tool,<br>Han® C: 1.5 ... 10 mm²,<br>Pack contents:<br>In plastic case,<br>Locator Han® C,<br>Pneumatic tube,<br>Operating instructions,<br>Adjustment gauge | 09 99 000 0307 |  |
| Table fixing,<br>for part number 09 99 000 0307 and 09 99 000 0314 | 09 99 000 0309 |  |
| Foot switch,<br>for part number 09 99 000 0307 and 09 99 000 0314 | 09 99 000 0347 |  |

# Battery crimping cool for Han® standard contacts



## Details

Fast, light, efficient – that's what crimping is all about today.

| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Battery crimping tool set,<br>Han D®: 0.14 ... 1.5 mm²,<br>Han E®: 0.5 ... 4 mm²,<br>Han® C: 1.5 ... 4 mm²,<br>Pack contents:<br>Locator Han® C,<br>Locator Han E®,<br>Locator Han D®,<br>Power supply | 0.14 ... 4 | 09 99 000 0990 |  |
| Locator,<br>Spare part,<br>Han D®,<br>for part number 09 99 000 0990 | 0.14 ... 1.5 | 09 99 000 0991 |  |
| Locator,<br>Spare part,<br>Han E®,<br>for part number 09 99 000 0990 | 0.5 ... 4 | 09 99 000 0992 |  |
| Locator,<br>Spare part,<br>Han® C,<br>for part number 09 99 000 0990 | 1.5 ... 4 | 09 99 000 0993 |  |
| Additional battery,<br>for part number 09 99 000 0990 | | 09 99 000 0994 |  |

## Specifications and approvals

DIN 46235

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Battery hydraulic tool,<br>Pressing force 60 kN,<br>Crimp die acc. to DIN 46235 with pressing width 9 mm | 10 ... 70 | 09 99 000 0850 |  |
| Hand hydraulic crimping tool,<br>Pressing force 60 kN,<br>Crimp die acc. to DIN 46235 with pressing width 9 mm | 10 ... 70 | 09 99 000 0851 |  |
| Crimp die,<br>for 60 kN tool,<br>Pack contents:<br>Supplied as a pair | 10<br>16<br>25<br>35<br>50<br>70 | 09 99 000 0852<br>09 99 000 0853<br>09 99 000 0854<br>09 99 000 0855<br>09 99 000 0856<br>09 99 000 0857 |  |

| Cross-section | Pressing width | Identification | Contacts |
|---|---|---|---|
| 10 mm² | 9 mm | 6 | TC 70, TC 100, TC 250 |
| 16 mm² | 9 mm | 8 | TC 70, TC 100, TC 200, TC 250 |
| 25 mm² | 9 mm | 10 | TC 70, TC 100, TC 200, TC 250, TC 350 |
| 35 mm² | 9 mm | 12 | TC 100, TC 200, TC 250, TC 350 |
| 50 mm² | 9 mm | 14 | TC 200, TC 250, TC 350 |
| 70 mm² | 9 mm | 16 | TC 200, TC 250, TC 350, TC 650 |

## Specifications and approvals

DIN 46235

| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Battery hydraulic tool,<br>Pressing force 120 kN,<br>Crimp die acc. to DIN 46235 with pressing width 10 ... 14 mm | 10 ... 240 | 09 99 000 0860 |  |
| Hand hydraulic crimping tool,<br>Pressing force 120 kN,<br>Crimp die acc. to DIN 46235 with pressing width 10 ... 14 mm | 10 ... 240 | 09 99 000 0861 |  |
| Crimp die,<br>for 120 kN tool,<br>Pack contents:<br>Supplied as a pair | 10<br>16<br>25<br>35<br>50<br>70<br>95<br>120<br>150<br>185<br>240 | 09 99 000 0862<br>09 99 000 0863<br>09 99 000 0864<br>09 99 000 0865<br>09 99 000 0866<br>09 99 000 0867<br>09 99 000 0868<br>09 99 000 0869<br>09 99 000 0870<br>09 99 000 0871<br>09 99 000 0872 |  |

| Cross-section | Pressing width | Identification | Contacts |
|---|---|---|---|
| 10 mm² | 10 mm | 6 | TC 70, TC 100, TC 250 |
| 16 mm² | 10 mm | 8 | TC 70, TC 100, TC 200, TC 250 |
| 25 mm² | 10 mm | 10 | TC 70, TC 100, TC 200, TC 250, TC 350 |
| 35 mm² | 10 mm | 12 | TC 100, TC 200, TC 250, TC 350 |
| 50 mm² | 13 mm | 14 | TC 200, TC 250, TC 350 |
| 70 mm² | 13 mm | 16 | TC 200, TC 250, TC 350, TC 650 |
| 95 mm² | 14 mm | 18 | TC 350, TC 650 |
| 120 mm² | 14 mm | 20 | TC 350, TC 650 |
| 150 mm² | 10 mm | 22 | TC 650 |
| 185 mm² | 10 mm | 25 | TC 650 |
| 240 mm² | 10 mm | 28 | TC 650 |

# Crimping machine TC-C01



## Features

- Basic unit of compact construction for pre-stripped wires (stranded wire)
- Easy handling due to well-arranged design
- for individual, turned male and female contacts
- Selective processing of male and female contacts
- Automatic contact feed
- Reproducible, top quality gas-tight crimp connections
- Non-slip, anti-vibration adjustable feet for setting the height
- Low noise level
- With carrying handle
- Removable electric and pneumatic supply connections
- Maintenance interval counter
- Minimal setup effort
- Stepless adjustment of the crimping depth
- Low follow-up costs for maintenance and repair
- Easy replacement of wearing components

## Details

Nominal voltage, max. 230 V
Nominal frequency 50 Hz
Power consumption ca.0.2 kW
Pressure ca.6 bar
Control system PLC
Work cycle trigger Footswitch
Work cycle 1 s
Noise level ca.62 dB
Crimp type Four-point crimping
Contact feed Vibratory bowl feed
Stroke counters Resettable daily counter and permanent counter
Dimensions 345 x 230 x 400 mm
Weight ≥24 kg

**Pack contents:**
2.0 m connection cable and grounding plug,
2.0 m pneumatic hose,
quick-release coupling and N6 plugin nipple,
footswitch,
carrying handle,
operating instructions,
declaration of conformity

# Crimping machine TC-C01



| Identification | Conductor cross-section (mm²) | Part number | Drawing (dimensions in mm) |
|---|---|---|---|
| Crimping machine TC-C01, for Han D® contact | 0.14 ... 2.5 | 09 98 000 9001 |  |
| Crimping machine TC-C01, for Han E® contact | 0.14 ... 4 | 09 98 000 9002 |  |
| Crimping machine TC-C01, for Han® C contact | 1.5 ... 10 | 09 98 000 9003 |  |
| Maintenance unit, Optional accessory | | 09 98 336 6851 |  |

# Crimping machine TK-M



## Features

- Basic unit of compact construction
- Fast stripping and crimping in one operating step
- Easy handling due to well-arranged design
- Touchscreen controlling
- for individual, turned male and female contacts
- Selective processing of male and female contacts
- Contact magazine with filling control
- Reproducible, top quality gas-tight crimp connections
- Infinitely variable adjustment parameters (stripping depth, stripping length, crimping depth, crimp contact feed rate)
- Rotatable vibration feeder and actuator in basic unit
- Low noise level
- for oil-free compressed air
- Minimal setup effort
- Low maintenance costs

## Details

Drive electro-pneumatic
Nominal voltage, max. 230 V
Nominal frequency 50 Hz
Power consumption ca.0.75 kW
Pressure ca.6 bar
Compressed air connection 3 $dm^3$ / work cycle
Control system PLC
Work cycle trigger sensor
Work cycle 1.5 s
Noise level <70 dB
Crimp type Four-point crimping
Contact feed Vibratory bowl feed
Stroke counters Resettable daily counte, total counter, operating hours, maintenance counter and quantity preselection
Dimensions 580 x 470 x 470 mm
Weight <60 kg

**Pack contents:**

one mounted interchangeable unit,
2.0 m connection cable and grounding plug,
2.0 m pneumatic hose with plug-in nipple N6,
plug gauges for setting the crimping,
centering bush for positioning the plug gauges,
draw for insulation remains,
drawer for holding the contacts when the magazine is emptied,
tool set for setting,
1 set of stripping blades,
operating instructions,
declaration of conformity

# Crimping machine TK-M



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping machine TK-M,<br>Basic machine without interchangeable unit,<br>Pack contents:<br>Tool set for setting,<br>1 set of stripping blades,<br>Operating instructions,<br>Declaration of Conformity | | 09 98 000 6900 |  |
| Interchangeable unit,<br>Han D® | 0.14 ... 2.5 | 09 98 000 6901 |  |
| Interchangeable unit,<br>Han E® | 0.14 ... 4 | 09 98 000 6902 |  |
| Interchangeable unit,<br>Han® C | 1.5 ... 6 | 09 98 000 6903 |  |
| Interchangeable unit,<br>D-Sub | 0.09 ... 0.82 | 09 98 000 6904 |  |
| Interchangeable unit,<br>Han-*Yellock*® | 0.14 ... 2.5 | 09 98 000 6907 |  |

# Crimping machine BK



## Features

- Fast stripping and crimping in one operating step
- Easy handling due to quick change tool and stripper
- Suitable for standard D-Sub crimp contacts
- Selective processing of male and female contacts
- Hand wheel for manual adjustments
- Maintenance-friendly through needle bearing rail
- Automatic exhaust of the isolation remainders
- Reproducible, top quality gas-tight crimp connections
- With crimp force monitor
- Setting parameters with raster rotary button (depth of insulation stripping, length of insulation stripping, crimping heigth on wire, crimping heigth on isulation, wire retainer position, band thrust and wire position in the crimp contact)
- Non slip and anti-vibration feet
- Low noise level
- for oil-free compressed air
- Low maintenance costs
- V-blades for special wires on request

## Details

Drive electro-pneumatic
Nominal voltage, max. 230 V
Nominal frequency 50 Hz
Power consumption 0.75 kW
Pressure 6 bar
Control system PLC
Stripping device type 514
Suction apparatus 2000.0900.20
Work cycle trigger sensor
Work cycle 0.35 s
Noise level 85 dB
Illumination integrated tool light 20001326
Motor speed 440 –2000 rpm
Stroke counters Resettable daily counter and permanent counter
Dimensions 690 (with a contact reel: 1400) x 420 x 430 mm
Weight <72 kg

**Pack contents:**

with role owner and guide plate,
2.0 m connection cable and grounding plug,
2.0 m pneumatic hose with plug-in nipple N9,
oiler bottle for the lubricating of the crimping contacts,
tool set for setting,
1 set of stamps for wire and isolation-crimp,
1 anvil one-piece for wire and isolation-crimp,
1 set of stripping blades,
1 litre of contact oil,
operating instructions,
declaration of conformity

# Crimping machine BK



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Crimping machine BK,<br>Pack contents:<br>With role owner and guide plate,<br>Tool set for setting,<br>1 set of stripping blades,<br>Operating instructions,<br>Declaration of Conformity | | 09 98 000 5000 |  |
| Quick change tool,<br>D-Sub | 0.09 ... 0.25<br>0.25 ... 0.5 | 09 98 000 3008<br>09 98 000 3010 |  |

# Hydraulic Punch Driver

## Technical characteristics

| | |
|---|---|
| Plate thickness | ≤2 mm structural grade carbon steel |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Size | Part number | |
|---|---|---|---|
| Battery hydraulic punch driver,<br>To produce panel cut outs for connectors,<br>Punching pressure: 60 kN,<br>Pack contents:<br>In plastic case,<br>Lithium-Ion battery 18 V, 3 Ah,<br>Charging set,<br>Accessories | | 09 99 000 0900 |  |
| Hydraulic hand punch driver,<br>To produce panel cut outs for connectors,<br>Punching pressure: 60 kN,<br>Pack contents:<br>In plastic case,<br>Accessories | | 09 99 000 0901 |  |
| Punching units for hydraulic punch drivers | 1 A<br>3 HPR<br>Han-*Yellock*® 10<br>Han-*Yellock*® 30<br>Han-*Yellock*® 60<br>Modular Compact | 09 99 000 0976<br>09 99 000 0906<br>09 99 000 0910<br>11 99 300 0001<br>11 99 600 0001<br>09 99 000 0912 | |
| Han A®,<br>Han-Eco® A,<br>Punching units for hydraulic punch drivers | 03 A<br>10 A<br>16 A | 09 99 000 0907<br>09 99 000 0908<br>09 99 000 0909 | |
| Han-Eco® A,<br>Rear mounting,<br>Punching units for hydraulic punch drivers | 10 A<br>16 A | 09 99 000 0914<br>09 99 000 0915 | |
| Han® B,<br>Han-Eco® B,<br>Punching units for hydraulic punch drivers | 06 B<br>10 B<br>16 B<br>24 B | 09 99 000 0902<br>09 99 000 0903<br>09 99 000 0904<br>09 99 000 0905 | |
| Han® B,<br>Han-Eco® B,<br>Rear mounting,<br>Punching units for hydraulic punch drivers | 06 B<br>10 B<br>16 B<br>24 B | 09 99 000 0916<br>09 99 000 0917<br>09 99 000 0918<br>09 99 000 0919 |  |

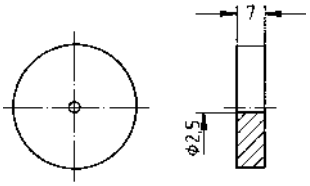
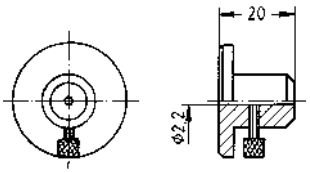
| Identification | Part number | |
|---|---|---|
| Torque set,<br>for High Current axial screw contact,<br>incl. reversing blade (A/F 4.0 + A/F 5.0),<br>Tightening torque: 5 ... 14 Nm,<br>Pack contents:<br>High quality metal box,<br>Variable tightening torque tool TorqueVario®-STplus,<br>Setting tool: torque-setter,<br>HARTING optimised interchangeable blades hexagonal A/F 4,<br>HARTING optimised interchangeable blades hexagonal A/F 5 | 09 99 000 0833 |  |
| Torque set,<br>for power contact,<br>incl. reversing blade (A/F 2.0 + A/F 2.5 + PH2),<br>+ different bits,<br>+ adapter blade,<br>Tightening torque: 1 ... 5 Nm,<br>Pack contents:<br>High quality metal box,<br>Variable tightening torque tool TorqueVario®-S,<br>Setting tool: torque-setter,<br>HARTING optimised interchangeable blades hexagonal A/F 2,<br>HARTING optimised interchangeable blades hexagonal A/F 2.5,<br>HARTING optimised interchangeable blades PH2,<br>Torque bit universal holder,<br>Bits: A/F3, A/F4 , PH0, PH1, PH2, T10, T15, T20, slot 0.6 x 4.5,<br>slot 0.8 x 5.5 | 09 99 000 0834 |  |
| Torque set,<br>for HARTING screw contacts and fixing screws,<br>Tightening torque: 0.5 ... 1.2 Nm,<br>Pack contents:<br>High quality metal box,<br>Two pre-set tightening torque screwdrivers TorqueFix®,<br>Interchangeable blades PH1, PH2, slot 0.5 x 3.0 | 09 99 000 0835 |  |

| Identification | Part number | |
|---|---|---|
| Insertion tool for crimp contacts,<br>Small cross-section,<br>Variable length of blade,<br>Han D®,<br>Han E®,<br>Han-*Yellock*® | 09 99 000 0847 |  |
| Replacement-tip,<br>for part number 09 99 000 0847 | 09 99 000 0848 | |
| Assembly tool,<br>for Han® ES insert | 09 99 000 0367 |  |
| Torque set,<br>for guiding pins and bushes,<br>Tightening torque: 0.5 Nm,<br>incl. 1/4" Bit,<br>Pack contents:<br>Torque bit universal holder ¼",<br>1 HARTING guiding pins and bushes bit,<br>Product comes already pre-assembled in practical plastic packaging | 09 99 000 0840 |  |
| Torque tool,<br>Han® 3 A,<br>Han® 4 A,<br>Han® Q 5/0,<br>Staf® | 09 99 000 0875 |  |
| Bit ¼" as a spare part for guiding pins and bushes | 09 99 000 0841 |  |
| Hexagonal driver for axial screw,<br>With grip,<br>A/F 4 (e. g. Han® 100 A Axial module) | 09 99 000 0363 |  |
| Hexagonal driver for axial screw,<br>With grip,<br>A/F 5 (e. g. Han® 200 A Axial module) | 09 99 000 0364 |  |
| Hexagonal driver for axial screw,<br>Bit ¼",<br>40 A contact (A/F 2) | 09 99 000 0369 |  |

| Identification | Part number | |
|---|---|---|
| Hexagonal driver for axial screw,<br>Adapter 3/8”,<br>A/F 4 (e. g. Han® 100 A Axial module) | 09 99 000 0370 |  |
| Hexagonal driver for axial screw,<br>Adapter 3/8”,<br>A/F 5 (e. g. Han® 200 A Axial module) | 09 99 000 0371 |  |
| Hexagonal driver for axial screw,<br>Adapter 3/8”,<br>A/F 8 (e. g. Han® HC Modular 650) | 09 99 000 0372 |  |
| Hexagonal driver for axial screw,<br>Bit ¼”,<br>70 A contact (A/F 2.5) | 09 99 000 0375 |  |
| Han® VDE Screw Driver Set,<br>The standard set,<br>Pack contents:<br>Slim bit screw driver 0.4 x 2.5,<br>Slim bit screw driver 0.5 x 3.0,<br>Slim bit screw driver 0.6 x 3.5,<br>Slim bit screw driver 1.0 x 4.5,<br>Phillips screw driver PH1 (191 x 30 mm),<br>Phillips screw driver PH2 (218 x 23 mm) | 09 99 000 0836 |  |
| Screw driver set Slimline,<br>Insolated blade for slim assembly,<br>Pack contents:<br>Phillips screw driver PH1 x 80 mm,<br>Phillips screw driver PH2 x 100 mm,<br>Slim bit screw driver 3.5 x 100 mm,<br>Slim bit screw driver 4.0 x 100 mm,<br>Slim bit screw driver 5.5 x 125 mm,<br>Slim bit screw driver 6.5 x 150 mm | 09 99 000 0844 |  |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Part number | Drawing (dimensions in mm) |
|---|---|---|
| Polishing paper,<br>for POF grain size 1000,<br>Pack contents:<br>Each part number means 5 pieces | 20 80 001 9911 | |
| Polishing paper,<br>for GI 9 µ-grain size,<br>Pack contents:<br>Each part number means 5 pieces | 20 80 001 9912 | |
| Polishing paper,<br>for GI 1 µ-grain size,<br>Pack contents:<br>Each part number means 5 pieces | 20 80 001 9913 | |
| Polishing tool,<br>DIN 41612  | 20 99 000 1092 |  |
| Polishing tool,<br>POF cable 2.2 mm diameter  | 20 99 000 1093 |  |
| Polishing tool,<br>SC | 20 99 000 1097 | |

# Removal tools



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Removal tool,<br>Han D® | | 09 99 000 0012 |  |
| Replacement-tip,<br>for part number 09 99 000 0012 | | 09 99 000 0004 |  |
| Removal tool,<br>Han E® | | 09 99 000 0319 |  |
| Removal tool,<br>Han® C | 1.5 ... 6<br>10 | 09 99 000 0305<br>09 99 000 0381 |  |
| Removal tool,<br>Han® C module,<br>09 14 003 3001 / 09 14 003 3101,<br>Han® Q 2/0, Han® Q 3/0, Han® Q 4/0<br>Crimp termination | | 09 99 000 0315 |  |
| Insertion / removal tools,<br>Han-Modular®,<br>for D-Sub crimp contact | | 09 99 000 0368 |  |
| Removal tool,<br>Han-Quintax®,<br>for Quintax contact | | 09 99 000 0323 |  |
| Removal tool,<br>for contacts in the multi module | | 09 99 000 0328 |  |
| Removal tool,<br>Han D®,<br>Service | | 09 99 000 0052 |  |
| Removal tool,<br>Han-Fast® Lock,<br>for easier removal of the Fast-Lock contact from the printed circuit board | | 09 99 000 0837 |  |

# Removal tools



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Removal tool,<br>for LC contact in the Han® LC module | | 09 99 000 0843 |  |
| Removal tool,<br>for pneumatic contacts | | 09 99 000 0899 |  |
| Removal tool,<br>Han-Modular®,<br>Han-Eco®,<br>Han-*Yellock*®,<br>for single modules,<br>Metal | | 09 99 000 0828 |  |
| Removal tool,<br>Han-Modular®,<br>for double modules | | 09 99 000 0842 |  |
| Removal tool,<br>for all Han-Modular® modules in plastic frames<br>You need 2 pieces for the removal of a single module and 4 pieces for the double module. | | 09 99 000 0331 |  |
| Removal tool,<br>for the Han® HV Single module | | 09 99 000 0335 |  |
| Removal tool,<br>for the Han® 100 A crimp module | | 09 99 000 0383 |  |
| Removal tool,<br>for the Han® 200 A crimp module<br>Insert from mating side. | | 09 99 000 0820 |  |
| Removal tool,<br>for the Han® 100 A single module,<br>for Han® GND | | 09 99 000 0827 |  |
| Removal tool,<br>Han® Megabit module | | 09 99 000 0880 |  |

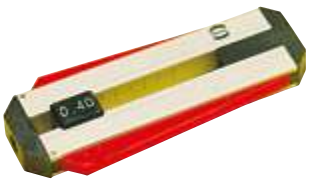
# Removal tools



| Identification | Conductor cross-section (mm²) | Part number | |
|---|---|---|---|
| Removal tool,<br>for the Han® HV Double module | | 09 99 000 0327 |  |
| Removal tool,<br>for Han-*Yellock*® modules and frames,<br>Thermoplastic | | 11 99 000 0001 |  |
| Removal tool,<br>for Han-*Yellock*® modules and frames,<br>Metal | | 11 99 000 0002 |  |
| Removal tool,<br>Han® F+B,<br>for circular inserts | | 09 99 000 0878 |  |
| Removal tool,<br>for Han® HC Modular 250 Crimp,<br>for unlocking the fixing plate<br>Insert from mating side. | | 09 99 000 0332 |  |
| Removal tool,<br>Han® EasyCon,<br>for assembly and disassembly of shielding clamps | | 09 99 000 0334 |  |
| Removal tool,<br>Han® K 6/6 | | 09 99 000 0977 | |
| Removal tool,<br>Han-Modular® Flexbox | | 09 99 000 0979 |  |
| Removal tool,<br>Han® HsB | | 09 99 000 0987 | |

## Technical characteristics

| | |
|---|---|
| RoHS | compliant |

| Identification | Conductor cross-section (mm²) | | Part number | |
|---|---|---|---|---|
| Stripping tool,<br>Pack contents:<br>Stripping blade set,<br>Straight | 0.03 ... 16 | | 09 99 000 0980 |  |
| Stripping blade set,<br>Straight | | | 09 99 000 0981 |  |
| Stripping blade set,<br>Oval | 10 ... 16 | | 09 99 000 0982 |  |
| Stripping blade set,<br>V-shape | | | 09 99 000 0983 |  |
| Fibre stripper | | 0.18/0.3 mm<br>0.3 mm<br>1 mm | 20 99 000 1046<br>20 99 000 1041<br>20 99 000 1045 |  |

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