

# HEAVY DUTY CONNECTORS





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**Rolling Stock**

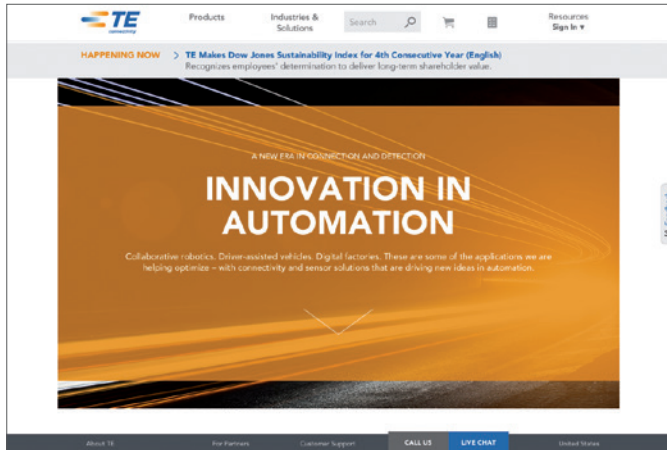


**Machinery**



**Factory Automation**

The broad range of Heavy Duty Connectors (HDC) are designed for reliably performing under the most demanding operating and harsh environmental conditions. With a tested salt spray and corrosion resistance of over 1000 hours and an IP 69 K rating, these connectors are suited for various applications in industrial environments. Thanks to their modular system, TE's Heavy Duty Connectors offer power, signal and data transmission in one connector.



### TE Connectivity Online

The TE Connectivity website is an innovative and interactive source for application information, product updates and technical solutions. Our step-by-step software makes our website intuitive and user-friendly to better serve you! Please contact us at: [te.com](http://te.com)

### Product Information Centers

You've got questions? TE's Product Information Centers (PIC) will help you get answers. Contact a technical product information specialist.

- Email us
- Call us
- Chat with us

Please go to [te.com/help](http://te.com/help) for more information.

### Internet

[te.com](http://te.com)

## Restriction on the Use of Hazardous Substances (RoHS)

At TE Connectivity (TE), we are ready to support your RoHS requirements. We have assessed more than 1.5 million end items/components for RoHS compliance, and issued new part numbers where any change was required to eliminate the restricted materials. Part numbers in this catalog are identified as:

### ROHS COMPLIANT

Part numbers in this catalog are RoHS Compliant, unless marked otherwise.

These products comply with European Union Directive 2002/95/EC as amended 1 January 2006 that restricts the use of lead, mercury, cadmium, hexavalent chromium, PBB, and PBDE in certain electric/electronic products sold into the EU as of 1 July 2006.

**Note:** For purposes of this Catalog, included within the definition of RoHS Compliant are products that are clearly “Out of Scope” of the RoHS Directive such as hand tools and other non-electrical accessories.

### NON-ROHS COMPLIANT

These part numbers are identified with a “◆” symbol. These products do not comply with the material restrictions of the European Union Directive 2002/95/EC.

### 5 OF 6 COMPLIANT

A “●” symbol identifies these part numbers. These products do not fully comply with the European Union Directive 2002/95/EC because they contain lead in solderable interfaces (they do not contain any of the other five restricted substances above allowable limits). However, these products may be suitable for use in RoHS applications where there is an application-based exception for lead in solders, such as the server, storage, or networking infrastructure exemption.

**Note:** Information regarding RoHS compliance is provided based on reasonable inquiry of our suppliers and represents our current actual knowledge based on the information provided by our suppliers. This information is subject to change. For latest compliance status, refer to our website referenced below.

### GETTING THE INFORMATION YOU NEED





Our comprehensive on-line RoHS Customer Support Center provides a forum to answer your questions and support your RoHS needs. A RoHS FAQ (Frequently Asked Questions) is available with links to more detailed information. You can also submit RoHS questions and receive a response within 24 hours during a normal work week. The Support Center also provides:

- Cross-Reference from Non-compliant to Compliant Products
- Ability to browse RoHS Compliant Products in our on-line catalog:  
[te.com/customersupport/productcompliance](http://te.com/customersupport/productcompliance)
- More detailed information regarding the definitions used above

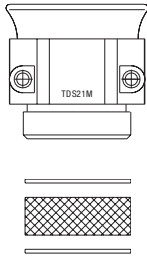
So whatever your questions when it comes to RoHS, we've got the answers at [www.te.com/leadfree](http://www.te.com/leadfree)

RoHS  
Customer  
Support  
Center 

## General overview of heavy duty connectors

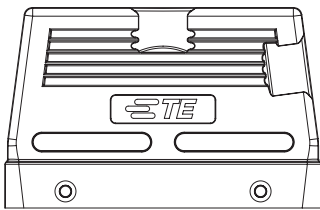
<p><b>General features</b></p>	<p>TE's HDC product series is designed for data, signal and power connections in harsh environments. The modular connector design provides a high degree of flexibility so solutions can be customized for different applications such as machinery, robotics, railway, wind energy and conventional energy generation and distribution.</p>
<p><b>Inserts</b></p>	<p>HDC products consist of three key elements: inserts, contacts and hoods and housings. The inserts and contacts are modular and assembled together to provide electrical performance offering crimp-, screw- and spring-clamp termination technology.</p>
<p><b>Enclosures</b></p>	<p>The hoods and housings are made of powder coated die cast aluminum alloy or of thermoplastic and are protecting the connector inserts against the ingress of dust or water according to the degree of protection IP 65, IP 68 and IP 69 K. Cable glands in different versions or DIN-rail mounts are completing the connector-solutions as accessories.</p>
<p><b>Customized design</b></p>	<p>For customer's special requirement, we can provide customized design. Please contact us.</p>
<p><b>Specifications, Standards and Approvals</b></p>	<p>1. Specifications            DIN VDE 0110 Concerning clearance and creepage distances            DIN VDE 0627 Connectors and plug devices</p> <p>2. Standards            DIN EN 175 301-801            DIN EN 60664-1            DIN EN 61 984            IEC 60 529</p> <p>3. Approvals</p> <p>     </p>

## Connector components



### CABLE FITTING

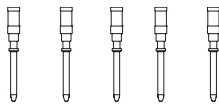
Special cable fittings for protection up to IP69K and for electro-magnetic compatibility available



### HOOD

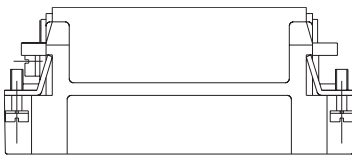
Standard and corrosion-resistant connector hoods:

- low and high construction
- 4 different locking systems
- different cable entries and directions:
  - M Thread
  - PG Thread



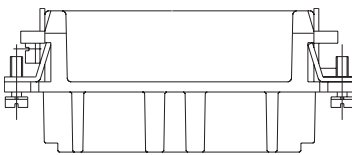
### CONTACTS

Silver or gold plated  
Solid machined contacts with screw, spring or crimp termination  
Stamped and formed contacts



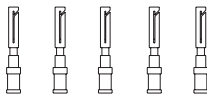
### MALE INSERT

Screw, Spring clamp or crimp terminal



### FEMALE INSERT

Screw, Spring clamp or crimp terminal



### HOOD AND HOUSING

Standard and corrosion-resistant bottom-entry, surface-mounted and cable-to-cable hoods:

- low and high construction (bottom-entry and cable-to-cable hood) with/without cover
- 4 different locking systems



## Terminal types

### Screw dimensions and tightening torque for screw terminals

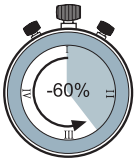
Wire gauge (mm <sup>2</sup> )	1.5	2.5	4.0	6.0	10	16
Screw thread	M3	M3	M3.5	M4	M4	M6
Test moment of torque (Nm)	0.5	0.5	0.8	1.2	1.2	1.2
Min. pull-out for stranded wire (N)	40	50	60	80	90	100

### Spring terminal

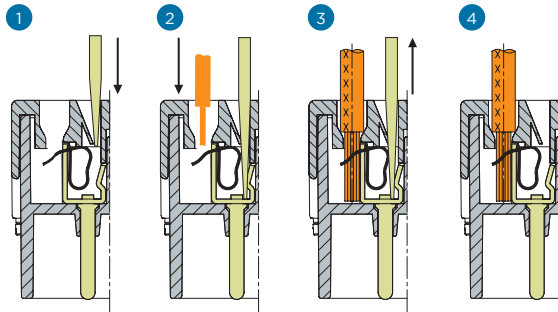
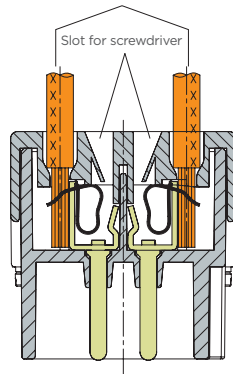
No special tools



60% faster



One conductor per termination



3.5x0.5mm

Screwdriver width: 3.5x0.5mm

### SCREW TERMINAL

The screw terminal is the most common type of connection. Ratings are based on VDE 0609/EN 60 999. Please refer to the table at the left for the tightening torque.

The series HE, HSB, HAVE are equipped with a wire protection, thus the use of ferrules is not necessary. The series HA is not equipped with wire protection and ferrules must be used.

### SPRING TERMINAL

The spring terminal offers a vibration proof termination for solid and stranded wires with cross sections ranging from 0.14 mm<sup>2</sup> to 2.5 mm<sup>2</sup> (AWG 26-14).

Easy operation of the spring terminal with a screw driver, which is inserted in the same direction of the cable opening.

Internationally approved by UL, CSA, VDE.

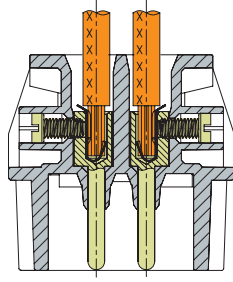
### CRIMP TERMINATION

A proper crimp connection is gastight, therefore corrosion free and represents a cold weld of the parts being connected. Wires to be connected must be matched with the correct size of crimp contacts. The crimp termination represents a highly reliable vibration proof connection with low contact resistance and highest contact density which can be applied with manual and automatic crimping tools.

## Terminal types

### SCREW TERMINAL

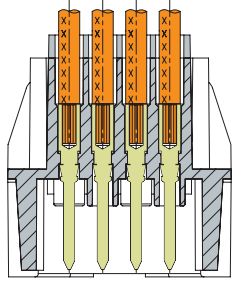
HA series  
HE, HVE series  
HSB series  
HK series  
HWK series  
HEAV series



Inserts	Max. wire gauge		Stripping length L (mm)
	mm <sup>2</sup>	AWG	
HA-003, HA-004	2.5	14	4.5
HA, HEAV	2.5	14	7.5
HE, HVE	2.5	14	7.5
HSB	6.0	10	7.5
HK, HWK	35.0	2.0	10.5

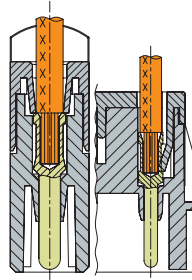
### CRIMP TERMINAL

HD series  
HDD series



Inserts	Max. wire gauge		Stripping length L (mm)
	mm <sup>2</sup>	AWG	
HD HDD HMN(10A) HQ(10A) HK(10A)	0.5	20	8.0
	0.75	18	8.0
	1.0	18	8.0
	1.5	16	8.0
	2.5	14	6.2

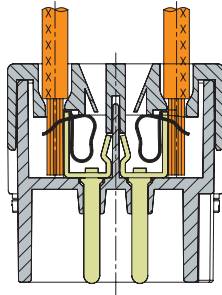
HAC, HEC series  
HEEE, HEE series  
HMN(16A/40A) series  
HQ(16A/40A) series  
HK(16A/40A) series



Inserts	Max. wire gauge		Stripping length L (mm)	
	mm <sup>2</sup>	AWG	16A	40A
HAC HEC HEE/HEEE HMN(16A/40A) HQ(16A/40A) HK(16A/40A)	0.5	20	7.5	-
	0.75	18	7.5	-
	1.0	18	7.5	9.2
	1.5	16	7.5	9.2
	2.5	14	7.5	9.2
	4.0	12	7.5	9.2
	6.0	10	-	9.2

### SPRING TERMINAL

HAS series  
HES series  
HESAV series



Inserts	Max. wire gauge		Stripping length L (mm)
	mm <sup>2</sup>	AWG	
HAS, HES, HESAV	2.5	14	9-11

### RECOMMENDED TIGHTENING TORQUE AND SIZE OF SCREW DRIVER

Size of screw	Connector type	Tightening torque [Nm]	Tightening torque [lbf·ft]	Recommended size of screwdriver
M3	Screw terminal HA-003/HA-004/HQ-005	0.25	0.20	0.4x2.5
M3	Screw terminal HA-010, HA-016	0.50	0.40	0.5x3.5 or ±size 1
M3	HE, HVAE Screw terminal HE, HVAE fixing screws of all kinds, guiding pins and bushes	0.50	0.40	0.5x3.5
M4	Ground terminal HA, HE, HD, HDD	1.20	0.90	0.5x3.5 or ±size 1+2
M4	Terminal blocks HSB	1.20	0.90	0.8x4.5
M5	Ground terminal HSB	2.00	1.40	0.8x4.5/1.2x8.0



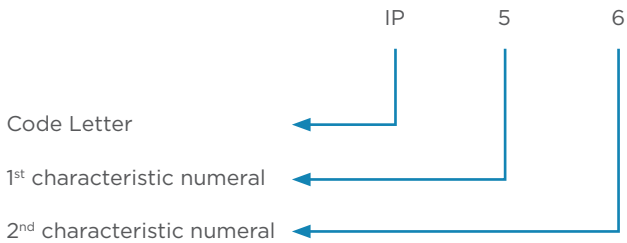


## Degree of protection provided by enclosures

For safety reasons, electrical equipment needs to be protected against outside influences. The basis for the determination is the standard IEC 529 titled 'Degree of protection provided by enclosures (IP-Code)'.

Using a standardized test procedure the extent of the protection class is verified. To classify different housings according to their protection class, a designation system is used which consists of the code - letters 'IP' and two code numbers.

### ARRANGEMENT OF THE IP-CODE (INTERNATIONAL/INGRESS PROTECTION)



### MEANING OF THE 1ST CHARACTERISTIC NUMERAL

The first numeral describes the protection of the housing against intrusion of foreign bodies as well as the protection of people against dangerous parts or influences. Because of this, there are two descriptions and definitions for each of the first code letter.

1 <sup>st</sup> numeral	Protection against solid objects and against access to hazardous parts	
	short description	definition
0	No protection	
1	<ul style="list-style-type: none"> <li>protection against solid foreign bodies of Ø 50mm</li> <li>protection against access to hazardous parts with the back of a hand</li> </ul>	A sphere of Ø 50mm, must not intrude
2	<ul style="list-style-type: none"> <li>protection against solid foreign bodies of Ø 12mm</li> <li>protection against access to hazardous parts with the finger</li> </ul>	A sphere of Ø 12mm diameter, must not intrude
3	<ul style="list-style-type: none"> <li>protection against solid foreign bodies of 2.5mm diameter and bigger</li> <li>protection against access to hazardous parts with a tool</li> </ul>	A sphere of Ø 2.5mm diameter, must not intrude
4	<ul style="list-style-type: none"> <li>protection against solid foreign bodies of 1.0mm diameter and bigger</li> <li>protection against access to hazardous parts with a wire</li> </ul>	The probe, sphere of Ø 1.0mm, must not intrude
5	Protected against dust	The infiltration of dust is not completely prevented, but it does not infiltrate to such an extent that the operation or the safety of the device is affected
6	Dust proof	No infiltration of dust

## MEANING OF THE 2ND CHARACTERISTIC NUMERAL

The second numeral describes the protection of the housing against the intrusion of water with harmful effects.

2 <sup>nd</sup> numeral	Protection degrees against the intrusion of water, designated by the second code digit	
	short description	definition
0	Not protected	-
1	Protected against dripping water	Vertically falling drops shall have not harmful effects
2	Protected against dripping water when the housing is at an angle of up to 15°	Vertically falling drops shall have not harmful effects when the enclosure is tilted up to 15°
3	Protected against water spray	Water sprayed at an angle up to 60°, shall have no harmful effects
4	Protected against splash water	Water splashed against the enclosure from any direction, shall have no harmful effects
4K	Protected against splash water with increased pressure	Water splashed against the enclosure with increased pressure from any direction, shall have no harmful effects (Applies acc. to DIN 40050-9 only for road vehicles)
5	Protected against jets of water	Water splashes against the enclosure from any direction as a water jet, shall have no harmful effects
6	Protected against strong jets of water	Water splashes against the enclosure from any direction as a strong water jet, shall have no harmful effects
6K	Protected against strong jets of water with increased pressure	Water splashes directly against the enclosure from any direction as a strong water jet with increased pressure, shall have no harmful effects (Applies acc. to DIN 40050-9 only for road vehicles)
7	Protection against the effects of temporary submersion in water	Quantity of water that ingresses an enclosure, when it is temporarily immersed under standardized conditions of pressure and time, shall have no harmful effects
8	Protection against the effects of continuous submersion in water	Quantity of water that ingresses an enclosure, when it is continuously immersed under conditions of pressure and time, shall have no harmful effects. The conditions must, however be harder than for code digit 7 and agreed between user and producer
9K	Protected against water during high-pressure / jet-stream cleaning	Water that is directed against the housing with greatly increased pressure from any direction must not have any detrimental effect (Applies acc. to DIN 40050-9 only for road vehicles)

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## Standards

### SPECIFICATIONS

TE connectors are still made on IEC 664/664 A, DIN VDE 0110/01.89 and DIN VDE 0627/06.86 standards. The standards have defined normal rules and requirements which include features construction and requirements.

To determine the minimum clearances and creepage distance, the recent applicable standard is the IEC 60664-1 standard (10.92), a fundamental safety standard to which all product in the committees should refer.

If no notice to products in the catalogue, clearance and creepage distances of all products in the catalogue are based on DIN VDE 0110:1989-01 and degrees pollution 3.

#### **Include some contents:**

1. Over-voltage categories (I, II, III, IV)
2. Degrees of pollution
3. Insulating material
4. Determination of clearances

### OVER-VOLTAGE CATEGORIES

#### **1. Over-voltage category I**

Equipment in over-voltage category I is only intended for use in apparatus or parts of systems in which no over-voltages will occur or are specially protected against over-voltages by means of surge voltages, filters or capacitors.

#### **2. Over-voltage category II**

Equipment in over-voltage category II is intended for use in systems or parts there of in which lightning over-voltages do not have to be taken into account.

#### **3. Over-voltage category III**

Equipment in over-voltage category III is intended for use in equipment for fixed installation, i.e. protective devices, relays, switches and plug devices.

## Insulation Coordination for Electrical Connectors in Low Voltage Plants

Dimensioning of Clearance and Creeping Distances acc. to DIN EN60664-1; following pages show only a part of the standards.

### INSULATION COORDINATION

Insulation coordination includes the design of the electrical insulation of a connector depending on its use and environment. This occurs either by design of the clearance distances (basis is the expected power surge) or by design of the creeping distance (basis is the operating voltage as well as the quality of the insulating material). Furthermore, insulation-changing conditions are taken into account (pollution, protective measures against pollution, air pressure, thermal or chemical influences).

Air distances are measured according to the outer or inner power surge expected. The four power surge classes (power surge categories I to IV) take the different use of the connector into account. Depending on the homogeneity of the field between the electrodes (case A – inhomogenous field, case B – homogenous field) the air distances can be determined according to table 2a (minimum air distances); industrial connectors are always determined according to case A.

The influence from pollution when determining the air- and creeping distances is taken into account by using four degrees of severity (pollution degree 1 to 4).

Basis of the creeping distances is the rated voltage which is deduced from the operating voltage. The minimum creeping distances are allocated in table 4 depending on the severity of pollution. If the product descriptions do not contain any additional information the products listed in this catalogue were rated according to norm DIN VDE 0110 for surge category III and severity of pollution 3.

### SURGE CATEGORY I TO IV

- Resources of surge category I are goods for the termination of fixed electrical installations of a building. Measures for the limitation of transient surges were taken either in the fixed installation or between the fixed installation and the equipment.
- Resources of surge category II are resources which use power and are fed from a fixed installation. Note: e.g. domestic appliances, portable tools and other appliances as well as similar consumers.
- Resources of surge category III are part of a fixed installation. They are resources from which a high degree of availability is expected. Note: Examples for such appliances are e.g. industrial connectors, distribution panels, power switches, distributors, switches, sockets.
- Devices of surge category IV are for use at the supply terminal of the installation. Note: Examples for such appliances are electricity counters, overload cut-out switches.

### POLLUTION DEGREE 1 TO 4

DIN VDE 0110 defines the pollution degrees as follows:

#### **Pollution Degree 1:**

There is no or only dry, non-conductive pollution. The pollution is without influence.

#### **Pollution Degree 2:**

There is only non-conductive pollution. Occasional momentary conductivity due to condensation.

#### **Pollution Degree 3:**

There is conductive pollution or dry non-conductive pollution, which becomes conductive due to condensation.

#### **Pollution Degree 4:**

There is a continuous conductivity due to conductive dust, rain or moisture.

### **Insulation Material**

The insulation materials are divided into the following four groups depending on their comparative tracking index (CTI):

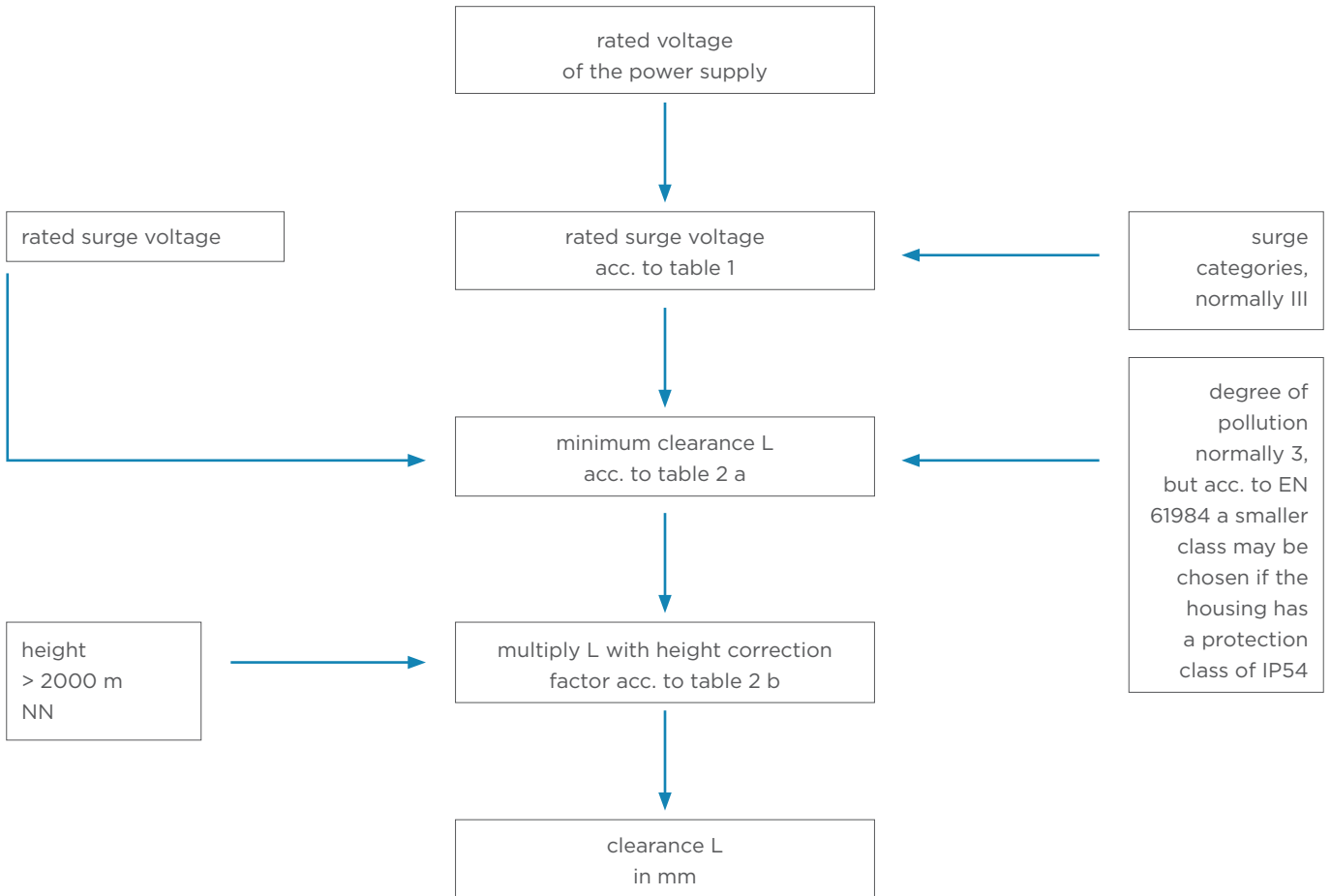
Insulation material I: .....  $600 \leq CTI$

Insulation material II: .....  $400 \leq CTI < 600$

Insulation material III a: .....  $175 \leq CTI < 400$

## Measurement of Clearances

### DIAGRAM FOR THE DETERMINATION OF CLEARANCES



### RATED SURGE VOLTAGE FOR UTILITIES

Rated voltage of the power supply* in V		Rated Surge Voltage in kV (1.2/50ms) for			
3-phase systems	single systems in the centre	utilities at the feed of the installation (surge category IV)	utilities as part of a fixed installation (surge category III)	utilities for connection to fixed installations (surge category II)	Specially protected utilities (surge category I)
	120 up to 240	4	2.5	1.5	0.8
230/400** 277/480**		6	4	2.5	1.5
400/690**		8	6	4	2.5
1000		12	8	6	4

\*) chosen voltage values

\*\*) the / dash is for a 3-phase system with 4 lines. The lower value is for phase to neutral, the higher value is for phase to phase

MINIMUM CLEARANCE IN AIR AT INSTALLATION HEIGHTS OF UP TO 2000 M ABOVE SEA LEVEL (NN)

"rated surge voltage [kV]"	case A, inhomogenous field, degree of pollution				case B, homogenous field, degree of pollution			
	1 (mm)	2 (mm)	3 (mm)	4 (mm)	1 (mm)	2 (mm)	3 (mm)	4 (mm)
0.33 _)	0.01	_)	0.80	1.6	0.01	0.2	0.8	1.6
0.40	0.02				0.02			
0.5 _)	0.04				0.04			
0.60	0.06				0.06			
0.80 _)	0.10				0.10			
1.0	0.15	0.25	1.0	0.2	0.15	0.3	0.3	
1.2	0.25				0.2			
1.5 _)	0.5	0.5	1.0	2	0.3	0.3	1.2	
2.0	1.0	1.0			0.45	0.5		
2.5 _)	1.5	1.5			0.6	0.6		
3.0	2	2	2	2	0.8	0.8	2	
4.0 _)	3	3	3	3	1.2	1.2		1.2
5.0	4	4	4	4	1.5	1.5	1.5	
6.0 _)	5.5	5.5	5.5	5.5	2	2	2	2
8.0 _)	8	8	8	8	3	3	3	3
10	11	11	11	11	3.5	3.5	3.5	3.5
12 _)	14	14	14	14	4.5	4.5	4.5	4.5
15	18	18	18	18	5.5	5.5	5.5	5.5
20	25	25	25	25	8	8	8	8
25	33	33	33	33	10	10	10	10
30	40	40	40	40	12.5	12.5	12.5	12.5
40	60	60	60	60	17	17	17	17
50	75	75	75	75	22	22	22	22
60	90	90	90	90	27	27	27	27
80	130	130	130	130	35	35	35	35
100	170	170	170	170	45	45	45	45

1) This voltage is

- for functional insulation: the maximum impulse voltage expected to occur across the clearance
- for basic insulation directly exposed by transient overvoltages
- for other basic insulation

\_ ) Preferred values

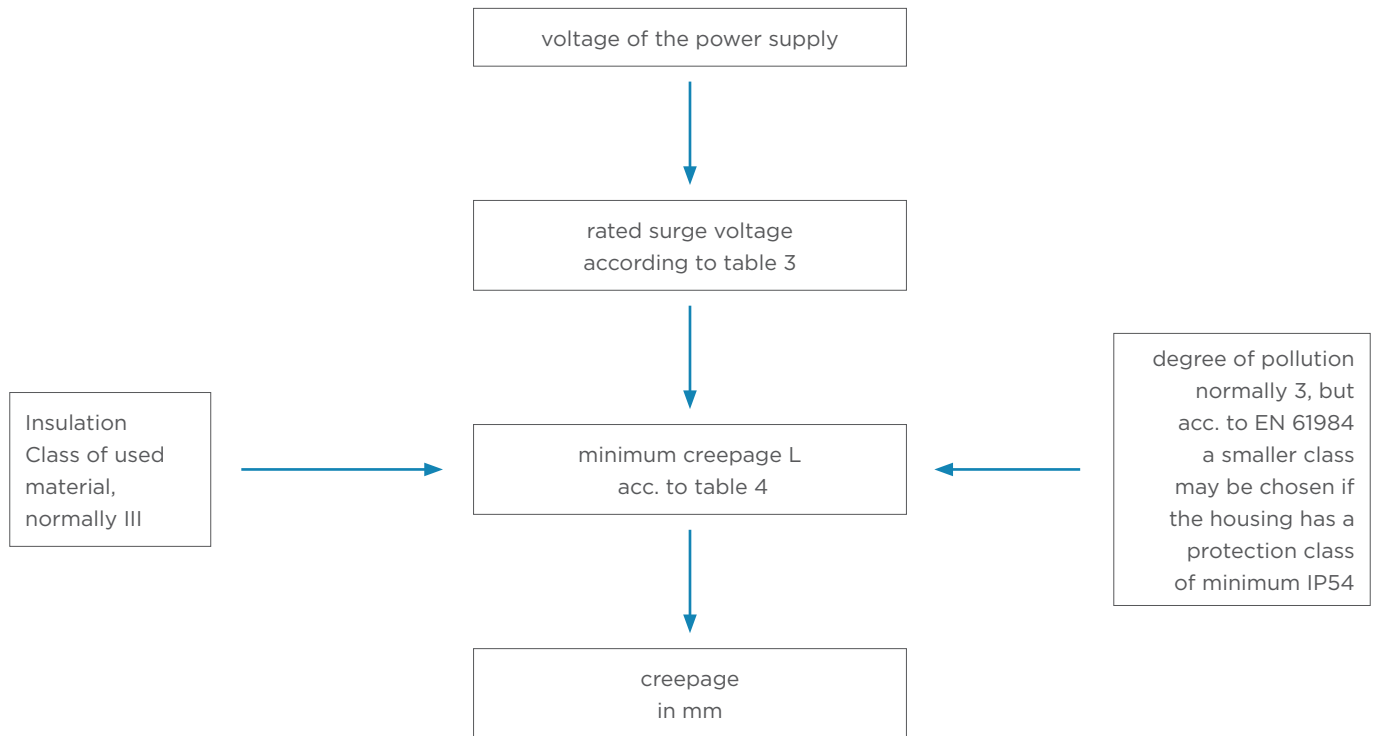
FACTORS FOR HEIGHT CORRECTION

height in m	normal air pressure in kPa	multiplication factor for distances
2000	80.0	1.00
3000	70.0	1.14
4000	62.0	1.29
5000	54.0	1.48
6000	47.0	1.70
7000	41.0	1.95
8000	35.5	2.25
9000	30.5	2.62
10000	26.5	3.02
15000	12.0	6.67
20000	5.5	14.50



## Measurement of creepage

### DIAGRAM FOR THE DETERMINATION OF CREEPAGE





voltage of the power supply [V]	rated voltage [V]
60	63
110/120/127	125
150	160
208	200
220/230/240	250
300	320
380/400/415	400
440	500
480/500	500
575	630
600	630
660/690	630
720/830	800
960	1000
1000	1000

Table 3

\*the above shown table does not give the entire correlation of world-wide used networks and rated voltages; it is reduced to the most common ones; further details, see DIN EN60664-1

### CREEPPAGES IN [MM] FOR ELECTRICAL EQUIPMENTS

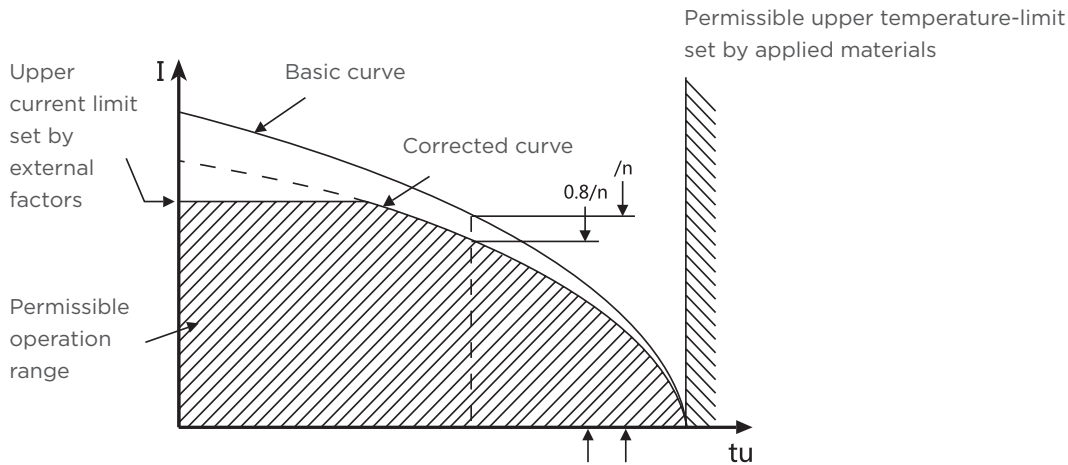
rated voltage [V]	degree of pollution									
	1 All Insulator Classes	2 Insulation Class			3 Insulation Class			4 Insulation Class		
		I	II	III	I	II	III	I	II	III
10	0.08	0.40	0.40	0.40	1.00	1.00	1.00	1.6	1.6	1.6
12.5	0.09	0.42	0.42	0.42	1.05	1.05	1.05	1.6	1.6	1.6
16	0.10	0.45	0.45	0.45	1.10	1.10	1.10	1.6	1.6	1.6
20	0.110	0.48	0.48	0.48	1.20	1.20	1.20	1.6	1.6	1.6
25	0.125	0.50	0.50	0.50	1.25	1.25	1.25	1.7	1.7	1.7
32	0.140	0.53	0.53	0.53	1.30	1.30	1.30	1.8	1.8	1.8
40	0.16	0.56	0.80	1.10	1.4	1.6	1.8	1.9	2.4	3.0
50	0.18	0.60	0.85	1.20	1.5	1.7	1.9	2.0	2.5	3.2
63	0.20	0.63	0.90	1.25	1.6	1.8	2.0	2.1	2.6	3.4
80	0.22	0.67	0.95	1.3	1.7	1.9	2.1	2.2	2.8	3.6
100	0.25	0.71	1.00	1.4	1.8	2.0	2.2	2.4	3.0	3.8
125	0.28	0.75	1.05	1.5	1.9	2.1	2.4	2.5	3.2	4.0
160	0.32	0.80	1.1	1.6	2.0	2.2	2.5	3.2	4.0	5.0
200	0.42	1.00	1.4	2.0	2.5	2.8	3.2	4.0	5.0	6.3
250	0.56	1.25	1.8	2.5	3.2	3.6	4.0	5.0	6.3	8.0
320	0.75	1.60	2.2	3.2	4.0	4.5	5.0	6.3	8.0	10.0
400	1.00	2.00	2.8	4.0	5.0	5.6	6.3	8.0	10.0	12.5
500	1.30	2.50	3.6	5.0	6.3	7.1	8.0	10.0	12.5	16.0
630	1.8	3.2	4.5	6.3	8.0	9	10.0	12.5	16	20
800	2.4	4.0	5.6	8.0	10.0	11	12.5	16.0	20	25
1000	3.2	5.0	7.1	10.0	12.5	14	16.0	20.0	25	32

Table 4

## Standards

### CURRENT CARRYING CAPACITY

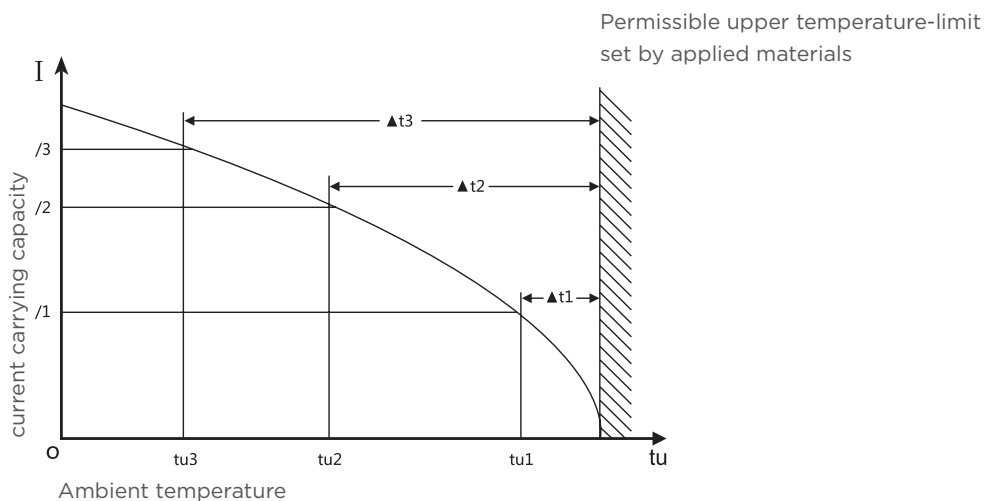
The current carrying capacity is determined in tests which are conducted on the basis of the DIN IEC 60 512 part 3. The current carrying capacity is limited by the thermal properties of materials which are used for inserts as well as by the insulating materials. These components have a maximum temperature which should not be exceeded.



Example of a current capacity curve

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 permissible upper-limit temperature.

In another measurement the self-heating ( $\Delta t$ ) at different currents is determined. 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. In practice it is not usual to load all terminals simultaneously with the maximum current. In such a case one contact can be loaded with a higher current as permitted by the current capacity curve, if less than 20% of the whole is loaded.



## Standards

### TIGHTENING TORQUE OF TERMINAL BLOCK SCREWS

IEC 60 947-1:1996/EN 60 947-1:1977 modified, table 4 specifies tightening torques for screw connections based on the type and size of the screw for electrical and mechanical type tests. Tightening contact terminal block to this torque guarantees that the connected conductors are reliably connected. The technical product data given in this catalog differ from this value. However they indicate a practical range of tightening torques which provides a gas-tightening contact and offers long-term contact stability.

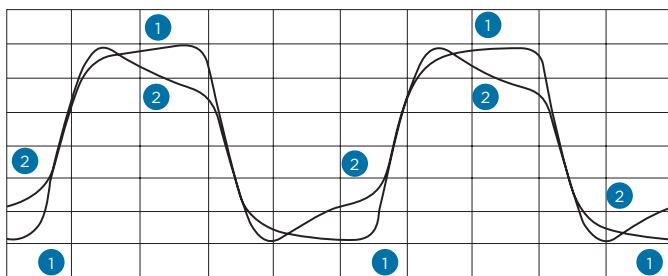
#### Extract from IEC 60 947-1/EN 60 947, Table 4

The torque according to IEC, EN

Thread Type	Head screw with slot		
	Torque [Nm]	CuZn or CuSN screw [Nm]	Steel screw [Nm]
M2.5	0.4	0.6	0.8
M3	0.5	0.8	1.0
M3.5	0.8	1.2	-
M4	1.2	1.8	2.0
M5	2.0	3.0	4.5
M6	2.5	4.0	8.0

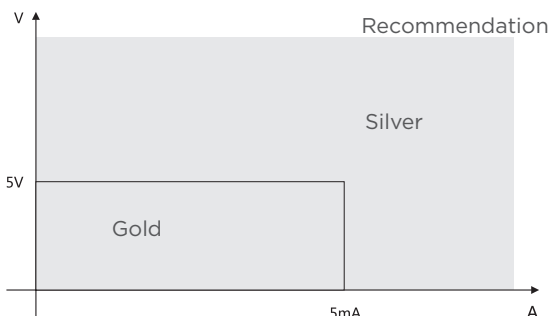
### LOW CURRENTS AND VOLTAGES

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 a 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 artificially aged contact representing a twenty year life is compared with a new contact.



- 1 New contact
- 2 After ageing

Changes to the transmitted signal after artificial ageing



Left is a table derived from actual experiences

## Selection guide

### TECHNICAL INFORMATION OF INSERTS

Insert	Type	Poles	Current	Voltage	Terminal	Contacts	Shells
HA	HA-003	3+PE	10A	250 V	screw	-	H3A
	HA-004	4+PE	10A	250V	screw	-	H3A
	HA-010	10+PE	16A	250V	screw crimp	CEM/F(16A) DEM/F(16A)	H10A
	HA-016	16+PE	16A	250V			H16A
	HA-032	32+PE	16A	250V			H32A
	HAS-003	003+PE	10A	400V	spring	-	H3A
	HAS-004	004+PE	10A	400V	spring	-	H3A
HD	HD-007	7+PE	10A	250V	crimp	CDM/F(10A) DDM/F(10A) CJM/F(10A)	H3A
	HD-008	8	10A	50V			H3A
	HD-015	15+PE	10A	250V			H10A
	HD-025	25+PE	10A	250V			H16A
	HD-040	40+PE	10A	250V			H16B
	HD-050	50+PE	10A	250V			H32A
	HD-064	64+PE	10A	250V			H24B
	HD-080	80+PE	10A	250V			H32B
	HD-128	128+PE	10A	250V			H48B
HDD	HDD-016	16+PE	10A	250V	crimp	CDM/F(10A) DDM/F(10A) CJM/F(10A)	H6B
	HDD-024	24+PE	10A	250V			H6B
	HDD-042	42+PE	10A	250V			H10B
	HDD-072	72+PE	10A	250V			H16B
	HDD-108	108+PE	10A	250V			H24B
	HDD-144	144+PE	10A	250V			H32B
	HDD-216	216+PE	10A	250V			H48B
HE	HE-006	6+PE	16A	500V	screw crimp spring double spring	CEM/F(16A) DEM/F(16A)	H6B
	HE-010	10+PE	16A	500V			H10B
	HE-016	16+PE	16A	500V			H16B
	HE-024	24+PE	16A	500V			H24B
	HE-032	32+PE	16A	500V			H32B
	HE-048	48+PE	16A	500V			H48B
HEE	HEE-010	10+PE	16A	500V	crimp	CEM/F(16A) DEM/F(16A)	H6B
	HEE-018	18+PE	16A	500V			H10B
	HEE-032	32+PE	16A	500V			H16B
	HEE-046	46+PE	16A	500V			H24B
	HEE-064	64+PE	16A	500V			H32B
	HEE-092	92+PE	16A	500V			H48B
	HEE-015	14+PE	16A	200V		CSF(16A)	-

## Selection guide

### TECHNICAL INFORMATION OF INSERTS

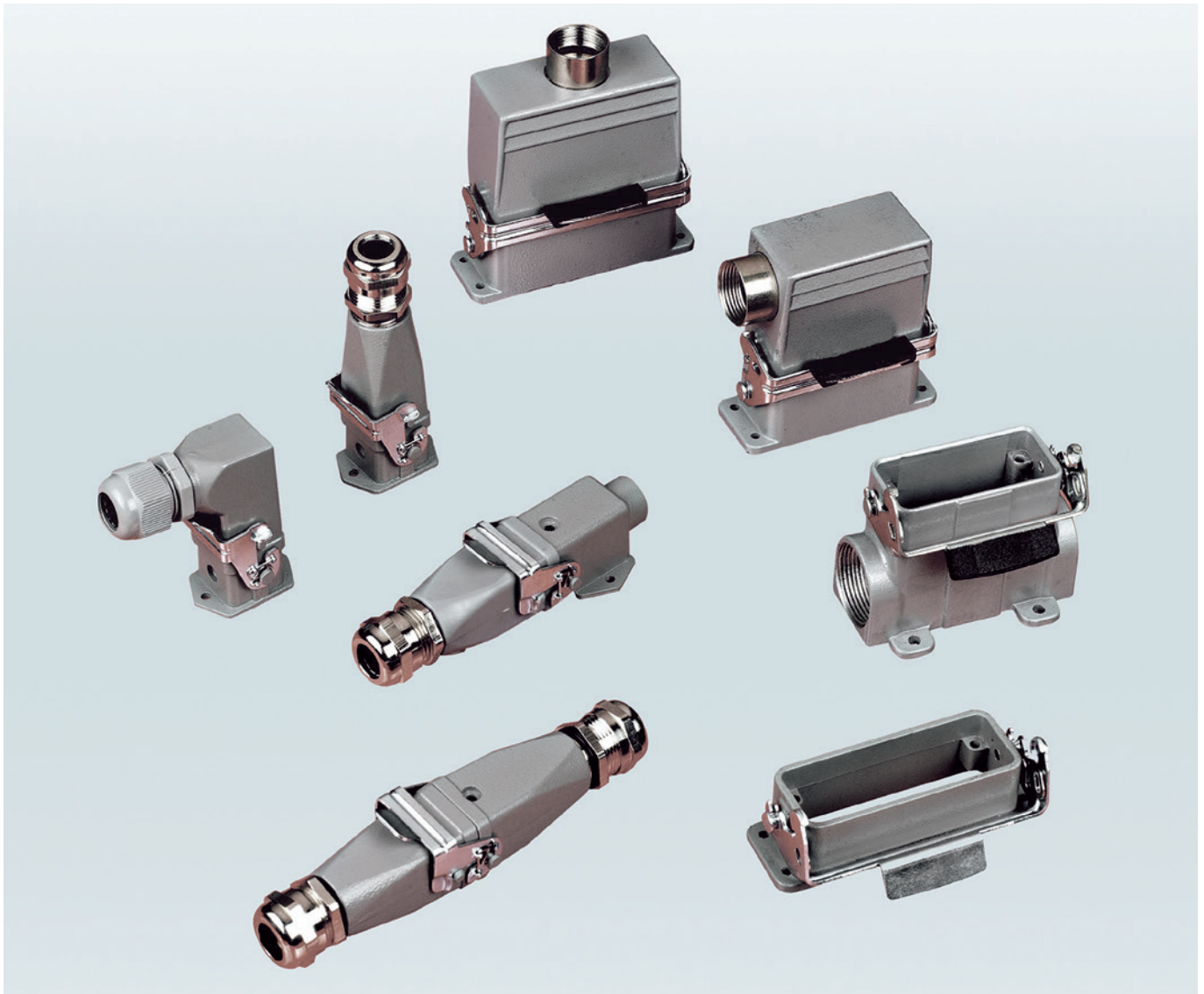
Insert	Type	Poles	Current	Voltage	Terminal	Contacts	Shells
HEEE	HEEE-020	20+PE	16A	400V	crimp	CEM/F(16A) DEM/F(16A)	H6B
	HEEE-032	32+PE	16A	400V			H10B
	HEEE-040	40+PE	16A	500V			H16B
	HEEE-048	48+PE	16A	400V			H16B
	HEEE-064	64+PE	16A	500V			H24B
	HEEE-072	72+PE	16A	400V			H24B
	HEEE-080	80+PE	16A	500V			H32B
	HEEE-096	96+PE	16A	400V			H32B
	HEEE-128	128+PE	16A	500V			H48B
	HEEE-144	144+PE	16A	400V			H48B
HVE	HVE-003	3+PE+2	16A	830V	screw crimp spring	CEM/F(16A) DEM/F(16A)	H10B
	HVE-006	6+PE+2	16A	830V			H16B
	HVE-010	10+PE+2	16A	830V			H24B
HSB	HSB-006	6+PE	35A	400/690V	screw	-	H16B
	HSB-012	12+PE	35A	400/690V	screw	-	H32B
HQ	HQ-005	5+PE	16A	400V	crimp	CEM/F(16A) DEM/F(16A)	H3A
	HQ-007	7+PE	10A	400V		CDM/F(10A) DDM/F(10A)	H3A
	HQ-008	8+PE	16A	500V		CEM/F(16A) DEM/F(16A)	H8A
	HQ-012	12+PE	10A	400V		CDM/F(10A) DDM/F(10A)	H3A
	HQ-017	17+PE	10A	250V			H8A
	HQ4/2	4+PE+2	40A+10A	600V+250V		CDM/F(10A) DDM/F(10A) CMM/F(40A) DMM/F(40A)	H8A
HEAV	HEAV-006	6+PE	16A	500V	screw spring	-	H6B
	HEAV-010	10+PE	16A	500V		-	H10B
	HEAV-016	16+PE	16A	500V		-	H16B
	HEAV-024	24+PE	16A	500V		-	H24B
HMN	HMN-001	1	200A	1000V	crimp	CHM/F(200A)	-
	HMN-D2	2	100A	1000V	crimp	CNM/F(100A)	-
	HMN-002	2	70A	1000V	crimp	CSM/F(70A)	-
	HMN-003	3	40A	690V	crimp	CMM/F(40A) DMM/F(40A)	-
	HMN-004	4	40A	830V	crimp	CMM/F(40A) DMM/F(40A)	-
	HMN-004SC	4	-	-	-	-	-
	HMN-005	5	16A	400V	spring	-	-
	HMN-006	6	16A	500V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-006P	6	16A	830V	crimp		-

## Selection guide

### TECHNICAL INFORMATION OF INSERTS

Insert	Type	Poles	Current	Voltage	Terminal	Contacts	Shells
HMN	HMN-008	8	16A	400V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-012	12	10A	250V	crimp	CDM/F(10A) DDM/F(10A)	-
	HMN-017	17	10A	160V	crimp	CDM/F(10A) DDM/F(10A)	-
	HMN-020	20	16A	500V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-025	25	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	HMN-009	9	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	HMN-RJ45	8	1A	50V	crimp	-	-
	HMN-Q1	1+1	16A	50V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-Q2	4+4	10A	50V	crimp	CDM/F(10A) DDM/F(10A)	-
	HMN-Q3	8+8	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	PIN-Q1	1	16A	50V	crimp	CEM/F(16A) DEM/F(16A)	-
	PIN-Q2	4	10A	50V	crimp	CDM/F(10A) DDM/F(10A)	-
	PIN-Q3	8	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	HMN-DM	-	-	-	-	-	-
HK/ HWK	HK4/0	4+PE	80A	690V	screw	-	H16B
	HK4/2	4+PE+2	80A+16A	690V+400V	screw	-	H16B
	HK6/12	6+PE+12	40A+10A	690V+230/400V	screw	-	H16B
	HK12/2	12+PE+2	40A+10A	690V+250V	crimp	CMM/F(40A) DMM/F(40A) CDM/F(10A) DDM/F(10A)	H16B
	HK6/36	6+PE+36	40A+10A	690V+160V	crimp	CMM/F(40A) DMM/F(40A) CDM/F(10A) DDM/F(10A)	H16B
	HK4/8	4+PE+8	80A+16A	400V	screw	-	H24B
	HK8/24	8+PE+24	16A+10A	230/400V+160V	crimp	CEM/F(16A) DEM/F(16A) CDM/F(10A) DDM/F(10A)	H10B
	HWK6/6	6+PE+6	40A+16A	690V+400V	screw	-	H16B
	HWK3/3/6	3+PE+3+6	100A+40A+16A	400/690V+400/ 690V+250/400V	screw	-	H24B

## HA Series



### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances

DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 60664-1

DIN EN 61 984

### 3. Approvals



## HD technical characteristics

Specifications .....	DIN VDE 0627
.....	DIN VDE 0110
Standards .....	DIN 43 652
.....	CECC 75 301-801
Number of contacts .....	7,8,15,25,40,50(2x25),64,
.....	80(2x40),128(2x64) + PE

### INSERTS

Working current .....	10A max
(See current carrying capacity)	
Working voltage .....	(8D is 50V)
.....	250V, Insulation group C
Test voltage urms .....	4KV(8D is 0.8KV)
Pollution degree .....	3
Pollution degree 2 also 10A; 250V/400V	
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate or Polybutylece
Temperature range .....	-40°C... +100°C/125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V
Mechanical working life-mating cycles.....	$\geq 500$

### CONTACTS

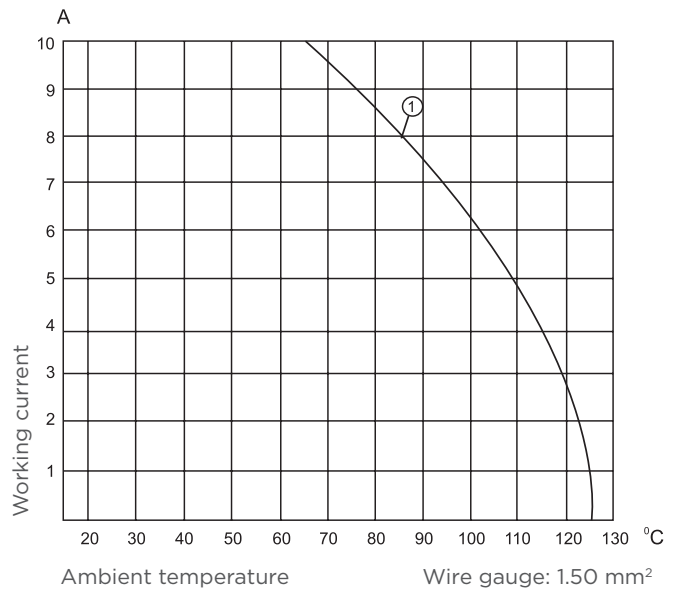
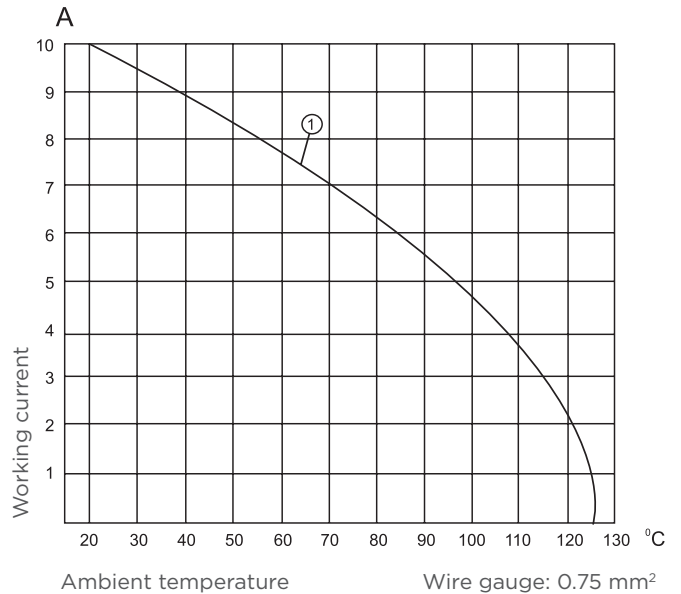
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 3m\Omega$
Terminal .....	Crimp terminal
.....	Rolled terminal
- mm <sup>2</sup> .....	0.15-2.5mm <sup>2</sup>
- AWG .....	26-14

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



1 HD-007



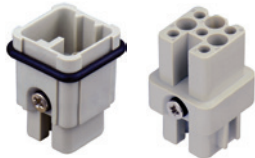
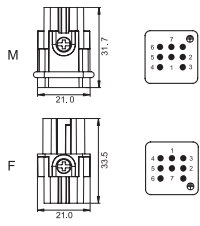

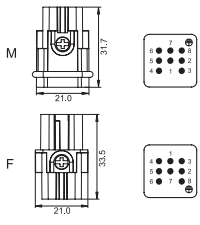
## HD-007/008 inserts

INSERTS FOR H3A HOOD/HOUSING


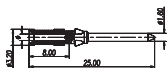

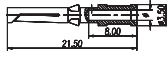
250V/50V 10A

7+ 

8

Dimensions (mm)	Contact arrangement view from termination side	Part Number		Type
		Male insert	Female insert	
250V/10A 		T2020072101-000		HD-007-M
			T2020072201-000	HD-007-F
50V/10A 		T2020082101-000		HD-008-M
			T2020082201-000	HD-008-F

### 10A Contact

Tech data	10A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤3mΩ <b>Terminal:</b> crimp connection <b>CDM/Male</b> 		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
<b>CDF/Female</b> 		0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## HA technical characteristics

Specifications .....DIN EN 60 664-1  
 .....DIN EN 61984  
 Number of contacts .....3,4,10,16,32(2x16) + PE

### INSERTS

Working current  
 HA-3, HA-4 .....10A  
 HA-10, HA-16, HA-32.....16A  
 Working voltage  
 HA-3, HA-4 .....250V/400V  
 HA-10, HA-16, HA-32.....250V  
 Test voltage urms  
 HA-003, HAS-004, HA-10, HA-16, HA-32.....4KV  
 HAS-003.....6KV  
 HA-004 .....2.5KV  
 Pollution degree .....2  
 Insulation resistance ..... $\geq 10^{10}\Omega$   
 Material .....Polycarbonate or Polybutylece  
 Temperature range .....-40°C... +100°C/125°C  
 Flammability acc. to UL94 .....V0  
 Working voltage acc. to UL/CSA.....600V  
 Mechanical working life-mating cycles..... $\geq 500$

### CONTACTS

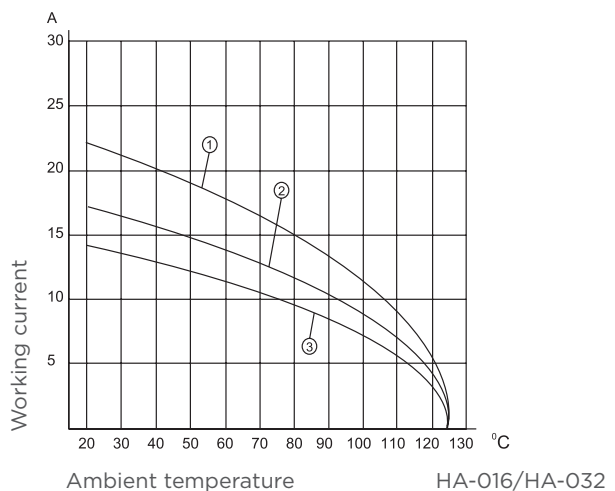
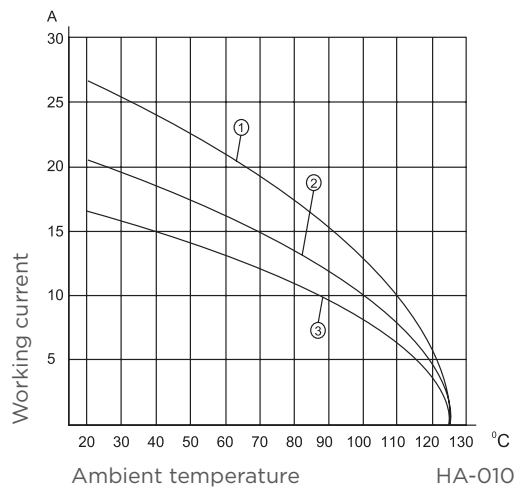
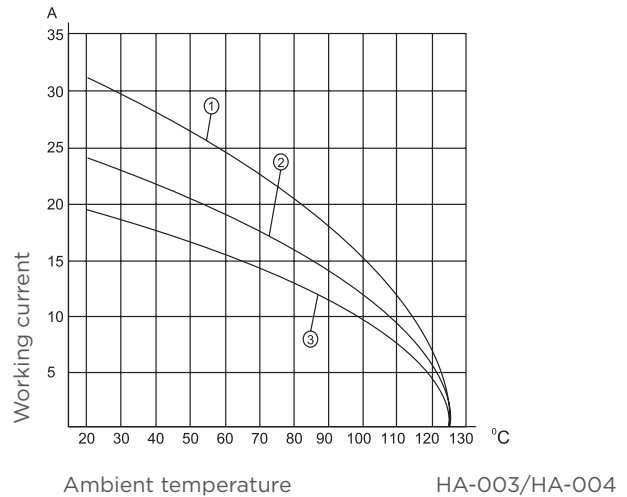
Material .....Copper alloy  
 Surface .....Hard silver-plated  
 .....Hard gold-xplated  
 Contact resistance ..... $\leq 1m\Omega$   
 Terminal .....Screw terminal  
 .....Crimp terminal  
 .....Spring terminal  
 - mm<sup>2</sup> .....0.5-2.5mm<sup>2</sup> /0.14-4.0mm<sup>2</sup>/0.5-2.5mm<sup>2</sup>  
 - AWG .....20-14/26-14/20-14  
 - Tightening/test torque.....0.5Nm: HA-010, HA-016, HA-032  
 .....0.25Nm: HA-003, HA-004

### HOODS, HOUSINGS

Material .....Die cast zinc  
 Surface .....Powder-coated (RAL 7037)  
 Locking element.....Stainless steel, steel-zinc plated  
 Temperature range .....-40°C... +100°C/125°C  
 Degree of protection acc. to DIN40 050 .....IP65

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 Wire gauge: 2.5mm<sup>2</sup>
- 2 Wire gauge: 1.5mm<sup>2</sup>
- 3 Wire gauge: 1.0mm<sup>2</sup>


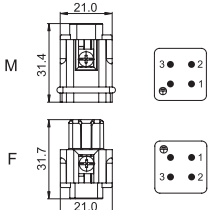

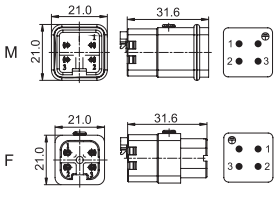
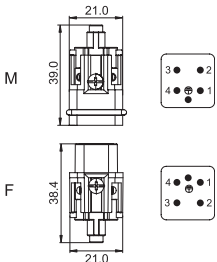
## HA-003/004 inserts

INSERTS FOR H3A HOOD/HOUSING

250V/400V 10A

3+Ⓢ

4+Ⓢ

Dimensions (mm)	Contact arrangement view from termination side	Part Number		Type
		Male insert	Female insert	
Screw terminal				
250V/10A 		T2010032101-000		HA-003-M
			T2010032201-000	HA-003-F
Spring terminal				
400V/10A 		T2010033101-000		HA-003-MS
			T2010033201-000	HA-003-FS
Screw terminal				
250V/10A 		T2010042101-000		HA-004-M
			T2010042201-000	HA-004-F
Spring terminal				
400V/10A 		T2010043101-000		HA-004-MS
			T2010043201-000	HA-004-FS

## HQ technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	5,7,8,12,17 + PE

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

## INSERTS

Working current	
HQ-005,008.....	16A max
HQ-007,012,017 .....	10A max
Working voltage	
HQ-005,007,012.....	400V
HQ-008.....	500V
HQ-017.....	250V
Test voltage urms	
HQ-005,017 .....	4KV
HQ-007,008,012 .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +100°C/125°C
Flammability acc. to UL94 .....	VO
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

## CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-4.0/0.14-2.5/1.5-6mm <sup>2</sup>
- AWG .....	26-12/26-14/16-10
- Tightening/test torque .....	0.25Nm

## HOODS, HOUSINGS


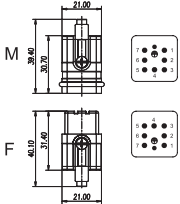

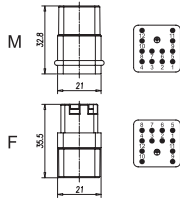
Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

# HQ-007/012 inserts


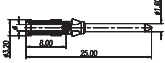

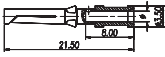
INSERTS FOR H3A HOOD/HOUSING

400V MAX. 10A

7+   
 12+ 

Dimensions (mm)	Contact arrangement view from termination side	Part Number		Type
		Male insert	Female insert	
Crimp terminal (Order crimp contacts separately)				
		T2080072101-000		HQ-007-M
			T2080072201-000	HQ-007-F
		T2080122101-000		HQ-012-M
			T2080122201-000	HQ-012-F

## 10A Contact


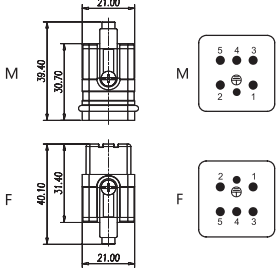
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
				0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## HQ-005 inserts





INSERTS FOR H3A HOOD/HOUSING

400V MAX. 16A

5+ (⊕)

Dimensions (mm)	Contact arrangement view from termination side	Part Number		Type
		Male insert	Female insert	
Crimp terminal (Order crimp contacts separately)				
		T2080052101-000		HQ-005-M
			T2080052201-000	HQ-005-F

### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male	16A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		mm	Type	Part Number	Type
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
CEF/Female  		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

## H3A metal hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number	
Top entry						
		M20	PG11	H3A-MTG-PG11 H3A-MTG-M20	T1329030111-000 T1329030120-000	
Side entry						
		M20	PG11	H3A-MTS-PG11 H3A-MTS-M20	T1319030111-000 T1319030120-000	
Bulkhead mounting: Bottom entry						
				H3A-MAG	T1509030000-000	
Bulkhead mounting: Side entry						
				H3A-MAGS	T1549030000-000	
Surface mounting: Side entry						
		M16 M20	PG11	H3A-MAGSV-PG11 H3A-MAGSV-M16 H3A-MAGSV-M20	T1619030111-000 T1619030116-000 T1619030120-000	
Cable-to-cable hood:						
		M20	PG11	H3A-MTGVB-PG11 H3A-MTGVB-M20	T1739030111-000 T1739030120-000	
Protection covers for hoods (thermoplastic)						
	Note: For mounted male insert and hood				H3A-KDTP	T1010031100-000
Metal protection covers for hoods						
	Note: For mounted female insert and hood				H3A-KDB	T1010033100-000

## H3A thermoplastic hoods/housings

### THERMOPLASTIC HOODS, HOUSINGS

Dimensions (mm)		Metr.	PG	Type	Part Number	
Top entry						
		M20	PG11	H3A-TG-PG11 H3A-TG-M20	T1329031111-000 T1329031120-000	
Side entry						
		M20	PG11	H3A-TS-PG11 H3A-TS-M20	T1319031111-000 T1319031120-000	
Bulkhead mounting: Bottom entry						
				H3A-AG	T1509031100-000	
Bulkhead mounting: Side entry						
				H3A-AGS	T1509031111-000	
Surface mounting: Side entry						
		M16 M20	PG11	H3A-AGSV-PG11 H3A-AGSV-M16 H3A-AGSV-M20	T1619031111-000 T1619031116-000 T1619031120-000	
Cable-to-cable hood:						
		M20	PG11	H3A-TGVB-PG11 H3A-TGVB-M20	T1739031111-000 T1739031120-000	
Protection covers for hoods (thermoplastic)						
	Note: For mounted male insert and hood				H3A-KDTP	T1010031100-000
Protection covers for hoods						
	Note: For mounted female insert and hood				H3A-KDBP (White) H3A-KDBPG (Grey)	T1010032100-000 T1010032300-000
White	Grey					
Covers without sealing type						
				H3A-KDBP (White) H3A-KDBP (Grey)	T1010033200-000 T1010032200-000	



## HIP.3/4, HIP-K.3/4, EMV-K.3/4 housings


**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h


**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood


IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Hood: Top entry</b>				
	M16	11	<b>HIP</b> HIP.3/4.STO.1.11.G HIP.3/4.STO.1.M16.G	1-1102600-5 0-1106408-1
	M16 M20	11	<b>HIP-K</b> HIP-K.3/4.STO.1.11.G HIP-K.3/4.STO.1.M16.G HIP-K.3/4.STO.1.M20.G	2-1102600-5 0-1106408-2 0-1106408-3
	M16 M20	11	<b>EMV-K</b> EMV-K.3/4.STO.1.11.G EMV-K.3/4.STO.1.M16.G EMV-K.3/4.STO.1.M20.G	4-1102700-5 0-1106402-2 0-1106402-3

### Surface mounted housing: Bottom entry

 <p>Panel cut-out 21 x 21</p>			<b>HIP</b> HIP.3/4.AG	1-1102603-5
			<b>HIP-K</b> HIP-K.3/4.AG	2-1102603-5
			<b>EMV-K</b> EMV-K.3/4.AG	4-1102703-5

### Surface mounted housing: Bottom entry (by panel cut-out)

 <p>Panel cut-out <math>\varnothing</math> 20</p>			<b>HIP</b> HIP.3/4.SGF	1-1102602-5
			<b>HIP-K</b> HIP-K.3/4.SGF	2-1102602-5
			<b>EMV-K</b> EMV-K.3/4.SGF	4-1102702-5

## HIP.3/4, HIP-K.3/4, EMV-K.3/4 housings


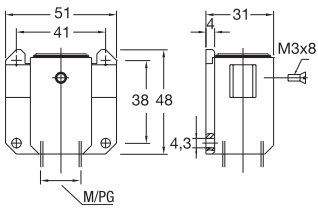

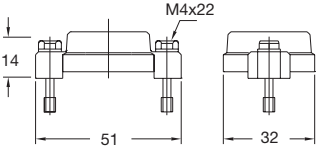
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

IP 68 / IP 69 K





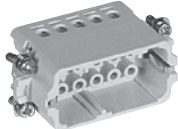
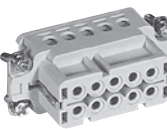
Description	Metr.	PG	Type	Part Number	
<b>Surface mounted housing: Side entry</b>					
		M16 M20	<b>HIP</b> HIP.3/4.SG.1.11.G HIP.3/4.SG.1.M16.G HIP.3/4.SG.1.M20.G	1-1102601-5 0-1106407-1 0-1106401-4	
			M16	<b>HIP-K</b> HIP-K.3/4.SG.1.11.G HIP-K.3/4.SG.1.M16.G	2-1102601-5 0-1106407-2
				<b>EMV-K</b> EMV-K.3/4.SG.1.11.G EMV-K.3/4.SG.1.M16.G EMV-K.3/4.SG.1.M20.G	4-1102701-5 0-1106401-2 0-1106401-3
	M16 M20		<b>HIP/EMV</b> HIP/EMV.3/4.SKB	3-1106200-5	
			<b>HIP-K/EMV-K</b> HIP-K/EMV-K.3/4.SKB	4-1106200-5	
	<b>Protective covers for housings</b>				
			<b>HIP/EMV</b> HIP/EMV.3/4.SKB	3-1106200-5	
			<b>HIP-K/EMV-K</b> HIP-K/EMV-K.3/4.SKB	4-1106200-5	

## HA.10 contact inserts

SCREW TERMINAL, SPRING CLAMP TERMINAL,  
CRIMP TERMINAL FOR SCREW MACHINED HE/HA CRIMP CONTACTS

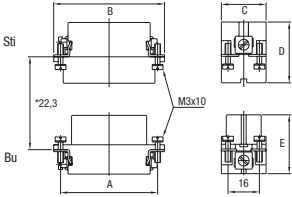
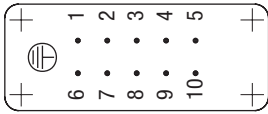
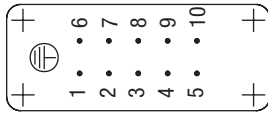
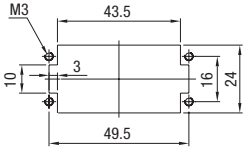
250V 16A

10+ 

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Screw terminal				
		HA-010-M	T2010102101-000	
		HA-010-F		T2010102201-000
Spring Clamp terminal				
		HA.10.Sti.SC.B 1-10	7-1103414-1	
		HA.10.Bu.SC.B 1-10		7-1103415-1
Crimp terminal				
		HA.10.Sti.C.B 1-10	2-1103414-3	
		HA.10.Bu.C.B 1-10		2-1103415-3


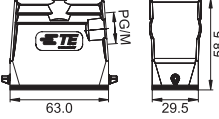

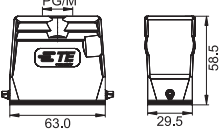
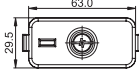

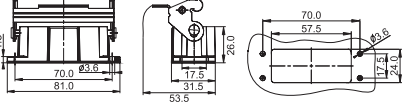

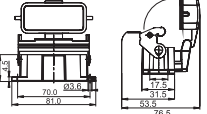

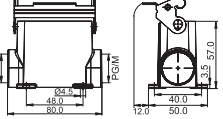

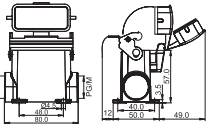

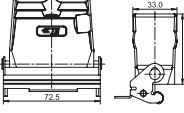
Dimensions	A	B	C	D	E
mm	49.5	57	23	31	28

Suitable crimp contacts and crimping tools: see page 48

Dimensions (mm)	Contact arrangement		Panel cut-out
	Male insert	Female insert	
			

# H10A metal hoods/housings

POWDER-COATED, RAL 7037






Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
		M20 M25	PG16 PG21	H10A-TS-PG16 H10A-TS-PG21 H10A-TS-M20 H10A-TS-M25	T1319100116-000 T1319100121-000 T1319100120-000 T1319100125-000						
Hood: Top entry											
		M20 M25	PG16 PG21	H10A-TG-PG16 H10A-TG-PG21 H10A-TG-M20 H10A-TG-M25	T1329100116-000 T1329100121-000 T1329100120-000 T1329100125-000						
Protection covers for hoods											
	63.0 29.5	With plastic rope		H10A-KDT	T1019101101-000 T1019101201-000						
Bulkhead mounted											
				H10A-AGS H10A-ADMS	T1509101000-000 T1519101000-000						
	With protection cover 			H10A-ADMS	T1519101000-000						
Surface mounted: Side entry											
		1 Side entry M20 M25 2 Side entry M20 M25	PG16 PG21 PG16 PG21	H10A-SGRS-PG16 H10A-SGRS-PG21 H10A-SGRS-M20 H10A-SGRS-M25 H10A-SGRS-2PG16 H10A-SGRS-2PG21 H10A-SGRS-2M20 H10A-SGRS-2M25	T1619101116-000 T1619101121-000 T1619101120-000 T1619101125-000 T1619101216-000 T1619101221-000 T1619101220-000 T1619101225-000						
	With protection cover 	1 Side entry M20 M25 2 Side entry M20 M25	PG16 PG21 PG16 PG21	H10A-SDRMS-PG16 H10A-SDRMS-PG21 H10A-SDRMS-M20 H10A-SDRMS-M25 H10A-SDRMS-2PG16 H10A-SDRMS-2PG21 H10A-SDRMS-2M20 H10A-SDRMS-2M25	T1629101116-000 T1629101121-000 T1629101120-000 T1629101125-000 T1629101216-000 T1629101221-000 T1629101220-000 T1629101225-000						
Cable-to-cable hood											
	<table border="1"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>52.6</td> </tr> <tr> <td>High</td> <td>66.6</td> </tr> </table> 	Construction	H	Low	52.6	High	66.6	Low construction High construction M20 M25 M25	PG16 PG21	H10A-TBFS-PG16 H10A-TBFS-M20 H10A-TBFS-M25 H10A-TBFHS-PG21 H10A-TBFHS-M25	T1739101116-000 T1739101120-000 T1739101125-000 T1779101121-000 T1779101125-000
Construction	H										
Low	52.6										
High	66.6										

## HA.16 contact inserts

SCREW TERMINAL, SPRING CLAMP TERMINAL,  
CRIMP TERMINAL FOR SCREW MACHINED HE/HA CRIMP CONTACTS

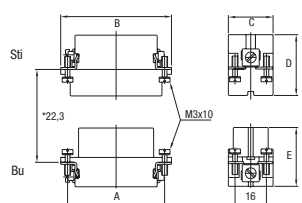
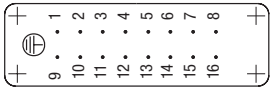
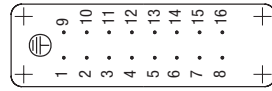
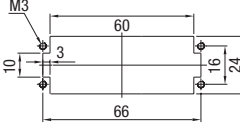
250V 16A

16+ 

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Screw terminal				
		HA-016-M	T2010162101-000	
		HA-016-F		T2010162201-000
Spring Clamp terminal				
		HA.16.Sti.SC.B 1-16	7-1103416-1	
		HA.16.Bu.SC.B 1-16		7-1103417-1
Crimp terminal				
		HA-016-MC	T2010164101-000	
		HA-016-FC		T2010164201-000



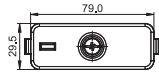

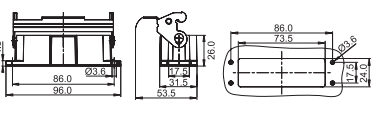
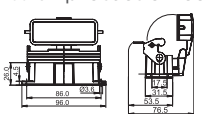

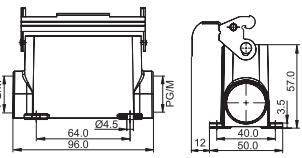
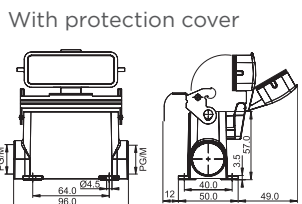

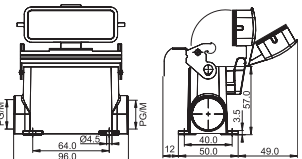
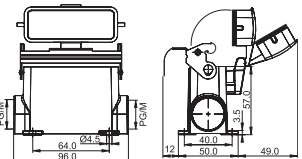

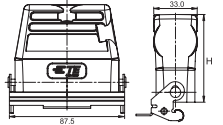
Dimensions	A	B	C	D	E
mm	66	73	23	31	28

Suitable crimp contacts and crimping tools: see page 48

Dimensions (mm)	Contact arrangement		Panel cut-out
	Male insert	Female insert	
			

## H16A metal hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number
Hood: Side entry					
	Low construction	M20 M25	PG16 PG21	H16A-TS-PG16 H16A-TS-PG21 H16A-TS-M20 H16A-TS-M25	T1319160116-000 T1319160121-000 T1319160120-000 T1319160125-000
	High construction				
	Low construction	M20 M25	PG16 PG21	H16A-TG-PG16 H16A-TG-PG21 H16A-TG-M20 H16A-TG-M25	T1329160116-000 T1329160121-000 T1329160120-000 T1329160125-000
	High construction				
Protection covers for hoods					
			with plastic rope	H16A-KDT	T1019161101-000 T1019161201-000
Bulkhead mounted					
				H16A-AGS	T1509161000-000
	With protection cover 			H16A-ADS H16A-ADMS	T1519162000-000 T1519161000-000
Surface mounted: Side entry					
		1 Side entry M20 M25	PG16 PG21	H16A-SGRS-PG16 H16A-SGRS-PG21 H16A-SGRS-M20 H16A-SGRS-M25	T1619161116-000 T1619161121-000 T1619161120-000 T1619161125-000
	With protection cover 	2 Side entry M20 M25	PG16 PG21	H16A-SGRS-2PG16 H16A-SGRS-2PG21 H16A-SGRS-2M20 H16A-SGRS-2M25	T1619161216-000 T1619161221-000 T1619161220-000 T1619161225-000
		1 Side entry M20 M25	PG16 PG21	H16A-SDRMS-PG16 H16A-SDRMS-PG21 H16A-SDRMS-M20 H16A-SDRMS-M25	T1629161116-000 T1629161121-000 T1629161120-000 T1629161125-000
		2 Side entry M20 M25	PG16 PG21	H16A-SDRMS-2PG16 H16A-SDRMS-2PG21 H16A-SDRMS-2M20 H16A-SDRMS-2M25	T1629161216-000 T1629161221-000 T1629161220-000 T1629161225-000
Cable-to-cable hood					
		Low construction	PG16	H16A-TBFS-PG16 H16A-TBFS-M20 H16A-TBFS-M25	T1739161116-000 T1739161120-000 T1739161125-000
		High construction			
		M20 M25	PG21	H16A-TBFHS-PG21 H16A-TBFHS-M25	T1779161121-000 T1779161125-000
		M25			

## HA.32 contact inserts

SCREW TERMINAL, SPRING CLAMP TERMINAL,  
CRIMP TERMINAL FOR SCREW MACHINED HE/HA CRIMP CONTACT

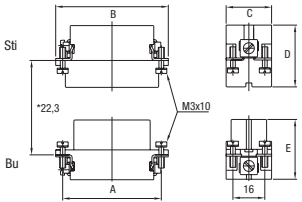
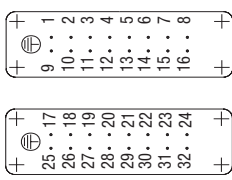
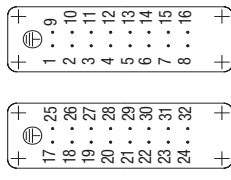
250V 16A

(2x16) 32+ Ⓢ

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Screw terminal				
		HA-016-M(1-16) HA-016-M(17-32)	T2010162101-000 T2010322101-000	
		HA-016-F(1-16) HA-016-F(17-32)		T2010162201-000 T2010322201-000
Spring Clamp terminal				
		HA.16.Sti.SC.B 1-16 HA.16.Sti.SC.B 17-32	7-1103416-1 7-1103416-7	
		HA.16.Bu.SC.B 1-16 HA.16.Bu.SC.B 17-32		7-1103417-1 7-1103417-7
Crimp terminal				
		HA-016-MC(1-16) HA-016-MC(17-32)	T2010164101-000 T2010324101-000	
		HA-016-FC(1-16) HA-016-FC(17-32)		T2010164201-000 T2010324201-000


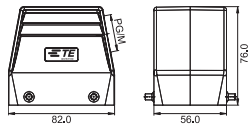

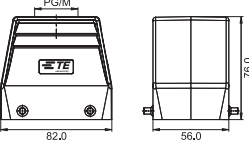

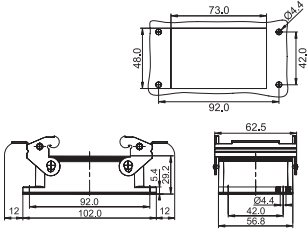

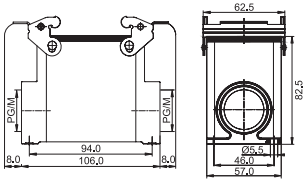
Dimensions	A	B	C	D	E
mm	66	73	23	31	28

Suitable crimp contacts and crimping tools: see page 48

Dimensions (mm)	Contact arrangement	
	Male insert	Female insert
		

## H32A metal hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
 	M25 M32 M40	PG21 PG29 PG36	H32A-TS-PG21 H32A-TS-PG29 H32A-TS-PG36 H32A-TS-M25 H32A-TS-M32 H32A-TS-M40	T1319320121-000 T1319320129-000 T1319320136-000 T1319320125-000 T1319320132-000 T1319320140-000
<b>Hood: Top entry</b>				
 	M25 M32 M40	PG21 PG29 PG36	H32A-TG-PG21 H32A-TG-PG29 H32A-TG-PG36 H32A-TG-M25 H32A-TG-M32 H32A-TG-M40	T1329320121-000 T1329320129-000 T1329320136-000 T1329320125-000 T1329320132-000 T1329320140-000
<b>Bulkhead mounted</b>				
 			H32A-AG	T1419320000-000
<b>Surface mounted: Side entry</b>				
 	1 Side entry M25 M32  2 Side entry M25 M32	PG21 PG29  PG21 PG29	H32A-SGR-PG21 H32A-SGR-PG29 H32A-SGR-M25 H32A-SGR-M32 H32A-SGR-2PG21 H32A-SGR-2PG29 H32A-SGR-2M25 H32A-SGR-2M32	T1449320121-000 T1449320129-000 T1449320125-000 T1449320132-000 T1449320221-000 T1449320229-000 T1449320225-000 T1449320232-000

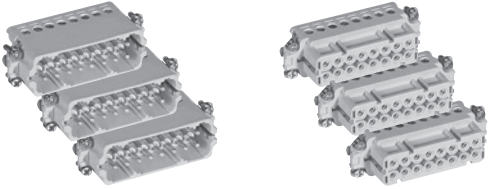
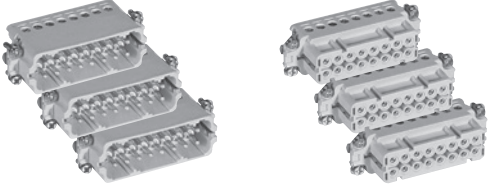
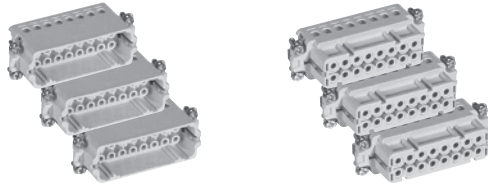


## HA.48 contact inserts

SCREW TERMINAL, SPRING CLAMP TERMINAL,  
CRIMP TERMINAL FOR SCREW MACHINED HE/HA CRIMP CONTACT

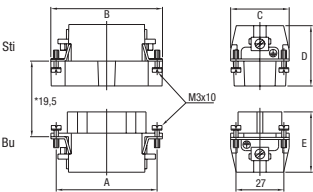
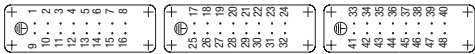
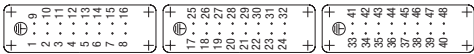
250V 16A

(3x16) 48+ 

Description		Type	Part Number	
			Male insert	Female insert
Male insert	Female insert		Male insert	Female insert
Screw terminal				
		HA.16.Sti.S.B 1-16 HA.16.Sti.S.B 17-32 HA.16.Sti.S.B 33-48	1-1103416-1 1-1103416-7 1-1103416-8	
		HA.16.Bu.S.B 1-16 HA.16.Bu.S.B 17-32 HA.16.Bu.S.B 33-48		1-1103417-1 1-1103417-7 1-1103417-8
Spring Clamp terminal				
		HA.16.Sti.SC.B 1-16 HA.16.Sti.SC.B 17-32 HA.16.Sti.SC.B 33-48	7-1103416-1 7-1103416-7 7-1103416-8	
		HA.16.Bu.SC.B 1-16 HA.16.Bu.SC.B 17-32 HA.16.Bu.SC.B 33-48		7-1103417-1 7-1103417-7 7-1103417-8
Crimp terminal				
		HA.16.Sti.C.B 1-16 HA.16.Sti.C.B 17-32 HA.16.Sti.C.B 33-48	2-1103416-3 2-1103416-7 2-1103416-8	
		HA.16.Bu.C.B 1-16 HA.16.Bu.C.B 17-32 HA.16.Bu.C.B 33-48		2-1103417-3 2-1103417-7 2-1103417-8

Dimensions	A	B	C	D	E
mm	77.5	83.5	33	34	35

Suitable crimp contacts and crimping tools: see page 48

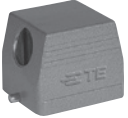
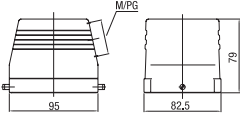

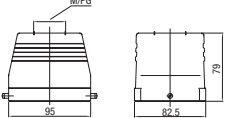

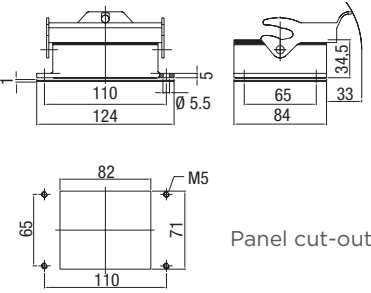

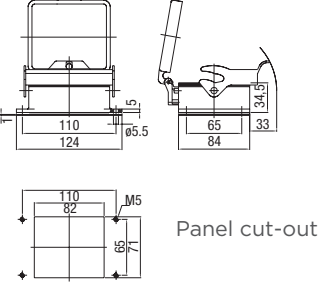
Dimensions (mm)	Contact arrangement	
	Male insert	Female insert
		

## HA.48 housings

POWDER-COATED, SILVER-GREY

### Side clip at housing bottom

IP 65

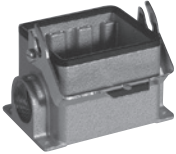
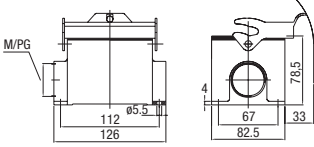
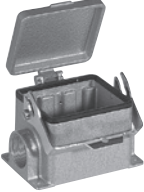
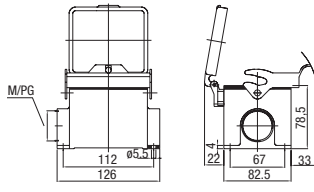
Description	Metr.	PG	Type	Part Number
Hood: Side entry, Standard construction				
 	M32	29	HA.48.STS-GR.1.29.G HA.48.STS-GR.1.M32.G	1-1102172-7 0-1102877-1
Hood: Top entry, Standard construction				
 	M32	29	HA.48.STO-GR.1.29.G HA.48.STO-GR.1.M32.G	1-1102175-7 0-1102877-2
Surface mounted housing: Bottom entry				
 			HA.48.AG-LB	1-1102176-2
Surface mounted housing with covers: Bottom entry				
 			HA.48.AGD-LB	1-1102177-2

## HA.48 housings

POWDER-COATED, SILVER-GREY

### Side clip at housing bottom

IP 65

Description	Metr.	PG	Type	Part Number
Surface mounted housing: Side entry, Standard construction				
 		29 2x29	HA.48.SG-LB.1.29.Z HA.48.SG-LB.2.29.Z	1-1102179-2 1-1102181-2
Surface mounted housing: Side entry, Standard construction				
 		M32 2xM32	HA.48.SGD-LB.1.29.Z HA.48.SGD-LB.2.29.Z HA.48.SGD-LB.1.M32.G HA.48.SGD-LB.2.M32.G	1-1102183-2 1-1102185-2 0-1102879-1 0-1102879-2

## HA.64 contact inserts

SCREW TERMINAL, SPRING CLAMP TERMINAL,  
CRIMP TERMINAL FOR SCREW MACHINED HE CRIMP CONTACTS

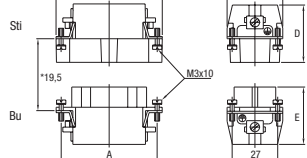
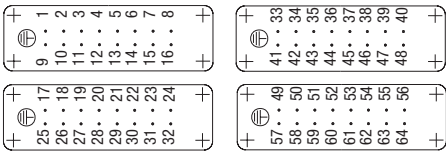
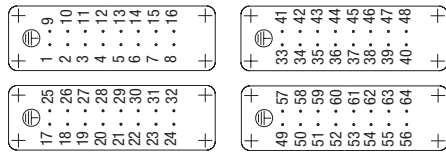
250V 16A

(4x16) 64+ Ⓢ

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Screw terminal				
		HA.16.Sti.S.B 1-16	1-1103416-1	
		HA.16.Sti.S.B 17-32	1-1103416-7	
		HA.16.Sti.S.B 33-48	1-1103416-8	
		HA.16.Sti.S.B 49-64	1-1103416-9	
		HA.16.Bu.S.B 1-16		1-1103417-1
		HA.16.Bu.S.B 17-32		1-1103417-7
		HA.16.Bu.S.B 33-48		1-1103417-8
		HA.16.Bu.S.B 49-64		1-1103417-9
Spring Clamp terminal				
		HA.16.Sti.SC.B 1-16	7-1103416-1	
		HA.16.Sti.SC.B 17-32	7-1103416-7	
		HA.16.Sti.SC.B 33-48	7-1103416-8	
		HA.16.Sti.SC.B 49-64	7-1103416-9	
		HA.16.Bu.SC.B 1-16		7-1103417-1
		HA.16.Bu.SC.B 17-32		7-1103417-7
		HA.16.Bu.SC.B 33-48		7-1103417-8
		HA.16.Bu.SC.B 49-64		7-1103417-9
Crimp terminal				
		HA.16.Sti.C.B 1-16	2-1103416-3	
		HA.16.Sti.C.B 17-32	2-1103416-7	
		HA.16.Sti.C.B 33-48	2-1103416-8	
		HA.16.Sti.C.B 49-64	2-1103416-9	
		HA.16.Bu.C.B 1-16		2-1103417-3
		HA.16.Bu.C.B 17-32		2-1103417-7
		HA.16.Bu.C.B 33-48		2-1103417-8
		HA.16.Bu.C.B 49-64		2-1103417-9

Dimensions	A	B	C	D	E
mm	77.5	83.5	33	34	35

Suitable crimp contacts and crimping tools: see page 48

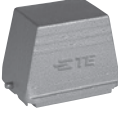
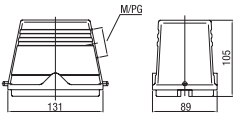

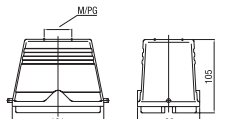

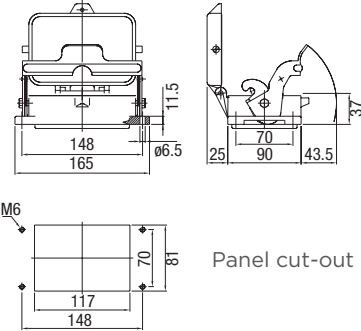

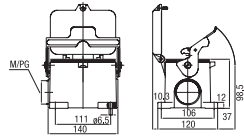
Dimensions (mm)	Contact arrangement	
	Male insert	Female insert
		

## HA.64 housings

POWDER-COATED, SILVER-GREY

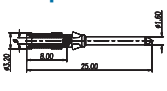

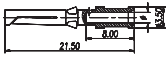

### Side clip at housing bottom

IP 65





Description	Metr.	PG	Type	Part Number	
Hood: Side entry, Standard construction					
		M50	29	HA.64.STS-GR.1.29.G	1-1102002-7
			36	HA.64.STS-GR.1.36.G	1-1102005-7
			42	HA.64.STS-GR.1.42.G	1-1102008-7
				HA.64.STS-GR.1.M50.G	0-1106480-2
Hood: Top entry, Standard construction					
		M50	29	HA.64.STO-GR.1.29.G	1-1102027-7
			36	HA.64.STO-GR.1.36.G	1-1102030-7
			42	HA.64.STO-GR.1.42.G	1-1102033-7
				HA.64.STO-GR.1.M50.G	0-1106480-1
Surface mounted housing: Bottom entry, Standard construction					
				HA.64.AGD-LB	1-1102009-2
Surface mounted housing: Side entry, Standard construction					
		2xM40	29	HA.64.SGD-LB.1.29.Z	1-1102011-2
			2x29	HA.64.SGD-LB.2.29.Z	1-1102013-2
			36	HA.64.SGD-LB.1.36.Z	1-1102015-2
			2x36	HA.64.SGD-LB.2.36.Z	1-1102017-2
				HA.64.SGD-LB.2.M40.Z	0-1106479-1

## Crimp contacts HN.D series

### 10A Contact


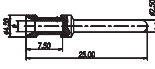

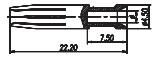
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male	10A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## Crimping tools HN.D series





Description		Type	Part Number
<b>Crimp tool</b> Wire range: 0.5-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts		CRIMPBOX-0.5/4	T3100000001-000
<b>Crimp tool</b> Wire range: 0.14-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts with locator and die		RSZ.HE-HN.D-HVT	1-1105851-8
<b>Removal tools</b> Used for CDM/CDF contact series		REMOV-HD	T3100000003-000
<b>M3 screw driver</b> Used for HA/HE inserts		SCREWD-M3	T3100000009-000

## Crimp contacts HE/HA series

### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
0.5	20			7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
0.75	18			7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

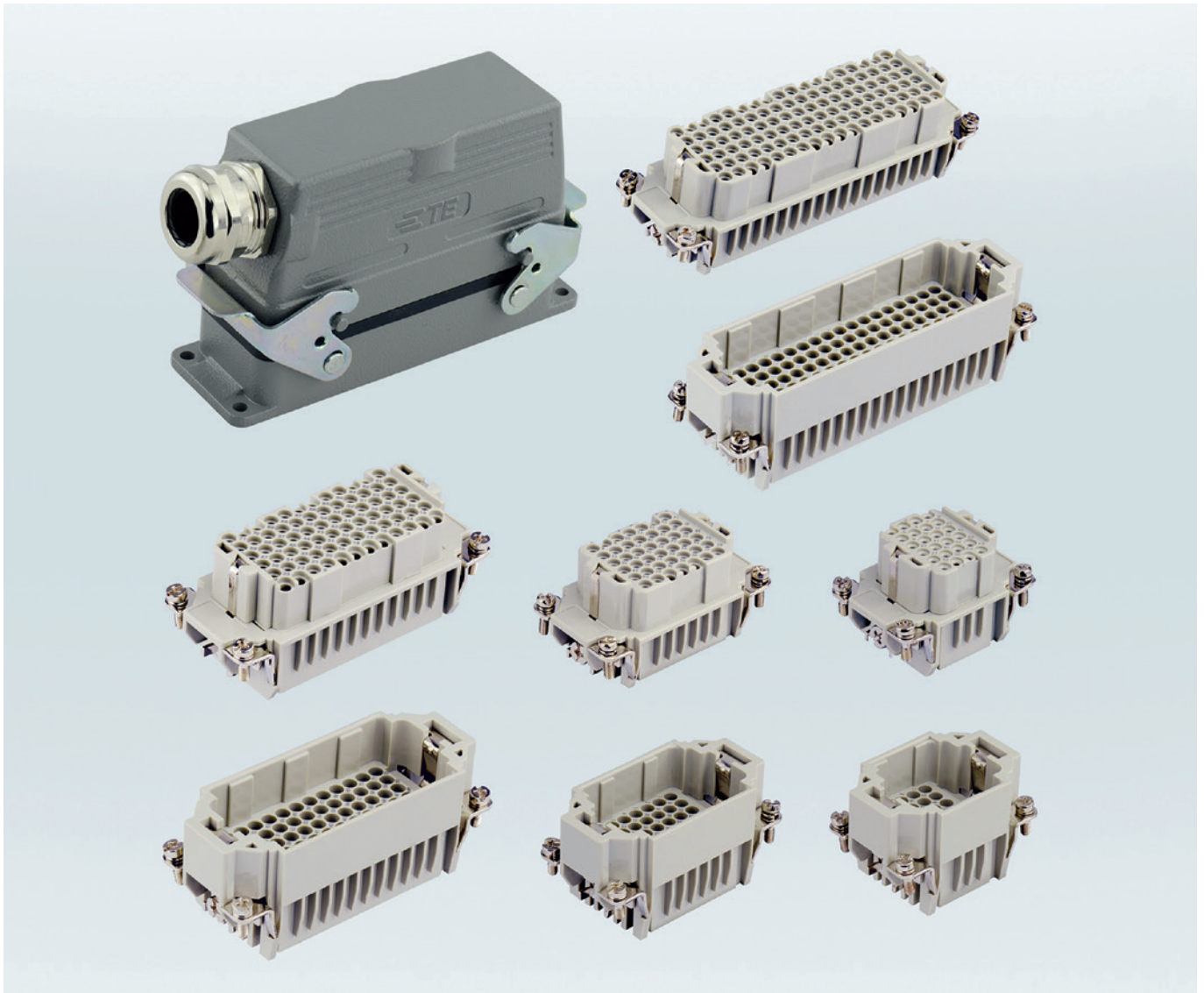
## Crimping tools HE/HA series

Description		Type	Part Number
<b>Crimp tool</b> Wire range: 0.5-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts		CRIMPBOX-0.5/4	T3100000001-000
<b>Crimp tool</b> Wire range: 0.14-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts with locator and die		RSZ.HE-HN.D-HVT	1-1105851-8
<b>Removal tools</b> Used for CEM/CEF contact series		REMOV-HEE	T3100000002-000
<b>M3 screw driver</b> Used for HA/HE inserts		SCREWD-M3	T3100000009-000





## HD, HDD Series



### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances

DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 175 301-801

DIN EN 61984

### 3. Approvals



## HD technical characteristics

Specifications .....	DIN VDE 0627
.....	DIN VDE 0110
Standards .....	DIN 43 652
.....	CECC 75 301-801
Number of contacts .....	7,8,15,25,40,50(2x25),64,
.....	80(2x40),128(2x64) + PE

### INSERTS

Working current .....	10A max
(See current carrying capacity)	
Working voltage .....	(8D is 50V)
.....	250V, Insulation group C
Test voltage urms .....	4KV(8D is 0.8KV)
Pollution degree .....	2
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate or Polybutylece
Temperature range .....	-40°C... +100°C/125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V
Mechanical working life-mating cycles.....	$\geq 500$

### CONTACTS

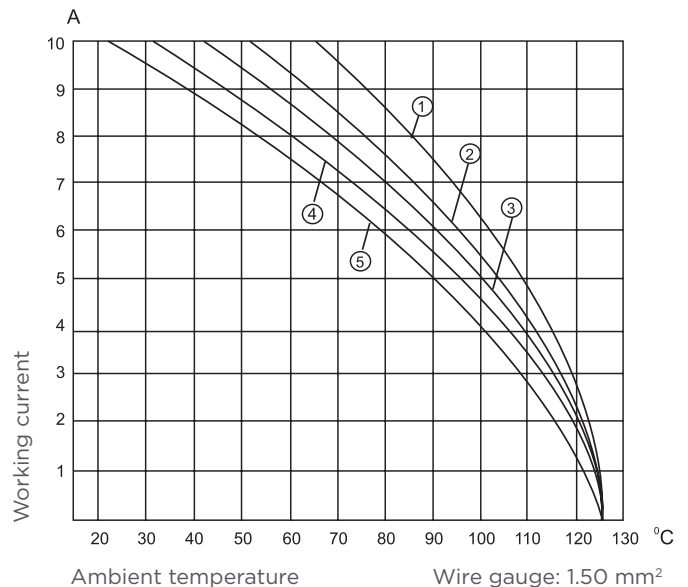
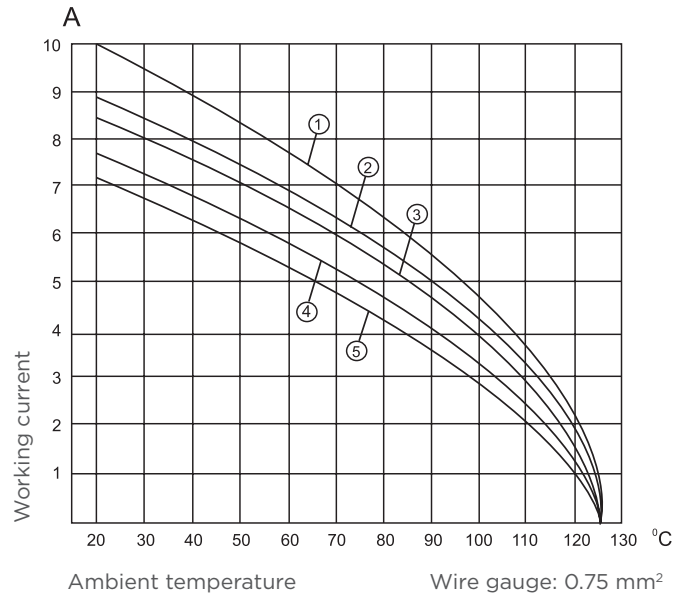
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 3m\Omega$
Terminal .....	Crimp terminal
.....	Rolled terminal
- mm <sup>2</sup> .....	0.15-2.5mm <sup>2</sup>
- AWG .....	26-14

### HOODS/HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 HD-007
- 2 HD-015
- 3 HD-025
- 4 HD-040
- 5 HD-064

## HDD technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	16,24,42,72,84(2x42),
.....	144(2x72) + PE

### INSERTS

Working current .....	10A max
(See current carrying capacity)	
Working voltage .....	250V, Insulation group C
Test voltage urms .....	2.5KV
Pollution degree .....	2
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +100°C/125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	500V
Mechanical working life-mating cycles.....	$\geq 500$

### CONTACTS

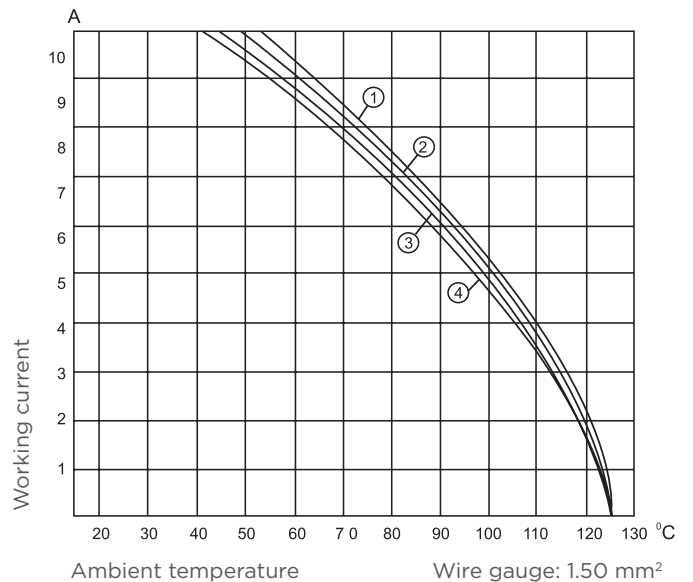
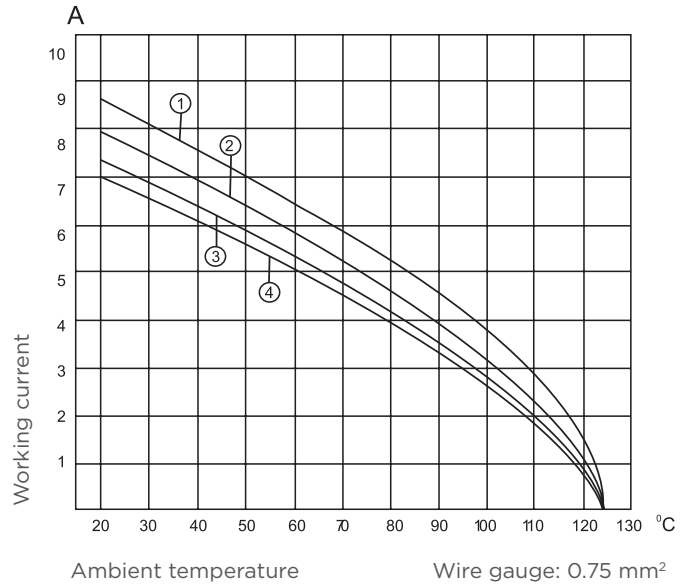
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 3m\Omega$
Terminal .....	Crimp terminal
.....	Rolled terminal
- mm <sup>2</sup> .....	0.14-2.5mm <sup>2</sup>
- AWG .....	26-14

### HOODS/HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 HDD-024
- 2 HDD-042
- 3 HDD-072
- 4 HDD-108

## HD, HDD series

### MODIFIED CONTACT ARRANGEMENT

The connector series HDD and HD equipped with all contacts may be used for voltages up to 250V-insulation group C. A modified contact loading arrangement permits use up to 500V-also in insulation group C.

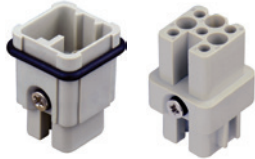
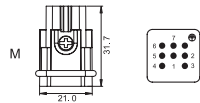
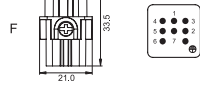

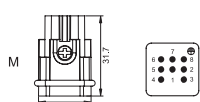
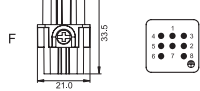
	Contact arrangement view from termination side				
	Working contact	Without contact	Male insert	Female insert	
Series HDD 380V-Insulation group C	<p>12 + </p> <p>M F</p>	<p>21 + </p> <p>M F</p>	<p>34 + </p> <p>M F</p>	<p>52 + </p> <p>M F</p>	
500V-Insulation group C	<p>5 + </p> <p>M F</p>	<p>11 + </p> <p>M F</p>	<p>17 + </p> <p>M F</p>	<p>26 + </p> <p>M F</p>	
Series HD 500V - Pollution degree 3	<p>3 + </p> <p>M F</p>	<p>7 + </p> <p>M F</p>	<p>11 + </p> <p>M F</p>	<p>20 + </p> <p>M F</p>	<p>32 + </p> <p>M F</p>

## HD-007/008 inserts


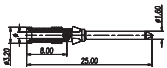

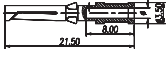
INSERTS FOR H3A HOOD/HOUSING

250V/50V 10A

7+   
8

Dimensions (mm)	Contact arrangement view from termination side	Part Number		Type
		Male insert	Female insert	
250V/10A 	M 	T2020072101-000		HD-007-M
	F 			
50V/10A 	M 	T2020082101-000		HD-008-M
	F 			

### 10A Contact

Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated			
		mm <sup>2</sup>	AWG		mm	Type	Part Number	Type	Part Number	
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000		
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000		
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000		
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000		
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000		
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000		
		CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
				0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
				0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
				1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
1.5	16			8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000		
2.5	14			6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000		

## H3A metal hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number	
Top entry						
		M20	PG11	H3A-MTG-PG11 H3A-MTG-M20	T1329030111-000 T1329030120-000	
Side entry						
		M20	PG11	H3A-MTS-PG11 H3A-MTS-M20	T1319030111-000 T1319030120-000	
Bulkhead mounting: Bottom entry						
				H3A-MAG	T1509030000-000	
Bulkhead mounting: Side entry						
				H3A-MAGS	T1549030000-000	
Surface mounting: Side entry						
		M16 M20	PG11	H3A-MAGSV-PG11 H3A-MAGSV-M16 H3A-MAGSV-M20	T1619030111-000 T1619030116-000 T1619030120-000	
Cable-to-cable hood:						
		M20	PG11	H3A-MTGVB-PG11 H3A-MTGVB-M20	T1739030111-000 T1739030120-000	
Protection covers for hoods (thermoplastic)						
	Note: For mounted male insert and hood				H3A-KDTP	T1010031100-000
Metal protection covers for hoods						
	Note: For mounted female insert and hood				H3A-KDB	T1010033100-000

## H3A thermoplastic hoods/housings

### THERMOPLASTIC HOODS, HOUSINGS

Dimensions (mm)		Metr.	PG	Type	Part Number	
Top entry						
		M20	PG11	H3A-TG-PG11 H3A-TG-M20	T1329031111-000 T1329031120-000	
Side entry						
		M20	PG11	H3A-TS-PG11 H3A-TS-M20	T1319031111-000 T1319031120-000	
Bulkhead mounting: Bottom entry						
				H3A-AG	T1509031100-000	
Bulkhead mounting: Side entry						
				H3A-AGS	T1509031111-000	
Surface mounting: Side entry						
		M16 M20	PG11	H3A-AGSV-PG11 H3A-AGSV-M16 H3A-AGSV-M20	T1619031111-000 T1619031116-000 T1619031120-000	
Cable-to-cable hood:						
		M20	PG11	H3A-TGVB-PG11 H3A-TGVB-M20	T1739031111-000 T1739031120-000	
Protection covers for hoods (thermoplastic)						
	Note: For mounted male insert and hood				H3A-KDTP	T1010031100-000
Protection covers for hoods						
	Note: For mounted female insert and hood				H3A-KDBP (White) H3A-KDBPG (Grey)	T1010032100-000 T1010032300-000
White	Grey					
Covers without sealing type						
				H3A-KDBP (White) H3A-KDBP (Grey)	T1010033200-000 T1010032200-000	



## HIP.3/4, HIP-K.3/4, EMV-K.3/4 housings


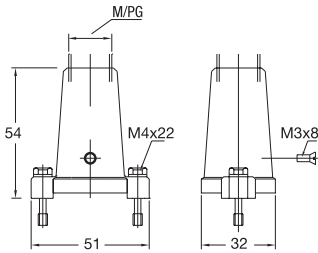

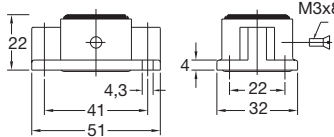

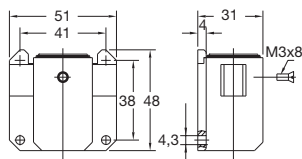
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number		
<b>Hood: Top entry</b>						
	 <p>M16</p>	11	<b>HIP</b> HIP.3/4.STO.1.11.G HIP.3/4.STO.1.M16.G	1-1102600-5 0-1106408-1		
			M16 M20	11	<b>HIP-K</b> HIP-K.3/4.STO.1.11.G HIP-K.3/4.STO.1.M16.G HIP-K.3/4.STO.1.M20.G	2-1102600-5 0-1106408-2 0-1106408-3
					M16 M20	11
	<b>Surface mounted housing: Bottom entry</b>					
		 <p>Panel cut-out 21 x 21</p>		<b>HIP</b> HIP.3/4.AG	1-1102603-5	
				<b>HIP-K</b> HIP-K.3/4.AG	2-1102603-5	
				<b>EMV-K</b> EMV-K.3/4.AG	4-1102703-5	
	<b>Surface mounted housing: Bottom entry (by panel cut-out)</b>					
		 <p>Panel cut-out <math>\varnothing</math> 20</p>		<b>HIP</b> HIP.3/4.SGF	1-1102602-5	
<b>HIP-K</b> HIP-K.3/4.SGF				2-1102602-5		
<b>EMV-K</b> EMV-K.3/4.SGF				4-1102702-5		



## HIP.3/4, HIP-K.3/4, EMV-K.3/4 housings

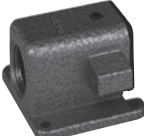
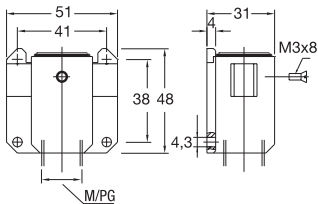

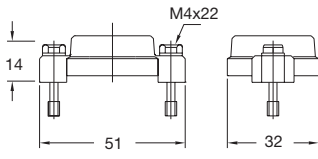
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

IP 68 / IP 69 K


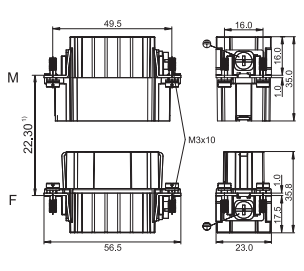
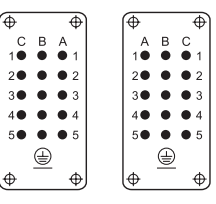
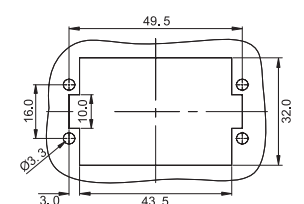
Description	Metr.	PG	Type	Part Number	
<b>Surface mounted housing: Side entry</b>					
		M16 M20	<b>HIP</b> HIP.3/4.SG.1.11.G HIP.3/4.SG.1.M16.G HIP.3/4.SG.1.M20.G	1-1102601-5 0-1106407-1 0-1106401-4	
			M16	<b>HIP-K</b> HIP-K.3/4.SG.1.11.G HIP-K.3/4.SG.1.M16.G	2-1102601-5 0-1106407-2
				<b>EMV-K</b> EMV-K.3/4.SG.1.11.G EMV-K.3/4.SG.1.M16.G EMV-K.3/4.SG.1.M20.G	4-1102701-5 0-1106401-2 0-1106401-3
	M16 M20				
	<b>Protective covers for housings</b>				
			<b>HIP/EMV</b> HIP/EMV.3/4.SKB	3-1106200-5	
			<b>HIP-K/EMV-K</b> HIP-K/EMV-K.3/4.SKB	4-1106200-5	

## HD-015 inserts


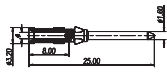

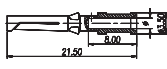
INSERTS FOR H10A HOOD/HOUSING

250V 10A

15+⊕ (machined contacts)

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HD-015-M	T2020152101-000	
		HD-015-F		T2020152201-000
Contact arrangement view from termination side	Panel cut out for inserts for use without hoods/housings			
				

## 10A Contact

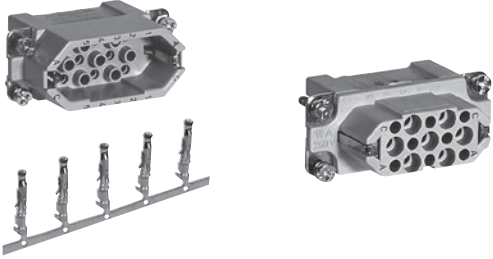
Tech data	10A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤3mΩ <b>Terminal:</b> crimp connection <b>CDM/Male</b> 		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
<b>CDF/Female</b> 	<b>10A Female crimp contacts</b> 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## HD-015 inserts

INSERTS FOR H10A HOOD/HOUSING

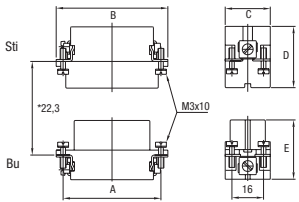
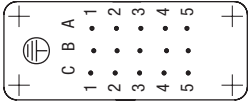
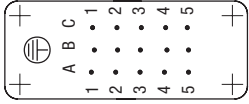
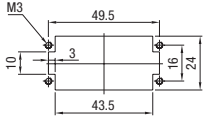
250V 10A

15+⊕ (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Crimp terminal				
		HD.15.Sti.C	2-1103004-3	
		HD.15.Bu.C		2-1103005-3


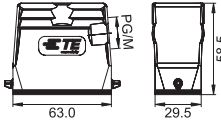

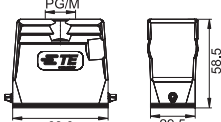
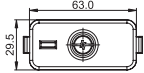

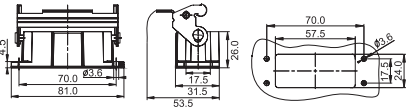

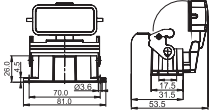

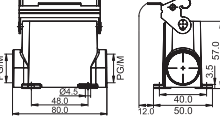
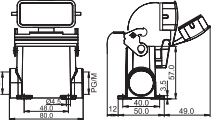

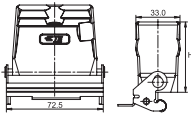
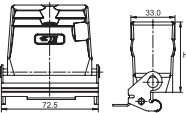
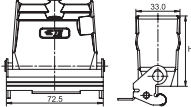
Dimensions	A	B	C	D	E
mm	49.5	57	23	35	35

Suitable crimp contacts and crimping tools: see page 111

Dimensions (mm)	Contact arrangement		Panel cut-out
	Male insert	Female insert	
			

# H10A metal hoods/housings

POWDER-COATED, RAL 7037


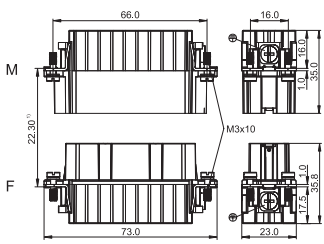
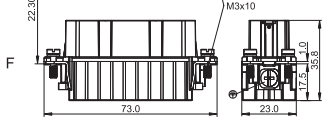
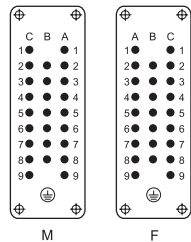
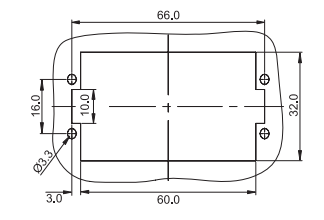
Dimensions (mm)		Metr.	PG	Type	Part Number							
Hood: Side entry												
		M20 M25	PG16 PG21	H10A-TS-PG16 H10A-TS-PG21 H10A-TS-M20 H10A-TS-M25	T1319100116-000 T1319100121-000 T1319100120-000 T1319100125-000							
Hood: Top entry												
		M20 M25	PG16 PG21	H10A-TG-PG16 H10A-TG-PG21 H10A-TG-M20 H10A-TG-M25	T1329100116-000 T1329100121-000 T1329100120-000 T1329100125-000							
Protection covers for hoods												
	63.0 29.5	With plastic rope		H10A-KDT	T1019101101-000 T1019101201-000							
Bulkhead mounted												
				H10A-AGS H10A-ADMS	T1509101000-000 T1519101000-000							
	With protection cover 			H10A-ADMS	T1519101000-000							
Surface mounted: Side entry												
		1 Side entry M20 M25 2 Side entry M20 M25	PG16 PG21 PG16 PG21	H10A-SGRS-PG16 H10A-SGRS-PG21 H10A-SGRS-M20 H10A-SGRS-M25 H10A-SGRS-2PG16 H10A-SGRS-2PG21 H10A-SGRS-2M20 H10A-SGRS-2M25	T1619101116-000 T1619101121-000 T1619101120-000 T1619101125-000 T1619101216-000 T1619101221-000 T1619101220-000 T1619101225-000							
	With protection cover 	1 Side entry M20 M25 2 Side entry M20 M25	PG16 PG21 PG16 PG21	H10A-SDRMS-PG16 H10A-SDRMS-PG21 H10A-SDRMS-M20 H10A-SDRMS-M25 H10A-SDRMS-2PG16 H10A-SDRMS-2PG21 H10A-SDRMS-2M20 H10A-SDRMS-2M25	T1629101116-000 T1629101121-000 T1629101120-000 T1629101125-000 T1629101216-000 T1629101221-000 T1629101220-000 T1629101225-000							
Cable-to-cable hood												
	<table border="1"> <tr> <td>Construction</td> <td>H</td> <td rowspan="3"></td> </tr> <tr> <td>Low</td> <td>52.6</td> </tr> <tr> <td>Hight</td> <td>66.6</td> </tr> </table>	Construction	H		Low	52.6	Hight	66.6	Low construction High construction M20 M25 M25	PG16 PG21	H10A-TBFS-PG16 H10A-TBFS-M20 H10A-TBFS-M25 H10A-TBFHS-PG21 H10A-TBFHS-M25	T1739101116-000 T1739101120-000 T1739101125-000 T1779101121-000 T1779101125-000
Construction	H											
Low	52.6											
Hight	66.6											

## HD-025 inserts


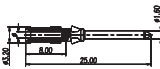


INSERTS FOR H16A HOOD/HOUSING

250V 10A

25+ Ⓢ (machined contacts)

Dimensions (mm)	Type	Part Number	
		Male insert	Female insert
Crimp terminal (order crimp contacts separately)			
		HD-025-M	T2020252101-000
		HD-025-F	T2020252201-000
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 		

## 10A Contact

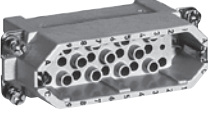

Tech data Material: copper alloy Contact resistance: $\leq 3\text{m}\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## HD-025 inserts

INSERTS FOR H16A HOOD/HOUSING

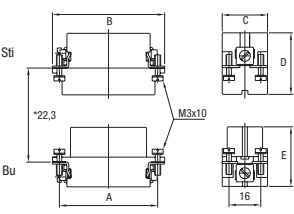
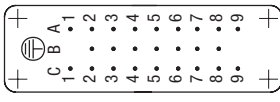
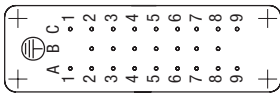
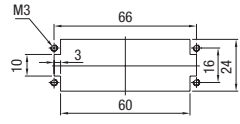
250V 10A

25+  (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HD.25.Sti.C	2-1103010-3	
		HD.25.Bu.C		2-1103011-3






Dimensions	A	B	C	D	E
mm	66	73	23	35	35

Suitable crimp contacts and crimping tools: see page 111

Dimensions (mm)	Contact arrangement		Panel cut-out
	Male insert	Female insert	
			

# H16A metal hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number			
Hood: Side entry								
	Low construction	M20 M25	PG16 PG21	H16A-TS-PG16 H16A-TS-PG21 H16A-TS-M20 H16A-TS-M25	T1319160116-000 T1319160121-000 T1319160120-000 T1319160125-000			
	High construction							
		Low construction	High construction					
Hood: Top entry								
	Low construction	M20 M25	PG16 PG21	H16A-TG-PG16 H16A-TG-PG21 H16A-TG-M20 H16A-TG-M25	T1329160116-000 T1329160121-000 T1329160120-000 T1329160125-000			
	High construction							
		Low construction	High construction					
Protection covers for hoods								
		with plastic rope		H16A-KDT	T1019161101-000 T1019161201-000			
Bulkhead mounted								
				H16A-AGS	T1509161000-000			
Surface mounted: Side entry								
			1 Side entry	PG16 PG21	H16A-SGRS-PG16 H16A-SGRS-PG21 H16A-SGRS-M20 H16A-SGRS-M25	T1619161116-000 T1619161121-000 T1619161120-000 T1619161125-000		
			2 Side entry	PG16 PG21	H16A-SGRS-2PG16 H16A-SGRS-2PG21 H16A-SGRS-2M20 H16A-SGRS-2M25	T1619161216-000 T1619161221-000 T1619161220-000 T1619161225-000		
Cable-to-cable hood								
			Low construction	PG16 PG21	H16A-TBFS-PG16 H16A-TBFS-M20 H16A-TBFS-M25 H16A-TBFHS-PG21 H16A-TBFHS-M25	T1739161116-000 T1739161120-000 T1739161125-000 T1779161121-000 T1779161125-000		
	<table border="1"> <tr> <th>Construction</th> <th>H</th> </tr> <tr> <td>Low</td> <td>66.6</td> </tr> <tr> <td>High</td> <td>80.6</td> </tr> </table>		Construction				H	Low
Construction	H							
Low	66.6							
High	80.6							


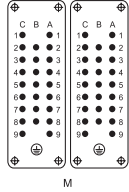


## HD-050 inserts


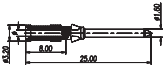

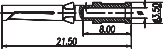
INSERTS FOR H32A HOOD/HOUSING

250V 10A

50 (2x25)+⊕ (Turning contacts)

Dimensions (mm)	Contact arrangement view from termination side	Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HD-025-M(1-25)	T2020252101-000	
		HD-025-M(26-50)	T2020502101-000	
		HD-025-F(1-25)		T2020252201-000
		HD-025-F(26-50)		T2020502201-000

### 10A Contact

Tech data Material: copper alloy Contact resistance: $\leq 3\text{m}\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000


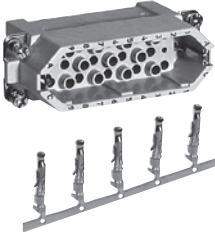


## HD-050 inserts

INSERTS FOR H32A HOOD/HOUSING

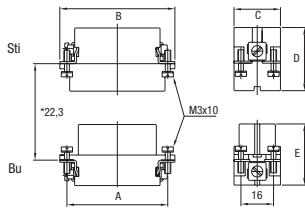
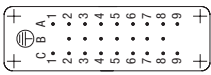
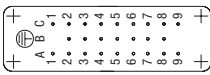
250V 10A

50 (2x25)+ $\oplus$  (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Crimp terminal				
		HD.25.Sti.C	2-1103010-3	
		HD.25.Bu.C		2-1103011-3


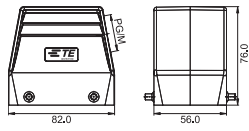

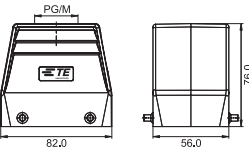

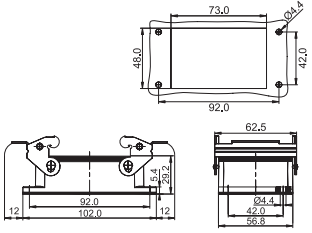

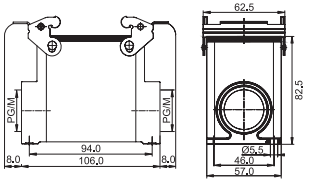
Dimensions	A	B	C	D	E
mm	66	73	23	35	35

Suitable crimp contacts and crimping tools: see page 111

Dimensions (mm)	Contact arrangement	
	Male insert	Female insert
		

## H32A metal hoods/housings

POWDER-COATED, RAL 7037


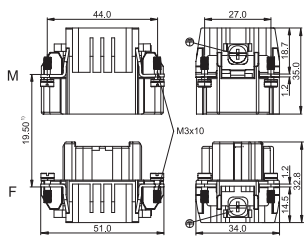
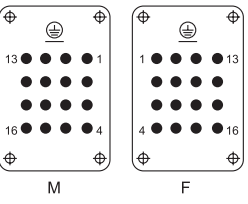
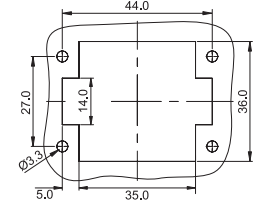
Dimensions (mm)	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
 	M25 M32 M40	PG21 PG29 PG36	H32A-TS-PG21 H32A-TS-PG29 H32A-TS-PG36 H32A-TS-M25 H32A-TS-M32 H32A-TS-M40	T1319320121-000 T1319320129-000 T1319320136-000 T1319320125-000 T1319320132-000 T1319320140-000
<b>Hood: Top entry</b>				
 	M25 M32 M40	PG21 PG29 PG36	H32A-TG-PG21 H32A-TG-PG29 H32A-TG-PG36 H32A-TG-M25 H32A-TG-M32 H32A-TG-M40	T1329320121-000 T1329320129-000 T1329320136-000 T1329320125-000 T1329320132-000 T1329320140-000
<b>Bulkhead mounted</b>				
 			H32A-AG	T1419320000-000
<b>Surface mounted: Side entry</b>				
 	1 Side entry M25 M32 2 Side entry M25 M32	PG21 PG29  PG21 PG29	H32A-SGR-PG21 H32A-SGR-PG29 H32A-SGR-M25 H32A-SGR-M32 H32A-SGR-2PG21 H32A-SGR-2PG29 H32A-SGR-2M25 H32A-SGR-2M32	T1449320121-000 T1449320129-000 T1449320125-000 T1449320132-000 T1449320221-000 T1449320229-000 T1449320225-000 T1449320232-000

## HDD-016 inserts


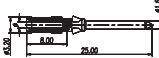

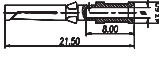
INSERTS FOR H6B HOOD/HOUSING

250V 10A

16+⊕ (machined contacts)

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HDD-016-M	T2030162101-000	
		HDD-016-F		T2030162201-000
Contact arrangement view from termination side		Panel cut out for inserts for use without hoods/housings		
				

### 10A Contact




Tech data	10A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤3mΩ <b>Terminal:</b> crimp connection <b>CDM/Male</b> 		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
		<b>CDF/Female</b> 	<b>10A Female crimp contacts</b> 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000
0.5	20			8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
0.75	18			8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
1.0	18			8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
1.5	16			8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
2.5	14			6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## HDD-016 inserts

INSERTS FOR H6B HOOD/HOUSING

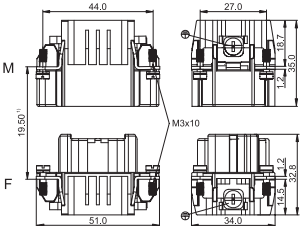
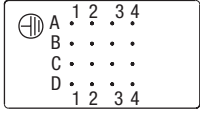
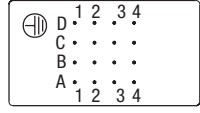
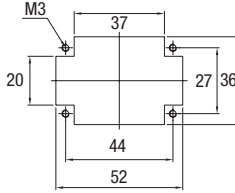
250V 10A

16+  (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Crimp terminal				
  		HD.16.Sti.C	2-1103006-3	
		HD.16.Bu.C		2-1103007-3

Dimensions	A	B	C	D	E
mm	44	51	33	35	35

Suitable crimp contacts and crimping tools: see page 111

Dimensions (mm)	Contact arrangement		Panel cut-out
	Male insert	Female insert	
			


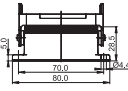

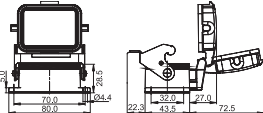

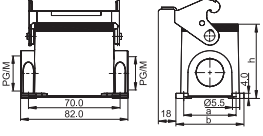

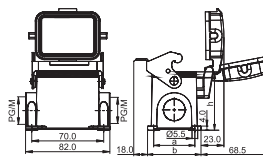
## H6B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	<p>Low construction</p> 	M20 M25	PG16 PG21	H6B-TS-PG16 H6B-TS-PG21 H6B-TS-M20 H6B-TS-M25	T1310060116-000 T1310060121-000 T1310060120-000 T1310060125-000						
	<p>High construction</p> 	M20 M25 M32	PG21 PG29	H6B-TSH-PG21 H6B-TSH-PG29 H6B-TSH-M20 H6B-TSH-M25 H6B-TSH-M32	T1330060121-000 T1330060129-000 T1330060120-000 T1330060125-000 T1330060132-000						
Hood: Top entry											
	<p>Low construction</p> 	M20 M25	PG16 PG21	H6B-TG-PG16 H6B-TG-PG21 H6B-TG-M20 H6B-TG-M25	T1320060116-000 T1320060121-000 T1320060120-000 T1320060125-000						
	<p>High construction</p> 	M20 M25 M32	PG21 PG29	H6B-TGH-PG21 H6B-TGH-PG29 H6B-TGH-M20 H6B-TGH-M25 H6B-TGH-M32	T1340060121-000 T1340060129-000 T1340060120-000 T1340060125-000 T1340060132-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="528 1379 746 1469"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M20 M25  M20 M25 M32	PG16  PG21 PG29	H6B-TBFS-PG16 H6B-TBFS-M20 H6B-TBFS-M25  H6B-TBFHS-PG21 H6B-TBFHS-PG29 H6B-TBFHS-M20 H6B-TBFHS-M25 H6B-TBFHS-M32	T1730062116-000 T1730062120-000 T1730062125-000  T1770062121-000 T1770062129-000 T1770062120-000 T1770062125-000 T1770062132-000
Construction	H										
Low	62.5										
High	74.5										
Protection covers for hoods											
				H6B-KDTP	T1010061400-000						

## H6B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number												
Bulkhead mounted																	
				H6B-AGS	T1500062000-000												
	With protection cover 			H6B-ADS	T1510062100-000												
Surface mounted: Side entry																	
	 <table border="1" data-bbox="347 1137 703 1234"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	56	Hight	45	57	74	Low construction 1 Side entry M20 M25 2 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29 PG21 PG29	H6B-SGRS-PG16 H6B-SGRS-PG21 H6B-SGRS-M20 H6B-SGRS-M25 H6B-SGRS-2PG16 H6B-SGRS-2PG21 H6B-SGRS-2M20 H6B-SGRS-2M25 H6B-SGRHS-PG21 H6B-SGRHS-PG29 H6B-SGRHS-M25 H6B-SGRHS-M32 H6B-SGRHS-2PG21 H6B-SGRHS-2PG29 H6B-SGRHS-2M25 H6B-SGRHS-2M32	T1610062116-000 T1610062121-000 T1610062120-000 T1610062125-000 T1610062216-000 T1610062221-000 T1610062220-000 T1610062225-000 T1650062121-000 T1650062129-000 T1650062125-000 T1650062132-000 T1650062221-000 T1650062229-000 T1650062225-000 T1650062232-000
Construction	A	B	H														
Low	40	52	56														
Hight	45	57	74														
	With protection cover  <table border="1" data-bbox="347 1563 703 1659"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	56	Hight	45	57	74	Low construction 1 Side entry M20 M25 2 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H6B-SDRS-PG16 H6B-SDRS-PG21 H6B-SDRS-M20 H6B-SDRS-M25 H6B-SDRS-2PG16 H6B-SDRS-2PG21 H6B-SDRS-2M20 H6B-SDRS-2M25 H6B-SDRHS-PG21 H6B-SDRHS-PG29 H6B-SDRHS-M25 H6B-SDRHS-M32 H6B-SDRHS-2PG21 H6B-SDRHS-2PG29 H6B-SDRHS-2M25 H6B-SDRHS-2M32	T1620062116-000 T1620062121-000 T1620062120-000 T1620062125-000 T1620062216-000 T1620062221-000 T1620062220-000 T1620062225-000 T1660062121-000 T1660062129-000 T1660062125-000 T1660062132-000 T1660062221-000 T1660062229-000 T1660062225-000 T1660062232-000
Construction	A	B	H														
Low	40	52	56														
Hight	45	57	74														

## HIP.6/16, HIP-K.6/16, EMV-K.6/16 housings


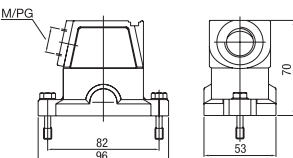

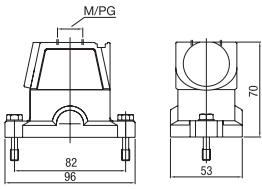

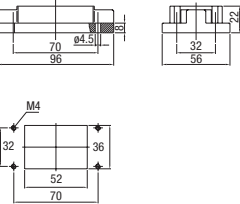

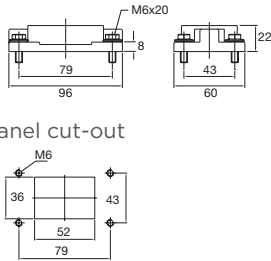
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

IP 68 / IP 69 K


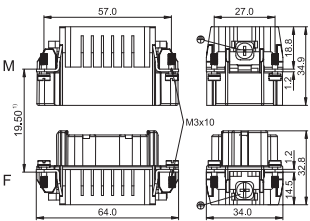
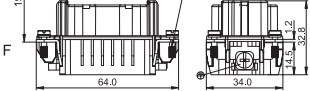
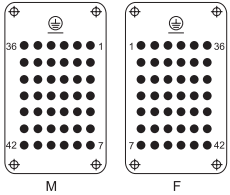
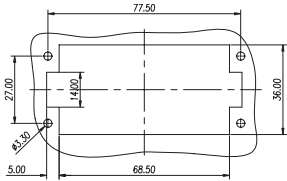
Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry</b>					
		M25	16	<b>HIP</b> HIP.6/16.STS.1.16.G HIP.6/16.STS.1.M25.G	1-1102631-5 0-1106425-2
		M25	16 21	<b>HIP-K</b> HIP-K.6/16.STS.1.16.G HIP-K.6/16.STS.1.21.G HIP-K.6/16.STS.1.M25.G	2-1102631-5 2-1102633-5 0-1106425-4
		M25	16	<b>EMV-K</b> EMV-K.6/16.STS.1.16.G EMV-K.6/16.STS.1.M25.G	4-1102704-5 0-1106416-4
<b>Hood: Top entry</b>					
		M32	16	<b>HIP</b> HIP.6/16.STO.1.16.G HIP.6/16.STO.1.M32.G	1-1102635-5 0-1106425-1
		M25 M32	16 21	<b>HIP-K</b> HIP-K.6/16.STO.1.16.G HIP-K.6/16.STO.1.21.G HIP-K.6/16.STO.1.M25.G HIP-K.6/16.STO.1.M32.G	2-1102635-5 2-1102637-5 0-1106425-6 0-1106425-3
		M32	13 16 21	<b>EMV-K</b> EMV-K.6/16.STO.1.13.G EMV-K.6/16.STO.1.16.G EMV-K.6/16.STO.1.21.G EMV-K.6/16.STO.1.M32.G	0-1108719-1 4-1102706-5 4-1102707-5 0-1106416-3
<b>Surface mounted housing: Bottom entry</b>					
				<b>HIP</b> HIP.6/16.AG	1-1102638-5
				<b>HIP-K</b> HIP-K.6/16.AG	2-1102638-5
				<b>EMV-K</b> EMV-K.6/16.AG	4-1102710-5
	 <p>Panel cut-out</p>			<b>HIP</b> HIP.6/16.AG.M6	1-1102606-5
				<b>HIP-K</b> HIP-K.6/16.AG.M6	2-1102606-5
				<b>EMV-K</b> EMV-K.6/16.AG.M6	4-1102712-5

## HDD-042 inserts


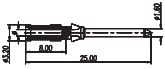


INSERTS FOR H10B HOOD/HOUSING

250V 10A

42+ Ⓢ (machined contacts)

Dimensions (mm)	Type	Part Number	
		Male insert	Female insert
Crimp terminal (order crimp contacts separately)			
		HDD-042-M	T2030422101-000
		HDD-042-F	T2030422201-000
Contact arrangement view from termination side	Panel cut out for inserts for use without hoods/housings		
			

## 10A Contact


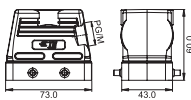



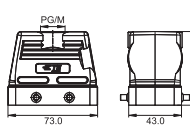

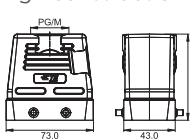

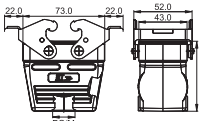

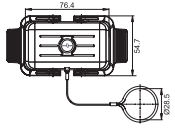

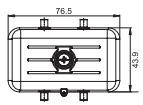
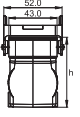

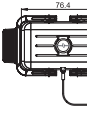
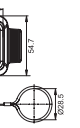

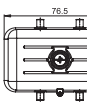
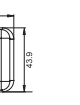
Tech data	10A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤3mΩ <b>Terminal:</b> crimp connection <b>CDM/Male</b> 		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
<b>CDF/Female</b> 	<b>10A Female crimp contacts</b> 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000






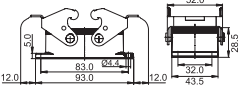

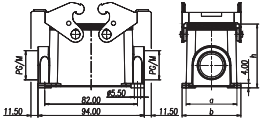

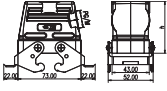

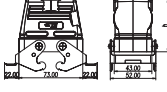


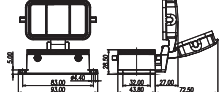
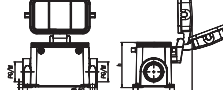
## H10B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
<b>Hood: Side entry</b>										
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>73.0</p> </div> <div style="text-align: center;">  <p>43.0</p> </div> </div>	M20 M25	PG16 PG21	H10B-TS-PG16 H10B-TS-PG21 H10B-TS-M20 H10B-TS-M25	T1210100116-000 T1210100121-000 T1210100120-000 T1210100125-000						
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>73.0</p> </div> <div style="text-align: center;">  <p>43.0</p> </div> </div>	M20 M25 M32	PG21 PG29	H10B-TSH-PG21 H10B-TSH-PG29 H10B-TSH-M20 H10B-TSH-M25 H10B-TSH-M32	T1230100121-000 T1230100129-000 T1230100120-000 T1230100125-000 T1230100132-000						
<b>Hood: Top entry</b>										
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>73.0</p> </div> <div style="text-align: center;">  <p>43.0</p> </div> </div>	M20 M25	PG16 PG21	H10B-TG-PG16 H10B-TG-PG21 H10B-TG-M20 H10B-TG-M25	T1220100116-000 T1220100121-000 T1220100120-000 T1220100125-000						
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>73.0</p> </div> <div style="text-align: center;">  <p>43.0</p> </div> </div>	M20 M25 M32	PG21 PG29	H10B-TGH-PG21 H10B-TGH-PG29 H10B-TGH-M20 H10B-TGH-M25 H10B-TGH-M32	T1240100121-000 T1240100129-000 T1240100120-000 T1240100125-000 T1240100132-000						
<b>Cable-to-cable hood</b>										
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>73.0</p> </div> <div style="text-align: center;">  <p>43.0</p> </div> </div> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M20 M25  M25 M32	PG16  PG21 PG29	H10B-TBFS-PG16 H10B-TBFS-M20 H10B-TBFS-M25  H10B-TBFHS-PG21 H10B-TBFHS-M25 H10B-TBFHS-M25 H10B-TBFHS-M32	T1710101116-000 T1710101120-000 T1710101125-000  T1750101121-000 T1750101129-000 T1750101125-000 T1750101132-000
Construction	H									
Low	62.5									
High	74.5									
<b>Protection covers for hoods</b>										
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>76.4</p> </div> <div style="text-align: center;">  <p>47</p> </div> </div>			H10B-KDTP	T1010101400-000						
<b>Housing protection cover</b>										
 <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>76.5</p> </div> <div style="text-align: center;">  <p>43.0</p> </div> </div>			H10B-KDBP	T1010102100-000						

# H10B with 2 levers on the hoods/housings


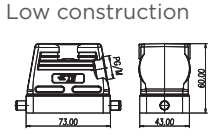

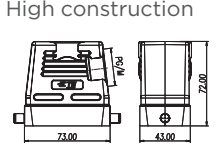

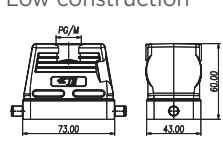

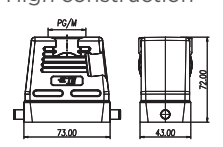

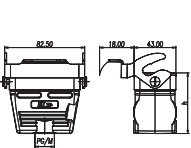

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number																								
<b>Bulkhead mounted</b>																												
 			H10B-AGS	T1410101000-000																								
<b>Surface mounted: Side entry</b>																												
  <table border="1" data-bbox="316 846 675 947"> <tr> <td>Construction</td> <td>A</td> <td>B</td> <td>H</td> </tr> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>56</td> </tr> <tr> <td>High</td> <td>45</td> <td>57</td> <td>74</td> </tr> </table>	Construction	A	B	H	Low	40	52	56	High	45	57	74	Low construction 1 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29 PG21 PG29	H10B-SGRS-PG16 H10B-SGRS-PG21 H10B-SGRS-M20 H10B-SGRS-M25 H10B-SGRS-2PG16 H10B-SGRS-2PG21 H10B-SGRS-2M20 H10B-SGRS-2M25 H10B-SGRHS-PG21 H10B-SGRHS-PG29 H10B-SGRHS-M25 H10B-SGRHS-M32 H10B-SGRHS-2PG21 H10B-SGRHS-2PG29 H10B-SGRHS-2M25 H10B-SGRHS-2M32	T1440101116-000 T1440101121-000 T1440101120-000 T1440101125-000 T1440101216-000 T1440101221-000 T1440101220-000 T1440101225-000 T1470101121-000 T1470101129-000 T1470101125-000 T1470101132-000 T1470101221-000 T1470101229-000 T1470101225-000 T1470101232-000												
Construction	A	B	H																									
Low	40	52	56																									
High	45	57	74																									
<b>Side entry housing with two levers</b>																												
  <table border="1" data-bbox="316 1182 515 1261"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>72</td> </tr> </table>	Construction	H	Low	60	High	72	Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H10B-TSBS-PG16 H10B-TSBS-PG21 H10B-TSBS-M20 H10B-TSBS-M25 H10B-TSBHS-PG21 H10B-TSBHS-PG29 H10B-TSBHS-M25 H10B-TSBHS-M32	T1250103116-000 T1250103121-000 T1250103120-000 T1250103125-000 T1270103121-000 T1270103129-000 T1270103125-000 T1270103132-000																		
Construction	H																											
Low	60																											
High	72																											
<b>Top entry housing with two levers</b>																												
  <table border="1" data-bbox="316 1440 515 1518"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>72</td> </tr> </table>	Construction	H	Low	60	High	72	Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H10B-TGBS-PG16 H10B-TGBS-PG21 H10B-TGBS-M20 H10B-TGBS-M25 H10B-TGBHS-PG21 H10B-TGBHS-PG29 H10B-TGBHS-M25 H10B-TGBHS-M32	T1260103116-000 T1260103121-000 T1260103120-000 T1260103125-000 T1280103121-000 T1280103129-000 T1280103125-000 T1280103132-000																		
Construction	H																											
Low	60																											
High	72																											
<b>Bulkhead mounted with 4 bolts</b>																												
    <table border="1" data-bbox="316 1933 699 2011"> <tr> <td>Construction</td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>F</td> <td>G</td> <td>H</td> </tr> <tr> <td>Low</td> <td>82</td> <td>94</td> <td>40</td> <td>52</td> <td>22</td> <td>67</td> <td>54</td> </tr> <tr> <td>High</td> <td>82</td> <td>94</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>74</td> </tr> </table>	Construction	A	B	C	D	F	G	H	Low	82	94	40	52	22	67	54	High	82	94	45	57	20	65	74	Low construction 1 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H10B-AD-BO H10B-SDR-BO-PG16 H10B-SDR-BO-PG21 H10B-SDR-BO-M20 H10B-SDR-BO-M25 H10B-SDR-BO-2PG16 H10B-SDR-BO-2PG21 H10B-SDR-BO-2M20 H10B-SDR-BO-2M25 H10B-SDRH-BO-PG21 H10B-SDRH-BO-PG29 H10B-SDRH-BO-M25 H10B-SDRH-BO-M32 H10B-SDRH-BO-2PG21 H10B-SDRH-BO-2PG29 H10B-SDRH-BO-2M25 H10B-SDRH-BO-2M32	T1430100000-000 T1460100116-000 T1460100121-000 T1460100120-000 T1460100125-000 T1460100216-000 T1460100221-000 T1460100220-000 T1460100225-000 T1490100121-000 T1490100129-000 T1490100125-000 T1490100132-000 T1490100221-000 T1490100229-000 T1490100225-000 T1490100232-000
Construction	A	B	C	D	F	G	H																					
Low	82	94	40	52	22	67	54																					
High	82	94	45	57	20	65	74																					




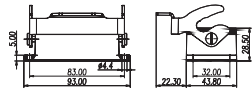

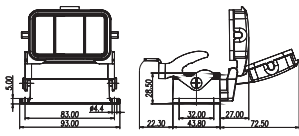

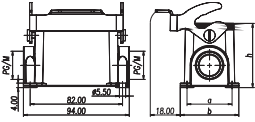

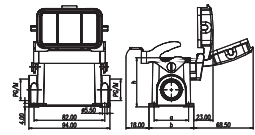
## H10B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
Hood: Side entry										
		M20 M25	PG16 PG21 H10B-TS-RO-PG16 H10B-TS-RO-PG21 H10B-TS-RO-M20 H10B-TS-RO-M25	T1310100116-000 T1310100121-000 T1310100120-000 T1310100125-000						
		M20 M25 M32	PG21 PG29 H10B-TSH-RO-PG21 H10B-TSH-RO-PG29 H10B-TSH-RO-M20 H10B-TSH-RO-M25 H10B-TSH-RO-M32	T1330100121-000 T1330100129-000 T1330100120-000 T1330100125-000 T1330100132-000						
Hood: Top entry										
		M20 M25	PG16 PG21 H10B-TG-RO-PG16 H10B-TG-RO-PG21 H10B-TG-RO-M20 H10B-TG-RO-M25	T1320100116-000 T1320100121-000 T1320100120-000 T1320100125-000						
		M20 M25 M32	PG21 PG29 H10B-TGH-RO-PG21 H10B-TGH-RO-PG29 H10B-TGH-RO-M20 H10B-TGH-RO-M25 H10B-TGH-RO-M32	T1340100121-000 T1340100129-000 T1340100120-000 T1340100125-000 T1340100132-000						
Cable-to-cable hood										
	 <table border="1" data-bbox="526 1400 758 1512"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M20 M25  M25 M32	PG16  PG21 PG29 H10B-TBF-LB-PG16 H10B-TBF-LB-M20 H10B-TBF-LB-M25 H10B-TBFH-LB-PG21 H10B-TBFH-LB-PG29 H10B-TBFH-LB-M25 H10B-TBFH-LB-M32	T1730103116-000 T1730103120-000 T1730103125-000 T1770103121-000 T1770103129-000 T1770103125-000 T1770103132-000
Construction	H									
Low	62.5									
High	74.5									
Protection covers for hoods										
			H10B-KDTP-LB	T1010101500-000						

# H10B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number														
Bulkhead mounted																			
				H10B-AG-LB	T1500103000-000														
	With protection cover 			H10B-AD-LB H10B-ADM-LB	T1510103000-000 T1510103001-000														
Surface mounted: Side entry																			
	 <table border="1" data-bbox="312 1227 671 1317"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>54</td> </tr> <tr> <td>High</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	54	High	45	57	74	Low construction High construction	1 Side entry 2 Side entry 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H10B-SGR-LB-PG16 H10B-SGR-LB-PG21 H10B-SGR-LB-M20 H10B-SGR-LB-M25 H10B-SGR-LB-2PG16 H10B-SGR-LB-2PG21 H10B-SGR-LB-2M20 H10B-SGR-LB-2M25 H10B-SGRH-LB-PG21 H10B-SGRH-LB-PG29 H10B-SGRH-LB-M25 H10B-SGRH-LB-M32 H10B-SGRH-LB-2PG21 H10B-SGRH-LB-2PG29 H10B-SGRH-LB-2M25 H10B-SGRH-LB-2M32	T1610103116-000 T1610103121-000 T1610103120-000 T1610103125-000 T1610103216-000 T1610103221-000 T1610103220-000 T1610103225-000 T1650103121-000 T1650103129-000 T1650103125-000 T1650103132-000 T1650103221-000 T1650103229-000 T1650103225-000 T1650103232-000
Construction	A	B	H																
Low	40	52	54																
High	45	57	74																
	With protection cover  <table border="1" data-bbox="312 1630 671 1720"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>54</td> </tr> <tr> <td>High</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	54	High	45	57	74	Low construction High construction	1 Side entry 2 Side entry 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29	H10B-SDR-LB-PG16 H10B-SDR-LB-PG21 H10B-SDR-LB-M20 H10B-SDR-LB-M25 H10B-SDR-LB-2PG16 H10B-SDR-LB-2PG21 H10B-SDR-LB-2M20 H10B-SDR-LB-2M25 H10B-SDRH-LB-PG21 H10B-SDRH-LB-PG29 H10B-SDRH-LB-M25 H10B-SDRH-LB-M32 H10B-SDRH-LB-2PG21 H10B-SDRH-LB-2PG29 H10B-SDRH-LB-2M25 H10B-SDRH-LB-2M32	T1620103116-000 T1620103121-000 T1620103120-000 T1620103125-000 T1620103216-000 T1620103221-000 T1620103220-000 T1620103225-000 T1660103121-000 T1660103129-000 T1660103125-000 T1660103132-000 T1660103221-000 T1660103229-000 T1660103225-000 T1660103232-000
Construction	A	B	H																
Low	40	52	54																
High	45	57	74																



## HIP.10/24, HIP-K.10/24, EMV-K.10/24 housings


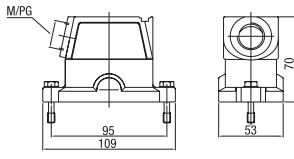

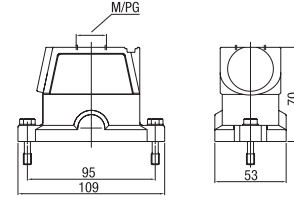

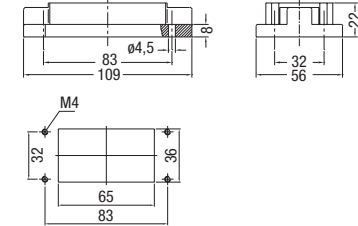
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry, Standard construction</b>					
		M25	16 21	<b>HIP</b> HIP.10/24.STS.1.16.G HIP.10/24.STS.1.21.G HIP.10/24.STS.1.M25.G  <b>HIP-K</b> HIP-K.10/24.STS.1.21.G HIP-K.10/24.STS.1.M25.G HIP-K.10/24.STS.1.M32.G	1-1102640-5 1-1102642-5 0-1106436-2
		M25 M32	21	<b>HIP-K</b> HIP-K.10/24.STS.1.21.G HIP-K.10/24.STS.1.M25.G HIP-K.10/24.STS.1.M32.G	2-1102642-5 0-1106436-4 0-1106436-6
		M25 M32	21	<b>EMV-K</b> EMV-K.10/24.STS.1.21.G EMV-K.10/24.STS.1.M25.G EMV-K.10/24.STS.1.M32.G	4-1102714-5 0-1106427-3 1-1106427-0
<b>Hood: Top entry</b>					
		M25	16 21	<b>HIP</b> HIP.10/24.STO.1.16.G HIP.10/24.STO.1.21.G HIP.10/24.STO.1.M25.G	1-1102644-5 1-1102646-5 0-1106436-1
		M25 M32	16	<b>HIP-K</b> HIP-K.10/24.STO.1.16.G HIP-K.10/24.STO.1.M25.G HIP-K.10/24.STO.1.M32.G	2-1102644-5 0-1106436-3 0-1106436-5
		M25	21	<b>EMV-K</b> EMV-K.10/24.STO.1.21.G EMV-K.10/24.STO.1.M25.G	4-1102715-5 0-1106427-4
<b>Surface mounted housing: Bottom entry</b>					
				<b>HIP</b> HIP.10/24.AG  <b>HIP-K</b> HIP-K.10/24.AG  <b>EMV-K</b> EMV-K.10/24.AG	1-1102647-5  2-1102647-5  4-1102718-5

## HIP.10/24, HIP-K.10/24, EMV-K.10/24 housings


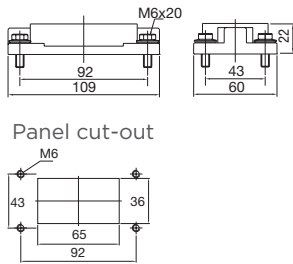

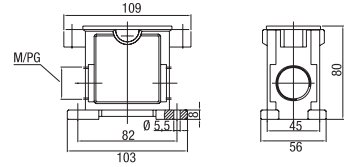

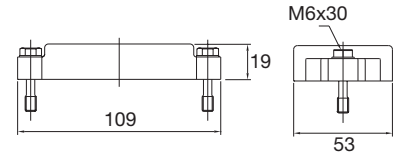
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Bottom entry</b>				
 			<b>HIP</b> HIP.10/24.AG.M6  <b>HIP-K</b> HIP-K.10/24.AG.M6  <b>EMV-K</b> EMV-K.10/24.AG.M6	1-1102612-5  2-1102612-5  4-1102720-5
<b>Surface mounted housing: Side entry</b>				
 	2xM32	21 2x21	<b>HIP</b> HIP.10/24.SG.1.21.G HIP.10/24.SG.2.21.G HIP.10/24.SG.2.M32.G  <b>HIP-K</b> HIP-K.10/24.SG.1.21.G HIP-K.10/24.SG.2.21.G  <b>EMV-K</b> EMV-K.10/24.SG.1.21.G EMV-K.10/24.SG.2.21.G EMV-K.10/24.SG.2.M32.G	1-1102610-5 1-1102611-5 0-1106435-1  5-1102610-5 2-1102611-5  5-1102716-5 4-1102717-5 0-1106426-2
<b>Protective covers for hoods and housing</b>				
 			<b>HIP</b> HIP/EMV.10/24.SKB  <b>HIP-K/EMV-K</b> HIP-K/EMV-K.10/24.SKB	3-1106202-5  4-1106202-5





## HD-040 inserts

INSERTS FOR H16B HOOD/HOUSING

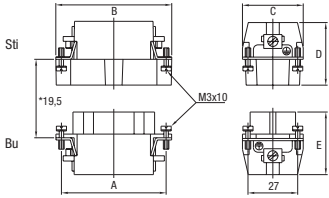
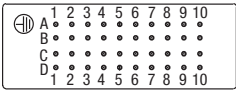
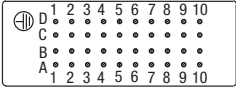
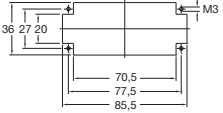
250V 10A

40+⊕ (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Crimp terminal				
		HD.40.Sti.C	2-1103012-3	
		HD.40.BU.C		2-1103013-3

Dimensions	A	B	C	D	E
mm	77.5	84.5	33	35	35

Suitable crimp contacts and crimping tools: see page 111


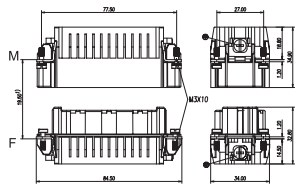
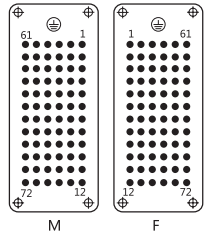
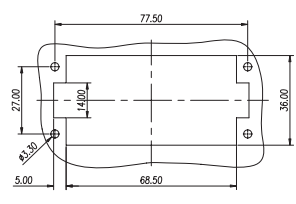
Dimensions (mm)	Contact arrangement		Panel cut-out
	Male insert	Female insert	
			

## HDD-072 inserts


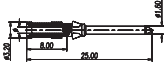

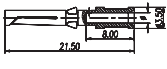
INSERTS FOR H16B HOOD/HOUSING

250V 10A

72+ Ⓢ (machined contacts)


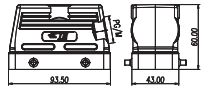

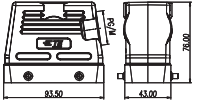

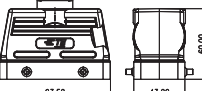



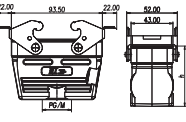

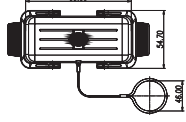

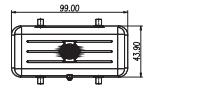
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HDD-072-M	T2030722101-000	
		HDD-072-F	T2030722201-000	
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 			

## 10A Contact

Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

# H16B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	Low construction 	M20 M25 M32	PG16 PG21	H16B-TS-PG16 H16B-TS-PG21 H16B-TS-M20 H16B-TS-M25 H16B-TS-M32	T1210160116-000 T1210160121-000 T1210160120-000 T1210160125-000 T1210160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TSH-PG21 H16B-TSH-PG29 H16B-TSH-M25 H16B-TSH-M32 H16B-TSH-M40	T1230160121-000 T1230160129-000 T1230060125-000 T1230160132-000 T1230160140-000						
Hood: Top entry											
	Low construction 	M25 M32	PG16 PG21	H16B-TG-PG16 H16B-TG-PG21 H16B-TG-M25 H16B-TG-M32	T1220160116-000 T1220160121-000 T1220160125-000 T1220160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TGH-PG21 H16B-TGH-PG29 H16B-TGH-M25 H16B-TGH-M32 H16B-TGH-M40	T1240160121-000 T1240160129-000 T1240160125-000 T1240160132-000 T1240160140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="533 1352 740 1442"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M25 M32	PG21	H16B-TBFS-PG21 H16B-TBFS-M25 H16B-TBFS-M32	T1710161121-000 T1710161125-000 T1710161132-000
Construction	H										
Low	62.5										
High	74.5										
		M25 M32 M40	PG21 PG29	H16B-TBFHS-PG21 H16B-TBFHS-PG29 H16B-TBFHS-M25 H16B-TBFHS-M32 H16B-TBFHS-M40	T1750161121-000 T1750161129-000 T1750161125-000 T1750161132-000 T1750161140-000						
Protection covers for hoods											
				H16B-KDTP	T1010161400-000						
Housing protection cover											
				H16B-KDBP	T1010162100-000						


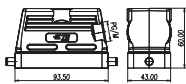

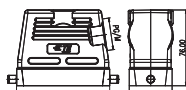

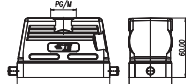

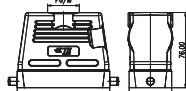

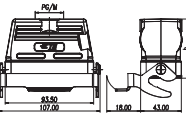

# H16B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number																										
Bulkhead mounted																															
				H16B-AGS	T1410161000-000																										
Surface mounted: Side entry																															
		1 Side entry Low construction 2 Side entry High construction	M25	PG21	H16B-SGRS-PG21	T1440161121-000																									
			M25	PG21	H16B-SGRS-M25	T1440161125-000																									
			M25	PG21	H16B-SGRS-2PG21	T1440161221-000																									
			M25	PG21	H16B-SGRS-2M25	T1440161225-000																									
			M32	PG29	H16B-SGRHS-PG21	T1470161121-000																									
			M32	PG29	H16B-SGRHS-M25	T1470161125-000																									
<table border="1"> <tr> <th>Construction</th> <th>H</th> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>		Construction	H	Low	56	High	81			H16B-SGRHS-M32	T1470161132-000																				
Construction	H																														
Low	56																														
High	81																														
			M25	PG21	H16B-SGRHS-2PG21	T1470161221-000																									
			M25	PG29	H16B-SGRHS-2PG29	T1470161229-000																									
			M32	PG21	H16B-SGRHS-2M25	T1470161225-000																									
			M32	PG29	H16B-SGRHS-2M32	T1470161232-000																									
Side entry housing with two levers																															
		Low construction High construction	M20	PG16	H16B-TSBS-PG16	T1250163116-000																									
			M25	PG21	H16B-TSBS-PG21	T1250163121-000																									
			M25	PG21	H16B-TSBS-M20	T1250163120-000																									
			M25	PG21	H16B-TSBS-M25	T1250163125-000																									
			M32	PG29	H16B-TSBHS-PG21	T1270163121-000																									
			M32	PG29	H16B-TSBHS-PG29	T1270163129-000																									
<table border="1"> <tr> <th>Construction</th> <th>H</th> </tr> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>76</td> </tr> </table>		Construction	H	Low	60	High	76			H16B-TSBHS-M25	T1270163125-000																				
Construction	H																														
Low	60																														
High	76																														
				H16B-TSBHS-M32	T1270163132-000																										
Top entry housing with two levers																															
		Low construction High construction	M20	PG16	H16B-TGBS-PG16	T1260163116-000																									
			M25	PG21	H16B-TGBS-PG21	T1260163121-000																									
			M25	PG21	H16B-TGBS-M20	T1260163120-000																									
			M25	PG21	H16B-TGBS-M25	T1260163125-000																									
			M32	PG29	H16B-TGBHS-PG21	T1280163121-000																									
			M32	PG29	H16B-TGBHS-PG29	T1280163129-000																									
<table border="1"> <tr> <th>Construction</th> <th>H</th> </tr> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>76</td> </tr> </table>		Construction	H	Low	60	High	76			H16B-TGBHS-M25	T1280163125-000																				
Construction	H																														
Low	60																														
High	76																														
				H16B-TGBHS-M32	T1280163132-000																										
Bulkhead mounted with 4 bolts																															
	With protection cover		1 Side entry Low construction 2 Side entry High construction	PG21	H16B-AD-BO	T1430160000-000																									
		<table border="1"> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>F</th> <th>G</th> <th>H</th> </tr> <tr> <td>Low</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>56</td> </tr> <tr> <td>High</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>81</td> </tr> </table>			Construction	A	B	C	D	F	G	H	Low	105	117	45	57	20	65	56	High	105	117	45	57	20	65	81	M25	H16B-SDR-BO-PG21	T1460160121-000
					Construction	A	B	C	D	F	G	H																			
					Low	105	117	45	57	20	65	56																			
				High	105	117	45	57	20	65	81																				
	M25	H16B-SDR-BO-M25		T1460160125-000																											
	M25	H16B-SDR-BO-2PG21		T1460160221-000																											
	M25	H16B-SDR-BO-2M25		T1460160225-000																											
				M25	PG21	H16B-SDRH-BO-PG21	T1490160121-000																								
				M32	PG29	H16B-SDRH-BO-PG29	T1490160129-000																								
				M25	PG21	H16B-SDRH-BO-M25	T1490160125-000																								
				M32	PG21	H16B-SDRH-BO-M32	T1490160132-000																								
		M25	PG29	H16B-SDRH-BO-2PG21	T1490160221-000																										
		M25	PG29	H16B-SDRH-BO-2PG29	T1490160229-000																										
		M32	PG21	H16B-SDRH-BO-2M25	T1490160225-000																										
		M32	PG29	H16B-SDRH-BO-2M32	T1490160232-000																										

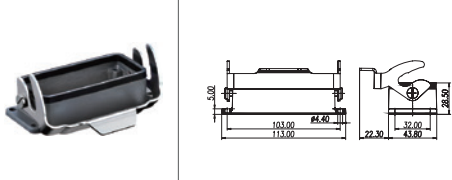
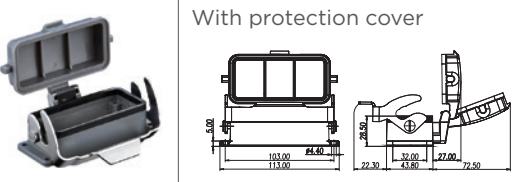



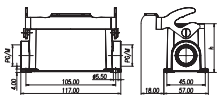

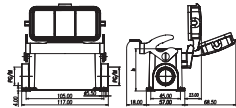
## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	Low construction 	M25 M32	PG21 PG29	H16B-TS-RO-PG21 H16B-TS-RO-PG29 H16B-TS-RO-M25 H16B-TS-RO-M32	T1310160121-000 T1310160129-000 T1310160125-000 T1310160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TSH-RO-PG21 H16B-TSH-RO-PG29 H16B-TSH-RO-M25 H16B-TSH-RO-M32 H16B-TSH-RO-M40	T1330160121-000 T1330160129-000 T1330160125-000 T1330160132-000 T1330160140-000						
Hood: Top entry											
	Low construction 	M25 M32	PG21 PG29	H16B-TG-RO-PG21 H16B-TG-RO-PG29 H16B-TG-RO-M25 H16B-TG-RO-M32	T1320160121-000 T1320160129-000 T1320160125-000 T1320160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TGH-RO-PG21 H16B-TGH-RO-PG29 H16B-TGH-RO-M25 H16B-TGH-RO-M32 H16B-TGH-RO-M40	T1340160121-000 T1340160129-000 T1340160125-000 T1340160132-000 T1340160140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="528 1346 751 1442"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M25 M32	PG21 PG29	H16B-TBF-LB-PG21 H16B-TBF-LB-PG29 H16B-TBF-LB-M25 H16B-TBF-LB-M32	T1730163121-000 T1730163129-000 T1730163125-000 T1730163132-000
Construction	H										
Low	62.5										
High	74.5										
		M25 M32 M40	PG21 PG29	H16B-TBFH-LB-PG21 H16B-TBFH-LB-PG29 H16B-TBFH-LB-M25 H16B-TBFH-LB-M32 H16B-TBFH-LB-M40	T1770163121-000 T1770163129-000 T1770163125-000 T1770163132-000 T1770163140-000						
Protection covers for hoods											
				H16B-KDTP-LB	T1010161500-000						

## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
Bulkhead mounted										
 			H16B-AG-LB	T1500163000-000						
 			H16B-AD-LB	T1510163000-000						
Surface mounted: Side entry										
  <table border="1" data-bbox="325 1151 544 1245"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	1 Side entry Low construction M20 M25 2 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SGR-LB-PG16 H16B-SGR-LB-PG21 H16B-SGR-LB-M20 H16B-SGR-LB-M25 H16B-SGR-LB-2PG16 H16B-SGR-LB-2PG21 H16B-SGR-LB-2M20 H16B-SGR-LB-2M25 H16B-SGRH-LB-PG21 H16B-SGRH-LB-PG29 H16B-SGRH-LB-M25 H16B-SGRH-LB-M32 H16B-SGRH-LB-2PG21 H16B-SGRH-LB-2PG29 H16B-SGRH-LB-2M25 H16B-SGRH-LB-2M32	T1610163116-000 T1610163121-000 T1610163120-000 T1610163125-000 T1610163216-000 T1610163221-000 T1610163220-000 T1610163225-000 T1650163121-000 T1650163129-000 T1650163125-000 T1650163132-000 T1650163221-000 T1650163229-000 T1650163225-000 T1650163232-000
Construction	H									
Low	56									
High	81									
  <table border="1" data-bbox="325 1570 544 1664"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	1 Side entry Low construction M20 M25 2 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SDR-LB-PG16 H16B-SDR-LB-PG21 H16B-SDR-LB-M20 H16B-SDR-LB-M25 H16B-SDR-LB-2PG16 H16B-SDR-LB-2PG21 H16B-SDR-LB-2M20 H16B-SDR-LB-2M25 H16B-SDRH-LB-PG21 H16B-SDRH-LB-PG29 H16B-SDRH-LB-M25 H16B-SDRH-LB-M32 H16B-SDRH-LB-2PG21 H16B-SDRH-LB-2PG29 H16B-SDRH-LB-2M25 H16B-SDRH-LB-2M32	T1620163116-000 T1620163121-000 T1620163120-000 T1620163125-000 T1620163216-000 T1620163221-000 T1620163220-000 T1620163225-000 T1660163121-000 T1660163129-000 T1660163125-000 T1660163132-000 T1660163221-000 T1660163229-000 T1660163225-000 T1660163232-000
Construction	H									
Low	56									
High	81									

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings

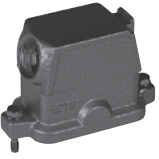
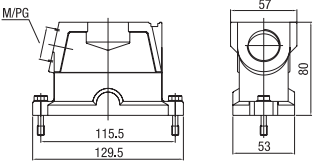

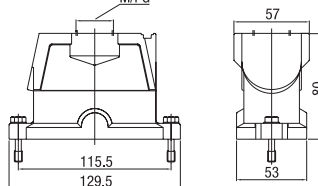

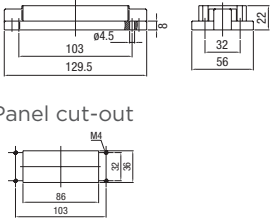

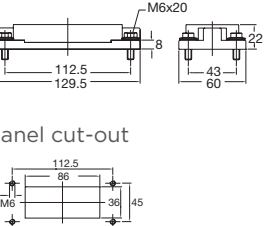
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
		M32	21 29	<b>HIP</b> HIP.16/40.STS.1.21.G HIP.16/40.STS.1.29.G HIP.16/40.STS.1.M32.G  1-1102649-5 1-1102651-5 0-1106454-2
		M32	29	<b>HIP-K</b> HIP-K.16/40.STS.1.29.G HIP-K.16/40.STS.1.M32.G  2-1102651-5 0-1106444-2
		M32	29 21	<b>EMV-K</b> EMV-K.16/40.STS.1.29.G EMV-K.16/40.STS.1.M32.G EMV-K.16/40.STS.1.21.G  4-1102723-5 0-1106446-4 4-1102722-5
<b>Hood: Top entry</b>				
		M32	21 29	<b>HIP</b> HIP.16/40.STO.1.21.G HIP.16/40.STO.1.29.G HIP.16/40.STO.1.M32.G  1-1102653-5 1-1102655-5 0-1106454-1
		M32	21 29	<b>HIP-K</b> HIP-K.16/40.STO.2.21.G HIP-K.16/40.STO.1.29.G HIP-K.16/40.STO.1.M32.G  0-1108534-1 2-1102655-5 0-1106444-1
		M32	29	<b>EMV-K</b> EMV-K.16/40.STO.1.29.G EMV-K.16/40.STO.1.M32.G  4-1102725-5 0-1106446-3
<b>Surface mounted housing: Bottom entry</b>				
				<b>HIP</b> HIP.16/40.AG  1-1102656-5
				<b>HIP-K</b> HIP-K.16/40.AG  2-1102656-5
				<b>EMV-K</b> EMV-K.16/40.AG  4-1102728-5
				<b>HIP</b> HIP.16/40.AG.M6  1-1102618-5
				<b>HIP-K</b> HIP-K.16/40.AG.M6  2-1102618-5
				<b>EMV-K</b> EMV-K.16/40.AG.M6  4-1102730-5

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings



**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Side entry</b>				
	2xM32	21 2x21	<b>HIP</b> HIP.16/40.SG.1.21.G	1-1102616-5
			HIP.16/40.SG.2.21.G	1-1102617-5
			HIP.16/40.SG.2.M32.G	0-1106453-1
	2xM32	21 2x21	<b>HIP-K</b> HIP-K.16/40.SG.1.21.G	5-1102616-5
			HIP-K.16/40.SG.2.21.G	2-1102617-5
			HIP-K.16/40.SG.2.M32.G	0-1106443-1
	2xM32	21 2x21	<b>EMV-K</b> EMV-K.16/40.SG.1.21.Z	4-1102726-5
			EMV-K.16/40.SG.2.21.Z	4-1102727-5
			EMV-K.16/40.SG.2.M32.G	0-1106445-2
<b>Protective covers for housings</b>				
			<b>HIP</b> HIP/EMV.16/40.SKB	3-1106203-5
			<b>HIP-K</b> HIP-K.16/40.SKB	4-1106203-5


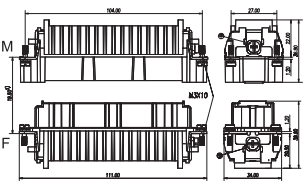
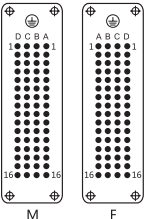
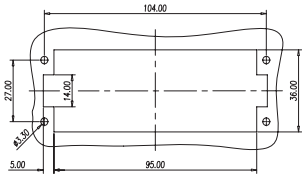


## HD-064 inserts


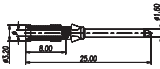
INSERTS FOR H24B HOOD/HOUSING

250V 10A

64+ (♁) (machined contacts)

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HD-064-M	T2020642101-000	
		HD-064-F		T2020642201-000
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 			

## 10A Contact

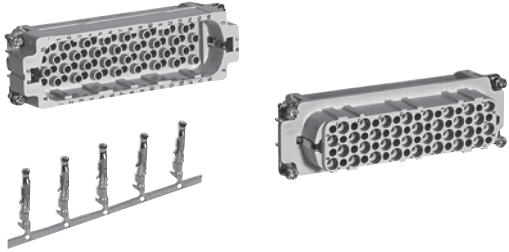
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Stripping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
		0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## HD-064 inserts

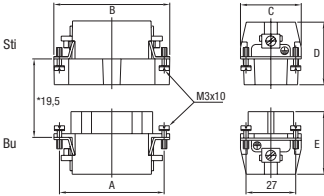
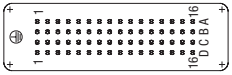

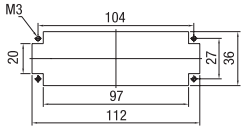
INSERTS FOR H24B HOOD/HOUSING

250V 10A

64+  $\oplus$  (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Crimp terminal				
		HD.64.Sti.C	2-1103032-3	
		HD.64.BU.C		2-1103033-3


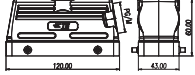

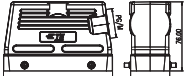





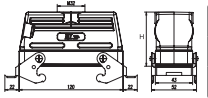

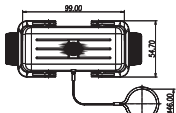

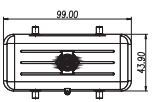
Suitable crimp contacts and crimping tools: see page 111

Dimensions (mm)	Contact arrangement		Panel cut-out
	Male insert	Female insert	
			




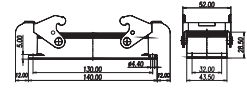

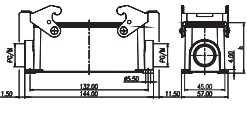

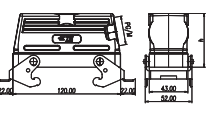

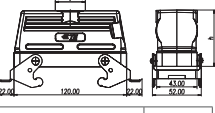

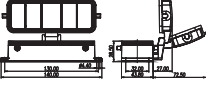
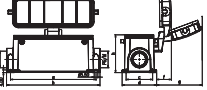
## H24B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	<p>Low construction</p> 	M25 M32	PG16 PG21	H24B-TS-PG16 H24B-TS-PG21 H24B-TS-M25 H24B-TS-M32	T1210240116-000 T1210240121-000 T1210240125-000 T1210240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TSH-PG21 H24B-TSH-PG29 H24B-TSH-M25 H24B-TSH-M32 H24B-TSH-M40	T1230240121-000 T1230240129-000 T1230240125-000 T1230240132-000 T1230240140-000						
Hood: Top entry											
	<p>Low construction</p> 	M25 M32	PG16 PG21	H24B-TG-PG16 H24B-TG-PG21 H24B-TG-M25 H24B-TG-M32	T1220240116-000 T1220240121-000 T1220240125-000 T1220240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TGH-PG21 H24B-TGH-PG29 H24B-TGH-M25 H24B-TGH-M32 H24B-TGH-M40	T1240240121-000 T1240240129-000 T1240240125-000 T1240240132-000 T1240240140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="531 1361 751 1458"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>78.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	78.5	M25 M32	PG21	H24B-TBFS-PG21 H24B-TBFS-M25 H24B-TBFS-M32	T1710241121-000 T1710241125-000 T1710241132-000
Construction	H										
Low	62.5										
High	78.5										
		M25 M32 M40	PG21 PG29	H24B-TBFHS-PG21 H24B-TBFHS-PG29 H24B-TBFHS-M25 H24B-TBFHS-M32 H24B-TBFHS-M40	T1750241121-000 T1750241129-000 T1750241125-000 T1750241132-000 T1750241140-000						
Protection covers for hoods											
				H24B-KDTP	T1010241400-000						
Housing protection cover											
				H24B-KDBP	T1010242100-000						


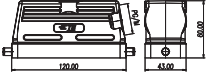

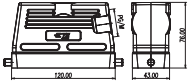

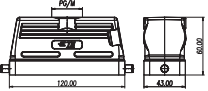

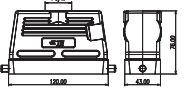

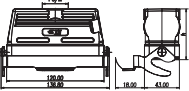

## H24B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number																								
Bulkhead mounted																													
				H24B-AGS	T1410241000-000																								
Surface mounted: Side entry																													
		1 Side entry Low construction 2 Side entry High construction	M25	PG21	H24B-SGRS-PG21	T1440241121-000																							
			M25	PG21	H24B-SGRS-M25	T1440241125-000																							
			M25	PG21	H24B-SGRS-2PG21	T1440241221-000																							
			M32	PG29	H24B-SGRS-2M25	T1440241225-000																							
			M25	PG21	H24B-SGRHS-PG21	T1470241121-000																							
			M32	PG29	H24B-SGRHS-PG29	T1470241129-000																							
			M25	PG21	H24B-SGRHS-M25	T1470241125-000																							
			M32	PG29	H24B-SGRHS-M32	T1470241132-000																							
<table border="1"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </tbody> </table>		Construction	H	Low	56	High	81																						
Construction	H																												
Low	56																												
High	81																												
Side entry housing with two levers																													
		Low construction High construction	M20	PG16	H24B-TSBS-PG16	T1250243116-000																							
			M25	PG21	H24B-TSBS-PG21	T1250243121-000																							
			M25	PG21	H24B-TSBS-M20	T1250243120-000																							
			M25	PG29	H24B-TSBS-M25	T1250243125-000																							
			M25	PG21	H24B-TSBHS-PG21	T1270243121-000																							
			M32	PG29	H24B-TSBHS-PG29	T1270243129-000																							
<table border="1"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>76</td> </tr> </tbody> </table>		Construction	H	Low	60	High	76																						
Construction	H																												
Low	60																												
High	76																												
Top entry housing with two levers																													
		Low construction High construction	M20	PG16	H24B-TGBS-PG16	T1260243116-000																							
			M25	PG21	H24B-TGBS-PG21	T1260243121-000																							
			M25	PG21	H24B-TGBS-M20	T1260243120-000																							
			M25	PG29	H24B-TGBS-M25	T1260243125-000																							
			M25	PG21	H24B-TGBHS-PG21	T1280243121-000																							
			M32	PG29	H24B-TGBHS-PG29	T1280243129-000																							
<table border="1"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>76</td> </tr> </tbody> </table>		Construction	H	Low	60	High	76																						
Construction	H																												
Low	60																												
High	76																												
Bulkhead mounted with 4 bolts																													
	With protection cover		1 Side entry Low construction 2 Side entry High construction	PG21	H24B-AD-BO	T1430240000-000																							
		M25			H24B-SDR-BO-PG21	T1460240121-000																							
		M25			H24B-SDR-BO-M25	T1460240125-000																							
		M25			H24B-SDR-BO-2PG21	T1460240221-000																							
		M25			H24B-SDR-BO-2M25	T1460240225-000																							
		M25			H24B-SDRH-BO-PG21	T1490240121-000																							
		M32			H24B-SDRH-BO-PG29	T1490240129-000																							
		M25			H24B-SDRH-BO-M25	T1490240125-000																							
M32		H24B-SDRH-BO-M32	T1490240132-000																										
<table border="1"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>F</th> <th>G</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>132</td> <td>144</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>56</td> </tr> <tr> <td>High</td> <td>132</td> <td>144</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>81</td> </tr> </tbody> </table>		Construction	A	B	C	D	F	G	H	Low	132	144	45	57	20	65	56	High	132	144	45	57	20	65	81				
Construction	A	B	C	D	F	G	H																						
Low	132	144	45	57	20	65	56																						
High	132	144	45	57	20	65	81																						
				PG21	H24B-SDRH-BO-2PG21	T1490240221-000																							
				PG29	H24B-SDRH-BO-2PG29	T1490240229-000																							
				PG21	H24B-SDRH-BO-2M25	T1490240225-000																							
				PG29	H24B-SDRH-BO-2M32	T1490240232-000																							


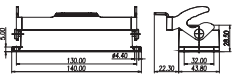

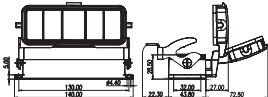

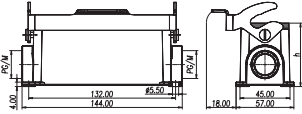

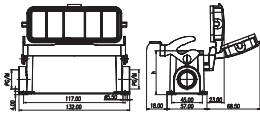
## H24B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	Low construction 	M25 M32	PG21 PG29	H24B-TS-RO-PG21 H24B-TS-RO-PG29 H24B-TS-RO-M25 H24B-TS-RO-M32	T1310240121-000 T1310240129-000 T1310240125-000 T1310240132-000						
	High construction 	M25 M32 M40	PG21 PG29	H24B-TSH-RO-PG21 H24B-TSH-RO-PG29 H24B-TSH-RO-M25 H24B-TSH-RO-M32 H24B-TSH-RO-M40	T1330240121-000 T1330240129-000 T1330240125-000 T1330240132-000 T1330240140-000						
Hood: Top entry											
	Low construction 	M25 M32	PG21 PG29	H24B-TG-RO-PG21 H24B-TG-RO-PG29 H24B-TG-RO-M25 H24B-TG-RO-M32	T1320240121-000 T1320240129-000 T1320240125-000 T1320240132-000						
	High construction 	M25 M32 M40	PG21 PG29	H24B-TGH-RO-PG21 H24B-TGH-RO-PG29 H24B-TGH-RO-M25 H24B-TGH-RO-M32 H24B-TGH-RO-M40	T1340240121-000 T1340240129-000 T1340240125-000 T1340240132-000 T1340240140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="531 1339 743 1429"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>78.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	78.5	M25 M32  M25 M32 M40	PG21 PG29  PG21 PG29	H24B-TBF-LB-PG21 H24B-TBF-LB-PG29 H24B-TBF-LB-M25 H24B-TBF-LB-M32  H24B-TBFH-LB-PG21 H24B-TBFH-LB-PG29 H24B-TBFH-LB-M25 H24B-TBFH-LB-M32 H24B-TBFH-LB-M40	T1730242121-000 T1730242129-000 T1730242125-000 T1730242132-000  T1770243121-000 T1770243129-000 T1770243125-000 T1770243132-000 T1770243140-000
Construction	H										
Low	62.5										
High	78.5										
Protection covers for hoods											
				H24B-KDTP-LB	T1010241500-000						

## H24B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number								
Bulkhead mounted												
			H24B-AG-LB	T1500243000-000								
	With protection cover 		H24B-AD-LB	T1510243000-000								
Surface mounted: Side entry												
	 <table border="1" data-bbox="320 1160 539 1256"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>81</td> </tr> </table>	Construction	H	Low	56	Hight	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H24B-SGR-LB-PG16 H24B-SGR-LB-PG21 H24B-SGR-LB-M20 H24B-SGR-LB-M25 H24B-SGR-LB-2PG16 H24B-SGR-LB-2PG21 H24B-SGR-LB-2M20 H24B-SGR-LB-2M25 H24B-SGRH-LB-PG21 H24B-SGRH-LB-PG29 H24B-SGRH-LB-M25 H24B-SGRH-LB-M32 H24B-SGRH-LB-2PG21 H24B-SGRH-LB-2PG29 H24B-SGRH-LB-2M25 H24B-SGRH-LB-2M32	T1610243116-000 T1610243121-000 T1610243120-000 T1610243125-000 T1610243216-000 T1610243221-000 T1610243220-000 T1610243225-000 T1650243121-000 T1650243129-000 T1650243125-000 T1650243132-000 T1650243221-000 T1650243229-000 T1650243225-000 T1650243232-000
Construction	H											
Low	56											
Hight	81											
	With protection cover  <table border="1" data-bbox="320 1608 539 1704"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>81</td> </tr> </table>	Construction	H	Low	56	Hight	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H24B-SDR-LB-PG16 H24B-SDR-LB-PG21 H24B-SDR-LB-M20 H24B-SDR-LB-M25 H24B-SDR-LB-2PG16 H24B-SDR-LB-2PG21 H24B-SDR-LB-2M20 H24B-SDR-LB-2M25 H24B-SDRH-LB-PG21 H24B-SDRH-LB-PG29 H24B-SDRH-LB-M25 H24B-SDRH-LB-M32 H24B-SDRH-LB-2PG21 H24B-SDRH-LB-2PG29 H24B-SDRH-LB-2M25 H24B-SDRH-LB-2M32	T1620243116-000 T1620243121-000 T1620243120-000 T1620243125-000 T1620243216-000 T1620243221-000 T1620243220-000 T1620243225-000 T1660243121-000 T1660243129-000 T1660243125-000 T1660243132-000 T1660243221-000 T1660243229-000 T1660243225-000 T1660243232-000
Construction	H											
Low	56											
Hight	81											

## HIP.24/64, HIP-K.24/64, EMV-K.24/64 housings

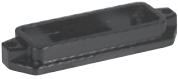
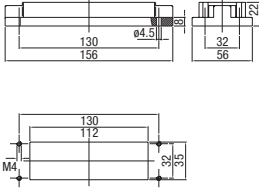

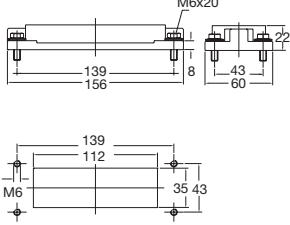

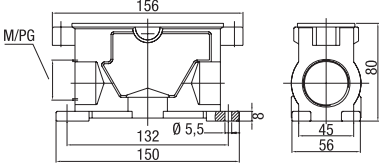

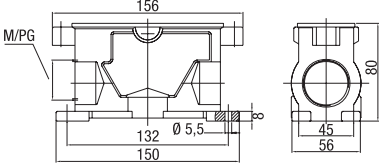
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Bottom entry, Standard construction</b>				
			<b>HIP</b> HIP.24/64.AG	1-1102665-5
			<b>HIP-K</b> HIP-K.24/64.AG	2-1102665-5
			<b>EMV-K</b> EMV-K.24/64.AG	4-1102760-5
			<b>HIP</b> HIP.24/64.AG.M6	1-1102626-5
			<b>HIP-K</b> HIP-K.24/64.AG.M6	2-1102626-5
			<b>HIP-K</b> HIP-K.24/64.AG.M6.D	2-1102628-5
			<b>HIP-K</b> HIP-K-1.24/64.AG.M6.D	0-1108533-1
<b>EMV-K</b> EMV-K.24/64.AG.M6	4-1102736-5			
<b>Surface mounted housing: Side entry, Standard construction</b>				
		2xM40	29 2x29	<b>HIP</b> HIP.24/64.SG.1.29.G HIP.24/64.SG.2.29.G HIP.24/64.SG.2.M40.G 1-1102624-5 1-1102625-5 0-1106472-1
			29 2x29	<b>HIP-K</b> HIP-K.24/64.SG.1.29.G HIP-K.24/64.SG.2.29.G HIP-K.24/64.SG.2.M40.G 5-1102624-5 2-1102625-5 0-1106472-2
			29 2x29	<b>EMV-K</b> EMV-K.24/64.SG.1.29.G EMV-K.24/64.SG.2.29.G EMV-K.24/64.SG.2.M40.G 4-1102734-5 4-1102735-5 0-1106460-2
<b>Protective cover housings</b>				
			<b>HIP</b> HIP/EMV.24/64.SKB 3-1106204-5  <b>HIP-K/EMV-K</b> HIP-K/EMV-K.24/64.SKB 4-1106204-5	



## HIP.24/64, HIP-K.24/64, EMV-K.24/64 housings


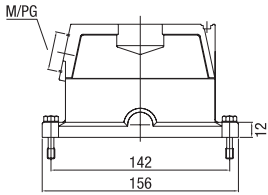

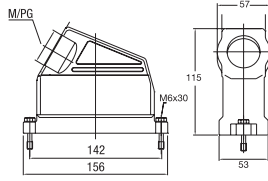

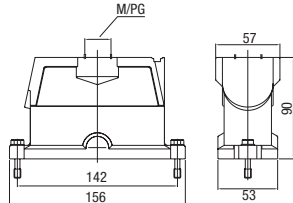
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry, Standard construction</b>					
		M40	21 29	<b>HIP</b> HIP.24/64.STS.1.21.G HIP.24/64.STS.1.29.G HIP.24/64.STS.1.M40.G	1-1102658-5 1-1102660-5 0-1106473-2
		M40	29	<b>HIP-K</b> HIP-K.24/64.STS.1.29.G HIP-K.24/64.STS.1.M40.G	2-1102660-5 0-1106473-4
		M25 M32 M40	29	<b>EMV-K</b> EMV-K.24/64.STS.1.29.G EMV-K.24/64.STS.1.M25.G EMV-K.24/64.STS.1.M32.G EMV-K.24/64.STS.1.M40.G	4-1102755-5 0-1102983-1 0-1106461-8 0-1106461-3
		M40	29 36	<b>HIP</b> HIP-KF.24/64.STS.1.29.G HIP-KF.24/64.STS.1.36.G HIP-KF.24/64.STS.1.M40.G	1-1102622-5 1-1102623-5 0-1106474-1
		M40	29 36	<b>HIP-K</b> HIP-KF/K.24/64.STS.1.29.G HIP-KF/K.24/64.STS.1.36.G HIP-KF/K.24/64.STS.1.M40.G	2-1102622-5 2-1102623-5 0-1106474-2
		M40	29 36	<b>EMV-K</b> EMV-KF/K.24/64.STS.1.29.G EMV-KF/K.24/64.STS.1.36.G EMV-KF/K.24/64.STS.1.M40.G	4-1102732-5 4-1102733-5 0-1106462-2
<b>Hood: Top entry, Standard construction</b>					
		M40			
		2xM32 M40	21 29	<b>HIP</b> HIP.24/64.STO.1.21.G HIP.24/64.STO.1.29.G HIP.24/64.STO.1.M40.G	1-1102662-5 1-1102664-5 0-1106473-1
		M40 2xM40	29	<b>HIP-K</b> HIP-K.24/64.STO.1.29.G HIP-K.24/64.STO.2.M32.G HIP-K.24/64.STO.1.M40.G	2-1102664-5 0-1102792-1 0-1106473-3
		29	<b>EMV-K</b> EMV-K.24/64.STO.1.29.G EMV-K.24/64.STO.1.M40.G	4-1102759-5 0-1106461-4	
		2xM40			
		2xM40			


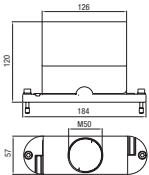

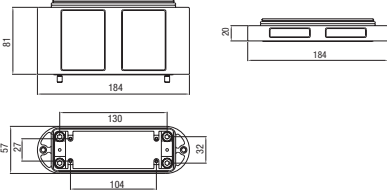

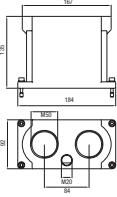

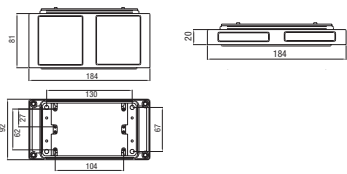
## HF-HIP-K 8/HF-EMV-K 8, HF-HIP-K 12/HF-EMV-K 12 housings

**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood


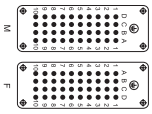

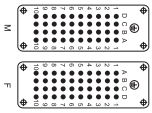
Description	Metr.	PG	Type	Part Number
Hood				
 	1xM50 1xM50 2xM40 2xM40		HF-HIP-K.8.Sto.1.M50G HF.8.EMV-K.8.Sto.1.M50G HF.HIP-K.8.Sto.2.M40G HF.EMV-K.8.Sto.2.M40G	0-1102839-4 0-1102839-3 0-1102839-2 0-1102839-1
Housing bottom				
 	81 mm 81 mm	<b>Height</b> 20 mm 20 mm	HF-HIP-K.8.AG.N HF-EMV-K.8.AG.N HF-HIP-K.8.AG HF-EMV-K.8.AG	0-1102837-2 0-1102837-1 0-1102836-2 0-1102836-1
Hood				
 	2xM40 2xM40 2xM50 2xM50		HF-HIP-K.12.Sto.2.M40G HF-EMV-K.12.Sto.2.M40G HF-HIP-K.12.Sto.2.M50G HF-EMV-K.12.Sto.2.M50G	0-1102840-2 0-1102840-1 0-1102840-4 0-1102840-3
Housing bottom				
 	81 mm 81 mm	<b>Height</b> 20 mm 20 mm	HF-HIP-K.12.AG.N HF-EMV-K.12.AG.N HF-HIP-K.12.AG HF-EMV-K.12.AG	0-1102838-2 0-1102838-1 0-1102192-2 0-1102192-1

## HD-080 inserts

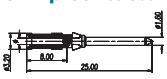


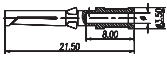
INSERTS FOR H32B HOOD/HOUSING

250V 10A

80 (2x40)+ $\oplus$  (machined contacts)

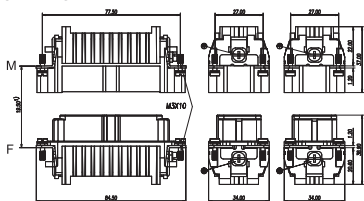
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)	Contact arrangement view from termination side			
		HD-040-M(1-40) HD-040-M(41-80)	T2020402101-000 T2020802101-000	
		HD-040-F(1-40) HD-040-F(41-80)		T2020402201-000 T2020802201-000

### 10A Contact

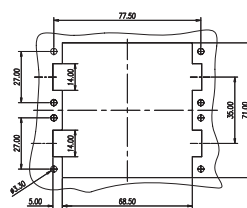
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male	10A Male crimp contacts 	Wire gauge		Stripping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		mm	Type	Part Number	Type
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

### Distance for contact max. 24mm

Crimp terminal



### Panel cut-out for inserts for use without hoods/housings



## HD-080 inserts

INSERTS FOR H32B HOOD/HOUSING

250V 10A

80 (2x40)+ $\oplus$  (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Screw terminal				
		2xHD.40.Sti.C	2-1103012-3	
		2xHD.40.Bu.C		2-1103013-3

Dimensions	A	B	C	D	E
mm	77.5	84.5	33	35	35

Suitable crimp contacts and crimping tools: see page 111


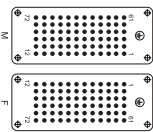

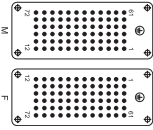
Dimensions (mm)	Contact arrangement	
	Male insert	Female insert

## HDD-144 inserts


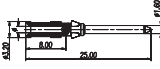

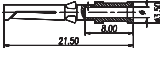
INSERTS FOR H32B HOOD/HOUSING

250V 10A

144 (2x72)+⊕ (machined contacts)

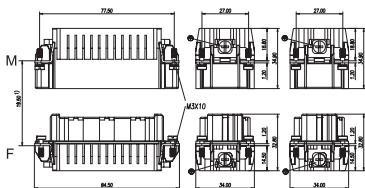
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)	Contact arrangement view from termination side			
		HDD-072-M(1-72) HDD-072-M(73-144)	T2030722101-000 T2031442101-000	
		HDD-072-F(1-72) HDD-072-F(73-144)		T2030722201-000 T2031442201-000

### 10A Contact

Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
					0.14-0.37	26-22	8.0	CDM-0.14
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000




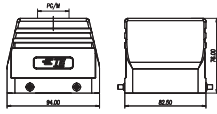

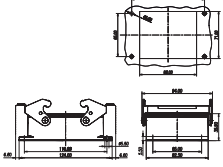

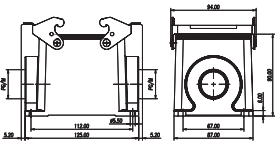

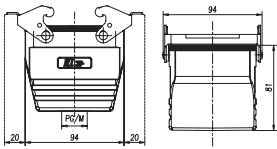

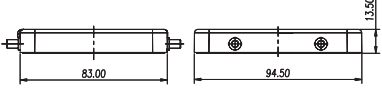
### Distance for contact max. 24mm

Crimp terminal




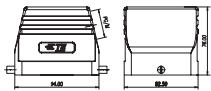

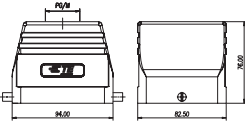

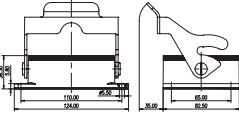

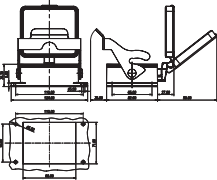

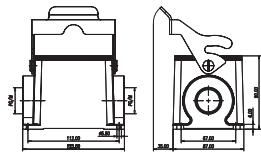
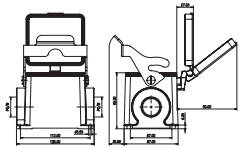
## H32B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
		M32 M40	PG29 PG36 H32B-TS-PG29 H32B-TS-PG36 H32B-TS-M32 H32B-TS-M40	T1210320129-000 T1210320136-000 T1210320132-000 T1210320140-000
<b>Hood: Top entry</b>				
		M25 M32 M40 M50	PG21 PG29 PG36 PG42 H32B-TG-PG21 H32B-TG-PG29 H32B-TG-PG36 H32B-TG-PG42 H32B-TG-M25 H32B-TG-M32 H32B-TG-M40 H32B-TG-M50	T1220320121-000 T1220320129-000 T1220320136-000 T1220320142-000 T1220320125-000 T1220320132-000 T1220320140-000 T1220320150-000
<b>Bulkhead mounted</b>				
			H32B-AG	T1410322000-000
<b>Surface mounted: Side entry</b>				
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-SGR-PG29 H32B-SGR-PG36 H32B-SGR-PG42 H32B-SGR-M32 H32B-SGR-M40 H32B-SGR-M50 H32B-SGR-M63	T1440322129-000 T1440322136-000 T1440322142-000 T1440322132-000 T1440322140-000 T1440322150-000 T1440322163-000
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-SGR-2PG29 H32B-SGR-2PG36 H32B-SGR-2PG42 H32B-SGR-2M32 H32B-SGR-2M40 H32B-SGR-2M50 H32B-SGR-2M63	T1440322229-000 T1440322236-000 T1440322242-000 T1440322232-000 T1440322240-000 T1440322250-000 T1440322263-000
<b>Cable-to-cable hood</b>				
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-TBF-PG29 H32B-TBF-PG36 H32B-TBF-PG42 H32B-TBF-M32 H32B-TBF-M40 H32B-TBF-M50 H32B-TBF-M63	T1710322129-000 T1710322136-000 T1710322142-000 T1710322132-000 T1710322140-000 T1710322150-000 T1710322163-000
<b>Protection covers for hoods</b>				
			H32B-KDB	T1000321220-000

## H32B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037


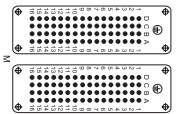
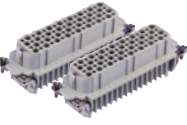
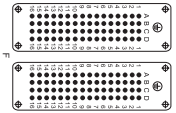
Dimensions (mm)	Metr.	PG	Type	Part Number	
Hood: Side entry					
		M32 M40	PG29 PG36	H32B-TS-RO-PG29 H32B-TS-RO-PG36 H32B-TS-RO-M32 H32B-TS-RO-M40	T1310320129-000 T1310320136-000 T1310320132-000 T1310320140-000
Hood: Top entry					
		M25 M32 M40 M50	PG21 PG29 PG36 PG42	H32B-TG-RO-PG21 H32B-TG-RO-PG29 H32B-TG-RO-PG36 H32B-TG-RO-PG42 H32B-TG-RO-M25 H32B-TG-RO-M32 H32B-TG-RO-M40 H32B-TG-RO-M50	T1320320121-000 T1320320129-000 T1320320136-000 T1320320142-000 T1320320125-000 T1320320132-000 T1320320140-000 T1320320150-000
Bulkhead mounted					
				H32B-AG-LB	T1500322000-000
	With protection cover 			H32B-AD-LB	T1510322000-000
Surface mounted: Side entry					
		1 Side entry M32 M40 2 Side entry M32 M40	PG29 PG29	H32B-SGR-LB-PG29 H32B-SGR-LB-M32 H32B-SGR-LB-M40 H32B-SGR-LB-2PG29 H32B-SGR-LB-2M32 H32B-SGR-LB-2M40	T1610322129-000 T1610322132-000 T1610322140-000 T1610322229-000 T1610322232-000 T1610322240-000
	With protection cover 	1 Side entry M32 M40 2 Side entry M32 M40	PG29 PG29	H32B-SDR-LB-PG29 H32B-SDR-LB-M32 H32B-SDR-LB-M40 H32B-SDR-LB-2PG29 H32B-SDR-LB-2M32 H32B-SDR-LB-2M40	T1620320129-000 T1620320132-000 T1620320140-000 T1620320229-000 T1620320232-000 T1620320240-000

## HD-128 inserts




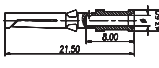
INSERTS FOR H48B HOOD/HOUSING

250V 10A

128 (2x64)+⊕ (machined contacts)

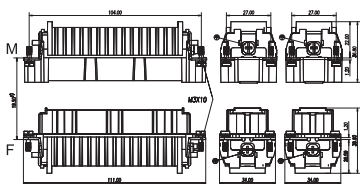
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)	Contact arrangement view from termination side			
		HD-O64-M(1-64) HD-O64-M(65-128)	T2020642101-000 T2021282101-000	
		HD-O64-F(1-64) HD-O64-F(65-128)		T2020642201-000 T2021282201-000

### 10A Contact

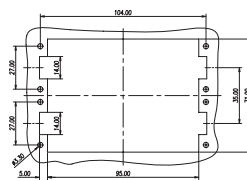
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
		0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000		
0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000		
1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000		
1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000		
2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000		

### Distance for contact max. 24mm

Crimp terminal



### Panel cut-out for inserts for use without hoods/housings





## HD.128/HEE 92 contact inserts

INSERTS FOR H48B HOOD/HOUSING

250V 10A

128 (2x64)+ (stamped and formed contacts)

Description		Type	Part Number	
Male insert	Female insert		Male insert	Female insert
Crimp terminal				
		2xHD.64.Sti.C	2-1103032-3	
		2xHD.64.Bu.C	2-1103033-3	

Dimensions	A	B	C	D	E
mm	104	110	33	35	35

Suitable crimp contacts and crimping tools: see page 111


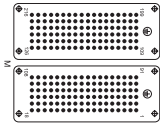

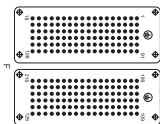
Dimensions (mm)	Contact arrangement	
	Male insert	Female insert

## HDD-216 inserts

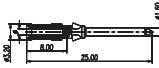

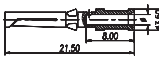
INSERTS FOR H48B HOOD/HOUSING

250V 10A

216 (2x108)+⊕ (machined contacts)

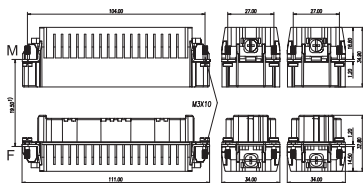
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)	Contact arrangement view from termination side			
		HDD-108-M(1-108) HDD-108-M(109-216)	T2031082101-000 T2032162101-000	
		HDD-108-F(1-108) HDD-108-F(109-216)		T2031082201-000 T2032162201-000

### 10A Contact

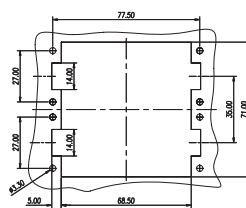
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male	10A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female		0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

### Distance for contact max. 24mm

Crimp terminal


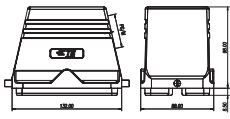

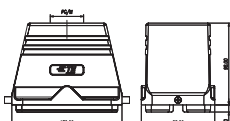

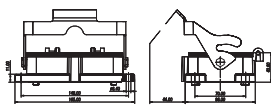

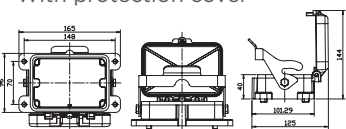

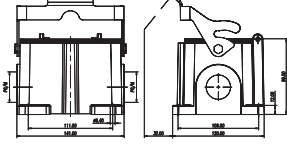

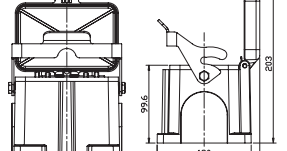


### Panel cut-out for inserts for use without hoods/housings



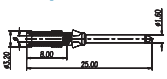


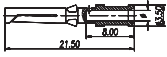
## H48B hoods/housings

POWDER-COATED, RAL 7037





Dimensions (mm)	Metr.	PG	Type	Part Number
Hood: Side entry				
		M32 M40 M50 M63	PG29 PG36 PG42 H48B-TS-PG29 H48B-TS-PG36 H4SB-TS-PG42 H48B-TS-M32 H48B-TS-M40 H48B-TS-M50 H48B-TS-M63	T1310480129-000 T1310480136-000 T1310480142-000 T1310480132-000 T1310480140-000 T1310480150-000 T1310480163-000
Hood: Top entry				
		M32 M40 M50 M63	PG29 PG36 PG42 H48B-TG-PG29 H48B-TG-PG36 H48B-TG-PG42 H48B-TG-M32 H48B-TG-M40 H48B-TG-M50 H48B-TG-M63	T1320480129-000 T1320480136-000 T1320480142-000 T1320480132-000 T1320480140-000 T1320480150-000 T1320480163-000
Bulkhead mounted				
			H48B-AG	T1500482000-000
	With protection cover 		H48B-AD-LB	T1510482000-000
Surface mounted: Side entry				
		1 Side entry M32 M40 M50 2 Side entry M32 M40 M50	PG29 PG36 PG42 H48B-SGR-PG29 H48B-SGR-PG36 H48B-SGR-PG42 H48B-SGR-M32 H48B-SGR-M40 H48B-SGR-M50 PG29 PG36 PG42 H48B-SGR-2PG29 H48B-SGR-2PG36 H48B-SGR-2PG42 H48B-SGR-2M32 H48B-SGR-2M40 H48B-SGR-2M50	T1610482129-000 T1610482136-000 T1610482142-000 T1610482132-000 T1610482140-000 T1610482150-000 T1610482229-000 T1610482236-000 T1610482242-000 T1610482232-000 T1610482240-000 T1610482250-000
Surface mounted with cover				
		1 Side entry M32 M40 M50 2 Side entry M32 M40 M50	PG29 PG36 PG42 H48B-SDR-PG29 H48B-SDR-PG36 H48B-SDR-PG42 H48B-SDR-M32 H48B-SDR-M40 H48B-SDR-M50 PG29 PG36 PG42 H48B-SDR-2PG29 H48B-SDR-2PG36 H48B-SDR-2PG42 H48B-SDR-2M32 H48B-SDR-2M40 H48B-SDR-2M50	T1620480129-000 T1620480136-000 T1620480142-000 T1620480132-000 T1620480140-000 T1620480150-000 T1620480229-000 T1620480236-000 T1620480242-000 T1620480232-000 T1620480240-000 T1620480250-000

## Crimp contacts HN.D series

### 10A Contact

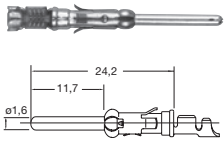
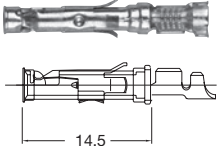
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male	10A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated			
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number		
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000		
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000		
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000		
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000		
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000		
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000		
			10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
				0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
				0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
				1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
1.5	16			8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000		
2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000				

## Crimping tools HN.D series

Description		Type	Part Number
<b>Crimp tool</b> Wire range: 0.5-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts		CRIMPBOX-0.5/4	T3100000001-000
<b>Crimp tool</b> Wire range: 0.14-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts with locator and die		RSZ.HE-HN.D-HVT	1-1105851-8
<b>Removal tools</b> Used for CDM/CDF contact series		REMOV-HD	T3100000003-000
<b>M3 screw driver</b> Used for HA/HE inserts		SCREWD-M3	T3100000009-000

## Crimp contacts HD.M series

### 10A Contact

<b>Tech data</b> <b>Material:</b> copper alloy Finish: tin plated tin plated hard gold <b>Contact resistance:</b> $\leq 3m\Omega$ <b>Crimp Terminal:</b> 0.14-2.5 mm <sup>2</sup> AWG: 26-14	<b>Description</b>		<b>Type</b>	<b>Part Number</b>	<b>Dimensions (mm<sup>2</sup>)</b>
	<b>Pin contact</b>	<b>Socket contact</b>			
			Pin contact tin plated Reel contact/pin tin plated Pin contact gold plated Reel contact/pin gold plated Socket contact tin plated Socket contact gold plated Reel contact/socket gold plated	1-1105000-3 2-1105000-3 4-1105000-3 0-0164161-9 0-0166824-2 1-1105000-2 3-1105000-2 0-0164160-4 0-0164161-4 1-1105001-3 2-1105001-3 4-1105001-3 1-1105001-2 3-1105001-2 1-0163087-1 0-0163083-7	0.3-0.56 0.5-1.5 1.5-2.5 0.5-1.5 1.5-2.5 0.3-0.56 0.8-1.5 0.3-0.56 0.8-1.5 0.3-0.56 0.5-1.5 1.5-2.5 0.3-0.56 0.8-1.5 0.3-0.56 0.8-1.5

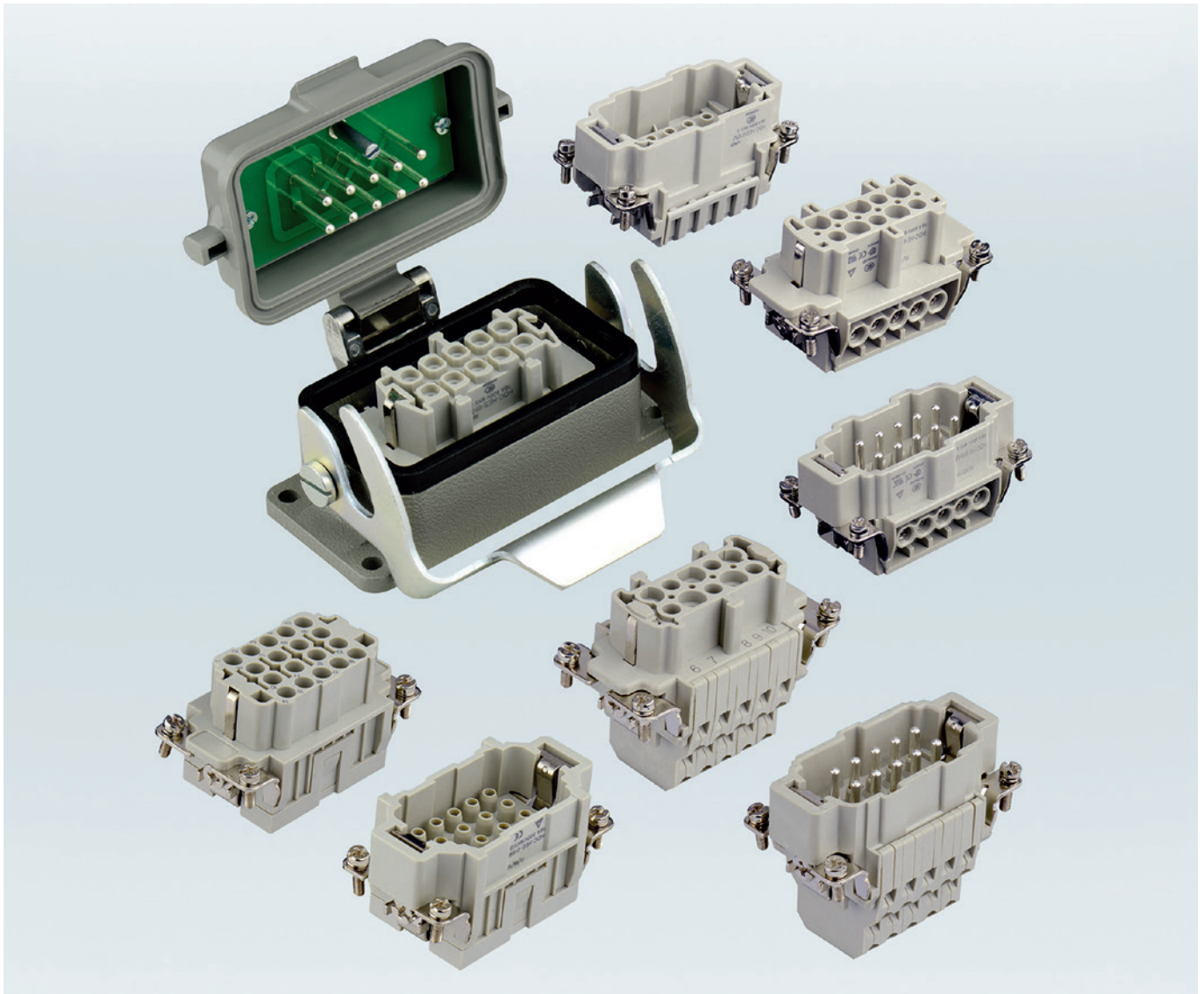
Type	Wire cross section	Stripping length
1	0.2-0.56 mm <sup>2</sup>	3.5 mm
2	0.5-1.5 mm <sup>2</sup>	3.5 mm
3	0.8-1.5 mm <sup>2</sup>	3.5 mm
4	1.5-2.5 mm <sup>2</sup>	3.5 mm

## Crimping tools HD.M series

Description		Designation	Part Number	Cross section (mm <sup>2</sup> )
Crimping tool without locator and die		RSZ.BAS	539635-1	
Locator and die		ERGO-DIE XII	539742-2	0.2-2.5mm <sup>2</sup> for contacts PN
Extraction tool HD.M		AWZG-HD.M-RSZ	0-1102855-1	all cross sections
Insertion tool		EWZG-RSZ	0-1102855-6	below 0.75mm <sup>2</sup>



## HE, HEE, HEEE Series



### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances  
DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 60 664-1  
DIN EN 61 984

### 3. Approvals



## HE technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	6,10,16,24,32(2x16),
.....	48(2x24) + PE

### INSERTS

Working current .....	16A max
(See current carrying capacity)	
Working voltage .....	500V
Test voltage urms .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C...+125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V
Mechanical working life-mating cycles.....	$\geq 500$

### CONTACTS

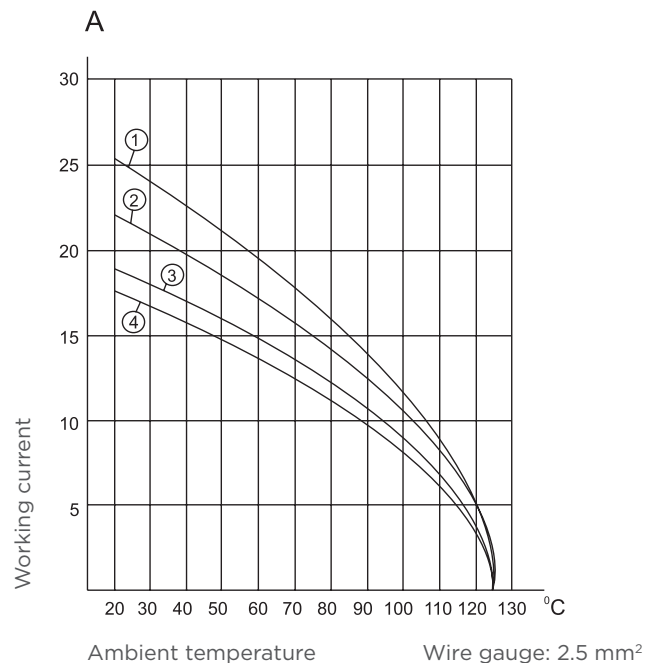
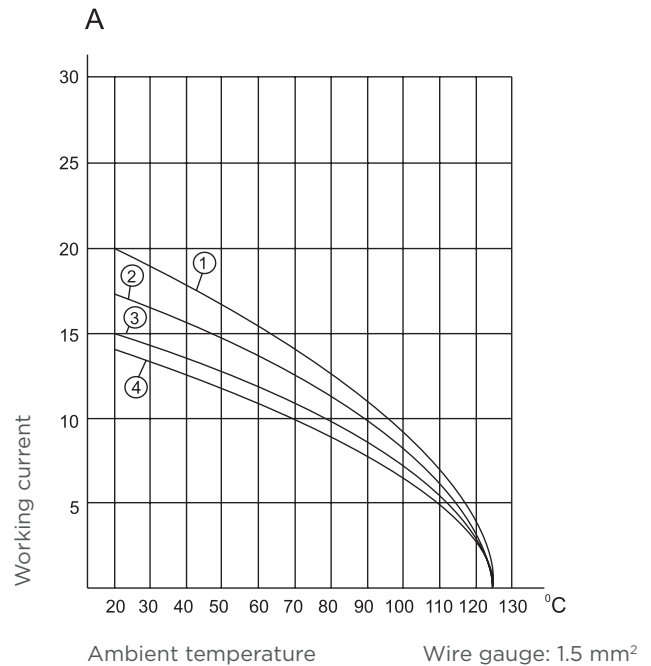
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	
.....	Crimp terminal
.....	Screw terminal
.....	Spring terminal
.....	Double Spring terminal
-mm <sup>2</sup>	
Crimp terminal .....	0.14-4.0
Screw terminal .....	0.5-2.5
Spring terminal .....	0.5-2.5
Double Spring terminal.....	0.2-2.5
-AWG	
Crimp terminal .....	26-12
Screw terminal .....	20-14
Spring terminal .....	20-14
Double Spring terminal.....	26-14
- Tightening/test torque .....	0.5 Nm

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 HDC-HE-006
- 2 HDC-HE-010
- 3 HDC-HE-016
- 4 HDC-HE-024



## HEE technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	10,18,32,46,64(2x32),
.....	92(2x46) + PE

### INSERTS

Working current .....	16A max
(See current carrying capacity)	
Working voltage .....	500V
Test voltage urms .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V
Mechanical working life-mating cycles.....	$\geq 500$

### CONTACTS

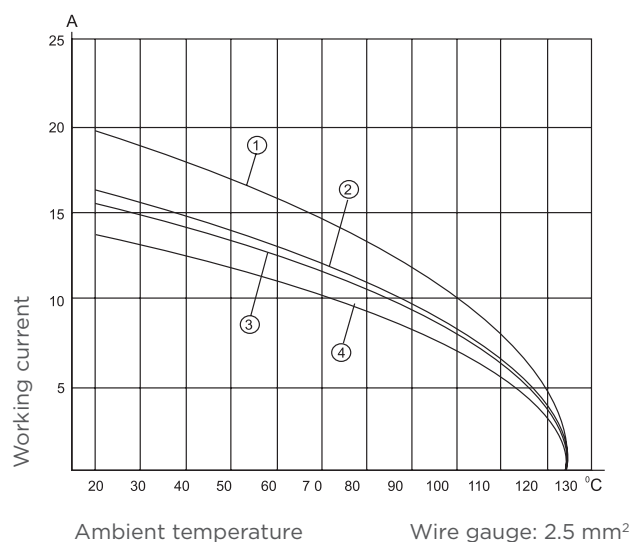
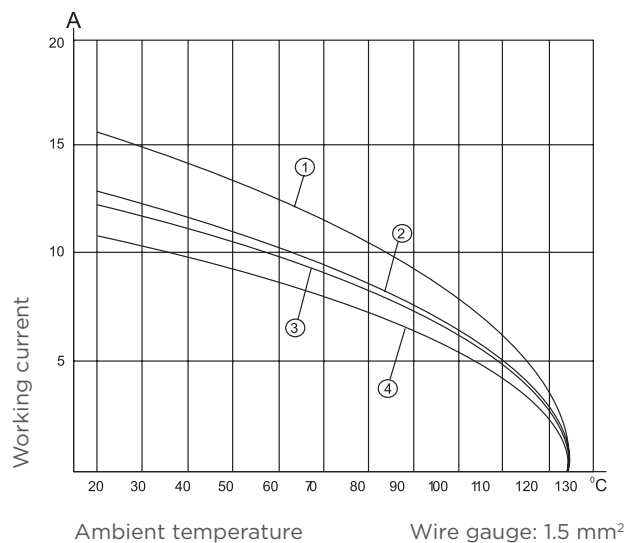
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-4.0mm <sup>2</sup>
- AWG .....	26-12

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 HDC-HEE-010
- 2 HDC-HEE-018
- 3 HDC-HEE-032
- 4 HDC-HEE-046

## HEEE technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	20,32,40,48,64,72,80(2x40)
.....	96(2x48),128(2x64), 144(2x72) + PE

### INSERTS

Working current .....	16A max
(See current carrying capacity)	
Working voltage .....	
HEEE-20,32,48,72,96,144 .....	400V
HEEE-40,64,80,128 .....	500V
Test voltage urms .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

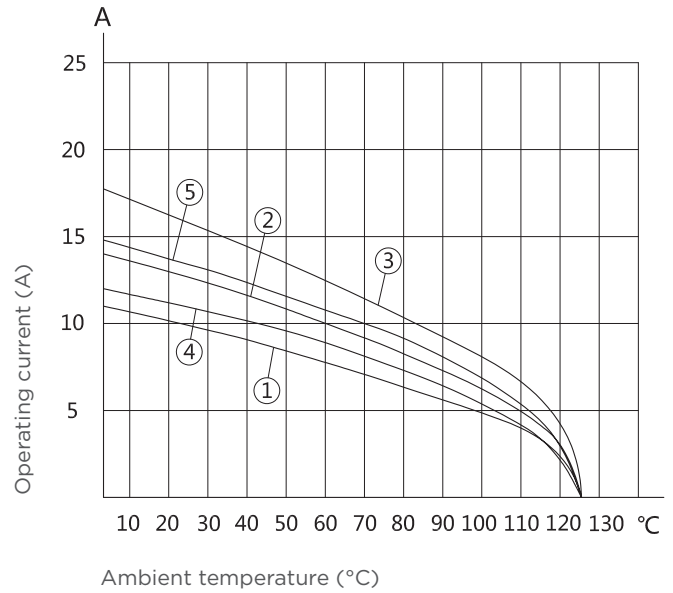
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 5m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-4.0mm <sup>2</sup>
- AWG .....	26-12

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element .....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals  
Control and test procedures according to DIN IEC 60512-3.



- 1 HEEE-064 / 1.5 mm<sup>2</sup>
- 2 HEEE-064 / 2.5 mm<sup>2</sup>
- 3 HEEE-064 / 4.0 mm<sup>2</sup>
- 4 HEEE-040 / 1.5 mm<sup>2</sup>
- 5 HEEE-040 / 2.5 mm<sup>2</sup>

# HE-006 inserts

INSERTS FOR H6B HOOD/HOUSING

500V MAX. 16A

6+ (Ⓢ)

Dimension (mm)	Type	Part Number	
		Male insert	Female insert
Screw terminal			
	HE-006-M	T2040062101-000	
	HE-006-F		T2040062201-000
Spring terminal			
	HE-006-MS	T2040063101-000	
	HE-006-FS		T2040063201-000
Crimp terminal (Order crimp contacts separately)			
	HE-006-MC	T2040064101-000	
	HE-006-FC		T2040064201-000
Spring terminal (Two terminals per contact)			
	HE-006-MSS	T2040065101-000	
	HE-006-FSS		T2040065201-000

## 16A Contact

Tech data Material: copper alloy Contact resistance: ≤1mΩ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Stripping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
0.5	20			7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
0.75	18			7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

Distance for contact max. 21mm

Contact arrangement view from termination side

Panel cut-out for inserts for use without hoods/housings

	a	b	c	d
HE	18	33	18	35
HES/HEC	19	34	19	36
HESS	34	49	32	49


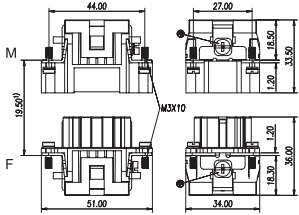
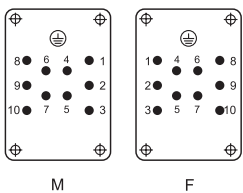
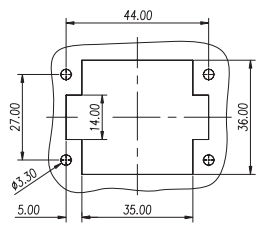


## HEE-010 inserts


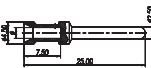

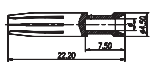
INSERTS FOR H6B HOOD/HOUSING

500V MAX. 16A

10+ ⊕

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HEE-010-M	T2050102101-000	
		HEE-010-F		T2050102201-000
<p>Contact arrangement view from termination side</p> 	<p>Panel cut out for inserts for use without hoods/housings</p> 			

## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		<b>CEF/Female</b> 		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
0.5	20			7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
0.75	18			7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000




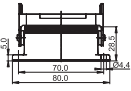

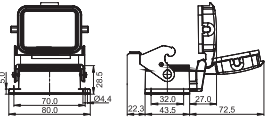

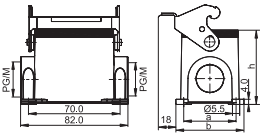

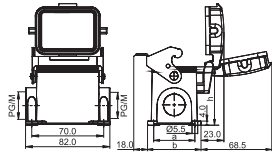
## H6B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
<b>Hood: Side entry</b>										
 <p>Low construction</p> 	M20 M25	PG16 PG21	H6B-TS-PG16 H6B-TS-PG21 H6B-TS-M20 H6B-TS-M25	T1310060116-000 T1310060121-000 T1310060120-000 T1310060125-000						
 <p>High construction</p> 	M20 M25 M32	PG21 PG29	H6B-TSH-PG21 H6B-TSH-PG29 H6B-TSH-M20 H6B-TSH-M25 H6B-TSH-M32	T1330060121-000 T1330060129-000 T1330060120-000 T1330060125-000 T1330060132-000						
<b>Hood: Top entry</b>										
 <p>Low construction</p> 	M20 M25	PG16 PG21	H6B-TG-PG16 H6B-TG-PG21 H6B-TG-M20 H6B-TG-M25	T1320060116-000 T1320060121-000 T1320060120-000 T1320060125-000						
 <p>High construction</p> 	M20 M25 M32	PG21 PG29	H6B-TGH-PG21 H6B-TGH-PG29 H6B-TGH-M20 H6B-TGH-M25 H6B-TGH-M32	T1340060121-000 T1340060129-000 T1340060120-000 T1340060125-000 T1340060132-000						
<b>Cable-to-cable hood</b>										
  <table border="1" data-bbox="526 1377 750 1467"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M20 M25  M20 M25 M32	PG16  PG21 PG29	H6B-TBFS-PG16 H6B-TBFS-M20 H6B-TBFS-M25  H6B-TBFHS-PG21 H6B-TBFHS-PG29 H6B-TBFHS-M20 H6B-TBFHS-M25 H6B-TBFHS-M32	T1730062116-000 T1730062120-000 T1730062125-000  T1770062121-000 T1770062129-000 T1770062120-000 T1770062125-000 T1770062132-000
Construction	H									
Low	62.5									
High	74.5									
<b>Protection covers for hoods</b>										
 			H6B-KDTP	T1010061400-000						

## H6B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number												
Bulkhead mounted																	
				H6B-AGS	T1500062000-000												
	With protection cover 			H6B-ADS	T1510062100-000												
Surface mounted: Side entry																	
	 <table border="1" data-bbox="347 1144 703 1238"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	56	Hight	45	57	74	Low construction 1 Side entry M20 M25 2 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29 PG21 PG29 PG21 PG29 PG21 PG29	H6B-SGRS-PG16 H6B-SGRS-PG21 H6B-SGRS-M20 H6B-SGRS-M25 H6B-SGRS-2PG16 H6B-SGRS-2PG21 H6B-SGRS-2M20 H6B-SGRS-2M25 H6B-SGRHS-PG21 H6B-SGRHS-PG29 H6B-SGRHS-M25 H6B-SGRHS-M32 H6B-SGRHS-2PG21 H6B-SGRHS-2PG29 H6B-SGRHS-2M25 H6B-SGRHS-2M32	T1610062116-000 T1610062121-000 T1610062120-000 T1610062125-000 T1610062216-000 T1610062221-000 T1610062220-000 T1610062225-000 T1650062121-000 T1650062129-000 T1650062125-000 T1650062132-000 T1650062221-000 T1650062229-000 T1650062225-000 T1650062232-000
Construction	A	B	H														
Low	40	52	56														
Hight	45	57	74														
	With protection cover  <table border="1" data-bbox="347 1563 703 1657"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	56	Hight	45	57	74	Low construction 1 Side entry M20 M25 2 Side entry M20 M25 High construction 1 Side entry M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29 PG21 PG29 PG21 PG29	H6B-SDRS-PG16 H6B-SDRS-PG21 H6B-SDRS-M20 H6B-SDRS-M25 H6B-SDRS-2PG16 H6B-SDRS-2PG21 H6B-SDRS-2M20 H6B-SDRS-2M25 H6B-SDRHS-PG21 H6B-SDRHS-PG29 H6B-SDRHS-M25 H6B-SDRHS-M32 H6B-SDRHS-2PG21 H6B-SDRHS-2PG29 H6B-SDRHS-2M25 H6B-SDRHS-2M32	T1620062116-000 T1620062121-000 T1620062120-000 T1620062125-000 T1620062216-000 T1620062221-000 T1620062220-000 T1620062225-000 T1660062121-000 T1660062129-000 T1660062125-000 T1660062132-000 T1660062221-000 T1660062229-000 T1660062225-000 T1660062232-000
Construction	A	B	H														
Low	40	52	56														
Hight	45	57	74														

## HIP.6/16, HIP-K.6/16, EMV-K.6/16 housings


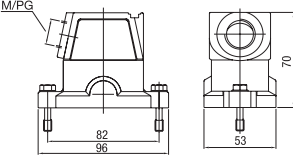

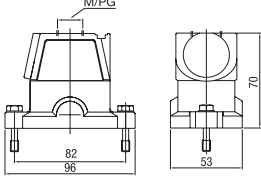

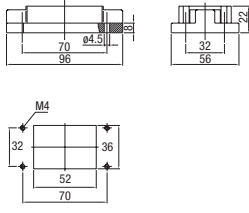

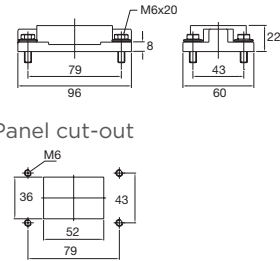
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry</b>					
		M25	16	<b>HIP</b> HIP.6/16.STS.1.16.G HIP.6/16.STS.1.M25.G	1-1102631-5 0-1106425-2
		M25	16 21	<b>HIP-K</b> HIP-K.6/16.STS.1.16.G HIP-K.6/16.STS.1.21.G HIP-K.6/16.STS.1.M25.G	2-1102631-5 2-1102633-5 0-1106425-4
		M25	16	<b>EMV-K</b> EMV-K.6/16.STS.1.16.G EMV-K.6/16.STS.1.M25.G	4-1102704-5 0-1106416-4
<b>Hood: Top entry</b>					
		M32	16	<b>HIP</b> HIP.6/16.STO.1.16.G HIP.6/16.STO.1.M32.G	1-1102635-5 0-1106425-1
		M25 M32	16 21	<b>HIP-K</b> HIP-K.6/16.STO.1.16.G HIP-K.6/16.STO.1.21.G HIP-K.6/16.STO.1.M25.G HIP-K.6/16.STO.1.M32.G	2-1102635-5 2-1102637-5 0-1106425-6 0-1106425-3
		M32	13 16 21	<b>EMV-K</b> EMV-K.6/16.STO.1.13.G EMV-K.6/16.STO.1.16.G EMV-K.6/16.STO.1.21.G EMV-K.6/16.STO.1.M32.G	0-1108719-1 4-1102706-5 4-1102707-5 0-1106416-3
<b>Surface mounted housing: Bottom entry</b>					
				<b>HIP</b> HIP.6/16.AG	1-1102638-5
				<b>HIP-K</b> HIP-K.6/16.AG	2-1102638-5
				<b>EMV-K</b> EMV-K.6/16.AG	4-1102710-5
	 <p>Panel cut-out</p>			<b>HIP</b> HIP.6/16.AG.M6	1-1102606-5
				<b>HIP-K</b> HIP-K.6/16.AG.M6	2-1102606-5
				<b>EMV-K</b> EMV-K.6/16.AG.M6	4-1102712-5



## HIP.6/16, HIP-K.6/16, EMV-K.6/16 housings


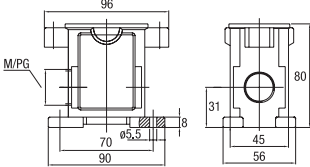
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h


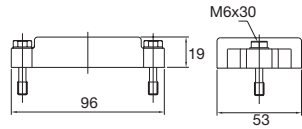
**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Surface mounted housing: Side entry</b>					
		2xM32	16 2x16	<b>HIP</b> HIP.6/16.SG.1.16.G HIP.6/16.SG.2.16.G HIP.6/16.SG.2.M32.G	1-1102604-5 1-1102605-5 0-1106424-1
		2xM25 2xM32	16 2x16	<b>HIP-K</b> HIP-K.6/16.SG.1.16.G HIP-K.6/16.SG.2.16.G HIP-K.6/16.SG.2.M25.G HIP-K.6/16.SG.2.M32.G	2-1102604-5 2-1102605-5 0-1102942-1 0-1106424-2
		2xM25 2xM32	16 2x16	<b>EMV-K</b> EMV-K.6/16.SG.1.16.G EMV-K.6/16.SG.2.16.G EMV-K.6/16.SG.2.M25.G EMV-K.6/16.SG.2.M32.G	5-1102708-5 5-1102709-5 0-1106413-3 0-1106415-2

### Protective covers for housings




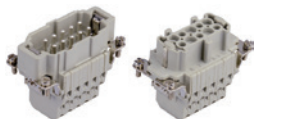
				<b>HIP</b> HIP/EMV.6/16.SKB	3-1106201-5
				<b>HIP-K</b> HIP-K/EMV-K.6/16.SKB	4-1106201-5
				<b>EMV-K</b> HIP-K/EMV-K.6/16.SKB	4-1106201-5

# HE-010 inserts


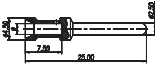

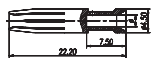
INSERTS FOR H10B HOOD/HOUSING

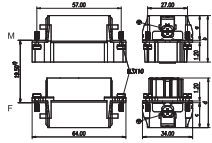
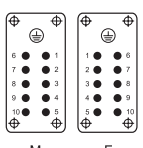
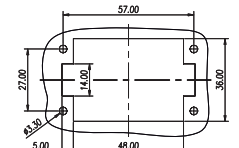
500V MAX. 16A

10+ (⊕)

Dimension (mm)	Type	Part Number	
		Male insert	Female insert
Screw terminal			
	HE-010-M	T2040102101-000	
	HE-010-F		T2040102201-000
Spring terminal			
	HE-010-MS	T2040103101-000	
	HE-010-FS		T2040103201-000
Crimp terminal (Order crimp contacts separately)			
	HE-010-MC	T2040104101-000	
	HE-010-FC		T2040104201-000
Spring terminal (Two terminals per contact)			
	HE-010-MSS	T2040105101-000	
	HE-010-FSS		T2040105201-000

## 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated			
		mm <sup>2</sup>	AWG		mm	Type	Part Number	Type	Part Number	
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000		
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000		
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000		
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000		
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000		
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000		
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000		
			16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
				0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
				0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000		
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000		
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000		
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000		

Distance for contact max. 21mm	Contact arrangement view from termination side	Panel cut-out for inserts for use without hoods/housings																				
 <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>HE</td> <td>18</td> <td>33</td> <td>18</td> <td>35</td> </tr> <tr> <td>HES/HEC</td> <td>19</td> <td>34</td> <td>19</td> <td>36</td> </tr> <tr> <td>HESS</td> <td>34</td> <td>49</td> <td>32</td> <td>49</td> </tr> </tbody> </table>		a	b	c	d	HE	18	33	18	35	HES/HEC	19	34	19	36	HESS	34	49	32	49		
	a	b	c	d																		
HE	18	33	18	35																		
HES/HEC	19	34	19	36																		
HESS	34	49	32	49																		


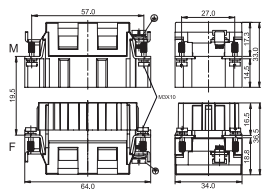
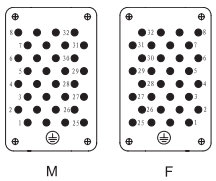
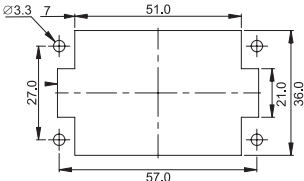


## HEEE-032 inserts


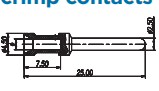
INSERTS FOR H10B HOOD/HOUSING

400V MAX. 16A

32+ 


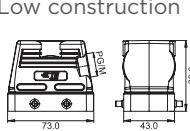

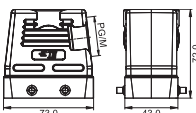

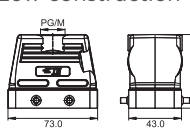

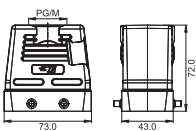

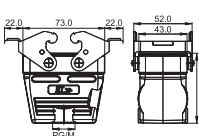

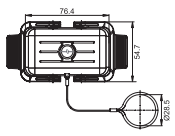

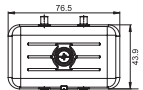
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HEEE-032-M	T2050323101-000	
		HEEE-032-F		T2050323201-000
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 			

### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000


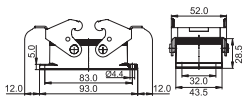

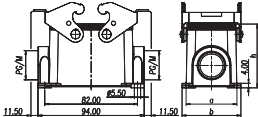

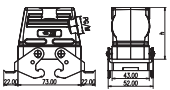

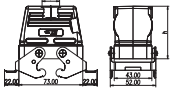



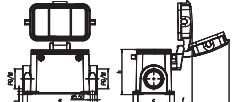
## H10B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
<b>Hood: Side entry</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Low construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25</p> </div> </div>		PG16 PG21	H10B-TS-PG16 H10B-TS-PG21 H10B-TS-M20 H10B-TS-M25	T1210100116-000 T1210100121-000 T1210100120-000 T1210100125-000						
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>High construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25 M32</p> </div> </div>		PG21 PG29	H10B-TSH-PG21 H10B-TSH-PG29 H10B-TSH-M20 H10B-TSH-M25 H10B-TSH-M32	T1230100121-000 T1230100129-000 T1230100120-000 T1230100125-000 T1230100132-000						
<b>Hood: Top entry</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Low construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25</p> </div> </div>		PG16 PG21	H10B-TG-PG16 H10B-TG-PG21 H10B-TG-M20 H10B-TG-M25	T1220100116-000 T1220100121-000 T1220100120-000 T1220100125-000						
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>High construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25 M32</p> </div> </div>		PG21 PG29	H10B-TGH-PG21 H10B-TGH-PG29 H10B-TGH-M20 H10B-TGH-M25 H10B-TGH-M32	T1240100121-000 T1240100129-000 T1240100120-000 T1240100125-000 T1240100132-000						
<b>Cable-to-cable hood</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">  </div> <div style="margin-left: 10px;"> <table border="1"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table> </div> </div>	Construction	H	Low	62.5	High	74.5	<p>Low construction</p> <p>M20 M25</p> <p>High construction</p> <p>M25 M32</p>	PG16  PG21 PG29	<p>H10B-TBFS-PG16 H10B-TBFS-M20 H10B-TBFS-M25</p> <p>H10B-TBFHS-PG21 H10B-TBFHS-M25 H10B-TBFHS-M32</p>	<p>T1710101116-000 T1710101120-000 T1710101125-000</p> <p>T1750101121-000 T1750101129-000 T1750101125-000 T1750101132-000</p>
Construction	H									
Low	62.5									
High	74.5									
<b>Protection covers for hoods</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">  </div> </div>			H10B-KDTP	T1010101400-000						
<b>Housing protection cover</b>										
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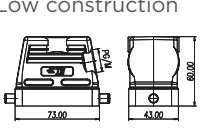

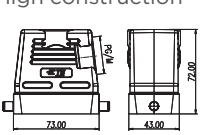

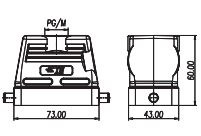

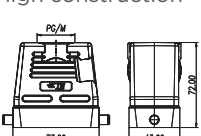

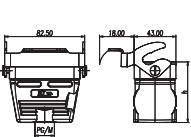

## H10B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number														
Bulkhead mounted																			
				H10B-AGS	T1410101000-000														
Surface mounted: Side entry																			
		1 Side entry Low construction	M20	PG16	H10B-SGRS-PG16	T1440101116-000													
			M25	PG21	H10B-SGRS-PG21	T1440101121-000													
			M20	PG16	H10B-SGRS-M20	T1440101120-000													
			M25	PG21	H10B-SGRS-M25	T1440101125-000													
			M20	PG16	H10B-SGRS-2PG16	T1440101216-000													
			M25	PG21	H10B-SGRS-2PG21	T1440101221-000													
		1 Side entry High construction	M20	PG16	H10B-SGRS-2M20	T1440101220-000													
			M25	PG21	H10B-SGRS-2M25	T1440101225-000													
			M25	PG21	H10B-SGRHS-PG21	T1470101121-000													
			M32	PG29	H10B-SGRHS-PG29	T1470101129-000													
			M25	PG21	H10B-SGRHS-M25	T1470101125-000													
			M32	PG29	H10B-SGRHS-M32	T1470101132-000													
Side entry housing with two levers																			
		Low construction	M20	PG16	H10B-TSBS-PG16	T1250103116-000													
			M25	PG21	H10B-TSBS-PG21	T1250103121-000													
			M20	PG21	H10B-TSBS-M20	T1250103120-000													
			M25	PG29	H10B-TSBS-M25	T1250103125-000													
			High construction	Construction	H	Low	60	H10B-TSBHS-PG21	T1270103121-000										
						Hight	72	H10B-TSBHS-PG29	T1270103129-000										
M25	PG21	H10B-TSBHS-M25				T1270103125-000													
M32	PG29	H10B-TSBHS-M32	T1270103132-000																
Top entry housing with two levers																			
		Low construction	M20	PG16	H10B-TGBS-PG16	T1260103116-000													
			M25	PG21	H10B-TGBS-PG21	T1260103121-000													
			M20	PG21	H10B-TGBS-M20	T1260103120-000													
			M25	PG29	H10B-TGBS-M25	T1260103125-000													
			High construction	Construction	H	Low	60	H10B-TGBHS-PG21	T1280103121-000										
						Hight	72	H10B-TGBHS-PG29	T1280103129-000										
M25	PG21	H10B-TGBHS-M25				T1280103125-000													
M32	PG29	H10B-TGBHS-M32	T1280103132-000																
Bulkhead mounted with 4 bolts																			
	With protection cover		1 Side entry Low construction	PG16	H10B-AD-BO	T1430100000-000													
		1 Side entry High construction			PG21	M20	H10B-SDR-BO-PG16	T1460100116-000											
						M25	H10B-SDR-BO-PG21	T1460100121-000											
						M20	H10B-SDR-BO-M20	T1460100120-000											
						M25	H10B-SDR-BO-M25	T1460100125-000											
						PG16	M20	H10B-SDR-BO-2PG16	T1460100216-000										
				M25			H10B-SDR-BO-2PG21	T1460100221-000											
	PG21	M20		H10B-SDR-BO-2M20	T1460100220-000														
		M25		H10B-SDR-BO-2M25	T1460100225-000														
		PG21		M25	H10B-SDRH-BO-PG21	T1490100121-000													
	M32			H10B-SDRH-BO-PG29	T1490100129-000														
	PG21			M25	H10B-SDRH-BO-M25	T1490100125-000													
PG29			M25	H10B-SDRH-BO-M32	T1490100132-000														
			M25	H10B-SDRH-BO-2PG21	T1490100221-000														
	M32		H10B-SDRH-BO-2PG29	T1490100229-000															
Bulkhead mounted with 4 bolts																			
		Low construction	M20	PG16	H10B-SDRH-BO-2M20	T1490100220-000													
			M25	PG21	H10B-SDRH-BO-2M25	T1490100225-000													
			High construction	Construction	A	B	C	D	F	G	H	Low	82	94	40	52	22	67	54
												Hight	82	94	45	57	20	65	74
												M25	PG21	H10B-SDRH-BO-2M32	T1490100232-000				

# H10B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
<b>Hood: Side entry</b>										
		M20 M25	PG16 PG21	H10B-TS-RO-PG16 H10B-TS-RO-PG21 H10B-TS-RO-M20 H10B-TS-RO-M25 T1310100116-000 T1310100121-000 T1310100120-000 T1310100125-000						
		M20 M25 M32	PG21 PG29	H10B-TSH-RO-PG21 H10B-TSH-RO-PG29 H10B-TSH-RO-M20 H10B-TSH-RO-M25 H10B-TSH-RO-M32 T1330100121-000 T1330100129-000 T1330100120-000 T1330100125-000 T1330100132-000						
<b>Hood: Top entry</b>										
		M20 M25	PG16 PG21	H10B-TG-RO-PG16 H10B-TG-RO-PG21 H10B-TG-RO-M20 H10B-TG-RO-M25 T1320100116-000 T1320100121-000 T1320100120-000 T1320100125-000						
		M20 M25 M32	PG21 PG29	H10B-TGH-RO-PG21 H10B-TGH-RO-PG29 H10B-TGH-RO-M20 H10B-TGH-RO-M25 H10B-TGH-RO-M32 T1340100121-000 T1340100129-000 T1340100120-000 T1340100125-000 T1340100132-000						
<b>Cable-to-cable hood</b>										
	 <table border="1" data-bbox="534 1400 750 1500"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>Hight</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	Hight	74.5	M20 M25  M25 M32	PG16  PG21 PG29	H10B-TBF-LB-PG16 H10B-TBF-LB-M20 H10B-TBF-LB-M25 H10B-TBFH-LB-PG21 H10B-TBFH-LB-PG29 H10B-TBFH-LB-M25 H10B-TBFH-LB-M32 T1730103116-000 T1730103120-000 T1730103125-000 T1770103121-000 T1770103129-000 T1770103125-000 T1770103132-000
Construction	H									
Low	62.5									
Hight	74.5									
<b>Protection covers for hoods</b>										
				H10B-KDTP-LB T1010101500-000						



# H10B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number												
Bulkhead mounted																	
				H10B-AG-LB	T1500103000-000												
	With protection cover 			H10B-AD-LB H10B-ADM-LB	T1510103000-000 T1510103001-000												
Surface mounted: Side entry																	
	 <table border="1"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>54</td> </tr> <tr> <td>Hight</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	54	Hight	45	57	74	1 Side entry Low construction M20 M25 2 Side entry M20 M25 High construction M25 M32 1 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H10B-SGR-LB-PG16 H10B-SGR-LB-PG21 H10B-SGR-LB-M20 H10B-SGR-LB-M25 H10B-SGR-LB-2PG16 H10B-SGR-LB-2PG21 H10B-SGR-LB-2M20 H10B-SGR-LB-2M25 H10B-SGRH-LB-PG21 H10B-SGRH-LB-PG29 H10B-SGRH-LB-M25 H10B-SGRH-LB-M32 H10B-SGRH-LB-2PG21 H10B-SGRH-LB-2PG29 H10B-SGRH-LB-2M25 H10B-SGRH-LB-2M32	T1610103116-000 T1610103121-000 T1610103120-000 T1610103125-000 T1610103216-000 T1610103221-000 T1610103220-000 T1610103225-000 T1650103121-000 T1650103129-000 T1650103125-000 T1650103132-000 T1650103221-000 T1650103229-000 T1650103225-000 T1650103232-000
Construction	A	B	H														
Low	40	52	54														
Hight	45	57	74														
	With protection cover  <table border="1"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>54</td> </tr> <tr> <td>Hight</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	54	Hight	45	57	74	1 Side entry Low construction M20 M25 2 Side entry M20 M25 High construction M25 M32 1 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29	H10B-SDR-LB-PG16 H10B-SDR-LB-PG21 H10B-SDR-LB-M20 H10B-SDR-LB-M25 H10B-SDR-LB-2PG16 H10B-SDR-LB-2PG21 H10B-SDR-LB-2M20 H10B-SDR-LB-2M25 H10B-SDRH-LB-PG21 H10B-SDRH-LB-PG29 H10B-SDRH-LB-M25 H10B-SDRH-LB-M32 H10B-SDRH-LB-2PG21 H10B-SDRH-LB-2PG29 H10B-SDRH-LB-2M25 H10B-SDRH-LB-2M32	T1620103116-000 T1620103121-000 T1620103120-000 T1620103125-000 T1620103216-000 T1620103221-000 T1620103220-000 T1620103225-000 T1660103121-000 T1660103129-000 T1660103125-000 T1660103132-000 T1660103221-000 T1660103229-000 T1660103225-000 T1660103232-000
Construction	A	B	H														
Low	40	52	54														
Hight	45	57	74														



## HIP.10/24, HIP-K.10/24, EMV-K.10/24 housings


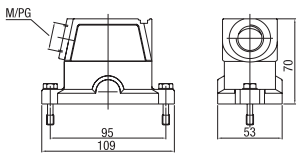

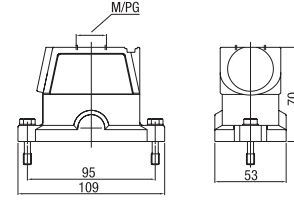

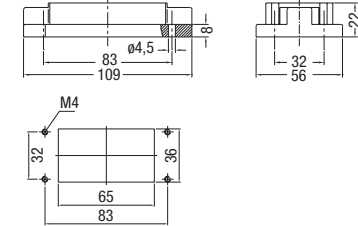
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry, Standard construction</b>					
		M25	16 21	<b>HIP</b> HIP.10/24.STS.1.16.G HIP.10/24.STS.1.21.G HIP.10/24.STS.1.M25.G  <b>HIP-K</b> HIP-K.10/24.STS.1.21.G HIP-K.10/24.STS.1.M25.G HIP-K.10/24.STS.1.M32.G	1-1102640-5 1-1102642-5 0-1106436-2
		M25 M32	21	<b>HIP-K</b> HIP-K.10/24.STS.1.21.G HIP-K.10/24.STS.1.M25.G HIP-K.10/24.STS.1.M32.G	2-1102642-5 0-1106436-4 0-1106436-6
		M25 M32	21	<b>EMV-K</b> EMV-K.10/24.STS.1.21.G EMV-K.10/24.STS.1.M25.G EMV-K.10/24.STS.1.M32.G	4-1102714-5 0-1106427-3 1-1106427-0
<b>Hood: Top entry</b>					
		M25	16 21	<b>HIP</b> HIP.10/24.STO.1.16.G HIP.10/24.STO.1.21.G HIP.10/24.STO.1.M25.G	1-1102644-5 1-1102646-5 0-1106436-1
		M25 M32	16	<b>HIP-K</b> HIP-K.10/24.STO.1.16.G HIP-K.10/24.STO.1.M25.G HIP-K.10/24.STO.1.M32.G	2-1102644-5 0-1106436-3 0-1106436-5
		M25	21	<b>EMV-K</b> EMV-K.10/24.STO.1.21.G EMV-K.10/24.STO.1.M25.G	4-1102715-5 0-1106427-4
<b>Surface mounted housing: Bottom entry</b>					
				<b>HIP</b> HIP.10/24.AG  <b>HIP-K</b> HIP-K.10/24.AG  <b>EMV-K</b> EMV-K.10/24.AG	1-1102647-5  2-1102647-5  4-1102718-5

## HIP.10/24, HIP-K.10/24, EMV-K.10/24 housings


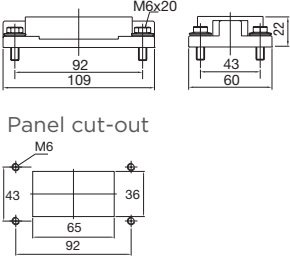

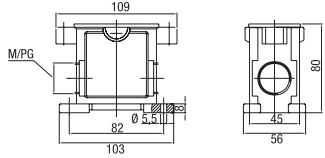

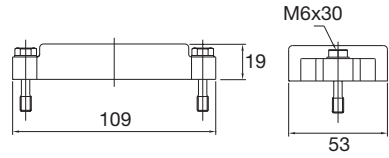
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K



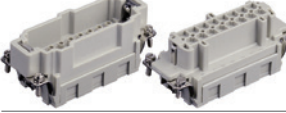

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Bottom entry</b>				
 			<b>HIP</b> HIP.10/24.AG.M6  <b>HIP-K</b> HIP-K.10/24.AG.M6  <b>EMV-K</b> EMV-K.10/24.AG.M6	1-1102612-5  2-1102612-5  4-1102720-5
<b>Surface mounted housing: Side entry</b>				
 	2xM32	21 2x21	<b>HIP</b> HIP.10/24.SG.1.21.G HIP.10/24.SG.2.21.G HIP.10/24.SG.2.M32.G  <b>HIP-K</b> HIP-K.10/24.SG.1.21.G HIP-K.10/24.SG.2.21.G  <b>EMV-K</b> EMV-K.10/24.SG.1.21.G EMV-K.10/24.SG.2.21.G EMV-K.10/24.SG.2.M32.G	1-1102610-5 1-1102611-5 0-1106435-1  5-1102610-5 2-1102611-5  5-1102716-5 4-1102717-5 0-1106426-2
<b>Protective covers for hoods and housing</b>				
 			<b>HIP</b> HIP/EMV.10/24.SKB  <b>HIP-K/EMV-K</b> HIP-K/EMV-K.10/24.SKB	3-1106202-5  4-1106202-5

## HE-016 inserts


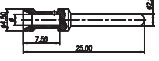

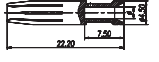
INSERTS FOR H16B HOOD/HOUSING

500V MAX. 16A

16+ 

Dimension (mm)	Type	Part Number	
		Male insert	Female insert
Screw terminal			
	HE-016-M	T2040162101-000	
	HE-016-F		T2040162201-000
Spring terminal			
	HE-016-MS	T2040163101-000	
	HE-016-FS		T2040163201-000
Crimp terminal (Order crimp contacts separately)			
	HE-016-MC	T2040164101-000	
	HE-016-FC		T2040164201-000
Spring terminal (Two terminals per contact)			
	HE-016-MSS	T2040165101-000	
	HE-016-FSS		T2040165201-000

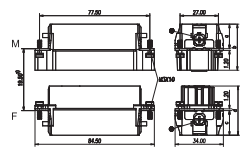
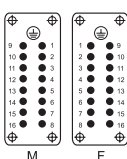
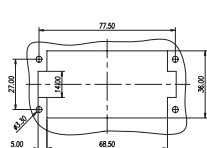
### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		mm	Type	Part Number	Type
CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000		
1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000		
2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000		
4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000		

Distance for contact max. 21mm

Contact arrangement view  
from termination side

Panel cut-out for inserts for use  
without hoods/housings


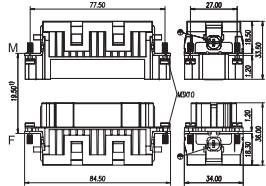
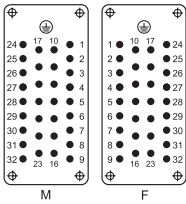
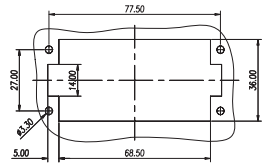
 <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>HE</td> <td>18</td> <td>33</td> <td>18</td> <td>35</td> </tr> <tr> <td>HES/HEC</td> <td>19</td> <td>34</td> <td>19</td> <td>36</td> </tr> <tr> <td>HESS</td> <td>34</td> <td>49</td> <td>32</td> <td>49</td> </tr> </tbody> </table>		a	b	c	d	HE	18	33	18	35	HES/HEC	19	34	19	36	HESS	34	49	32	49		
	a	b	c	d																		
HE	18	33	18	35																		
HES/HEC	19	34	19	36																		
HESS	34	49	32	49																		

## HEE-032 inserts


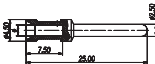

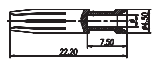
INSERTS FOR H16B HOOD/HOUSING

500V MAX. 16A

32+Ⓢ

Dimensions (mm)	Type	Part Number	
		Male insert	Female insert
Crimp terminal (order crimp contacts separately)			
		HEE-032-M	T2050322101-000
		HEE-032-F	T2050322201-000
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 		

## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 	<b>16A Female crimp contacts</b> 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

# HEEE-040 inserts

INSERTS FOR H16B HOOD/HOUSING

500V MAX. 16A

40+

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HEEE-040-M	T2050402101-000	
		HEEE-040-F		T2050402201-000
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 			

## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 	<b>16A Female crimp contacts</b> 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000


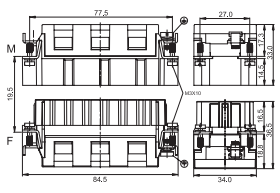
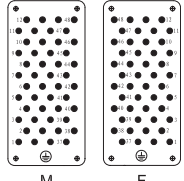
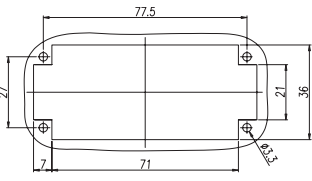


# HEEE-048 inserts


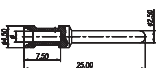

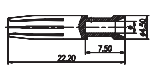
INSERTS FOR H16B HOOD/HOUSING

400V MAX. 16A

48+


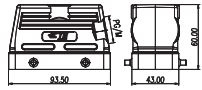

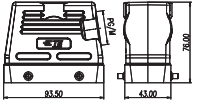

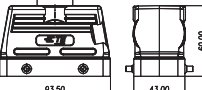



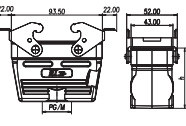

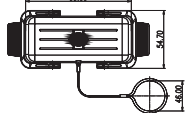

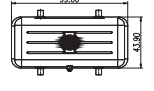
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HEEE-048-F	T2050482101-000	
		HEEE-048-F		T2050482201-000
Contact arrangement view from termination side	Panel cut out for inserts for use without hoods/housings			
				

## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Stripping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 	<b>16A Female crimp contacts</b> 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000


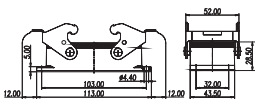

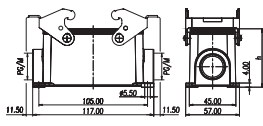

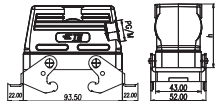

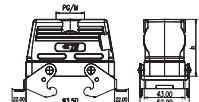

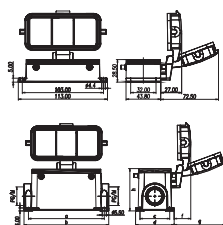
## H16B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	Low construction 	M20 M25 M32	PG16 PG21	H16B-TS-PG16 H16B-TS-PG21 H16B-TS-M20 H16B-TS-M25 H16B-TS-M32	T1210160116-000 T1210160121-000 T1210160120-000 T1210160125-000 T1210160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TSH-PG21 H16B-TSH-PG29 H16B-TSH-M25 H16B-TSH-M32 H16B-TSH-M40	T1230160121-000 T1230160129-000 T1230060125-000 T1230160132-000 T1230160140-000						
Hood: Top entry											
	Low construction 	M25 M32	PG16 PG21	H16B-TG-PG16 H16B-TG-PG21 H16B-TG-M25 H16B-TG-M32	T1220160116-000 T1220160121-000 T1220160125-000 T1220160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TGH-PG21 H16B-TGH-PG29 H16B-TGH-M25 H16B-TGH-M32 H16B-TGH-M40	T1240160121-000 T1240160129-000 T1240160125-000 T1240160132-000 T1240160140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="533 1350 738 1435"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M25 M32	PG21	H16B-TBFS-PG21 H16B-TBFS-M25 H16B-TBFS-M32	T1710161121-000 T1710161125-000 T1710161132-000
Construction	H										
Low	62.5										
High	74.5										
		M25 M32 M40	PG21 PG29	H16B-TBFHS-PG21 H16B-TBFHS-PG29 H16B-TBFHS-M25 H16B-TBFHS-M32 H16B-TBFHS-M40	T1750161121-000 T1750161129-000 T1750161125-000 T1750161132-000 T1750161140-000						
Protection covers for hoods											
				H16B-KDTP	T1010161400-000						
Housing protection cover											
				H16B-KDBP	T1010162100-000						

## H16B with 2 levers on the hoods/housings


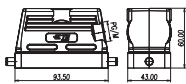

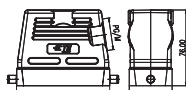

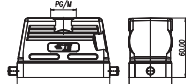

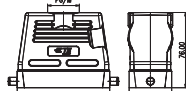

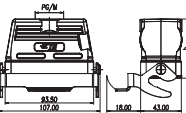

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number																									
Bulkhead mounted																														
				H16B-AGS	T1410161000-000																									
Surface mounted: Side entry																														
	 <table border="1" data-bbox="319 862 534 952"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M25 M25 M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H16B-SGRS-PG21 H16B-SGRS-M25 H16B-SGRS-2PG21 H16B-SGRS-2M25 H16B-SGRHS-PG21 H16B-SGRHS-PG29 H16B-SGRHS-M25 H16B-SGRHS-M32 H16B-SGRHS-2PG21 H16B-SGRHS-2PG29 H16B-SGRHS-2M25 H16B-SGRHS-2M32	T1440161121-000 T1440161125-000 T1440161221-000 T1440161225-000 T1470161121-000 T1470161129-000 T1470161125-000 T1470161132-000 T1470161221-000 T1470161229-000 T1470161225-000 T1470161232-000																		
Construction	H																													
Low	56																													
High	81																													
Side entry housing with two levers																														
	 <table border="1" data-bbox="319 1187 534 1288"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>76</td> </tr> </table>	Construction	H	Low	60	High	76	Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H16B-TSBS-PG16 H16B-TSBS-PG21 H16B-TSBS-M20 H16B-TSBS-M25 H16B-TSBHS-PG21 H16B-TSBHS-PG29 H16B-TSBHS-M25 H16B-TSBHS-M32	T1250163116-000 T1250163121-000 T1250163120-000 T1250163125-000 T1270163121-000 T1270163129-000 T1270163125-000 T1270163132-000																			
Construction	H																													
Low	60																													
High	76																													
Top entry housing with two levers																														
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Construction	H																													
Low	60																													
High	76																													
Bulkhead mounted with 4 bolts																														
	With protection cover  <table border="1" data-bbox="311 1937 694 2016"> <tr> <td>Construction</td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>F</td> <td>G</td> <td>H</td> </tr> <tr> <td>Low</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>56</td> </tr> <tr> <td>High</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>81</td> </tr> </table>	Construction	A	B	C	D	F	G	H	Low	105	117	45	57	20	65	56	High	105	117	45	57	20	65	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M25 M25 M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H16B-AD-BO H16B-SDR-BO-PG21 H16B-SDR-BO-M25 H16B-SDR-BO-2PG21 H16B-SDR-BO-2M25 H16B-SDRH-BO-PG21 H16B-SDRH-BO-PG29 H16B-SDRH-BO-M25 H16B-SDRH-BO-M32 H16B-SDRH-BO-2PG21 H16B-SDRH-BO-2PG29 H16B-SDRH-BO-2M25 H16B-SDRH-BO-2M32	T1430160000-000 T1460160121-000 T1460160125-000 T1460160221-000 T1460160225-000 T1490160121-000 T1490160129-000 T1490160125-000 T1490160132-000 T1490160221-000 T1490160229-000 T1490160225-000 T1490160232-000
Construction	A	B	C	D	F	G	H																							
Low	105	117	45	57	20	65	56																							
High	105	117	45	57	20	65	81																							




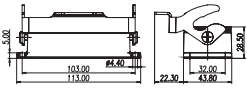

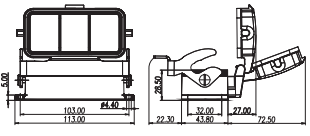

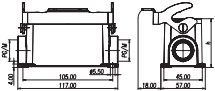

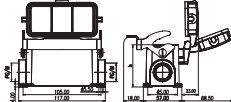
## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	<p>Low construction</p> 	M25 M32	PG21 PG29	H16B-TS-RO-PG21 H16B-TS-RO-PG29 H16B-TS-RO-M25 H16B-TS-RO-M32	T1310160121-000 T1310160129-000 T1310160125-000 T1310160132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H16B-TSH-RO-PG21 H16B-TSH-RO-PG29 H16B-TSH-RO-M25 H16B-TSH-RO-M32 H16B-TSH-RO-M40	T1330160121-000 T1330160129-000 T1330160125-000 T1330160132-000 T1330160140-000						
Hood: Top entry											
	<p>Low construction</p> 	M25 M32	PG21 PG29	H16B-TG-RO-PG21 H16B-TG-RO-PG29 H16B-TG-RO-M25 H16B-TG-RO-M32	T1320160121-000 T1320160129-000 T1320160125-000 T1320160132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H16B-TGH-RO-PG21 H16B-TGH-RO-PG29 H16B-TGH-RO-M25 H16B-TGH-RO-M32 H16B-TGH-RO-M40	T1340160121-000 T1340160129-000 T1340160125-000 T1340160132-000 T1340160140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="533 1352 751 1442"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>Hight</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	Hight	74.5	M25 M32  M25 M32 M40	PG21 PG29  PG21 PG29	H16B-TBF-LB-PG21 H16B-TBF-LB-PG29 H16B-TBF-LB-M25 H16B-TBF-LB-M32  H16B-TBFH-LB-PG21 H16B-TBFH-LB-PG29 H16B-TBFH-LB-M25 H16B-TBFH-LB-M32 H16B-TBFH-LB-M40	T1730163121-000 T1730163129-000 T1730163125-000 T1730163132-000  T1770163121-000 T1770163129-000 T1770163125-000 T1770163132-000 T1770163140-000
Construction	H										
Low	62.5										
Hight	74.5										
Protection covers for hoods											
				H16B-KDTP-LB	T1010161500-000						

## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Bulkhead mounted											
				H16B-AG-LB	T1500163000-000						
	With protection cover 			H16B-AD-LB	T1510163000-000						
Surface mounted: Side entry											
	 <table border="1" data-bbox="327 1153 542 1243"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SGR-LB-PG16 H16B-SGR-LB-PG21 H16B-SGR-LB-M20 H16B-SGR-LB-M25 H16B-SGR-LB-2PG16 H16B-SGR-LB-2PG21 H16B-SGR-LB-2M20 H16B-SGR-LB-2M25 H16B-SGRH-LB-PG21 H16B-SGRH-LB-PG29 H16B-SGRH-LB-M25 H16B-SGRH-LB-M32 H16B-SGRH-LB-2PG21 H16B-SGRH-LB-2PG29 H16B-SGRH-LB-2M25 H16B-SGRH-LB-2M32	T1610163116-000 T1610163121-000 T1610163120-000 T1610163125-000 T1610163216-000 T1610163221-000 T1610163220-000 T1610163225-000 T1650163121-000 T1650163129-000 T1650163125-000 T1650163132-000 T1650163221-000 T1650163229-000 T1650163225-000 T1650163232-000
Construction	H										
Low	56										
High	81										
	With protection cover  <table border="1" data-bbox="327 1568 542 1657"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SDR-LB-PG16 H16B-SDR-LB-PG21 H16B-SDR-LB-M20 H16B-SDR-LB-M25 H16B-SDR-LB-2PG16 H16B-SDR-LB-2PG21 H16B-SDR-LB-2M20 H16B-SDR-LB-2M25 H16B-SDRH-LB-PG21 H16B-SDRH-LB-PG29 H16B-SDRH-LB-M25 H16B-SDRH-LB-M32 H16B-SDRH-LB-2PG21 H16B-SDRH-LB-2PG29 H16B-SDRH-LB-2M25 H16B-SDRH-LB-2M32	T1620163116-000 T1620163121-000 T1620163120-000 T1620163125-000 T1620163216-000 T1620163221-000 T1620163220-000 T1620163225-000 T1660163121-000 T1660163129-000 T1660163125-000 T1660163132-000 T1660163221-000 T1660163229-000 T1660163225-000 T1660163232-000
Construction	H										
Low	56										
High	81										

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings


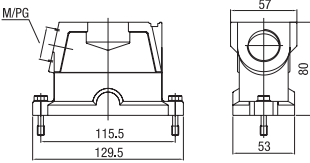

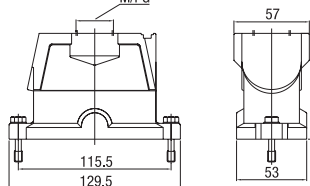

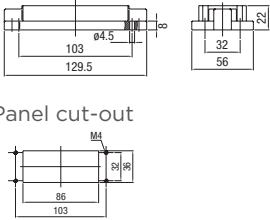

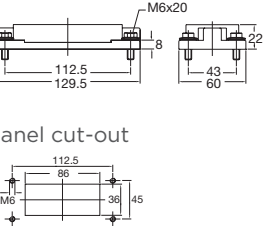
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry</b>					
		M32	21 29	<b>HIP</b> HIP.16/40.STS.1.21.G HIP.16/40.STS.1.29.G HIP.16/40.STS.1.M32.G	1-1102649-5 1-1102651-5 0-1106454-2
		M32	29	<b>HIP-K</b> HIP-K.16/40.STS.1.29.G HIP-K.16/40.STS.1.M32.G	2-1102651-5 0-1106444-2
		M32	29 21	<b>EMV-K</b> EMV-K.16/40.STS.1.29.G EMV-K.16/40.STS.1.M32.G EMV-K.16/40.STS.1.21.G	4-1102723-5 0-1106446-4 4-1102722-5
<b>Hood: Top entry</b>					
		M32	21 29	<b>HIP</b> HIP.16/40.STO.1.21.G HIP.16/40.STO.1.29.G HIP.16/40.STO.1.M32.G	1-1102653-5 1-1102655-5 0-1106454-1
		M32	21 29	<b>HIP-K</b> HIP-K.16/40.STO.2.21.G HIP-K.16/40.STO.1.29.G HIP-K.16/40.STO.1.M32.G	0-1108534-1 2-1102655-5 0-1106444-1
		M32	29	<b>EMV-K</b> EMV-K.16/40.STO.1.29.G EMV-K.16/40.STO.1.M32.G	4-1102725-5 0-1106446-3
<b>Surface mounted housing: Bottom entry</b>					
				<b>HIP</b> HIP.16/40.AG	1-1102656-5
				<b>HIP-K</b> HIP-K.16/40.AG	2-1102656-5
				<b>EMV-K</b> EMV-K.16/40.AG	4-1102728-5
				<b>HIP</b> HIP.16/40.AG.M6	1-1102618-5
				<b>HIP-K</b> HIP-K.16/40.AG.M6	2-1102618-5
				<b>EMV-K</b> EMV-K.16/40.AG.M6	4-1102730-5

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings




**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K





Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Side entry</b>				
	2xM32	21 2x21	<b>HIP</b> HIP.16/40.SG.1.21.G	1-1102616-5
			HIP.16/40.SG.2.21.G	1-1102617-5
			HIP.16/40.SG.2.M32.G	0-1106453-1
	2xM32	21 2x21	<b>HIP-K</b> HIP-K.16/40.SG.1.21.G	5-1102616-5
			HIP-K.16/40.SG.2.21.G	2-1102617-5
			HIP-K.16/40.SG.2.M32.G	0-1106443-1
	2xM32	21 2x21	<b>EMV-K</b> EMV-K.16/40.SG.1.21.Z	4-1102726-5
			EMV-K.16/40.SG.2.21.Z	4-1102727-5
			EMV-K.16/40.SG.2.M32.G	0-1106445-2
				
	<b>Protective covers for housings</b>			
				<b>HIP</b> HIP/EMV.16/40.SKB
<b>HIP-K</b> HIP-K.16/40.SKB				4-1106203-5

## HE-024 inserts


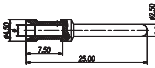

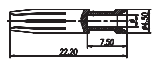
INSERTS FOR H24B HOOD/HOUSING

500V MAX. 16A

24+ ⊕

Dimension (mm)	Type	Part Number	
		Male insert	Female insert
Screw terminal			
	HE-024-M	T2040242101-000	
	HE-024-F		T2040242201-000
Spring terminal			
	HE-024-MS	T2040243101-000	
	HE-024-FS		T2040243201-000
Crimp terminal (Order crimp contacts separately)			
	HE-024-MC	T2040244101-000	
	HE-024-FC		T2040244201-000
Spring terminal (Two terminals per contact)			
	HE-024-MSS	T2040245101-000	
	HE-024-FSS		T2040245201-000

## 16A Contact


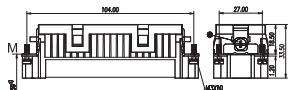
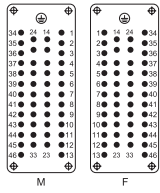
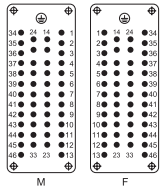
Tech data Material: copper alloy Contact resistance: $\leq 1\text{m}\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip-ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

## HEE-046 inserts


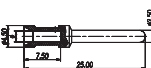

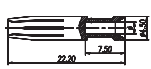
INSERTS FOR H24B HOOD/HOUSING

500V MAX. 16A

46+ 

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HEE-046-M	T2050462101-000	
		HEE-046-F		T2050462201-000
Contact arrangement view from termination side	Panel cut out for inserts for use without hoods/housings			
				

## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000


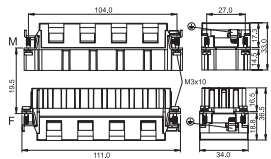
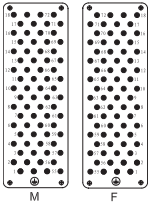
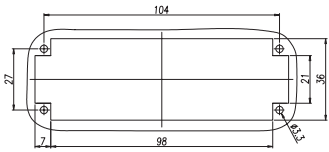


## HEEE-072 inserts


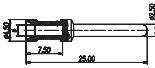


INSERTS FOR H24B HOOD/HOUSING

400V MAX. 16A

72+ 

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HEEE-072-M	T2050722101-000	
		HEEE-072-F		T2050722201-000
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 			


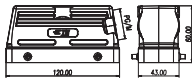

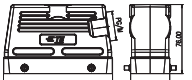

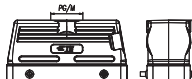

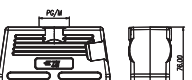

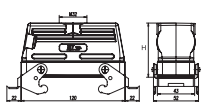

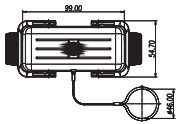

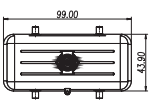
## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 	<b>16A Female crimp contacts</b> 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000




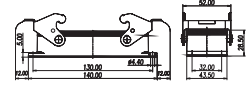

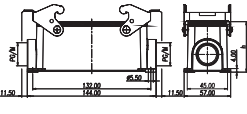

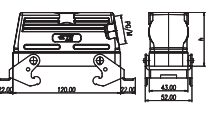

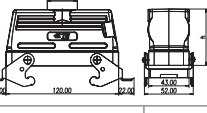

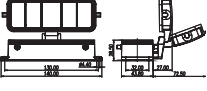

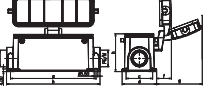
## H24B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	Low construction 	M25 M32	PG16 PG21	H24B-TS-PG16 H24B-TS-PG21 H24B-TS-M25 H24B-TS-M32	T1210240116-000 T1210240121-000 T1210240125-000 T1210240132-000						
	High construction 	M25 M32 M40	PG21 PG29	H24B-TSH-PG21 H24B-TSH-PG29 H24B-TSH-M25 H24B-TSH-M32 H24B-TSH-M40	T1230240121-000 T1230240129-000 T1230240125-000 T1230240132-000 T1230240140-000						
Hood: Top entry											
	Low construction 	M25 M32	PG16 PG21	H24B-TG-PG16 H24B-TG-PG21 H24B-TG-M25 H24B-TG-M32	T1220240116-000 T1220240121-000 T1220240125-000 T1220240132-000						
	High construction 	M25 M32 M40	PG21 PG29	H24B-TGH-PG21 H24B-TGH-PG29 H24B-TGH-M25 H24B-TGH-M32 H24B-TGH-M40	T1240240121-000 T1240240129-000 T1240240125-000 T1240240132-000 T1240240140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="539 1361 754 1451"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>78.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	78.5	M25 M32  M25 M32 M40	PG21  PG21 PG29	H24B-TBFS-PG21 H24B-TBFS-M25 H24B-TBFS-M32  H24B-TBFHS-PG21 H24B-TBFHS-PG29 H24B-TBFHS-M25 H24B-TBFHS-M32 H24B-TBFHS-M40	T1710241121-000 T1710241125-000 T1710241132-000  T1750241121-000 T1750241129-000 T1750241125-000 T1750241132-000 T1750241140-000
Construction	H										
Low	62.5										
High	78.5										
Protection covers for hoods											
				H24B-KDTP	T1010241400-000						
Housing protection cover											
				H24B-KDBP	T1010242100-000						


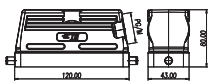

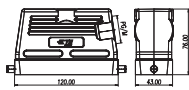

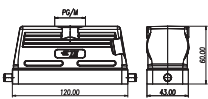

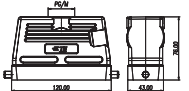

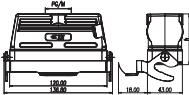

## H24B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number																								
Bulkhead mounted																													
				H24B-AGS	T1410241000-000																								
Surface mounted: Side entry																													
	 <table border="1" data-bbox="319 851 534 952"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>56</td></tr> <tr><td>High</td><td>81</td></tr> </table>	Construction	H	Low	56	High	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M25 M25 M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H24B-SGRS-PG21 H24B-SGRS-M25 H24B-SGRS-2PG21 H24B-SGRS-2M25 H24B-SGRHS-PG21 H24B-SGRHS-PG29 H24B-SGRHS-M25 H24B-SGRHS-M32 H24B-SGRHS-2PG21 H24B-SGRHS-2PG29 H24B-SGRHS-2M25 H24B-SGRHS-2M32	T1440241121-000 T1440241125-000 T1440241221-000 T1440241225-000 T1470241121-000 T1470241129-000 T1470241125-000 T1470241132-000 T1470241221-000 T1470241229-000 T1470241225-000 T1470241232-000																	
Construction	H																												
Low	56																												
High	81																												
Side entry housing with two levers																													
	 <table border="1" data-bbox="319 1187 534 1288"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>60</td></tr> <tr><td>High</td><td>76</td></tr> </table>	Construction	H	Low	60	High	76	Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H24B-TSBS-PG16 H24B-TSBS-PG21 H24B-TSBS-M20 H24B-TSBS-M25 H24B-TSBHS-PG21 H24B-TSBHS-PG29 H24B-TSBHS-M25 H24B-TSBHS-M32	T1250243116-000 T1250243121-000 T1250243120-000 T1250243125-000 T1270243121-000 T1270243129-000 T1270243125-000 T1270243132-000																		
Construction	H																												
Low	60																												
High	76																												
Top entry housing with two levers																													
	 <table border="1" data-bbox="319 1467 534 1556"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>60</td></tr> <tr><td>High</td><td>76</td></tr> </table>	Construction	H	Low	60	High	76	Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H24B-TGBS-PG16 H24B-TGBS-PG21 H24B-TGBS-M20 H24B-TGBS-M25 H24B-TGBHS-PG21 H24B-TGBHS-PG29 H24B-TGBHS-M25 H24B-TGBHS-M32	T1260243116-000 T1260243121-000 T1260243120-000 T1260243125-000 T1280243121-000 T1280243129-000 T1280243125-000 T1280243132-000																		
Construction	H																												
Low	60																												
High	76																												
Bulkhead mounted with 4 bolts																													
	With protection cover 	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M25 M25 M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H24B-AD-BO H24B-SDR-BO-PG21 H24B-SDR-BO-M25 H24B-SDR-BO-2PG21 H24B-SDR-BO-2M25 H24B-SDRH-BO-PG21 H24B-SDRH-BO-PG29 H24B-SDRH-BO-M25 H24B-SDRH-BO-M32 H24B-SDRH-BO-2PG21 H24B-SDRH-BO-2PG29 H24B-SDRH-BO-2M25 H24B-SDRH-BO-2M32	T1430240000-000 T1460240121-000 T1460240125-000 T1460240221-000 T1460240225-000 T1490240121-000 T1490240129-000 T1490240125-000 T1490240132-000 T1490240221-000 T1490240229-000 T1490240225-000 T1490240232-000																							
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Construction	A	B	C	D	F	G	H																						
Low	132	144	45	57	20	65	56																						
High	132	144	45	57	20	65	81																						


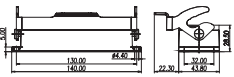

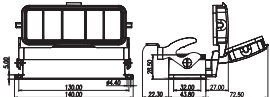

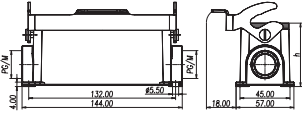

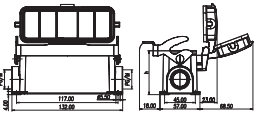
## H24B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	<p>Low construction</p> 	M25 M32	PG21 PG29	H24B-TS-RO-PG21 H24B-TS-RO-PG29 H24B-TS-RO-M25 H24B-TS-RO-M32	T1310240121-000 T1310240129-000 T1310240125-000 T1310240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TSH-RO-PG21 H24B-TSH-RO-PG29 H24B-TSH-RO-M25 H24B-TSH-RO-M32 H24B-TSH-RO-M40	T1330240121-000 T1330240129-000 T1330240125-000 T1330240132-000 T1330240140-000						
Hood: Top entry											
	<p>Low construction</p> 	M25 M32	PG21 PG29	H24B-TG-RO-PG21 H24B-TG-RO-PG29 H24B-TG-RO-M25 H24B-TG-RO-M32	T1320240121-000 T1320240129-000 T1320240125-000 T1320240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TGH-RO-PG21 H24B-TGH-RO-PG29 H24B-TGH-RO-M25 H24B-TGH-RO-M32 H24B-TGH-RO-M40	T1340240121-000 T1340240129-000 T1340240125-000 T1340240132-000 T1340240140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="531 1335 743 1435"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>78.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	78.5	<p>Low construction (M25, M32)</p> <p>High construction (M25, M32, M40)</p>	PG21 PG29	<p>Low construction (M25, M32):</p> H24B-TBF-LB-PG21 H24B-TBF-LB-PG29 H24B-TBF-LB-M25 H24B-TBF-LB-M32 <p>High construction (M25, M32, M40):</p> H24B-TBFH-LB-PG21 H24B-TBFH-LB-PG29 H24B-TBFH-LB-M25 H24B-TBFH-LB-M32 H24B-TBFH-LB-M40	<p>Low construction (M25, M32):</p> T1730242121-000 T1730242129-000 T1730242125-000 T1730242132-000 <p>High construction (M25, M32, M40):</p> T1770243121-000 T1770243129-000 T1770243125-000 T1770243132-000 T1770243140-000
Construction	H										
Low	62.5										
High	78.5										
Protection covers for hoods											
				H24B-KDTP-LB	T1010241500-000						

## H24B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
Bulkhead mounted										
			H24B-AG-LB	T1500243000-000						
	With protection cover 		H24B-AD-LB	T1510243000-000						
Surface mounted: Side entry										
	 <table border="1" data-bbox="320 1137 539 1227"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>56</td></tr> <tr><td>Hight</td><td>81</td></tr> </table>	Construction	H	Low	56	Hight	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32 PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29 PG21 PG29	H24B-SGR-LB-PG16 H24B-SGR-LB-PG21 H24B-SGR-LB-M20 H24B-SGR-LB-M25 H24B-SGR-LB-2PG16 H24B-SGR-LB-2PG21 H24B-SGR-LB-2M20 H24B-SGR-LB-2M25 H24B-SGRH-LB-PG21 H24B-SGRH-LB-PG29 H24B-SGRH-LB-M25 H24B-SGRH-LB-M32 H24B-SGRH-LB-2PG21 H24B-SGRH-LB-2PG29 H24B-SGRH-LB-2M25 H24B-SGRH-LB-2M32 T1610243116-000 T1610243121-000 T1610243120-000 T1610243125-000 T1610243216-000 T1610243221-000 T1610243220-000 T1610243225-000 T1650243121-000 T1650243129-000 T1650243125-000 T1650243132-000 T1650243221-000 T1650243229-000 T1650243225-000 T1650243232-000
Construction	H									
Low	56									
Hight	81									
	With protection cover  <table border="1" data-bbox="320 1585 539 1675"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>56</td></tr> <tr><td>Hight</td><td>81</td></tr> </table>	Construction	H	Low	56	Hight	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32 PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H24B-SDR-LB-PG16 H24B-SDR-LB-PG21 H24B-SDR-LB-M20 H24B-SDR-LB-M25 H24B-SDR-LB-2PG16 H24B-SDR-LB-2PG21 H24B-SDR-LB-2M20 H24B-SDR-LB-2M25 H24B-SDRH-LB-PG21 H24B-SDRH-LB-PG29 H24B-SDRH-LB-M25 H24B-SDRH-LB-M32 H24B-SDRH-LB-2PG21 H24B-SDRH-LB-2PG29 H24B-SDRH-LB-2M25 H24B-SDRH-LB-2M32 T1620243116-000 T1620243121-000 T1620243120-000 T1620243125-000 T1620243216-000 T1620243221-000 T1620243220-000 T1620243225-000 T1660243121-000 T1660243129-000 T1660243125-000 T1660243132-000 T1660243221-000 T1660243229-000 T1660243225-000 T1660243232-000
Construction	H									
Low	56									
Hight	81									

## HIP.24/64, HIP-K.24/64, EMV-K.24/64 housings

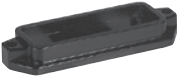
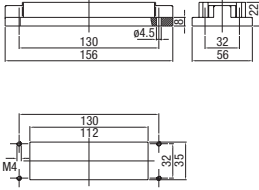

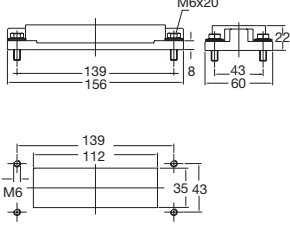

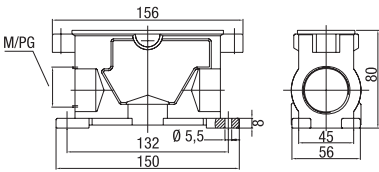

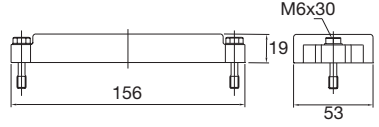
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Bottom entry, Standard construction</b>				
			<b>HIP</b> HIP.24/64.AG	1-1102665-5
			<b>HIP-K</b> HIP-K.24/64.AG	2-1102665-5
			<b>EMV-K</b> EMV-K.24/64.AG	4-1102760-5
			<b>HIP</b> HIP.24/64.AG.M6	1-1102626-5
			<b>HIP-K</b> HIP-K.24/64.AG.M6	2-1102626-5
			<b>HIP-K</b> HIP-K.24/64.AG.M6.D	2-1102628-5
			<b>HIP-K</b> HIP-K-1.24/64.AG.M6.D	0-1108533-1
			<b>EMV-K</b> EMV-K.24/64.AG.M6	4-1102736-5
<b>Surface mounted housing: Side entry, Standard construction</b>				
		2xM40	<b>HIP</b> HIP.24/64.SG.1.29.G	1-1102624-5
			<b>HIP</b> HIP.24/64.SG.2.29.G	1-1102625-5
			<b>HIP</b> HIP.24/64.SG.2.M40.G	0-1106472-1
		2xM40	<b>HIP-K</b> HIP-K.24/64.SG.1.29.G	5-1102624-5
			<b>HIP-K</b> HIP-K.24/64.SG.2.29.G	2-1102625-5
			<b>HIP-K</b> HIP-K.24/64.SG.2.M40.G	0-1106472-2
		2xM40	<b>EMV-K</b> EMV-K.24/64.SG.1.29.G	4-1102734-5
			<b>EMV-K</b> EMV-K.24/64.SG.2.29.G	4-1102735-5
			<b>EMV-K</b> EMV-K.24/64.SG.2.M40.G	0-1106460-2
<b>Protective cover housings</b>				
			<b>HIP</b> HIP/EMV.24/64.SKB	3-1106204-5
			<b>HIP-K/EMV-K</b> HIP-K/EMV-K.24/64.SKB	4-1106204-5

## HIP.24/64, HIP-K.24/64, EMV-K.24/64 housings


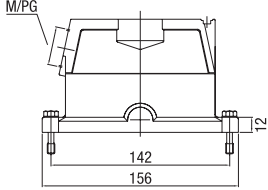

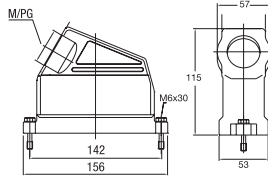

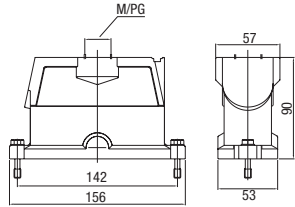
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry, Standard construction</b>					
		M40	21 29	<b>HIP</b> HIP.24/64.STS.1.21.G HIP.24/64.STS.1.29.G HIP.24/64.STS.1.M40.G	1-1102658-5 1-1102660-5 0-1106473-2
		M40	29	<b>HIP-K</b> HIP-K.24/64.STS.1.29.G HIP-K.24/64.STS.1.M40.G	2-1102660-5 0-1106473-4
		M25 M32 M40	29	<b>EMV-K</b> EMV-K.24/64.STS.1.29.G EMV-K.24/64.STS.1.M25.G EMV-K.24/64.STS.1.M32.G EMV-K.24/64.STS.1.M40.G	4-1102755-5 0-1102983-1 0-1106461-8 0-1106461-3
		M40	29 36	<b>HIP</b> HIP-KF.24/64.STS.1.29.G HIP-KF.24/64.STS.1.36.G HIP-KF.24/64.STS.1.M40.G	1-1102622-5 1-1102623-5 0-1106474-1
		M40	29 36	<b>HIP-K</b> HIP-KF/K.24/64.STS.1.29.G HIP-KF/K.24/64.STS.1.36.G HIP-KF/K.24/64.STS.1.M40.G	2-1102622-5 2-1102623-5 0-1106474-2
		M40	29 36	<b>EMV-K</b> EMV-KF/K.24/64.STS.1.29.G EMV-KF/K.24/64.STS.1.36.G EMV-KF/K.24/64.STS.1.M40.G	4-1102732-5 4-1102733-5 0-1106462-2
<b>Hood: Top entry, Standard construction</b>					
		M40			
		2xM32 M40	21 29	<b>HIP</b> HIP.24/64.STO.1.21.G HIP.24/64.STO.1.29.G HIP.24/64.STO.1.M40.G	1-1102662-5 1-1102664-5 0-1106473-1
		M40 2xM40	29	<b>HIP-K</b> HIP-K.24/64.STO.1.29.G HIP-K.24/64.STO.2.M32.G HIP-K.24/64.STO.1.M40.G	2-1102664-5 0-1102792-1 0-1106473-3
		29	<b>EMV-K</b> EMV-K.24/64.STO.1.29.G EMV-K.24/64.STO.1.M40.G	4-1102759-5 0-1106461-4	
		2xM40			


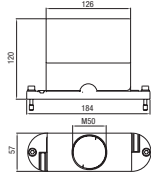

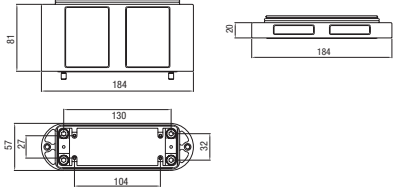

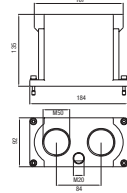

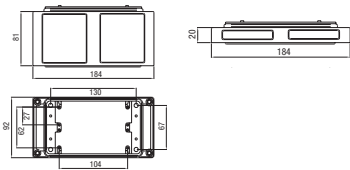
## HF-HIP-K 8/HF-EMV-K 8, HF-HIP-K 12/HF-EMV-K 12 housings

**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

Description	Metr.	PG	Type	Part Number
Hood				
		1xM50 1xM50 2xM40 2xM40	HF-HIP-K.8.Sto.1.M50G HF.8.EMV-K.8.Sto.1.M50G HF.HIP-K.8.Sto.2.M40G HF.EMV-K.8.Sto.2.M40G	0-1102839-4 0-1102839-3 0-1102839-2 0-1102839-1
Housing bottom				
		<b>Height</b> 20 mm 20 mm 81 mm 81 mm	HF-HIP-K.8.AG.N HF-EMV-K.8.AG.N HF-HIP-K.8.AG HF-EMV-K.8.AG	0-1102837-2 0-1102837-1 0-1102836-2 0-1102836-1
Hood				
		2xM40 2xM40 2xM50 2xM50	HF-HIP-K.12.Sto.2.M40G HF-EMV-K.12.Sto.2.M40G HF-HIP-K.12.Sto.2.M50G HF-EMV-K.12.Sto.2.M50G	0-1102840-2 0-1102840-1 0-1102840-4 0-1102840-3
Housing bottom				
		<b>Height</b> 20 mm 20 mm 81 mm 81 mm	HF-HIP-K.12.AG.N HF-EMV-K.12.AG.N HF-HIP-K.12.AG HF-EMV-K.12.AG	0-1102838-2 0-1102838-1 0-1102192-2 0-1102192-1

## HE-032 inserts


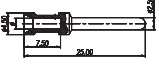

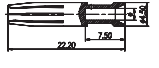
INSERTS FOR H32B HOOD/HOUSING

500V MAX. 16A

32 (2x16)+⊕

Dimension (mm)	Type	Part Number	
		Male insert	Female insert
Screw terminal			
	HE-016-M(1-16) HE-016-M(17-32)	T2040162101-000 T2040322101-000	
	HE-016-F(1-16) HE-016-F(17-32)		T2040162201-000 T2040322201-000
Spring terminal			
	HE-016-MS(1-16) HE-016-MS(17-32)	T2040163101-000 T2040323101-000	
	HE-016-FS(1-16) HE-016-FS(17-32)		T2040163201-000 T2040323201-000
Crimp terminal (Order crimp contacts separately)			
	HE-016-MC(1-16) HE-016-MC(17-32)	T2040164101-000 T2040324101-000	
	HE-016-FC(1-16) HE-016-FC(17-32)		T2040164201-000 T2040324201-000
Spring terminal (Two terminals per contact)			
	HE-016-MSS(1-16) HE-016-MSS(17-32)	T2040165101-000 T2040325101-000	
	HE-016-FSS(1-16) HE-016-FSS(17-32)		T2040165201-000 T2040325201-000

## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000


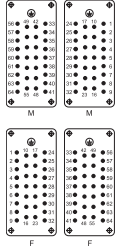


## HEE-064 inserts

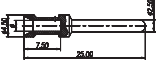


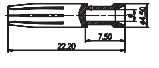
INSERTS FOR H32B HOOD/HOUSING

500V MAX. 16A

64 (2x32)+⊕

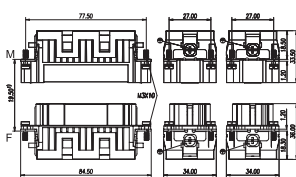
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)	Contact arrangement view from termination side			
		HEE-032-M(1-32) HEE-032-M(33-64)	T2050322101-000 T2050642101-000	
		HEE-032-F(1-32) HEE-032-F(33-64)		T2050322201-000 T2050642201-000

### 16A Contact

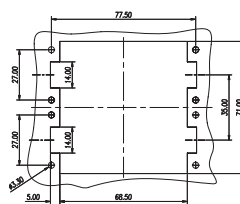
Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male	16A Male crimp contacts 	Wire gauge		Stripping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

### Distance for contact max. 21mm

Crimp terminal



### Panel cut-out for inserts for use without hoods/housings




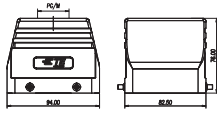

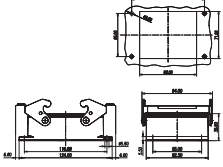

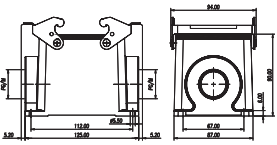

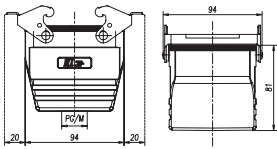

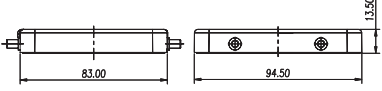







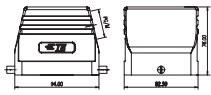

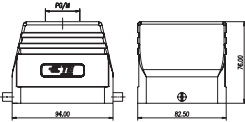

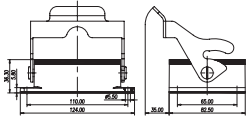

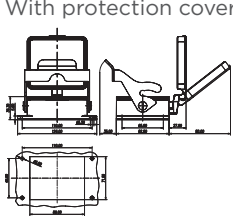

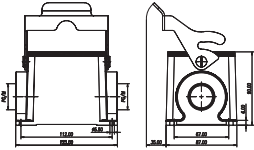

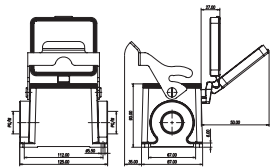
## H32B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
		M32 M40	PG29 PG36 H32B-TS-PG29 H32B-TS-PG36 H32B-TS-M32 H32B-TS-M40	T1210320129-000 T1210320136-000 T1210320132-000 T1210320140-000
<b>Hood: Top entry</b>				
		M25 M32 M40 M50	PG21 PG29 PG36 PG42 H32B-TG-PG21 H32B-TG-PG29 H32B-TG-PG36 H32B-TG-PG42 H32B-TG-M25 H32B-TG-M32 H32B-TG-M40 H32B-TG-M50	T1220320121-000 T1220320129-000 T1220320136-000 T1220320142-000 T1220320125-000 T1220320132-000 T1220320140-000 T1220320150-000
<b>Bulkhead mounted</b>				
			H32B-AG	T1410322000-000
<b>Surface mounted: Side entry</b>				
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-SGR-PG29 H32B-SGR-PG36 H32B-SGR-PG42 H32B-SGR-M32 H32B-SGR-M40 H32B-SGR-M50 H32B-SGR-M63	T1440322129-000 T1440322136-000 T1440322142-000 T1440322132-000 T1440322140-000 T1440322150-000 T1440322163-000
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-SGR-2PG29 H32B-SGR-2PG36 H32B-SGR-2PG42 H32B-SGR-2M32 H32B-SGR-2M40 H32B-SGR-2M50 H32B-SGR-2M63	T1440322229-000 T1440322236-000 T1440322242-000 T1440322232-000 T1440322240-000 T1440322250-000 T1440322263-000
<b>Cable-to-cable hood</b>				
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-TBF-PG29 H32B-TBF-PG36 H32B-TBF-PG42 H32B-TBF-M32 H32B-TBF-M40 H32B-TBF-M50 H32B-TBF-M63	T1710322129-000 T1710322136-000 T1710322142-000 T1710322132-000 T1710322140-000 T1710322150-000 T1710322163-000
<b>Protection covers for hoods</b>				
			H32B-KDB	T1000321220-000

## H32B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
		M32 M40	PG29 PG36 H32B-TS-RO-PG29 H32B-TS-RO-PG36 H32B-TS-RO-M32 H32B-TS-RO-M40	T1310320129-000 T1310320136-000 T1310320132-000 T1310320140-000
<b>Hood: Top entry</b>				
		M25 M32 M40 M50	PG21 PG29 PG36 PG42 H32B-TG-RO-PG21 H32B-TG-RO-PG29 H32B-TG-RO-PG36 H32B-TG-RO-PG42 H32B-TG-RO-M25 H32B-TG-RO-M32 H32B-TG-RO-M40 H32B-TG-RO-M50	T1320320121-000 T1320320129-000 T1320320136-000 T1320320142-000 T1320320125-000 T1320320132-000 T1320320140-000 T1320320150-000
<b>Bulkhead mounted</b>				
			H32B-AG-LB	T1500322000-000
	With protection cover 		H32B-AD-LB	T1510322000-000
<b>Surface mounted: Side entry</b>				
		1 Side entry M32 M40 2 Side entry M32 M40	PG29 H32B-SGR-LB-PG29 H32B-SGR-LB-M32 H32B-SGR-LB-M40 PG29 H32B-SGR-LB-2PG29 H32B-SGR-LB-2M32 H32B-SGR-LB-2M40	T1610322129-000 T1610322132-000 T1610322140-000 T1610322229-000 T1610322232-000 T1610322240-000
	With protection cover 	1 Side entry M32 M40 2 Side entry M32 M40	PG29 H32B-SDR-LB-PG29 H32B-SDR-LB-M32 H32B-SDR-LB-M40 PG29 H32B-SDR-LB-2PG29 H32B-SDR-LB-2M32 H32B-SDR-LB-2M40	T1620320129-000 T1620320132-000 T1620320140-000 T1620320229-000 T1620320232-000 T1620320240-000

# HE-048 inserts

INSERTS FOR H48B HOOD/HOUSING

500V MAX. 16A

48 (2x24)+ Ⓢ

Dimension (mm)	Type	Part Number	
		Male insert	Female insert
Screw terminal			
	HE-024-M(1-24)	T2040242101-000	
	HE-024-M(25-48)	T2040482101-000	
	HE-024-F(1-24)		T2040242201-000
	HE-024-F(25-48)		T2040482201-000
Spring terminal			
	HE-024-MS(1-24)	T2040243101-000	
	HE-024-MS(25-48)	T2040483101-000	
	HE-024-FS(1-24)		T2040243201-000
	HE-024-FS(25-48)		T2040483201-000
Crimp terminal (Order crimp contacts separately)			
	HE-024-MC(1-24)	T2040244101-000	
	HE-024-MC(25-48)	T2040484101-000	
	HE-024-FC(1-24)		T2040244201-000
	HE-024-FC(25-48)		T2040484201-000
Spring terminal (Two terminals per contact)			
	HE-024-MSS(1-24)	T2040245101-000	
	HE-024-MSS(25-48)	T2040485101-000	
	HE-024-FSS(1-24)		T2040245201-000
	HE-024-FSS(25-48)		T2040485201-000

## 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Stripping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
0.5	20			7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
0.75	18			7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

Distance for contact max. 21mm 	Contact arrangement view from termination side 	Panel cut-out for inserts for use without hoods/housings 
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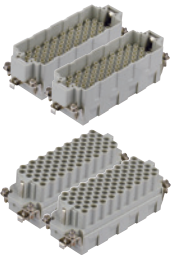
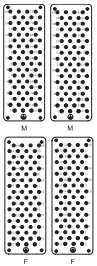


## HEEE-144 inserts

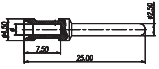


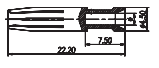
INSERTS FOR H48B HOOD/HOUSING

400V MAX. 16A

144+⊕

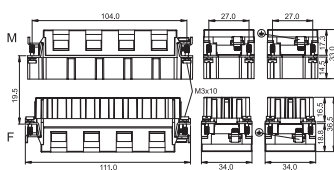
Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)	Contact arrangement view from termination side			
		HEEE-072-M(1-72) HEEE-144-M(73-144)	T2050722101-000 T2051442101-000	
		HEEE-072-F(1-72) HEEE-144-F(73-144)		T2050722201-000 T2051442201-000

### 16A Contact

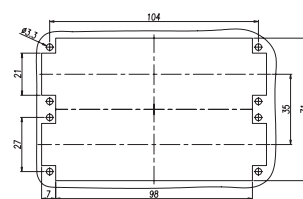
Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male	16A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
  <b>CEF/Female</b>  	<b>16A Female crimp contacts</b> 	0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

### Distance for contact max. 21mm

Crimp terminal


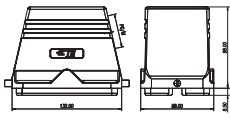

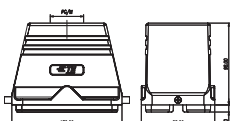

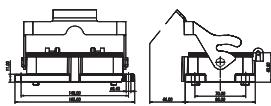

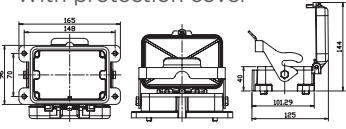

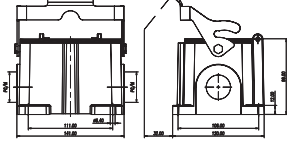

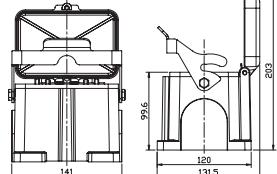


### Panel cut-out for inserts for use without hoods/housings




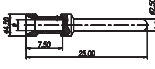

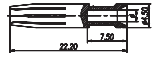
## H48B hoods/housings

POWDER-COATED, RAL 7037





Dimensions (mm)		Metr.	PG	Type	Part Number
Hood: Side entry					
		M32 M40 M50 M63	PG29 PG36 PG42	H48B-TS-PG29 H48B-TS-PG36 H48B-TS-PG42 H48B-TS-M32 H48B-TS-M40 H48B-TS-M50 H48B-TS-M63	T1310480129-000 T1310480136-000 T1310480142-000 T1310480132-000 T1310480140-000 T1310480150-000 T1310480163-000
Hood: Top entry					
		M32 M40 M50 M63	PG29 PG36 PG42	H48B-TG-PG29 H48B-TG-PG36 H48B-TG-PG42 H48B-TG-M32 H48B-TG-M40 H48B-TG-M50 H48B-TG-M63	T1320480129-000 T1320480136-000 T1320480142-000 T1320480132-000 T1320480140-000 T1320480150-000 T1320480163-000
Bulkhead mounted					
				H48B-AG	T1500482000-000
	With protection cover 			H48B-AD-LB	T1510482000-000
Surface mounted: Side entry					
		M32 M40 M50	PG29 PG36 PG42	H48B-SGR-PG29 H48B-SGR-PG36 H48B-SGR-PG42 H48B-SGR-M32 H48B-SGR-M40 H48B-SGR-M50	T1610482129-000 T1610482136-000 T1610482142-000 T1610482132-000 T1610482140-000 T1610482150-000
		M32 M40 M50	PG29 PG36 PG42	H48B-SGR-2PG29 H48B-SGR-2PG36 H48B-SGR-2PG42 H48B-SGR-2M32 H48B-SGR-2M40 H48B-SGR-2M50	T1610482229-000 T1610482236-000 T1610482242-000 T1610482232-000 T1610482240-000 T1610482250-000
Surface mounted with cover					
		M32 M40 M50	PG29 PG36 PG42	H48B-SDR-PG29 H48B-SDR-PG36 H48B-SDR-PG42 H48B-SDR-M32 H48B-SDR-M40 H48B-SDR-M50	T1620480129-000 T1620480136-000 T1620480142-000 T1620480132-000 T1620480140-000 T1620480150-000
		M32 M40 M50	PG29 PG36 PG42	H48B-SDR-2PG29 H48B-SDR-2PG36 H48B-SDR-2PG42 H48B-SDR-2M32 H48B-SDR-2M40 H48B-SDR-2M50	T1620480229-000 T1620480236-000 T1620480242-000 T1620480232-000 T1620480240-000 T1620480250-000

## Crimp contacts HE/HA series

### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1\text{m}\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

## Crimping tools HE/HA series

Description		Type	Part Number
<b>Crimp tool</b> Wire range: 0.5-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts		CRIMPBOX-0.5/4	T3100000001-000
<b>Crimp tool</b> Wire range: 0.14-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts with locator and die		RSZ.HE-HN.D-HVT	1-1105851-8
<b>Removal tools</b> Used for CEM/CEF contact series		REMOV-HEE	T3100000002-000
<b>M3 screw driver</b> Used for HA/HE inserts		SCREWD-M3	T3100000009-000

## HVE technical characteristics

Specifications ..... DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts ..... 3+PE+2,6+PE+2,10+PE+2

### INSERTS

Working current ..... 16A max  
 (See current carrying capacity)  
 Working voltage .....830V  
 Test voltage urms .....8KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Working voltage acc. to UL/CSA ..... 600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

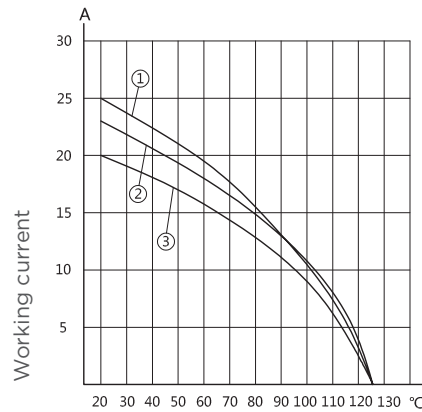
Material ..... Copper alloy  
 Surface ..... Hard silver-plated  
 ..... Hard gold-plated  
 Contact resistance .....  $\leq 5m\Omega$   
 Terminal ..... Screw terminal  
 ..... Crimp terminal  
 ..... Spring terminal  
 - mm<sup>2</sup>  
 Screw terminal ..... 0.5-2.5mm<sup>2</sup>  
 Crimp terminal ..... 0.14-4mm<sup>2</sup>  
 Spring terminal ..... 0.5-2.5mm<sup>2</sup>  
 - AWG  
 Screw terminal ..... 20-14  
 Crimp terminal ..... 26-12  
 Spring terminal ..... 20-14  
 - Tightening/test torque ..... 0.5 Nm

### HOODS, HOUSINGS

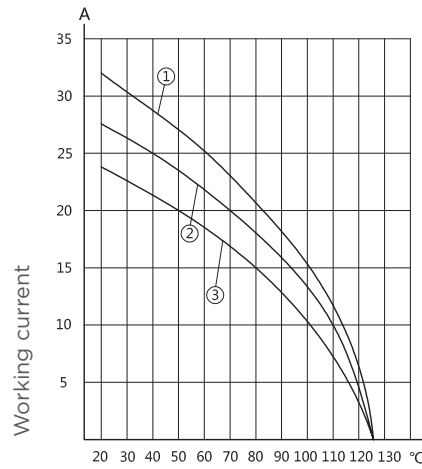
Material ..... Die cast aluminium  
 Surface ..... Powder-coated (RAL 7037)  
 Locking element ..... Stainless steel, steel-zinc plated  
 Temperature range ..... -40°C... +125°C  
 Degree of protection acc. to DIN40 050 ..... IP65

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



Ambient temperature







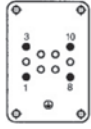
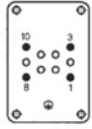
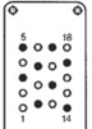
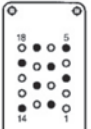
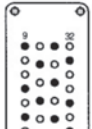
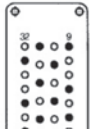
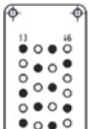
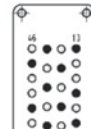
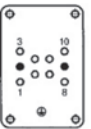
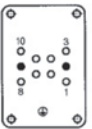
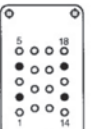
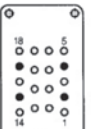
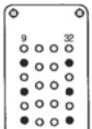
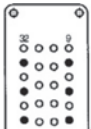
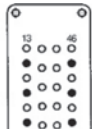
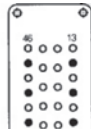
Ambient temperature

- 1 HVE-003
- 2 HVE-006
- 3 HVE-010

## HEE series (high voltage) inserts

### MODIFIED CONTACT ARRANGEMENT




The connector series HEE equipped with all contacts may be used for voltages up to 500V-insulation group C. A modified contact loading arrangement permits use up to 1000V-also in insulation group C.

		Contact arrangement view from termination side			
		4+ 	8+ 	14+ 	20+ 
Series HEE 690V- Insulation group C					
					
1000V- Insulation group C					
					
		Working contact	Without contact	Male insert	Female insert

## HVE series

INSERTS FOR H10B, H16B, H24B HOOD/HOUSING

830V MAX. 16A

Dimension (mm)	Type	Part Number	
		Male insert	Female insert
3+ $\oplus$ +2 Screw terminal			
	HVE-003-M	T2300033101-000	
	HVE-003-F		T2300033201-000
6+ $\oplus$ +2 Screw terminal			
	HVE-006-M	T2300063101-000	
	HVE-006-F		T2300063201-000
10+ $\oplus$ +2 Screw terminal			
	HVE-010-M	T2300103101-000	
	HVE-010-F		T2300103201-000

## HSB Series



### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances  
DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 60 664-1  
DIN EN 61 984

### 3. Approvals



## HSB technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	6,12(2x6) + PE

### INSERTS

Working current .....	35A max
(See current carrying capacity)	
Working voltage	
Conductor - ground .....	400 V
Conductor - conductor .....	690 V
Test voltage urms .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

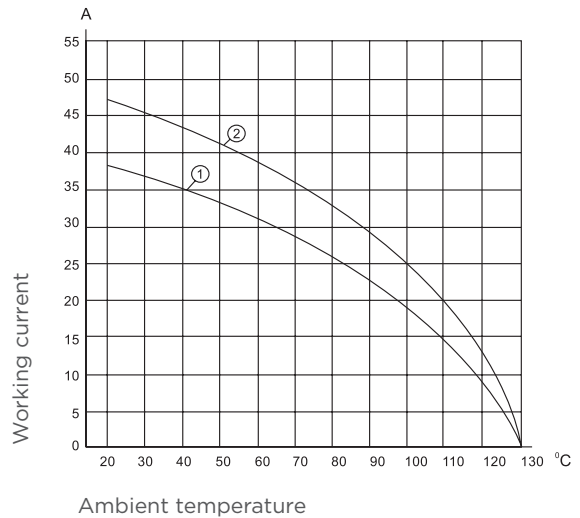
Material .....	Copper alloy
Surface .....	Hard silver-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	Screw terminal
- mm <sup>2</sup> .....	1.5-6mm <sup>2</sup>
- AWG .....	16-10
- Tightening/test torque .....	1.2 Nm

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element .....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 Wire gauge: 4.0mm<sup>2</sup>
- 2 Wire gauge: 6.0mm<sup>2</sup>


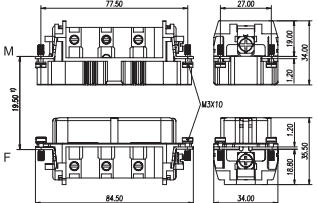
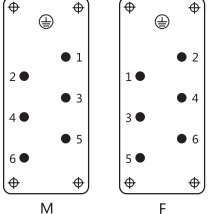
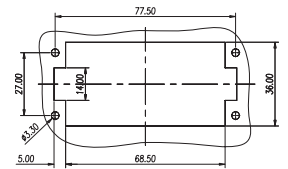


## HSB-006 inserts

INSERTS FOR H16B HOOD/HOUSING


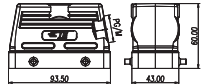

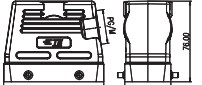

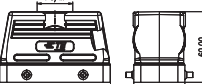



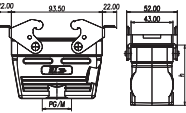

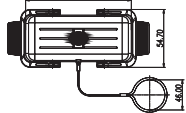

690V 35A

6+ 

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)				
		HSB-006-M	T2060062101-000	
		HSB-006-F		T2060062201-000
<p>Contact arrangement view from termination side</p> 	<p>Panel cut out for inserts for use without hoods/housings</p> 			


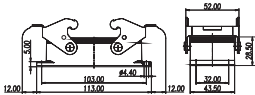

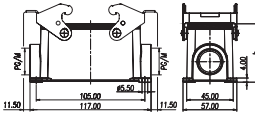

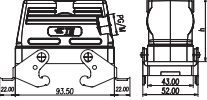

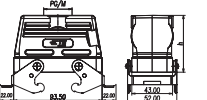

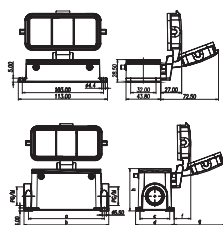
## H16B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	Low construction 	M20 M25 M32	PG16 PG21	H16B-TS-PG16 H16B-TS-PG21 H16B-TS-M20 H16B-TS-M25 H16B-TS-M32	T1210160116-000 T1210160121-000 T1210160120-000 T1210160125-000 T1210160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TSH-PG21 H16B-TSH-PG29 H16B-TSH-M25 H16B-TSH-M32 H16B-TSH-M40	T1230160121-000 T1230160129-000 T1230060125-000 T1230160132-000 T1230160140-000						
Hood: Top entry											
	Low construction 	M25 M32	PG16 PG21	H16B-TG-PG16 H16B-TG-PG21 H16B-TG-M25 H16B-TG-M32	T1220160116-000 T1220160121-000 T1220160125-000 T1220160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TGH-PG21 H16B-TGH-PG29 H16B-TGH-M25 H16B-TGH-M32 H16B-TGH-M40	T1240160121-000 T1240160129-000 T1240160125-000 T1240160132-000 T1240160140-000						
Cable-to-cable hood											
	<table border="1" data-bbox="533 1346 740 1435"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M25 M32	PG21	H16B-TBFS-PG21 H16B-TBFS-M25 H16B-TBFS-M32	T1710161121-000 T1710161125-000 T1710161132-000
Construction	H										
Low	62.5										
High	74.5										
		M25 M32 M40	PG21 PG29	H16B-TBFHS-PG21 H16B-TBFHS-PG29 H16B-TBFHS-M25 H16B-TBFHS-M32 H16B-TBFHS-M40	T1750161121-000 T1750161129-000 T1750161125-000 T1750161132-000 T1750161140-000						
Protection covers for hoods											
				H16B-KDTP	T1010161400-000						
Housing protection cover											
				H16B-KDBP	T1010162100-000						


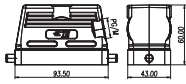

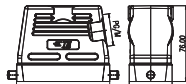

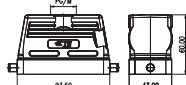

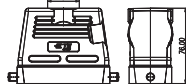

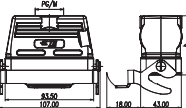

## H16B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number																									
Bulkhead mounted																														
				H16B-AGS	T1410161000-000																									
Surface mounted: Side entry																														
	 <table border="1" data-bbox="319 855 539 945"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </tbody> </table>	Construction	H	Low	56	High	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M25 M25 M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H16B-SGRS-PG21 H16B-SGRS-M25 H16B-SGRS-2PG21 H16B-SGRS-2M25 H16B-SGRHS-PG21 H16B-SGRHS-PG29 H16B-SGRHS-M25 H16B-SGRHS-M32 H16B-SGRHS-2PG21 H16B-SGRHS-2PG29 H16B-SGRHS-2M25 H16B-SGRHS-2M32	T1440161121-000 T1440161125-000 T1440161221-000 T1440161225-000 T1470161121-000 T1470161129-000 T1470161125-000 T1470161132-000 T1470161221-000 T1470161229-000 T1470161225-000 T1470161232-000																		
Construction	H																													
Low	56																													
High	81																													
Side entry housing with two levers																														
	 <table border="1" data-bbox="319 1191 539 1281"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>76</td> </tr> </tbody> </table>	Construction	H	Low	60	High	76	Low construction High construction	M20 M25 M25 M32	PG16 PG21 PG21 PG29	H16B-TSBS-PG16 H16B-TSBS-PG21 H16B-TSBS-M20 H16B-TSBS-M25 H16B-TSBHS-PG21 H16B-TSBHS-PG29 H16B-TSBHS-M25 H16B-TSBHS-M32	T1250163116-000 T1250163121-000 T1250163120-000 T1250163125-000 T1270163121-000 T1270163129-000 T1270163125-000 T1270163132-000																		
Construction	H																													
Low	60																													
High	76																													
Top entry housing with two levers																														
	 <table border="1" data-bbox="319 1491 539 1581"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>76</td> </tr> </tbody> </table>	Construction	H	Low	60	High	76	Low construction High construction	M20 M25 M25 M32	PG16 PG21 PG21 PG29	H16B-TGBS-PG16 H16B-TGBS-PG21 H16B-TGBS-M20 H16B-TGBS-M25 H16B-TGBHS-PG21 H16B-TGBHS-PG29 H16B-TGBHS-M25 H16B-TGBHS-M32	T1260163116-000 T1260163121-000 T1260163120-000 T1260163125-000 T1280163121-000 T1280163129-000 T1280163125-000 T1280163132-000																		
Construction	H																													
Low	60																													
High	76																													
Bulkhead mounted with 4 bolts																														
	With protection cover  <table border="1" data-bbox="319 1939 689 2011"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>F</th> <th>G</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>56</td> </tr> <tr> <td>High</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>81</td> </tr> </tbody> </table>	Construction	A	B	C	D	F	G	H	Low	105	117	45	57	20	65	56	High	105	117	45	57	20	65	81	Low construction High construction	M25 M25 M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H16B-AD-BO H16B-SDR-BO-PG21 H16B-SDR-BO-M25 H16B-SDR-BO-2PG21 H16B-SDR-BO-2M25 H16B-SDRH-BO-PG21 H16B-SDRH-BO-PG29 H16B-SDRH-BO-M25 H16B-SDRH-BO-M32 H16B-SDRH-BO-2PG21 H16B-SDRH-BO-2PG29 H16B-SDRH-BO-2M25 H16B-SDRH-BO-2M32	T1430160000-000 T1460160121-000 T1460160125-000 T1460160221-000 T1460160225-000 T1490160121-000 T1490160129-000 T1490160125-000 T1490160132-000 T1490160221-000 T1490160229-000 T1490160225-000 T1490160232-000
Construction	A	B	C	D	F	G	H																							
Low	105	117	45	57	20	65	56																							
High	105	117	45	57	20	65	81																							


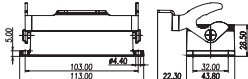

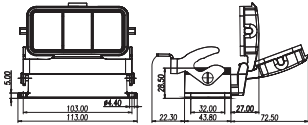

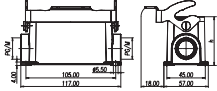

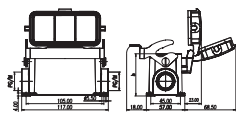
## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
Hood: Side entry										
		M25 M32	PG21 PG29	H16B-TS-RO-PG21 H16B-TS-RO-PG29 H16B-TS-RO-M25 H16B-TS-RO-M32 T1310160121-000 T1310160129-000 T1310160125-000 T1310160132-000						
		M25 M32 M40	PG21 PG29	H16B-TSH-RO-PG21 H16B-TSH-RO-PG29 H16B-TSH-RO-M25 H16B-TSH-RO-M32 H16B-TSH-RO-M40 T1330160121-000 T1330160129-000 T1330160125-000 T1330160132-000 T1330160140-000						
Hood: Top entry										
		M25 M32	PG21 PG29	H16B-TG-RO-PG21 H16B-TG-RO-PG29 H16B-TG-RO-M25 H16B-TG-RO-M32 T1320160121-000 T1320160129-000 T1320160125-000 T1320160132-000						
		M25 M32 M40	PG21 PG29	H16B-TGH-RO-PG21 H16B-TGH-RO-PG29 H16B-TGH-RO-M25 H16B-TGH-RO-M32 H16B-TGH-RO-M40 T1340160121-000 T1340160129-000 T1340160125-000 T1340160132-000 T1340160140-000						
Cable-to-cable hood										
	 <table border="1" data-bbox="528 1339 751 1435"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>Hight</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	Hight	74.5	M25 M32  M25 M32 M40	PG21 PG29  PG21 PG29	H16B-TBF-LB-PG21 H16B-TBF-LB-PG29 H16B-TBF-LB-M25 H16B-TBF-LB-M32 H16B-TBFH-LB-PG21 H16B-TBFH-LB-PG29 H16B-TBFH-LB-M25 H16B-TBFH-LB-M32 H16B-TBFH-LB-M40 T1730163121-000 T1730163129-000 T1730163125-000 T1730163132-000 T1770163121-000 T1770163129-000 T1770163125-000 T1770163132-000 T1770163140-000
Construction	H									
Low	62.5									
Hight	74.5									
Protection covers for hoods										
				H16B-KDTP-LB T1010161500-000						

## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
Bulkhead mounted										
 			H16B-AG-LB	T1500163000-000						
 			H16B-AD-LB	T1510163000-000						
Surface mounted: Side entry										
  <table border="1" data-bbox="325 1144 544 1234"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	1 Side entry Low construction M20 M25 2 Side entry High construction M20 M25 1 Side entry High construction M25 M32 2 Side entry High construction M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SGR-LB-PG16 H16B-SGR-LB-PG21 H16B-SGR-LB-M20 H16B-SGR-LB-M25 H16B-SGR-LB-2PG16 H16B-SGR-LB-2PG21 H16B-SGR-LB-2M20 H16B-SGR-LB-2M25 H16B-SGRH-LB-PG21 H16B-SGRH-LB-PG29 H16B-SGRH-LB-M25 H16B-SGRH-LB-M32 H16B-SGRH-LB-2PG21 H16B-SGRH-LB-2PG29 H16B-SGRH-LB-2M25 H16B-SGRH-LB-2M32	T1610163116-000 T1610163121-000 T1610163120-000 T1610163125-000 T1610163216-000 T1610163221-000 T1610163220-000 T1610163225-000 T1650163121-000 T1650163129-000 T1650163125-000 T1650163132-000 T1650163221-000 T1650163229-000 T1650163225-000 T1650163232-000
Construction	H									
Low	56									
High	81									
  <table border="1" data-bbox="325 1559 544 1648"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	1 Side entry Low construction M20 M25 2 Side entry High construction M20 M25 1 Side entry High construction M25 M32 2 Side entry High construction M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SDR-LB-PG16 H16B-SDR-LB-PG21 H16B-SDR-LB-M20 H16B-SDR-LB-M25 H16B-SDR-LB-2PG16 H16B-SDR-LB-2PG21 H16B-SDR-LB-2M20 H16B-SDR-LB-2M25 H16B-SDRH-LB-PG21 H16B-SDRH-LB-PG29 H16B-SDRH-LB-M25 H16B-SDRH-LB-M32 H16B-SDRH-LB-2PG21 H16B-SDRH-LB-2PG29 H16B-SDRH-LB-2M25 H16B-SDRH-LB-2M32	T1620163116-000 T1620163121-000 T1620163120-000 T1620163125-000 T1620163216-000 T1620163221-000 T1620163220-000 T1620163225-000 T1660163121-000 T1660163129-000 T1660163125-000 T1660163132-000 T1660163221-000 T1660163229-000 T1660163225-000 T1660163232-000
Construction	H									
Low	56									
High	81									

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings

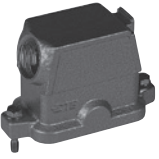
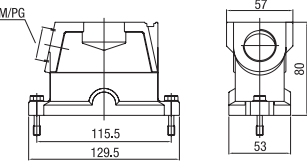

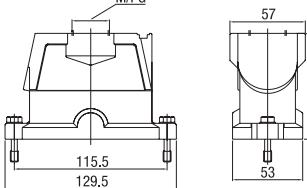

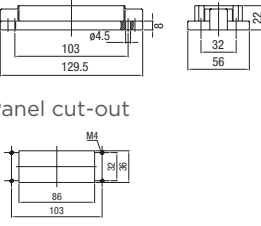

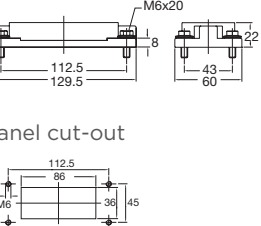
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
		M32	21 29	<b>HIP</b> HIP.16/40.STS.1.21.G HIP.16/40.STS.1.29.G HIP.16/40.STS.1.M32.G  1-1102649-5 1-1102651-5 0-1106454-2
		M32	29	<b>HIP-K</b> HIP-K.16/40.STS.1.29.G HIP-K.16/40.STS.1.M32.G  2-1102651-5 0-1106444-2
		M32	29 21	<b>EMV-K</b> EMV-K.16/40.STS.1.29.G EMV-K.16/40.STS.1.M32.G EMV-K.16/40.STS.1.21.G  4-1102723-5 0-1106446-4 4-1102722-5
<b>Hood: Top entry</b>				
		M32	21 29	<b>HIP</b> HIP.16/40.STO.1.21.G HIP.16/40.STO.1.29.G HIP.16/40.STO.1.M32.G  1-1102653-5 1-1102655-5 0-1106454-1
		M32	21 29	<b>HIP-K</b> HIP-K.16/40.STO.2.21.G HIP-K.16/40.STO.1.29.G HIP-K.16/40.STO.1.M32.G  0-1108534-1 2-1102655-5 0-1106444-1
		M32	29	<b>EMV-K</b> EMV-K.16/40.STO.1.29.G EMV-K.16/40.STO.1.M32.G  4-1102725-5 0-1106446-3
<b>Surface mounted housing: Bottom entry</b>				
				<b>HIP</b> HIP.16/40.AG  1-1102656-5
				<b>HIP-K</b> HIP-K.16/40.AG  2-1102656-5
				<b>EMV-K</b> EMV-K.16/40.AG  4-1102728-5
				<b>HIP</b> HIP.16/40.AG.M6  1-1102618-5
				<b>HIP-K</b> HIP-K.16/40.AG.M6  2-1102618-5
				<b>EMV-K</b> EMV-K.16/40.AG.M6  4-1102730-5

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings



**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K


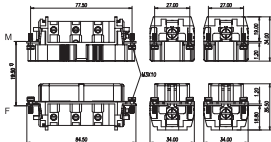
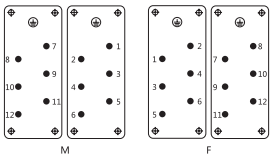
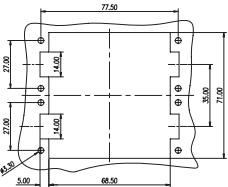
Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Side entry</b>				
	2xM32	21 2x21	<b>HIP</b> HIP.16/40.SG.1.21.G	1-1102616-5
			HIP.16/40.SG.2.21.G	1-1102617-5
			HIP.16/40.SG.2.M32.G	0-1106453-1
	2xM32	21 2x21	<b>HIP-K</b> HIP-K.16/40.SG.1.21.G	5-1102616-5
			HIP-K.16/40.SG.2.21.G	2-1102617-5
			HIP-K.16/40.SG.2.M32.G	0-1106443-1
	2xM32	21 2x21	<b>EMV-K</b> EMV-K.16/40.SG.1.21.Z	4-1102726-5
			EMV-K.16/40.SG.2.21.Z	4-1102727-5
			EMV-K.16/40.SG.2.M32.G	0-1106445-2
<b>Protective covers for housings</b>				
			<b>HIP</b> HIP/EMV.16/40.SKB	3-1106203-5
			<b>HIP-K</b> HIP-K.16/40.SKB	4-1106203-5

## HSB-012 inserts

INSERTS FOR H32B HOOD/HOUSING

690V 35A




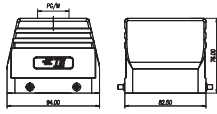

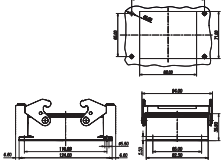

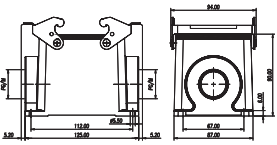

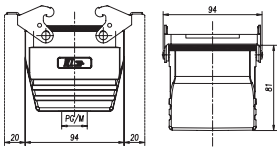

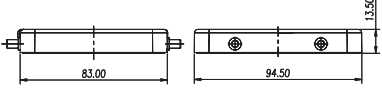
12 (2x6)+ Ⓢ

Dimensions (mm)	Type	Part Number	
		Male insert	Female insert
Screw terminal			
		HSB-006-M(1-6) HSB-006-M(7-12)	T2060062101-000 T2060122101-000
		HSB-006-F(1-6) HSB-006-F(7-12)	T2060062201-000 T2060122201-000
Contact arrangement view from termination side	Panel cut out for inserts for use without hoods/housings		
			




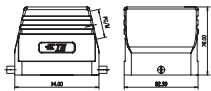

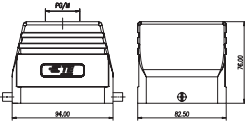

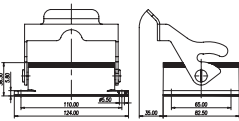

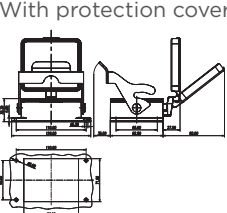

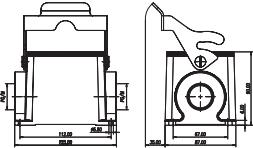

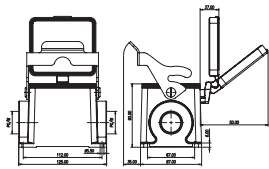
## H32B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

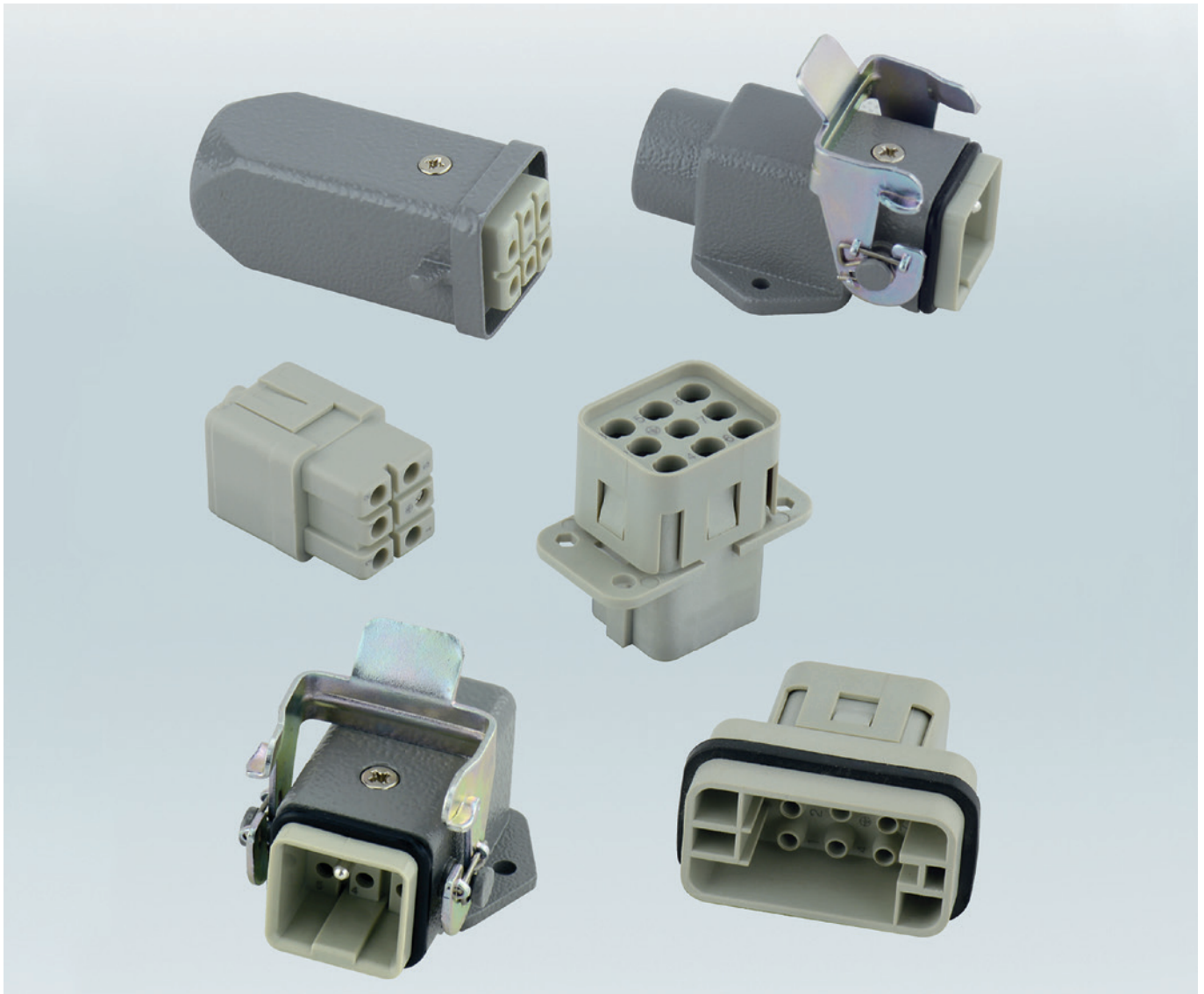
Dimensions (mm)	Metr.	PG	Type	Part Number
<b>Hood: Side entry</b>				
		M32 M40	PG29 PG36 H32B-TS-PG29 H32B-TS-PG36 H32B-TS-M32 H32B-TS-M40	T1210320129-000 T1210320136-000 T1210320132-000 T1210320140-000
<b>Hood: Top entry</b>				
		M25 M32 M40 M50	PG21 PG29 PG36 PG42 H32B-TG-PG21 H32B-TG-PG29 H32B-TG-PG36 H32B-TG-PG42 H32B-TG-M25 H32B-TG-M32 H32B-TG-M40 H32B-TG-M50	T1220320121-000 T1220320129-000 T1220320136-000 T1220320142-000 T1220320125-000 T1220320132-000 T1220320140-000 T1220320150-000
<b>Bulkhead mounted</b>				
			H32B-AG	T1410322000-000
<b>Surface mounted: Side entry</b>				
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-SGR-PG29 H32B-SGR-PG36 H32B-SGR-PG42 H32B-SGR-M32 H32B-SGR-M40 H32B-SGR-M50 H32B-SGR-M63	T1440322129-000 T1440322136-000 T1440322142-000 T1440322132-000 T1440322140-000 T1440322150-000 T1440322163-000
		1 Side entry	PG29 PG36 PG42 H32B-SGR-2PG29 H32B-SGR-2PG36 H32B-SGR-2PG42 H32B-SGR-2M32 H32B-SGR-2M40 H32B-SGR-2M50 H32B-SGR-2M63	T1440322229-000 T1440322236-000 T1440322242-000 T1440322232-000 T1440322240-000 T1440322250-000 T1440322263-000
		2 Side entry		
<b>Cable-to-cable hood</b>				
		M32 M40 M50 M63	PG29 PG36 PG42 H32B-TBF-PG29 H32B-TBF-PG36 H32B-TBF-PG42 H32B-TBF-M32 H32B-TBF-M40 H32B-TBF-M50 H32B-TBF-M63	T1710322129-000 T1710322136-000 T1710322142-000 T1710322132-000 T1710322140-000 T1710322150-000 T1710322163-000
<b>Protection covers for hoods</b>				
			H32B-KDB	T1000321220-000

## H32B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number
Hood: Side entry				
		M32 M40	PG29 PG36 H32B-TS-RO-PG29 H32B-TS-RO-PG36 H32B-TS-RO-M32 H32B-TS-RO-M40	T1310320129-000 T1310320136-000 T1310320132-000 T1310320140-000
Hood: Top entry				
		M25 M32 M40 M50	PG21 PG29 PG36 PG42 H32B-TG-RO-PG21 H32B-TG-RO-PG29 H32B-TG-RO-PG36 H32B-TG-RO-PG42 H32B-TG-RO-M25 H32B-TG-RO-M32 H32B-TG-RO-M40 H32B-TG-RO-M50	T1320320121-000 T1320320129-000 T1320320136-000 T1320320142-000 T1320320125-000 T1320320132-000 T1320320140-000 T1320320150-000
Bulkhead mounted				
			H32B-AG-LB	T1500322000-000
	With protection cover 		H32B-AD-LB	T1510322000-000
Surface mounted: Side entry				
		1 Side entry M32 M40 2 Side entry M32 M40	PG29 H32B-SGR-LB-PG29 H32B-SGR-LB-M32 H32B-SGR-LB-M40 PG29 H32B-SGR-LB-2PG29 H32B-SGR-LB-2M32 H32B-SGR-LB-2M40	T1610322129-000 T1610322132-000 T1610322140-000 T1610322229-000 T1610322232-000 T1610322240-000
	With protection cover 	1 Side entry M32 M40 2 Side entry M32 M40	PG29 H32B-SDR-LB-PG29 H32B-SDR-LB-M32 H32B-SDR-LB-M40 PG29 H32B-SDR-LB-2PG29 H32B-SDR-LB-2M32 H32B-SDR-LB-2M40	T1620320129-000 T1620320132-000 T1620320140-000 T1620320229-000 T1620320232-000 T1620320240-000

## HQ Series



### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances  
DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 175 301-801  
DIN EN 61 984

### 3. Approvals



## HQ technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	5,7,8,12,17,4/2 + PE

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

## INSERTS

Working current	
HQ-005,008.....	16A max
HQ-007,012,017 .....	10A max
HQ4/2.....	Power area 40A max
.....	Signal area 10A max
Working voltage	
HQ-005,007,012.....	400V
HQ-008.....	500V
HQ-017.....	250V
HQ4/2.....	Power area 600V Signal area 250V
Test voltage urms	
HQ-005,017 .....	4KV
HQ-007,008,012,4/2 .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +100°C/125°C
Flammability acc. to UL94 .....	VO
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

## CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-4.0/0.14-2.5/1.5-6mm <sup>2</sup>
- AWG .....	26-12/26-14/16-10
- Tightening/test torque .....	0.25Nm

## HOODS, HOUSINGS


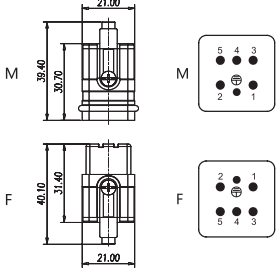
Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

## HQ-005 inserts


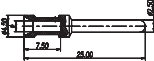

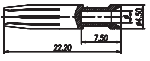
INSERTS FOR H3A HOOD/HOUSING

400V MAX. 16A

5+ (⊕)

Dimensions (mm)	Contact arrangement view from termination side	Part Number		Type
		Male insert	Female insert	
Crimp terminal (Order crimp contacts separately)				
		T2080052101-000		HQ-005-M
			T2080052201-000	HQ-005-F

## 16A Contact


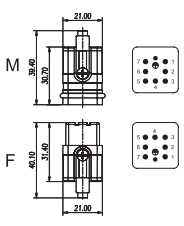

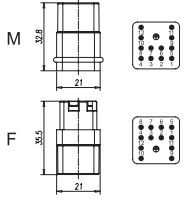
Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

## HQ-007/012 inserts


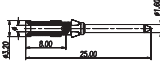

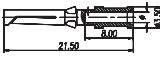
INSERTS FOR H3A HOOD/HOUSING

400V MAX. 10A

7+   
12+ 

Dimensions (mm)	Contact arrangement view from termination side	Part Number		Type
		Male insert	Female insert	
Crimp terminal (Order crimp contacts separately)				
		T2080072101-000		HQ-007-M
			T2080072201-000	HQ-007-F
		T2080122101-000		HQ-012-M
			T2080122201-000	HQ-012-F

### 10A Contact

Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
				0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000


## H3A metal hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number
Top entry					
		M20	PG11	H3A-MTG-PG11 H3A-MTG-M20	T1329030111-000 T1329030120-000
Side entry					
		M20	PG11	H3A-MTS-PG11 H3A-MTS-M20	T1319030111-000 T1319030120-000
Bulkhead mounting: Bottom entry					
				H3A-MAG	T1509030000-000
Bulkhead mounting: Side entry					
				H3A-MAGS	T1549030000-000
Surface mounting: Side entry					
		M16 M20	PG11	H3A-MAGSV-PG11 H3A-MAGSV-M16 H3A-MAGSV-M20	T1619030111-000 T1619030116-000 T1619030120-000
Cable-to-cable hood:					
		M20	PG11	H3A-MTGVB-PG11 H3A-MTGVB-M20	T1739030111-000 T1739030120-000
Protection covers for hoods (thermoplastic)					
	Note: For mounted male insert and hood				H3A-KDTP T1010031100-000
Metal protection covers for hoods					
	Note: For mounted female insert and hood				H3A-KDB T1010033100-000

## H3A thermoplastic hoods/housings

### THERMOPLASTIC HOODS, HOUSINGS

Dimensions (mm)		Metr.	PG	Type	Part Number	
Top entry						
		M20	PG11	H3A-TG-PG11 H3A-TG-M20	T1329031111-000 T1329031120-000	
Side entry						
		M20	PG11	H3A-TS-PG11 H3A-TS-M20	T1319031111-000 T1319031120-000	
Bulkhead mounting: Bottom entry						
				H3A-AG	T1509031100-000	
Bulkhead mounting: Side entry						
				H3A-AGS	T1509031111-000	
Surface mounting: Side entry						
		M16 M20	PG11	H3A-AGSV-PG11 H3A-AGSV-M16 H3A-AGSV-M20	T1619031111-000 T1619031116-000 T1619031120-000	
Cable-to-cable hood:						
		M20	PG11	H3A-TGVB-PG11 H3A-TGVB-M20	T1739031111-000 T1739031120-000	
Protection covers for hoods (thermoplastic)						
	Note: For mounted male insert and hood				H3A-KDTP	T1010031100-000
Protection covers for hoods						
	Note: For mounted female insert and hood				H3A-KDBP (White) H3A-KDBPG (Grey)	T1010032100-000 T1010032300-000
White	Grey					
Covers without sealing type						
				H3A-KDBP (White) H3A-KDBP (Grey)	T1010033200-000 T1010032200-000	



## HIP.3/4, HIP-K.3/4, EMV-K.3/4 housings


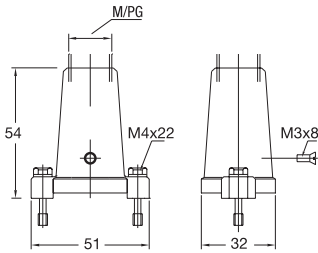
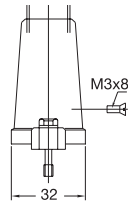
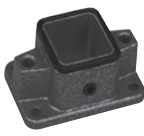
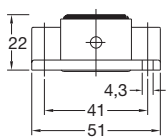
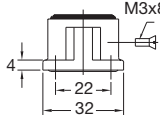

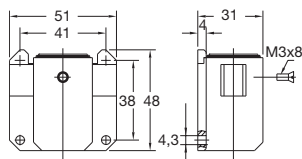
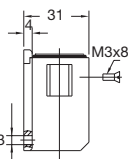
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number		
<b>Hood: Top entry</b>						
	 <p>M/PG 54 M4x22 51</p>	 <p>M3x8 32</p>	<b>HIP</b> HIP.3/4.STO.1.11.G HIP.3/4.STO.1.M16.G	1-1102600-5 0-1106408-1		
			M16 M20	11	<b>HIP-K</b> HIP-K.3/4.STO.1.11.G HIP-K.3/4.STO.1.M16.G HIP-K.3/4.STO.1.M20.G	2-1102600-5 0-1106408-2 0-1106408-3
			M16 M20	11	<b>EMV-K</b> EMV-K.3/4.STO.1.11.G EMV-K.3/4.STO.1.M16.G EMV-K.3/4.STO.1.M20.G	4-1102700-5 0-1106402-2 0-1106402-3
	<b>Surface mounted housing: Bottom entry</b>					
		 <p>22 4.3 41 51</p>	 <p>M3x8 4 22 32</p>	<b>HIP</b> HIP.3/4.AG	1-1102603-5	
					<b>HIP-K</b> HIP-K.3/4.AG	2-1102603-5
					<b>EMV-K</b> EMV-K.3/4.AG	4-1102703-5
	<b>Surface mounted housing: Bottom entry (by panel cut-out)</b>					
		 <p>51 41 38 48 4.3</p>	 <p>31 4 M3x8</p>	<b>HIP</b> HIP.3/4.SGF	1-1102602-5	
				<b>HIP-K</b> HIP-K.3/4.SGF	2-1102602-5	
				<b>EMV-K</b> EMV-K.3/4.SGF	4-1102702-5	

## HIP.3/4, HIP-K.3/4, EMV-K.3/4 housings


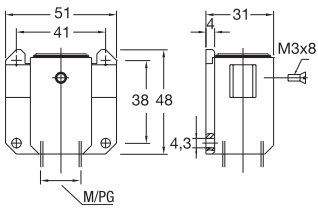

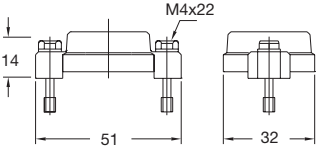
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black




### Screw lock on hood


IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Surface mounted housing: Side entry</b>					
		M16 M20	<b>HIP</b> HIP.3/4.SG.1.11.G HIP.3/4.SG.1.M16.G HIP.3/4.SG.1.M20.G	1-1102601-5 0-1106407-1 0-1106401-4	
			M16	<b>HIP-K</b> HIP-K.3/4.SG.1.11.G HIP-K.3/4.SG.1.M16.G	2-1102601-5 0-1106407-2
			M16 M20	<b>EMV-K</b> EMV-K.3/4.SG.1.11.G EMV-K.3/4.SG.1.M16.G EMV-K.3/4.SG.1.M20.G	4-1102701-5 0-1106401-2 0-1106401-3
<b>Protective covers for housings</b>					
			<b>HIP/EMV</b> HIP/EMV.3/4.SKB	3-1106200-5	
			<b>HIP-K/EMV-K</b> HIP-K/EMV-K.3/4.SKB	4-1106200-5	

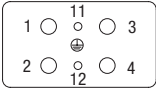
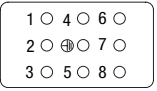
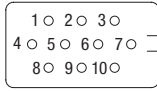
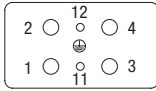
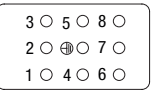
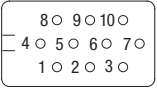
## HQ-017, 4/2, 8, 10 Inserts

### INSERTS FOR H8A HOOD/HOUSING

17+  4/2+  8+  10

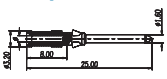


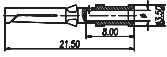
Dimension (mm)	Type	Part Number	
		Male insert	Female insert
Crimp terminal (order crimp contacts separately)			
250V max. 10A 	HQ-017-M	T2080172101-000	
	HQ-017-F		T2080172201-000
400V/250V max. 40A/10A 	HQ-4/2-M	T2080062101-100	
	HQ-4/2-F		T2080062201-100
	HQ-008-M	T2019092101-000	
	HQ-008-F		T2019092201-000
	HG-Q.10.Sti.C	O-1108808-1	
	HG-Q.10.Bu.C		O-1103091-1

Suitable crimp contacts and crimping tools: see page 190





HE-Q.4/2	HE-Q.8	HE-Q.10
Contact arrangement Male insert		
		
Contact arrangement Female insert		
		

## Crimp contacts HN.D series

### 10A Contact

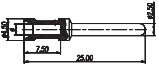


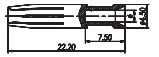
Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male	10A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated			
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number		
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000		
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000		
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000		
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000		
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000		
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000		
			10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
				0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
				0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
				1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
1.5	16			8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000		
2.5	14			6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000		

## Crimping tools HN.D series





Description		Type	Part Number
<b>Crimp tool</b> Wire range: 0.5-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts		CRIMPBOX-0.5/4	T3100000001-000
<b>Crimp tool</b> Wire range: 0.14-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts with locator and die		RSZ.HE-HN.D-HVT	1-1105851-8
<b>Removal tools</b> Used for CDM/CDF contact series		REMOV-HD	T3100000003-000
<b>M3 screw driver</b> Used for HA/HE inserts		SCREWD-M3	T3100000009-000

## Crimp contacts HE/HA series

### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1\text{m}\Omega$ Terminal: crimp connection CEM/Male	16A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		CEM/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
0.5	20			7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
0.75	18			7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

## Crimping tools HE/HA series

Description		Type	Part Number
<b>Crimp tool</b> Wire range: 0.5-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts		CRIMPBOX-0.5/4	T3100000001-000
<b>Crimp tool</b> Wire range: 0.14-4.0mm <sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts with locator and die		RSZ.HE-HN.D-HVT	1-1105851-8
<b>Removal tools</b> Used for CEM/CEF contact series		REMOV-HEE	T3100000002-000
<b>M3 screw driver</b> Used for HA/HE inserts		SCREWD-M3	T3100000009-000

## Crimp contacts HGQ10 series


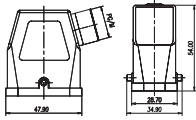

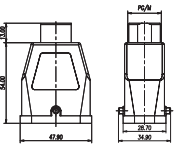
Tech data	Type	Part Number	(mm <sup>2</sup> )	Tool
<b>Material:</b> copper alloy <b>Finish:</b> tin plated <b>Contact resistance:</b> ≤3mΩ <b>Crimp Terminal:</b> 0.2-4.0 mm <sup>2</sup> AWG: 24-12  Other finishes and Materials on request  Appl. Spec.: 114-18018	Pin contact tin plated	962966-1	0.2 - 0.4	734285-1
		962967-1	0.5 - 1.0	734285-1
		962968-1	1.0 - 2.5	734285-2
		962969-1	2.5 - 4.0	734285-3
	Reel contact/pin tin plated	929962-1	0.2 - 0.4	734285-1
		929963-1	0.5 - 1.0	734285-1
		929964-1	1.0 - 2.5	734285-2
		929965-1	2.5 - 4.0	734285-3
	Socket contact tin plated	962976-1	0.2 - 0.4	734285-1
		962977-1	0.5 - 1.0	734285-1
		962978-1	1.0 - 2.5	734285-2
		962979-1	2.5 - 4.0	734285-3
	Reel contact/socket tin plated	929969-1	0.2 - 0.4	734285-1
		929970-1	0.5 - 1.0	734285-1
		929971-1	1.0 - 2.5	734285-2
		929972-1	2.5 - 4.0	734285-3

## Crimping tools HGQ10 series

Description	Type	Part Number
Extraction tool	Extraction tool	1-1579007-8
	Handtool 734285-11,5 mm <sup>2</sup> 734285-22,5 mm <sup>2</sup> 734285-34,0 mm <sup>2</sup>	
Crimping tool with locator	Safety Press SSC-2FP	1481004-7
Bench and Automatic tooling on request	Ergo Die Adapter	1579000-7

## H8A with 1 lever on the hoods/housings

### THERMOPLASTIC HOODS, HOUSINGS


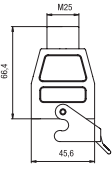
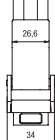

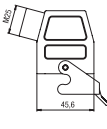
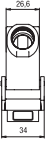
Dimensions (mm)	Metr.	PG	Type	Part Number
Hood: Side entry				
 	M20 M25  M25	PG16	H8A-TS-PG16 H8A-TS-M20 H8A-TS-M25  <b>EMV</b> HG-Q-EMV.STO.1.M25.Z	T1359090116-000 T1319080120-000 T1319080125-000  O-1103073-3
Hood: Top entry				
 	M20 M25  M25		H8A-TG-M20 H8A-TG-M25  <b>EMV</b> HG-Q-EMV.STO.1.M25.Z	T1329080120-000 T1329080125-000  O-1103073-4

## HG-Q housings

Plastic glass-fibre reinforced

**EMV:** Protection against electro-magnetic interference

IP 65

Description	Metr.	PG	Type	Part Number
Cable-to-cable hood: Bottom entry				
			HG-Q.KDO-LB.1.M25.Z	O-1108795-1
	M25		<b>EMV</b> HG-Q-EMV.KDO-LB.1.M25.Z	O-1108795-3
Cable-to-cable hood: Side entry				
			HG-Q.KDS-LB.1.M25.Z	O-1108795-2
	M25		<b>EMV</b> HG-Q-EMV.KDS-LB.1.M25.Z	O-1108795-4
Surface mount housing: Bottom entry				
			HG-Q.AG-LB	O-1103072-1
	M25		<b>EMV</b> HG-Q-EMV.AG-LB	O-1103072-2







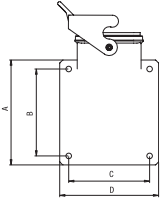

## HG-Q.10 motor housings

Plastic glass-fibre reinforced

400V 20A

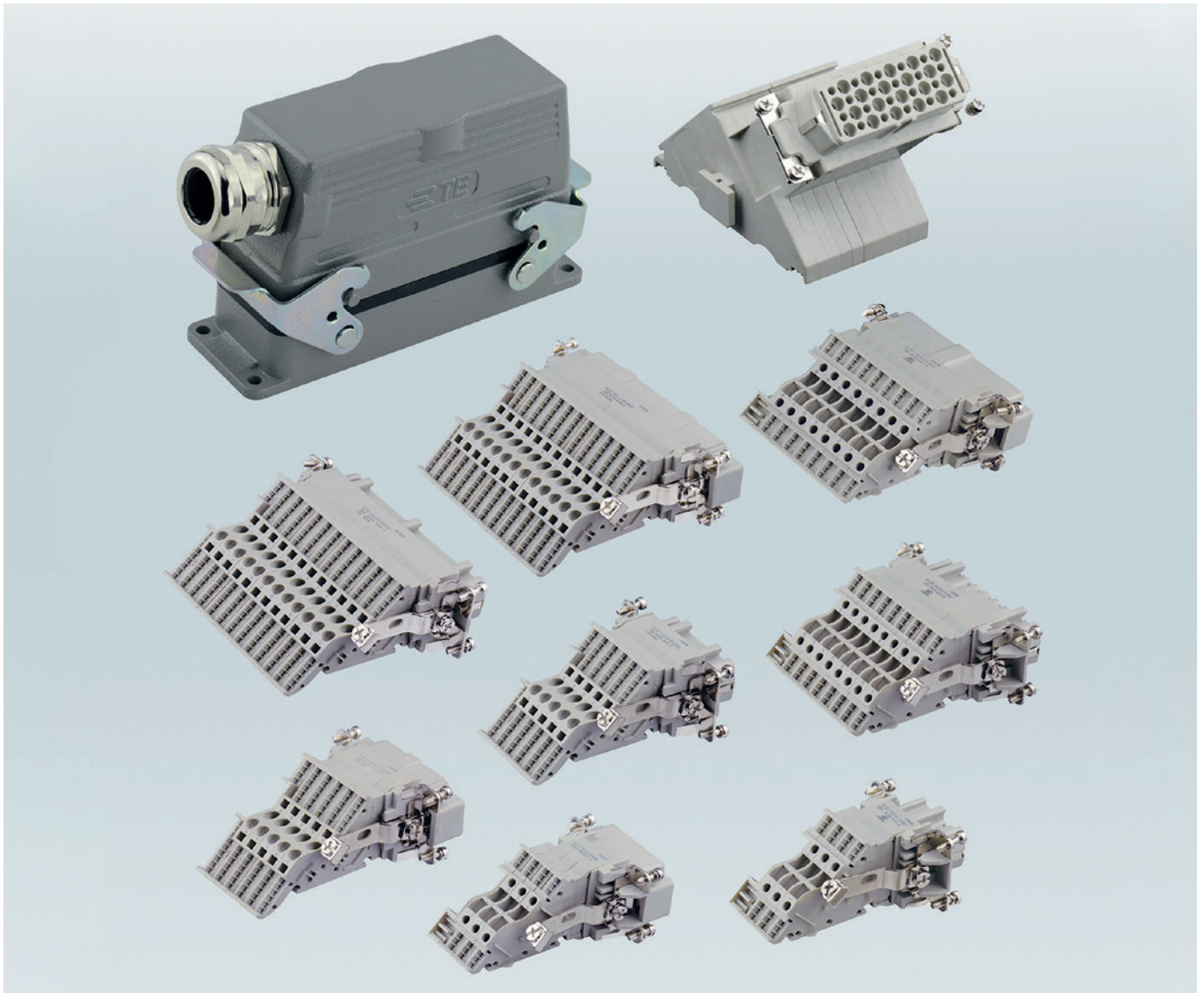
**EMV:** Protection against electro-magnetic interference

IP 65

Description	Metr.	PG	Type	Part Number																															
			HG-Q.10.MC.1	0-1103092-1																															
			<b>EMV</b> HG-Q.10-EMV.MC.1	0-1103092-8																															
			HG-Q.10.MC.2	0-1103092-2																															
			<b>EMV</b> HG-Q.10-EMV.MC.2	0-1103092-9																															
			HG-Q.10.MC.3	0-1103092-3																															
			<b>EMV</b> HG-Q.10-EMV.MC.3	1-1103092-0																															
	 <table border="1"> <caption>Dimensions (mm)</caption> <thead> <tr> <th>PN</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>0-1, 0-8</td> <td>70</td> <td>58</td> <td>54</td> <td>66</td> </tr> <tr> <td>0-2, 0-9</td> <td>70</td> <td>60</td> <td>60</td> <td>70</td> </tr> <tr> <td>0-3, 1-0</td> <td>74</td> <td>56</td> <td>56</td> <td>74</td> </tr> <tr> <td>0-4, 1-1</td> <td>75</td> <td>64</td> <td>64</td> <td>75</td> </tr> <tr> <td>0-5, 1-2</td> <td>120</td> <td>105</td> <td>105</td> <td>120</td> </tr> </tbody> </table>	PN	A	B	C	D	0-1, 0-8	70	58	54	66	0-2, 0-9	70	60	60	70	0-3, 1-0	74	56	56	74	0-4, 1-1	75	64	64	75	0-5, 1-2	120	105	105	120			HG-Q.10.MC.4	0-1103092-4
		PN	A	B	C	D																													
0-1, 0-8		70	58	54	66																														
0-2, 0-9		70	60	60	70																														
0-3, 1-0		74	56	56	74																														
0-4, 1-1	75	64	64	75																															
0-5, 1-2	120	105	105	120																															
			<b>EMV</b> HG-Q.10-EMV.MC.4	1-1103092-1																															
			HG-Q.10.MC.5	0-1103092-5																															
			<b>EMV</b> HG-Q.10-EMV.MC.5	1-1103092-2																															



## HEAV Contact Series



### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances

DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 60 664-1

DIN EN 61 984

### 3. Approvals



## HEAV/HESAV technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts ..... 6,10,16,24 + PE

### INSERTS

Working current ..... 16A max  
 (See current carrying capacity)  
 Working voltage ..... 500V  
 Test voltage urms..... 6KV  
 Test voltage urms acc. to TUV ..... 4KV  
 Pollution degree ..... 2  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Working voltage acc. to UL/CSA ..... 600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

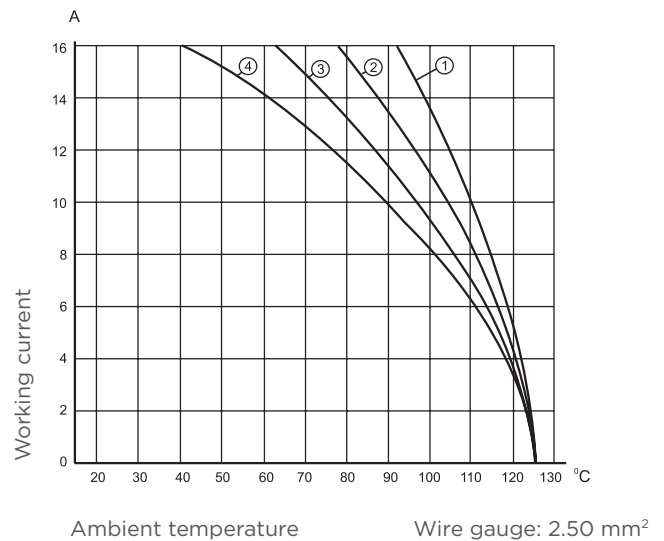
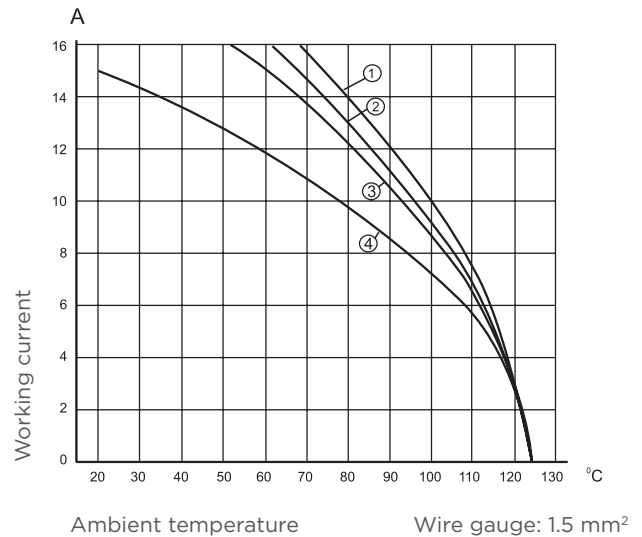
Material ..... Copper alloy  
 Surface ..... Hard silver-plated  
 Contact resistance .....  $\leq 4m\Omega$   
 HEAV Terminal ..... Screw terminal  
 - mm<sup>2</sup> ..... 0.2-2.5mm<sup>2</sup>  
 - AWG ..... 24-14  
 HESAV Terminal ..... Spring terminal  
 - mm<sup>2</sup> ..... 0.5-2.5mm<sup>2</sup>  
 - AWG ..... 20-14

### HOODS, HOUSINGS

Material ..... Die cast aluminium  
 Surface ..... Powder-coated (RAL 7037)  
 Locking element.....Stainless steel, steel-zinc plated  
 Temperature range ..... -40°C... +125°C  
 Degree of protection acc. to DIN40 050 .....IP65

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.




- 1 HEAV-006/HESAV-006
- 2 HEAV-010/HESAV-010
- 3 HEAV-016/HESAV-016
- 4 HEAV-024/HESAV-024

## HEAV inserts

LEFT HAND VERSION  
SCREW TERMINAL

500V MAX. 16A

6+  10+   
16+  24+ 

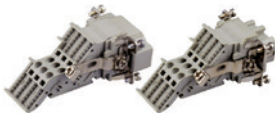

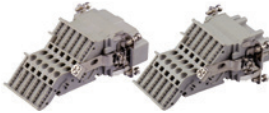
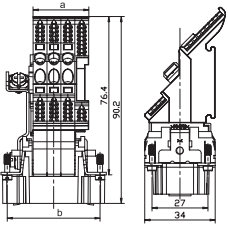


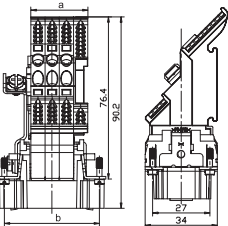
Dimensions (mm)	Type	Type	Part Number																
			Male insert	Female insert															
Screw terminal 6+ 																			
	6-pole	HEAV-006-M	T2090062101-000																
		HEAV-006-F		T2090062201-000															
Screw terminal 10+ 																			
	10-pole	HEAV-010-M	T2090102101-000																
		HEAV-010-F		T2090102201-000															
Left hand version																			
 <table border="1" data-bbox="368 1111 655 1272"> <thead> <tr> <th>Male insert/ Female insert</th> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>HEAV-006</td> <td>20</td> <td>44</td> </tr> <tr> <td>HEAV-010</td> <td>34</td> <td>57</td> </tr> <tr> <td>HEAV-016</td> <td>54</td> <td>77.5</td> </tr> <tr> <td>HEAV-024</td> <td>81</td> <td>104</td> </tr> </tbody> </table>	Male insert/ Female insert	A	B	HEAV-006	20	44	HEAV-010	34	57	HEAV-016	54	77.5	HEAV-024	81	104				
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HEAV-024	81	104																	
Screw terminal 16+ 																			
	16-pole	HEAV-016-M	T2090162101-000																
		HEAV-016-F		T2090162201-000															
Screw terminal 24+ 																			
	24-pole	HEAV-024-M	T2090242101-000																
		HEAV-024-F		T2090242201-000															
Left hand version																			
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HEAV-024	81	104																	

## HESAV inserts

LEFT HAND VERSION  
SPRING TERMINAL

500V MAX. 16A

6+  10+   
16+  24+ 

Dimensions (mm)	Type	Type	Part Number																
			Male insert	Female insert															
Spring terminal 6+ 																			
	6-pole	HEAV-006-MS	T2100063101-000																
		HEAV-006-FS		T2100063201-000															
Spring terminal 10+ 																			
	10-pole	HEAV-010-MS	T2100103101-000																
		HEAV-010-FS		T2100103201-000															
Left hand version																			
 <table border="1" data-bbox="368 1111 659 1279"> <thead> <tr> <th>Male insert/ Female insert</th> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>HEAV-006</td> <td>20</td> <td>44</td> </tr> <tr> <td>HEAV-010</td> <td>34</td> <td>57</td> </tr> <tr> <td>HEAV-016</td> <td>54</td> <td>77.5</td> </tr> <tr> <td>HEAV-024</td> <td>81</td> <td>104</td> </tr> </tbody> </table>	Male insert/ Female insert	A	B	HEAV-006	20	44	HEAV-010	34	57	HEAV-016	54	77.5	HEAV-024	81	104				
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HEAV-024	81	104																	
Spring terminal 16+ 																			
	16-pole	HEAV-016-MS	T2100163101-000																
		HEAV-016-FS		T2100163201-000															
Spring terminal 24+ 																			
	24-pole	HEAV-024-MS	T2100243101-000																
		HEAV-024-FS		T2100243201-000															
Left hand version																			
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HEAV-006	20	44																	
HEAV-010	34	57																	
HEAV-016	54	77.5																	
HEAV-024	81	104																	

## HMN Modular Series



- Mutually compatible with other brands
- More convenient to install
- Complete series
- Can be developed according to customer requirements

### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances  
DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 175 301-801  
DIN EN 61 984

### 3. Approvals





## HMN modular connectors overview

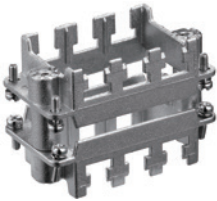
H10A



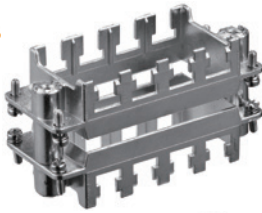
H6B



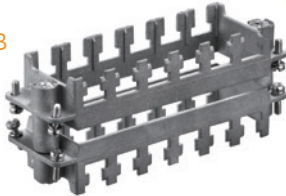
H10B



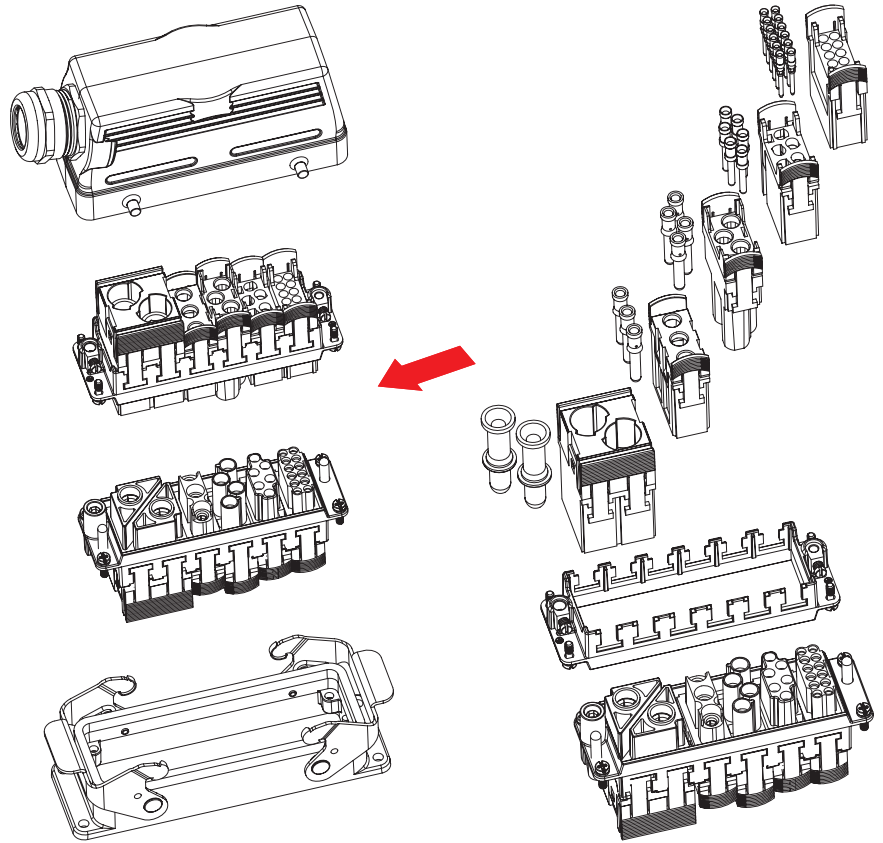
H16B



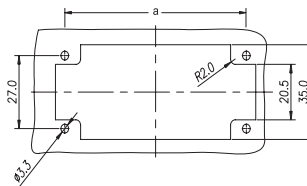
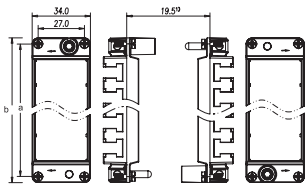
H24B



MODULAR UNITS, INSTALL AND REMOVE WITHOUT SPECIAL TOOLS!



### HMN MODULE FIXING FRAME



Hood/Housing	NO. of modules	a	b
H10A	1	49.5	56.5
H6B	2	44	51
H10B	3	57	64.1
H16B	4	77.5	84.5
H24B	6	104	111

Distance for electrical contacts max. 21mm.  
For pneumatic contacts max. 20.5mm. Each frame is composed of an upper and a lower bracket.

Description	Size	Part Number	Type
H10A frame for 1 modules	H10A	T2079104201-M	H10A-T1-M
		T2079104101-F	H10A-T1-F
H6B frame for 2 modules	H6B	T2070064101-000	H6BN-T2-M
		T2070064201-000	H6BN-T2-F
H10B frame for 3 modules	H10B	T2070104101-000	H10BN-T3-M
		T2070104201-000	H10BN-T3-F
H16B frame for 4 modules	H16B	T2070164101-000	H16BN-T4-M
		T2070164201-000	H16BN-T4-F
H24B frame for 6 modules	H24B	T2070244101-000	H24BN-T6-M
		T2070244201-000	H24BN-T6-F





## 200A/1 Pole module technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts ..... 1 pole

### INSERTS

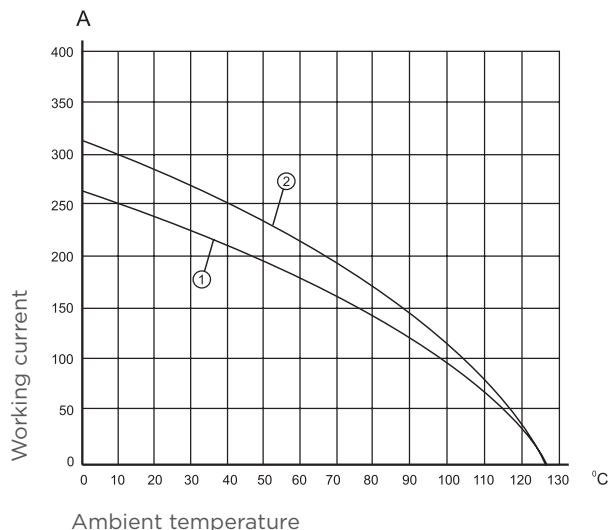
Working current ..... 200A max  
 (See current carrying capacity)  
 Working voltage ..... 1000V  
 Test voltage urms ..... 8KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Working voltage acc. to UL/CSA..... 600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

Material ..... Copper alloy  
 Surface ..... Hard silver-plated  
 Contact resistance .....  $\leq 0.3m\Omega$   
 Terminal ..... Crimp terminal  
 - mm<sup>2</sup> ..... 25-70mm<sup>2</sup>  
 - AWG ..... 2-0

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 H24B hood/housing with 3 modules;  
wire gauge: 50mm<sup>2</sup>
- 2 H24B hood/housing with 3 modules;  
wire gauge: 70mm<sup>2</sup>



## 100A/2 Poles module technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts ..... 2 poles

### INSERTS

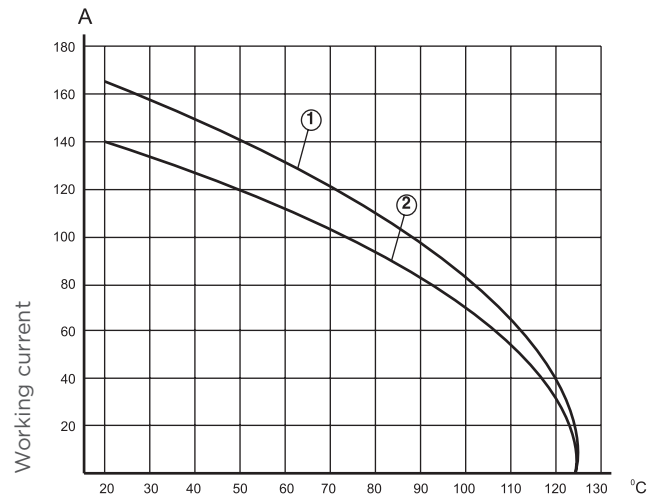
Working current ..... 100A max  
 (See current carrying capacity)  
 Working voltage ..... 1000V  
 Test voltage urms ..... 8KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Working voltage acc. to UL/CSA..... 600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

Material .....Copper alloy  
 Surface .....Hard silver-plated  
 Contact resistance .....  $\leq 0.3m\Omega$   
 Terminal ..... Crimp terminal  
 - mm<sup>2</sup> ..... 10-35mm<sup>2</sup>  
 - AWG ..... 6-2

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



Ambient temperature


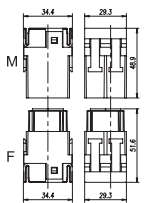

- 1 H24B hood/housing with 3 modules; wire gauge: 35mm<sup>2</sup>
- 2 H24B hood/housing with 3 modules; wire gauge: 25mm<sup>2</sup>

## HMN-D2 module inserts


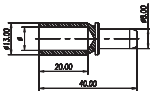

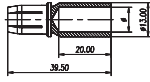
CRIMP TERMINAL

1000V MAX. 100A

2 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal	Size chart			
		HMN-D2-MC	T2111028101-000	
		HMN-D2-FC		T2111028201-000
Contact arrangement view from termination side				

### 100A Contact

Tech data	100A Male crimp contacts	Wire gauge	Ø	Stripping length	Crimp contacts, silver-plated	
		mm <sup>2</sup>	mm		Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CDM/Male</b> 		10	4.3	19	CNM-10	T2050001010-000
		16	5.5	19	CNM-16	T2050001016-000
		25	7	19	CNM-25	T2050001025-000
		35	8.2	16	CNM-35	T2050001035-000
<b>CDF/Female</b> 	<b>100A Female crimp contacts</b> 	10	4.3	19	CNF-10	T2050002010-000
		16	5.5	19	CNF-16	T2050002016-000
		25	7	19	CNF-25	T2050002025-000
		35	8.2	16	CNF-35	T2050002035-000

## 70A/2 Poles module technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts ..... 2 poles

### INSERTS

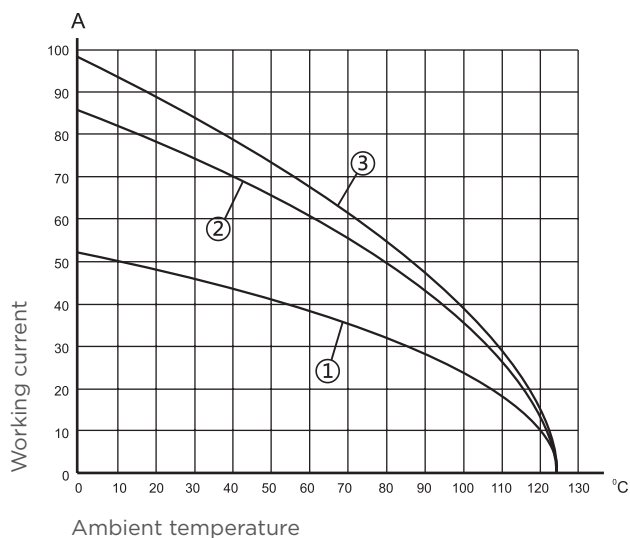
Working current ..... 70A max  
 (See current carrying capacity)  
 Working voltage ..... 1000V  
 Test voltage urms ..... 8KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Working voltage acc. to UL/CSA ..... 600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

Material ..... Copper alloy  
 Surface ..... Hard silver-plated  
 Contact resistance .....  $\leq 0.5m\Omega$   
 Terminal ..... Crimp terminal  
 - mm<sup>2</sup> ..... 6-22mm<sup>2</sup>  
 - AWG ..... 8-4

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.




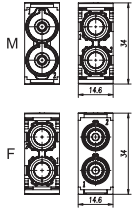
- 1 H24B hood/housing with 6 modules;  
wire gauge: 6mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules;  
wire gauge: 16mm<sup>2</sup>
- 3 H24B hood/housing with 6 modules;  
wire gauge: 22mm<sup>2</sup>

## HMN-002 module inserts

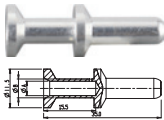
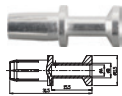
CRIMP TERMINAL

1000V MAX. 70A

2 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (order crimp contacts separately)	Contact arrangement view from termination side			
		HMN-002-MC	T2111020101-000	
		HMN-002-FC		T2111020201-000

### 70A Contact

Male		Wire gauge		A	B	Crimp contacts, silver-plated	
		mm <sup>2</sup>	AWG			Type	Part Number
Female		10.0mm <sup>2</sup>	AWG7	4.3	5.6	CSM-10	T2400001100-000
		16.0mm <sup>2</sup>	AWG5	5.5	8.5	CSM-16	T2400001160-000
		25.0mm <sup>2</sup>	AWG3	7.0	10.0	CSM-25	T2400001250-000
		10.0mm <sup>2</sup>	AWG7	4.3	5.6	CSF-10	T2400002100-000
		16.0mm <sup>2</sup>	AWG5	5.5	8.5	CSF-16	T2400002160-000
		25.0mm <sup>2</sup>	AWG3	7.0	10.0	CSF-25	T2400002250-000

## 40A/3 Poles module technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts ..... 3 poles

### CURRENT CARRYING CAPACITY

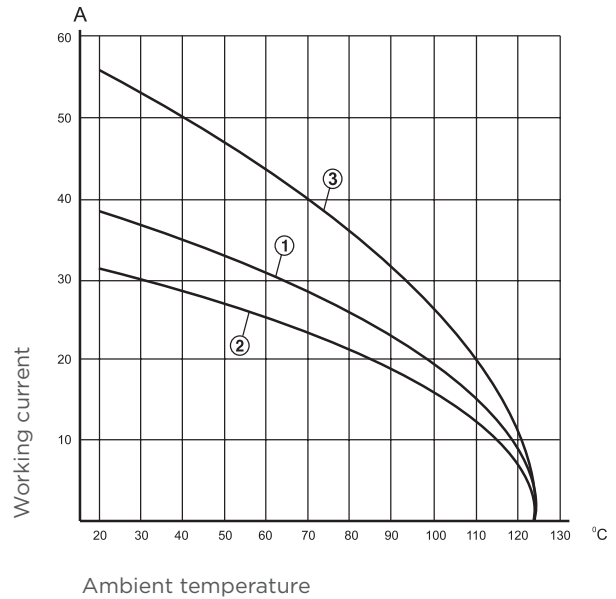
The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

### INSERTS

Working current .....40A max  
 (See current carrying capacity)  
 Working voltage  
 Cable  $\varnothing$  up to 5mm..... 690V  
 Cable  $\varnothing$  up to 7.5mm..... 500V  
 Test voltage urms ..... 6KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Working voltage acc. to UL/CSA ..... 600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

Material .....Copper alloy  
 Surface .....Hard silver-plated  
 Contact resistance .....  $\leq 0.3m\Omega$   
 Terminal ..... Crimp terminal  
 -  $mm^2$  .....1.0-6 $mm^2$   
 - AWG .....18-10



- 1 H24B hood/housing with 6 modules;  
wire gauge: 6.0 $mm^2$
- 2 H24B hood/housing with 6 modules;  
wire gauge: 4.0 $mm^2$
- 3 H24B hood/housing with 6 modules;  
wire gauge: 10.0 $mm^2$


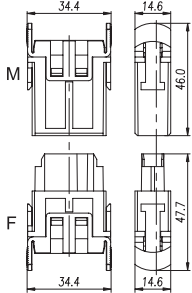
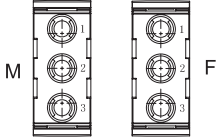


## HMN-003 module inserts




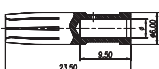
CRIMP TERMINAL

690V MAX. 40A

3 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal	Size chart			
		HMN-003-M	T2111032101-000	
		HMN-003-F		T2111032201-000
Contact arrangement view from termination side				

### 40A Contact

Tech data	40A Male crimp contacts	Wire gauge		Stripping length	Crimp contacts, silver-plated	
		mm <sup>2</sup>	AWG		Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤0.3mΩ <b>Terminal:</b> crimp connection <b>CMM/Male</b> 		1.5	16	8.0	CMM-1.5	T2040001015-000
		2.5	14	8.0	CMM-2.5	T2040001025-000
		4.0	12	8.0	CMM-4.0	T2040001040-000
		6.0	10	8.0	CMM-6.0	T2040001060-000
		10	7	8.0	CMM-10	T2040001100-000
		<b>CMF/Female</b> 	<b>40A Female crimp contacts</b> 	1.5	16	8.0
2.5	14			8.0	CMF-2.5	T2040002025-000
4.0	12			8.0	CMF-4.0	T2040002040-000
6.0	10			8.0	CMF-6.0	T2040002060-000
10	7			8.0	CMF-10	T2040002100-000

## 40A/4 Poles module technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts .....4 poles

### INSERTS

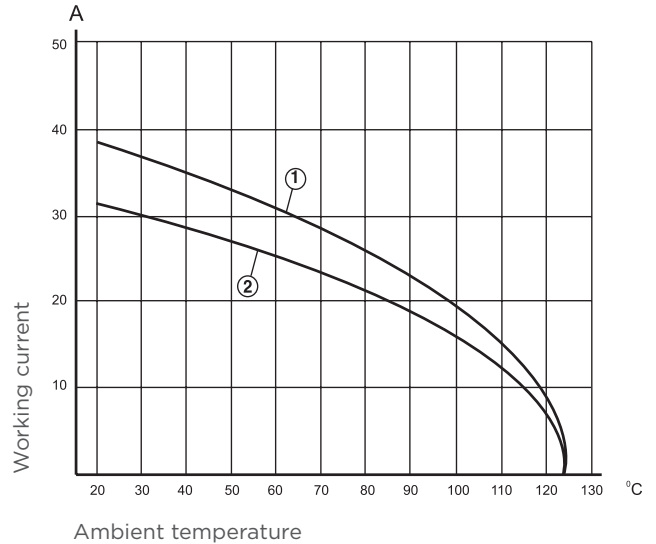
Working current .....40A max  
 (See current carrying capacity)  
 Working voltage  
 Cable ø up to 5mm.....830V  
 Cable ø up to 7.5mm..... 500V  
 Test voltage urms .....8KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Working voltage acc. to UL/CSA ..... 600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

Material .....Copper alloy  
 Surface .....Hard silver-plated  
 Contact resistance .....  $\leq 0.3m\Omega$   
 Terminal ..... Crimp terminal  
 - mm<sup>2</sup> .....1.0-6mm<sup>2</sup>  
 - AWG .....18-10

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



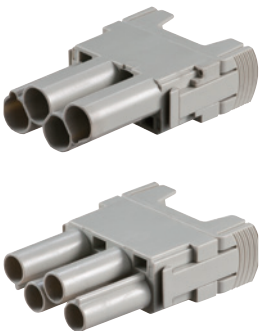
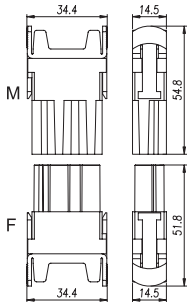
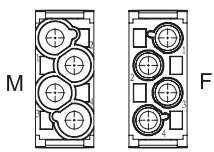
- 1 H24B hood/housing with 6 modules;  
wire gauge: 6.0mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules;  
wire gauge: 4.0mm<sup>2</sup>

## HMN-004 module inserts




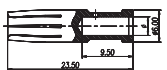
CRIMP TERMINAL

830V MAX. 40A

4 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal	Size chart			
		HMN-004-M	T2111042101-000	
		HMN-004-F		T2111042201-000
Contact arrangement view from termination side				

### 40A Contact

Tech data	40A Male crimp contacts	Wire gauge		Stripping length	Crimp contacts, silver-plated	
		mm <sup>2</sup>	AWG		Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤0.3mΩ <b>Terminal:</b> crimp connection <b>CMM/Male</b> 		1.5	16	8.0	CMM-1.5	T2040001015-000
		2.5	14	8.0	CMM-2.5	T2040001025-000
		4.0	12	8.0	CMM-4.0	T2040001040-000
		6.0	10	8.0	CMM-6.0	T2040001060-000
		10	7	8.0	CMM-10	T2040001100-000
<b>CMF/Female</b> 	<b>40A Female crimp contacts</b> 	1.5	16	8.0	CMF-1.5	T2040002015-000
		2.5	14	8.0	CMF-2.5	T2040002025-000
		4.0	12	8.0	CMF-4.0	T2040002040-000
		6.0	10	8.0	CMF-6.0	T2040002060-000
		10	7	8.0	CMF-10	T2040002100-000

## 16A/5 Poles module technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	5 poles

### INSERTS

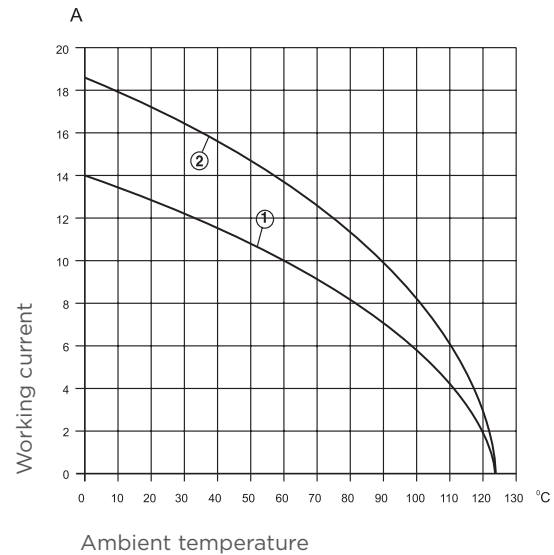
Working current .....	16A max
(See current carrying capacity)	
Working voltage.....	400V
Test voltage urms .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 3m\Omega$
Terminal .....	Spring terminal
- mm <sup>2</sup> .....	0.5-2.5mm <sup>2</sup>
- AWG .....	20-14

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



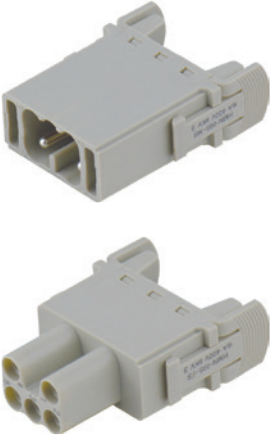
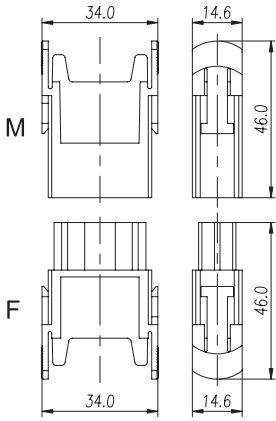
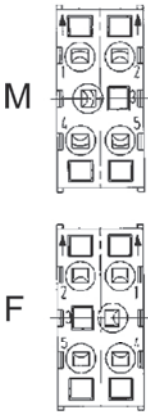
- 1 H24B hood/housing with 6 modules;  
wire gauge: 2.5mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules;  
wire gauge: 1.5mm<sup>2</sup>

## HMN-005 module inserts

SPRING TERMINAL

400V MAX. 16A

5 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Spring terminal	Size chart			
		HMN-005-MS	T2110052101-000	
		HMN-005-FS		T2110052201-000
Contact arrangement view from termination side				

## 16A/6 Poles module technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	6 poles

### INSERTS

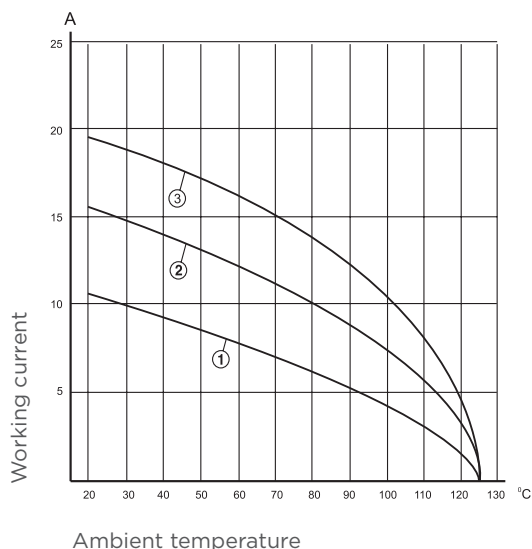
Working current .....	16A max
(See current carrying capacity)	
Working voltage.....	500/830V
Test voltage urms	
HMN-006-M/F.....	6KV
HMN-006-PM/F.....	8KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-4.0mm <sup>2</sup>
- AWG .....	26-12

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

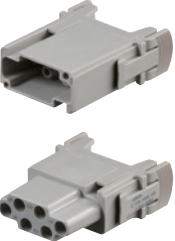
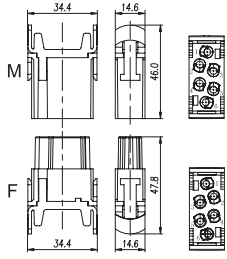

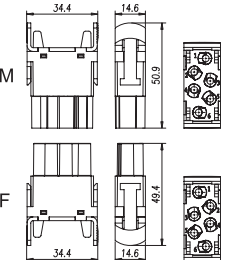


- 1 H24B hood/housing with 6 modules; wire gauge: 1.5mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules; wire gauge: 2.5mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules; wire gauge: 4mm<sup>2</sup>


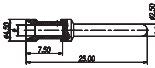

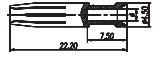
## HMN-006 module inserts

### CRIMP TERMINAL

6 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal	Contact arrangement view from termination side			
500V max. 16A 		HMN-006-M	T2111062101-000	
		HMN-006-F		T2111062201-000
830V Max. 16A 		HMN-006-PM	T2111063101-000	
		HMN-006-PF		T2111063201-000

### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1\text{m}\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
0.5	20			7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
0.75	18			7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

## 16A/8 Poles module technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	8 poles

### INSERTS

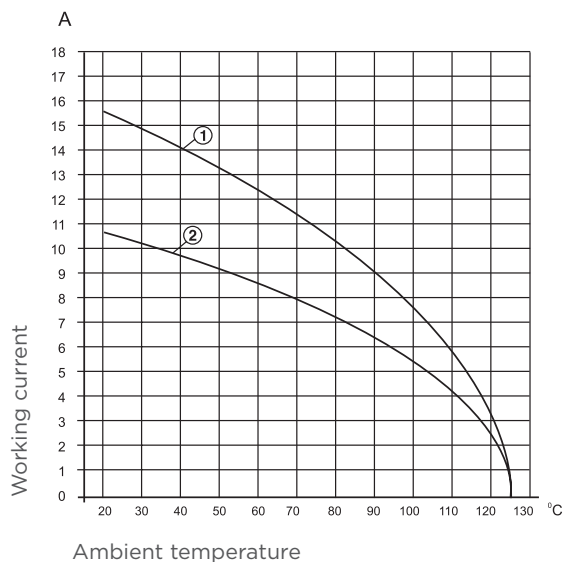
Working current .....	16A max
(See current carrying capacity)	
Working voltage.....	400V
Test voltage urms .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-4.0mm <sup>2</sup>
- AWG .....	26-12

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 H24B hood/housing with 6 modules; wire gauge: 2.5mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules; wire gauge: 1.5mm<sup>2</sup>

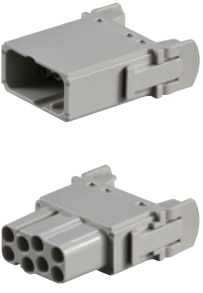
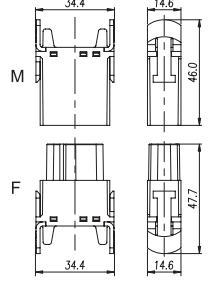
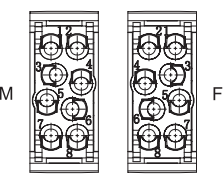


# HMN-008 module inserts


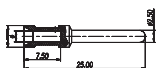

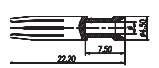
CRIMP TERMINAL

400V MAX. 16A

8 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (Order crimp contacts separately)	Size chart			
		HMN-008-M	T2111082101-000	
		HMN-008-F		T2111082201-000
Contact arrangement view from termination side				

## 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		<b>CEF/Female</b> 		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
0.5	20			7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
0.75	18			7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
1.0	18			7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
1.5	16			7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
2.5	14			7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
4.0	12			7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000



## 10A/12 Poles module technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts .....12 poles

### INSERTS

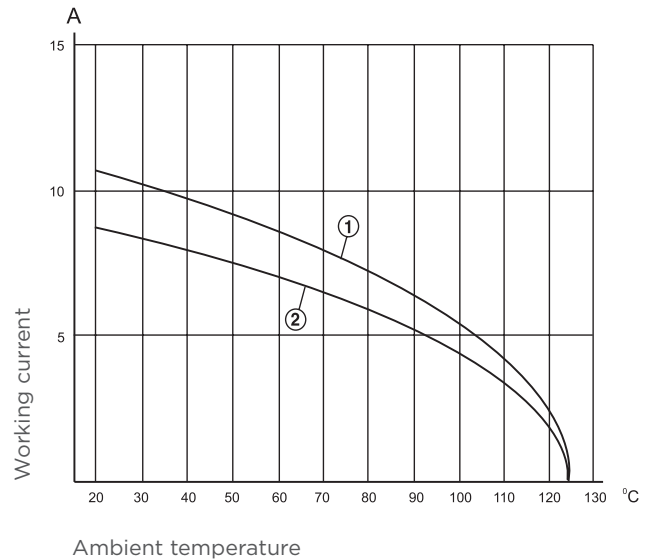
Working current .....10A max  
 (See current carrying capacity)  
 Working voltage .....250V  
 Test voltage urms .....4KV  
 Pollution degree .....3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 .....V0  
 Working voltage acc. to UL/CSA .....600V  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

Material .....Copper alloy  
 Surface .....Hard silver-plated  
 .....Hard gold-plated  
 Contact resistance .....  $\leq 3m\Omega$   
 Terminal ..... Crimp terminal  
 - mm<sup>2</sup> .....0.14-2.5mm<sup>2</sup>  
 - AWG .....26-14

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.




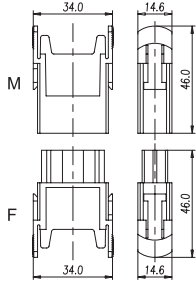

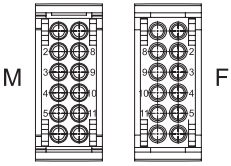
- 1 H24B hood/housing with 6 modules;  
wire gauge: 1.5mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules;  
wire gauge: 1.0mm<sup>2</sup>

## HMN-012 module inserts


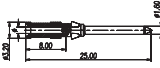

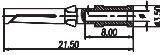
CRIMP TERMINAL

250V MAX. 10A

12 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (Order crimp contacts separately)	Size chart			
		HMN-012-M	T2111122101-000	
		HMN-012-F		T2111122201-000
Contact arrangement view from termination side				

### 10A Contact

Tech data	10A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤3mΩ <b>Terminal:</b> crimp connection <b>CDM/Male</b> 		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
		<b>CDF/Female</b> 		0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000
0.5	20			8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
0.75	18			8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
1.0	18			8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
1.5	16			8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
2.5	14			6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## 10A/17 Poles module technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	17 poles

### INSERTS

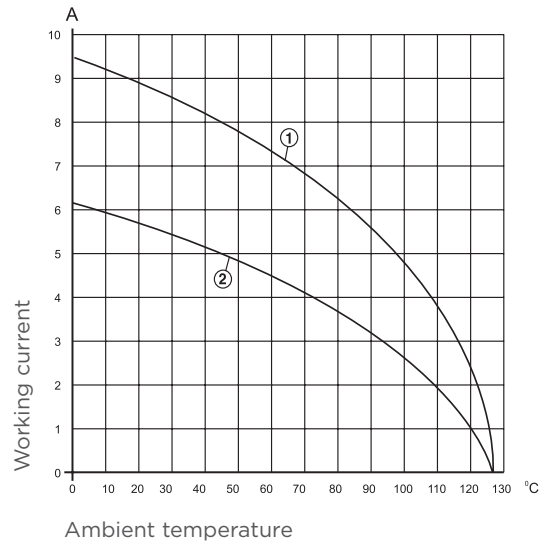
Working current .....	10A max
(See current carrying capacity)	
Working voltage.....	160V
Test voltage urms .....	2.5KV
Pollution degree .....	3
Pollution degree acc. to TUV.....	2
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 3m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-2.5mm <sup>2</sup>
- AWG .....	26-14

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.




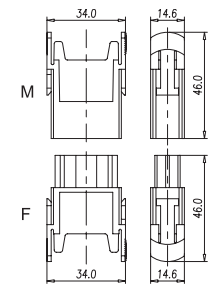
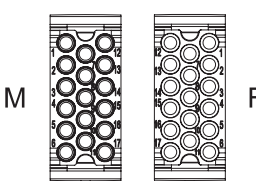
- 1 H24B hood/housing with 6 modules;  
wire gauge: 1.5mm<sup>2</sup>
- 2 H24B hood/housing with 6 modules;  
wire gauge: 1.0mm<sup>2</sup>

## HMN-017 module inserts


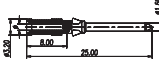

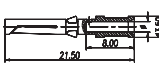
CRIMP TERMINAL

160V MAX. 10A

17 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (Order crimp contacts separately)	Size chart			
		HMN-017-M	T2111172101-000	
		HMN-017-F		T2111172201-000
Contact arrangement view from termination side				

### 10A Contact

Tech data	10A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤3mΩ <b>Terminal:</b> crimp connection <b>CDM/Male</b> 		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
		<b>CDF/Female</b> 		0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000
0.5	20			8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
0.75	18			8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
1.0	18			8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
1.5	16			8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
2.5	14			6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

## 16A/20 Poles module technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	20 poles

### INSERTS

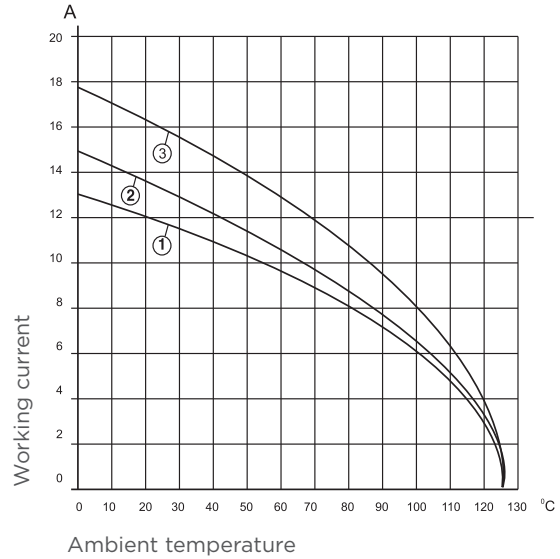
Working current .....	16A max
(See current carrying capacity)	
Working voltage.....	500V
Test voltage urms .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 1m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup> .....	0.14-4.0mm <sup>2</sup>
- AWG .....	26-12

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.




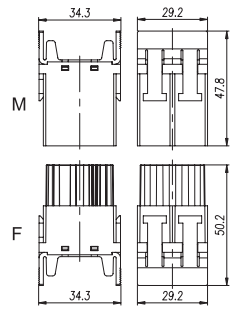
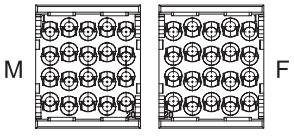
- 1 H24B hood/housing with 3 modules; wire gauge: 1.5mm<sup>2</sup>
- 2 H24B hood/housing with 3 modules; wire gauge: 2.5mm<sup>2</sup>
- 3 H24B hood/housing with 3 modules; wire gauge: 4mm<sup>2</sup>

## HMN-020 module inserts


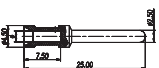

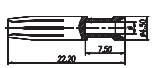
CRIMP TERMINAL

500V MAX. 16A

20 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (Order crimp contacts separately)	Size chart			
		HMN-020-M	T2111202101-000	
		HMN-020-F		T2111202201-000
Contact arrangement view from termination side				

### 16A Contact

Tech data	16A Male crimp contacts	Wire gauge		Strip-ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
<b>Material:</b> copper alloy <b>Contact resistance:</b> ≤1mΩ <b>Terminal:</b> crimp connection <b>CEM/Male</b> 		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
<b>CEF/Female</b> 		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000

## 5A/25 Poles module technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts .....25 poles

### INSERTS

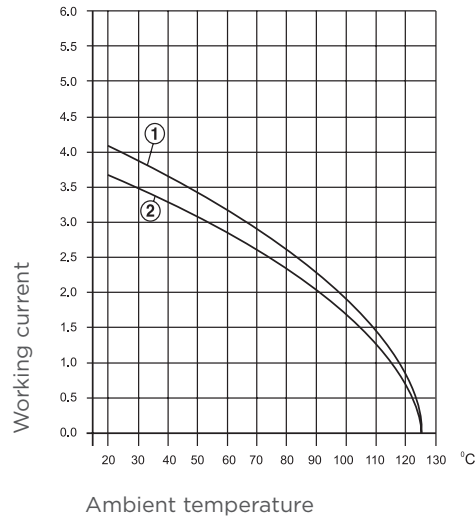
Working current ..... 5A max  
 (See current carrying capacity)  
 Working voltage..... 50V  
 Test voltage urms ..... 0.8KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0  
 Mechanical working life-mating cycles .....  $\geq 500$

### CONTACTS

Material .....Copper alloy  
 Surface .....Hard silver-plated  
 .....Hard gold-plated  
 Contact resistance ..... $\leq 1m\Omega$   
 Terminal ..... Crimp terminal  
 - mm<sup>2</sup> .....0.08-0.52mm<sup>2</sup>  
 - AWG .....28-20

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



#### Turned contacts

1 H24B hood/housing with 6 modules;  
 wire gauge: 0.5mm<sup>2</sup>

#### Stamped contacts

2 H24B hood/housing with 6 modules;  
 wire gauge: 0.5mm<sup>2</sup>





## D-Sub & RJ45 module technical characteristics

### D-SUB MODULE TECHNICAL CHARACTERISTICS

Specifications .....DIN EN 60 664-1  
..... DIN EN 61 984  
Number of contacts .....9 poles

#### INSERTS

Working current .....5A max  
(See current carrying capacity)  
Working voltage..... 50V  
Test voltage urms ..... 0.8KV  
Pollution degree ..... 3  
Insulation resistance .....  $\geq 10^{10}\Omega$   
Material ..... Polycarbonate  
Temperature range ..... -40°C... +125°C  
Flammability acc. to UL94 .....V0  
Mechanical working life-mating cycles .....  $\geq 500$

#### CONTACTS

Material .....Copper alloy  
Surface .....Hard silver-plated  
.....Hard gold-plated  
Contact resistance .....  $\leq 1m\Omega$   
Terminal ..... Crimp terminal

### RJ45 MODULE TECHNICAL CHARACTERISTICS

Specifications .....DIN EN 60 664-1  
..... DIN EN 61 984  
Number of contacts .....8 poles

#### INSERTS

Working current .....1A max  
(See current carrying capacity)  
Working voltage..... 50V  
Test voltage urms ..... 0.8KV  
Pollution degree ..... 3  
Insulation resistance .....  $\geq 10^{10}\Omega$   
Material ..... Polycarbonate  
Temperature range ..... -40°C... +85°C  
Flammability acc. to UL94 .....V0  
Mechanical working life-mating cycles .....  $\geq 500$

#### MODULE WITH RJ45 TERMINAL


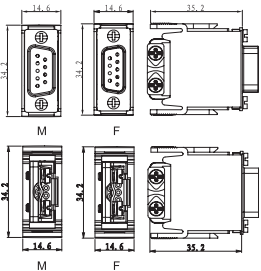


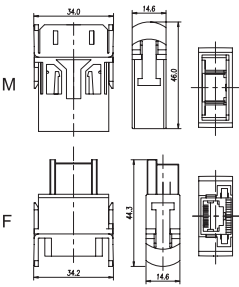


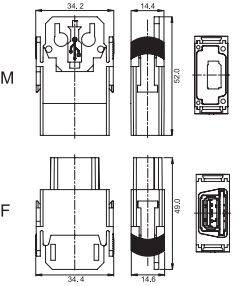

Material ..... Polycarbonate  
Temperature range..... -40°C... +70°C  
Flammability acc. to UL94 .....V0  
Stranded wire diameter..... 0.89-0.99mm  
Wire gauge ..... AWG24-26

Material ..... Polycarbonate  
Temperature range..... -40°C... +70°C  
Flammability acc. to UL94 .....V0  
Stranded wire diameter..... 0.94-1.07mm  
Wire gauge .....AWG22-24

## D-Sub/RJ45/USB module inserts

### CRIMP TERMINAL

9 Poles & 8 Poles & USB

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (Order crimp contacts separately)	Size chart			
		HMN-009-M	T2111092101-000	
		HMN-009-F		T2111092201-000
		HMN-RJ45-MC	T2113000101-100	
		HMN-RJ45-F		T2113000201-000
		HMN-USB-M	T2114000101-000	
		HMN-USB-F		T2114000201-000

## Quint module technical characteristics

Specifications .....DIN EN 60 664-1  
..... DIN EN 61 984

### INSERTS

Number of contacts ..... 2  
Insulation resistance .....  $\geq 10^{10} \Omega$   
Material ..... Polycarbonate  
Temperature range ..... -40°C ... +125°C  
Flammability acc. to UL 94 ..... V0  
Mechanical working life-mating cycles.....  $\geq 500$

### QUINT CONTACTS

Number of contacts  
- Quint 1 + shielding  
- Quint 4 + shielding  
- High Density Quint 8 + shielding

Working current  
- Quint 1..... 16A max  
- Quint 4 ..... 10A max  
- Quint 8 ..... 5A max  
Working voltage..... 50V  
Test voltage urms..... 0.8KV  
Pollution degree ..... 3  
Quint 8 Pollution degree acc. to TUV ..... 2  
Insulation resistance .....  $\geq 10^{10} \Omega$   
Material ..... Polycarbonate  
Temperature range ..... -40°C ... +125°C  
Flammability acc. to UL 94 ..... V0  
Mechanical working life-mating cycles.....  $\geq 500$

### CONTACTS

Material ..... Copper alloy  
Surface ..... Hard silver-plated  
..... Hard gold-plated  
Contact resistance.....  $\leq 3m\Omega$   
Terminal ..... Crimp terminal  
- mm<sup>2</sup>  
- Quint 1..... 0.14-4mm<sup>2</sup>  
- Quint 4 ..... 0.14-2.5mm<sup>2</sup>  
- Quint 8 ..... 0.08-0.52mm<sup>2</sup>  
- AWG  
- Quint 1..... 26-12  
- Quint 4 ..... 26-14  
- Quint 8 ..... 28-20

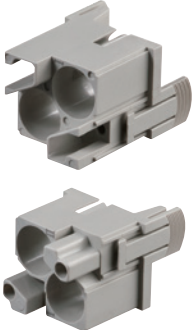
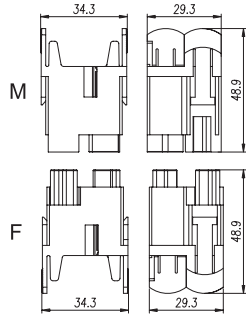
### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

## Quint module inserts


### CRIMP TERMINAL

2 Poles

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Crimp terminal (Order crimp contacts separately)	Size chart			
		HMN-Q1-M	T2111027101-000	
		HMN-Q1-F		T2111027201-000
		HMN-Q2-M	T2111027101-001	
		HMN-Q2-F		T2111027201-001
		HMN-Q3-M	T2111027101-002	
		HMN-Q3-F		T2111027201-002


#### Quint 1-pos

For 16A crimp contacts

	PIN-Q1-M	T2580011154-000	
	PIN-Q1-F		T2580012154-000


#### Quint 4-pos

For 10A crimp contacts

	PIN-Q2-M	T2580031154-000	
	PIN-Q2-F		T2580032154-000


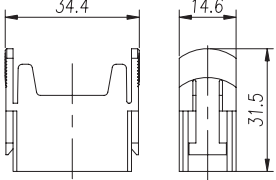
#### Quint 8-pos

For D-Sub crimp contacts

	PIN-Q3-M	T2580081154-000	
	PIN-Q3-F		T2580082154-000

## Dummy module inserts


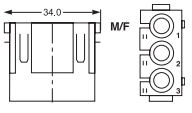
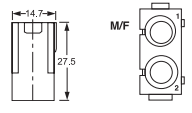
1

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
	Size chart			
		HMN-DM	T3110009902-000	


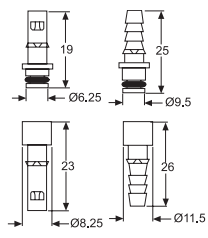
## HMN-P2, P3 module for pneumatic contacts

### PNEUMATIC CONTACTS, MODULAR UNITS, WITH 2 OR 3 SEATS

P2, P3

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Contact arrangement view from termination side				
		HMN-PA3	T2111032301-000	
		HMN-PA2	T2111022301-000	

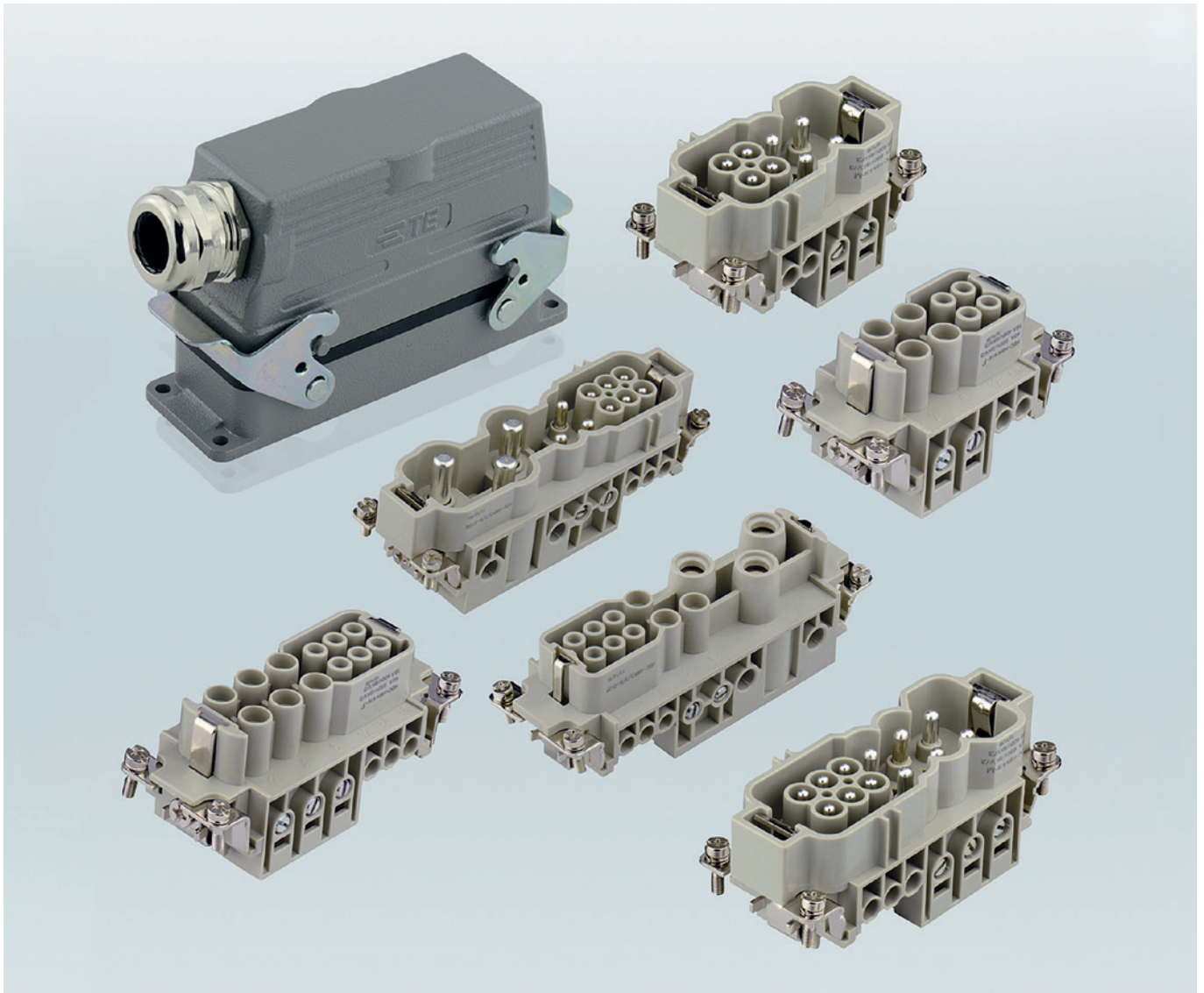
#### Pneumatic contacts with or without closing valve

				
<p><b>Male contacts without closing valve</b></p> <p>For tubes with internal <math>\varnothing</math> 1.6mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 3.0mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 4.0mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 6.0mm (For HMN P2 module)</p>		<p>Pneu-c-M1.6</p> <p>Pneu-c-M3.0</p> <p>Pneu-c-M4.0</p> <p>Pneu-c-M6.0</p>	<p>T2090002101-001</p> <p>T2090002101-002</p> <p>T2090002101-003</p> <p>T2090002101-004</p>	
<p><b>Female contacts without closing valve</b></p> <p>For tubes with internal <math>\varnothing</math> 1.6mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 3.0mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 4.0mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 6.0mm (For HMN P2 module)</p>		<p>Pneu-c-F1.6</p> <p>Pneu-c-F3.0</p> <p>Pneu-c-F4.0</p> <p>Pneu-c-F6.0</p>		<p>T2090002201-001</p> <p>T2090002201-002</p> <p>T2090002201-003</p> <p>T2090002201-004</p>
<p><b>Female contacts with closing valve</b></p> <p>For tubes with internal <math>\varnothing</math> 1.6mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 3.0mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 4.0mm (For HMN P3 module)</p> <p>For tubes with internal <math>\varnothing</math> 6.0mm (For HMN P3 module)</p>		<p>Pneu-c-Fw1.6</p> <p>Pneu-c-Fw3.0</p> <p>Pneu-c-Fw4.0</p> <p>Pneu-c-Fw6.0</p>		<p>T2090012201-001</p> <p>T2090012201-002</p> <p>T2090012201-003</p> <p>T2090012201-004</p>
<p><b>Male contacts (use contacts without closing valve)</b></p>				





## HK, HWK Series



### 1. Specifications

DIN VDE 0110 Concerning clearance and creepage distances

DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 60 664-1

DIN EN 61 984

### 3. Approvals



RoHS

## HK8/24 technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	8/24 + PE

## CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

## INSERTS

Rated current	
Power contact .....	16A max
Signal contact.....	10A max
Working voltage	
Power contact	
Conductor - ground .....	230V
Conductor - conductor .....	400V
Signal contact.....	160V
Test voltage urms	
Power contact .....	4KV
Signal contact.....	2.5KV
Pollution degree .....	2
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V/300V
Mechanical working life-mating cycles .....	$\geq 500$

## CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance .....	$\leq 3m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup>	
Power contact .....	0.15-4.0mm <sup>2</sup>
Signal contact.....	0.15-2.5mm <sup>2</sup>
- AWG	
Powder contact .....	26-12
Signal contact.....	26-14

## HOODS, HOUSINGS


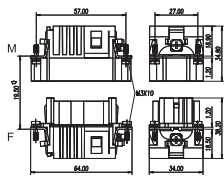
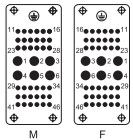
Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

## HK8/24 inserts


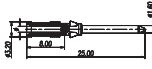

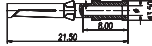
INSERTS FOR H10B HOOD/HOUSING

400V/160V MAX. 16A/10A


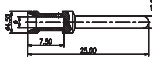

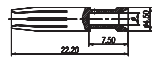
8/24+ ⊕

Dimensions (mm)	Type	Part Number	
		Male insert	Female insert
Crimp terminal (Order crimp contacts separately)			
		HK8/24-032-M	T2100322101-000
		HK8/24-032-F	T2100322201-000
Contact arrangement view from termination side 			

### 10A Contact










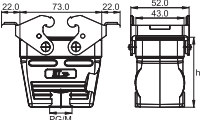




Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male 	10A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		mm	Type	Part Number	Type
CDF/Female 	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
		0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000

### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male 	16A Male crimp contacts 	Wire gauge		Strip- ping length	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		mm	Type	Part Number	Type
CEF/Female 	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000	DEF-0.3	T2030012002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000


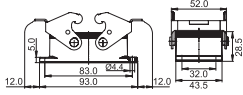

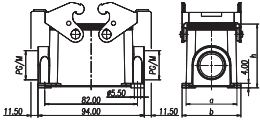

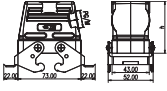

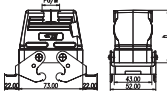



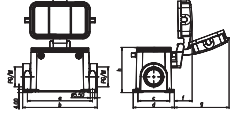

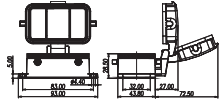
## H10B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
<b>Hood: Side entry</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Low construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25</p> </div> </div>		PG16 PG21	H10B-TS-PG16 H10B-TS-PG21 H10B-TS-M20 H10B-TS-M25	T1210100116-000 T1210100121-000 T1210100120-000 T1210100125-000						
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>High construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25 M32</p> </div> </div>		PG21 PG29	H10B-TSH-PG21 H10B-TSH-PG29 H10B-TSH-M20 H10B-TSH-M25 H10B-TSH-M32	T1230100121-000 T1230100129-000 T1230100120-000 T1230100125-000 T1230100132-000						
<b>Hood: Top entry</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>Low construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25</p> </div> </div>		PG16 PG21	H10B-TG-PG16 H10B-TG-PG21 H10B-TG-M20 H10B-TG-M25	T1220100116-000 T1220100121-000 T1220100120-000 T1220100125-000						
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;"> <p>High construction</p>  </div> <div style="margin-left: 10px;"> <p>M20 M25 M32</p> </div> </div>		PG21 PG29	H10B-TGH-PG21 H10B-TGH-PG29 H10B-TGH-M20 H10B-TGH-M25 H10B-TGH-M32	T1240100121-000 T1240100129-000 T1240100120-000 T1240100125-000 T1240100132-000						
<b>Cable-to-cable hood</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">  </div> <div style="margin-left: 10px;"> <table border="1"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table> </div> </div>	Construction	H	Low	62.5	High	74.5	<p>Low construction M20 M25</p> <p>High construction M25 M32</p>	PG16  PG21 PG29	<p>H10B-TBFS-PG16 H10B-TBFS-M20 H10B-TBFS-M25</p> <p>H10B-TBFHS-PG21 H10B-TBFHS-M25 H10B-TBFHS-M32</p>	<p>T1710101116-000 T1710101120-000 T1710101125-000</p> <p>T1750101121-000 T1750101129-000 T1750101125-000 T1750101132-000</p>
Construction	H									
Low	62.5									
High	74.5									
<b>Protection covers for hoods</b>										
 <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">  </div> </div>			H10B-KDTP	T1010101400-000						
<b>Housing protection cover</b>										
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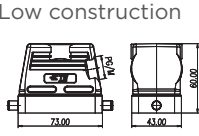

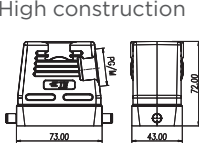

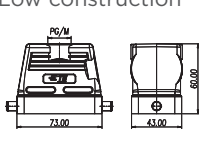

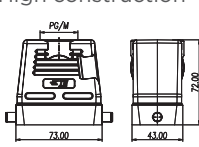

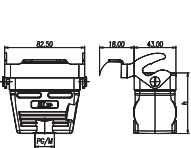

# H10B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number																								
<b>Bulkhead mounted</b>																												
 			H10B-AGS	T1410101000-000																								
<b>Surface mounted: Side entry</b>																												
  <table border="1" data-bbox="316 857 671 954"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>56</td> </tr> <tr> <td>High</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	56	High	45	57	74	1 Side entry Low construction M20 M25	PG16 PG21	H10B-SGRS-PG16 H10B-SGRS-PG21 H10B-SGRS-M20 H10B-SGRS-M25 H10B-SGRS-2PG16 H10B-SGRS-2PG21 H10B-SGRS-2M20 H10B-SGRS-2M25	T1440101116-000 T1440101121-000 T1440101120-000 T1440101125-000 T1440101216-000 T1440101221-000 T1440101220-000 T1440101225-000												
	Construction	A	B	H																								
	Low	40	52	56																								
	High	45	57	74																								
	1 Side entry High construction M25 M32	PG21 PG29	H10B-SGRHS-PG21 H10B-SGRHS-PG29 H10B-SGRHS-M25 H10B-SGRHS-M32	T1470101121-000 T1470101129-000 T1470101125-000 T1470101132-000																								
	2 Side entry Low construction M20 M25	PG16 PG21	H10B-SGRS-2PG16 H10B-SGRS-2M20 H10B-SGRS-2M25	T1470101229-000 T1470101225-000																								
2 Side entry High construction M25 M32	PG21 PG29	H10B-SGRHS-2PG21 H10B-SGRHS-2PG29 H10B-SGRHS-2M25 H10B-SGRHS-2M32	T1470101221-000 T1470101229-000 T1470101225-000 T1470101232-000																									
<b>Side entry housing with two levers</b>																												
  <table border="1" data-bbox="316 1178 515 1267"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>72</td> </tr> </tbody> </table>	Construction	H	Low	60	High	72	Low construction M20 M25	PG16 PG21	H10B-TSBS-PG16 H10B-TSBS-PG21 H10B-TSBS-M20 H10B-TSBS-M25	T1250103116-000 T1250103121-000 T1250103120-000 T1250103125-000																		
	Construction	H																										
	Low	60																										
High	72																											
High construction M25 M32	PG21 PG29	H10B-TSBHS-PG21 H10B-TSBHS-PG29 H10B-TSBHS-M25 H10B-TSBHS-M32	T1270103121-000 T1270103129-000 T1270103125-000 T1270103132-000																									
<b>Top entry housing with two levers</b>																												
  <table border="1" data-bbox="316 1424 536 1525"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>High</td> <td>72</td> </tr> </tbody> </table>	Construction	H	Low	60	High	72	Low construction M20 M25	PG16 PG21	H10B-TGBS-PG16 H10B-TGBS-PG21 H10B-TGBS-M20 H10B-TGBS-M25	T1260103116-000 T1260103121-000 T1260103120-000 T1260103125-000																		
	Construction	H																										
	Low	60																										
High	72																											
High construction M25 M32	PG21 PG29	H10B-TGBHS-PG21 H10B-TGBHS-PG29 H10B-TGBHS-M25 H10B-TGBHS-M32	T1280103121-000 T1280103129-000 T1280103125-000 T1280103132-000																									
<b>Bulkhead mounted with 4 bolts</b>																												
    <table border="1" data-bbox="316 1935 695 2018"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>F</th> <th>G</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>82</td> <td>94</td> <td>40</td> <td>52</td> <td>22</td> <td>67</td> <td>54</td> </tr> <tr> <td>High</td> <td>82</td> <td>94</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	C	D	F	G	H	Low	82	94	40	52	22	67	54	High	82	94	45	57	20	65	74	1 Side entry Low construction M20 M25	PG16 PG21	H10B-AD-BO H10B-SDR-BO-PG16 H10B-SDR-BO-PG21 H10B-SDR-BO-M20 H10B-SDR-BO-M25 H10B-SDR-BO-2PG16 H10B-SDR-BO-2PG21 H10B-SDR-BO-2M20 H10B-SDR-BO-2M25	T1430100000-000 T1460100116-000 T1460100121-000 T1460100120-000 T1460100125-000 T1460100216-000 T1460100221-000 T1460100220-000 T1460100225-000
	Construction	A	B	C	D	F	G	H																				
	Low	82	94	40	52	22	67	54																				
	High	82	94	45	57	20	65	74																				
	1 Side entry High construction M25 M32	PG21 PG29	H10B-SDRH-BO-PG21 H10B-SDRH-BO-PG29 H10B-SDRH-BO-M25 H10B-SDRH-BO-M32	T1490100121-000 T1490100129-000 T1490100125-000 T1490100132-000																								
	2 Side entry Low construction M25 M32	PG21 PG29	H10B-SDRH-BO-2PG21 H10B-SDRH-BO-2PG29 H10B-SDRH-BO-2M25 H10B-SDRH-BO-2M32	T1490100221-000 T1490100229-000 T1490100225-000 T1490100232-000																								
<b>With protection cover</b>																												
 	1 Side entry Low construction M20 M25	PG16 PG21	H10B-SDR-BO-PG16 H10B-SDR-BO-PG21 H10B-SDR-BO-M20 H10B-SDR-BO-M25	T1460100116-000 T1460100121-000 T1460100120-000 T1460100125-000																								
	1 Side entry High construction M25 M32	PG21 PG29	H10B-SDRH-BO-PG21 H10B-SDRH-BO-PG29 H10B-SDRH-BO-M25 H10B-SDRH-BO-M32	T1490100121-000 T1490100129-000 T1490100125-000 T1490100132-000																								

## H10B with 1 lever on the hoods/housings


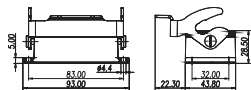

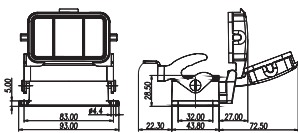

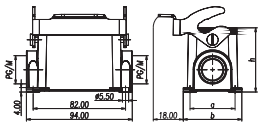

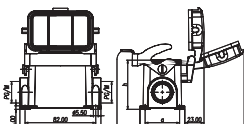
POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
Hood: Side entry										
		M20 M25	PG16 PG21 H10B-TS-RO-PG16 H10B-TS-RO-PG21 H10B-TS-RO-M20 H10B-TS-RO-M25	T1310100116-000 T1310100121-000 T1310100120-000 T1310100125-000						
		M20 M25 M32	PG21 PG29 H10B-TSH-RO-PG21 H10B-TSH-RO-PG29 H10B-TSH-RO-M20 H10B-TSH-RO-M25 H10B-TSH-RO-M32	T1330100121-000 T1330100129-000 T1330100120-000 T1330100125-000 T1330100132-000						
Hood: Top entry										
		M20 M25	PG16 PG21 H10B-TG-RO-PG16 H10B-TG-RO-PG21 H10B-TG-RO-M20 H10B-TG-RO-M25	T1320100116-000 T1320100121-000 T1320100120-000 T1320100125-000						
		M20 M25 M32	PG21 PG29 H10B-TGH-RO-PG21 H10B-TGH-RO-PG29 H10B-TGH-RO-M20 H10B-TGH-RO-M25 H10B-TGH-RO-M32	T1340100121-000 T1340100129-000 T1340100120-000 T1340100125-000 T1340100132-000						
Cable-to-cable hood										
	 <table border="1" data-bbox="534 1400 750 1500"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M20 M25  M25 M32	PG16  PG21 PG29 H10B-TBF-LB-PG16 H10B-TBF-LB-M20 H10B-TBF-LB-M25  H10B-TBFH-LB-PG21 H10B-TBFH-LB-PG29 H10B-TBFH-LB-M25 H10B-TBFH-LB-M32	T1730103116-000 T1730103120-000 T1730103125-000  T1770103121-000 T1770103129-000 T1770103125-000 T1770103132-000
Construction	H									
Low	62.5									
High	74.5									
Protection covers for hoods										
			H10B-KDTP-LB	T1010101500-000						



## H10B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number													
Bulkhead mounted																		
				H10B-AG-LB	T1500103000-000													
	With protection cover 			H10B-AD-LB H10B-ADM-LB	T1510103000-000 T1510103001-000													
Surface mounted: Side entry																		
	 <table border="1" data-bbox="316 1216 671 1305"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>54</td> </tr> <tr> <td>High</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	54	High	45	57	74	1 Side entry Low construction 2 Side entry High construction	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29 PG21 PG29	H10B-SGR-LB-PG16 H10B-SGR-LB-PG21 H10B-SGR-LB-M20 H10B-SGR-LB-M25 H10B-SGR-LB-2PG16 H10B-SGR-LB-2PG21 H10B-SGR-LB-2M20 H10B-SGR-LB-2M25 H10B-SGRH-LB-PG21 H10B-SGRH-LB-PG29 H10B-SGRH-LB-M25 H10B-SGRH-LB-M32 H10B-SGRH-LB-2PG21 H10B-SGRH-LB-2PG29 H10B-SGRH-LB-2M25 H10B-SGRH-LB-2M32	T1610103116-000 T1610103121-000 T1610103120-000 T1610103125-000 T1610103216-000 T1610103221-000 T1610103220-000 T1610103225-000 T1650103121-000 T1650103129-000 T1650103125-000 T1650103132-000 T1650103221-000 T1650103229-000 T1650103225-000 T1650103232-000
Construction	A	B	H															
Low	40	52	54															
High	45	57	74															
	With protection cover  <table border="1" data-bbox="316 1619 671 1709"> <thead> <tr> <th>Construction</th> <th>A</th> <th>B</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>40</td> <td>52</td> <td>54</td> </tr> <tr> <td>High</td> <td>45</td> <td>57</td> <td>74</td> </tr> </tbody> </table>	Construction	A	B	H	Low	40	52	54	High	45	57	74	1 Side entry Low construction 2 Side entry High construction	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H10B-SDR-LB-PG16 H10B-SDR-LB-PG21 H10B-SDR-LB-M20 H10B-SDR-LB-M25 H10B-SDR-LB-2PG16 H10B-SDR-LB-2PG21 H10B-SDR-LB-2M20 H10B-SDR-LB-2M25 H10B-SDRH-LB-PG21 H10B-SDRH-LB-PG29 H10B-SDRH-LB-M25 H10B-SDRH-LB-M32 H10B-SDRH-LB-2PG21 H10B-SDRH-LB-2PG29 H10B-SDRH-LB-2M25 H10B-SDRH-LB-2M32	T1620103116-000 T1620103121-000 T1620103120-000 T1620103125-000 T1620103216-000 T1620103221-000 T1620103220-000 T1620103225-000 T1660103121-000 T1660103129-000 T1660103125-000 T1660103132-000 T1660103221-000 T1660103229-000 T1660103225-000 T1660103232-000
Construction	A	B	H															
Low	40	52	54															
High	45	57	74															

## HIP.10/24, HIP-K.10/24, EMV-K.10/24 housings


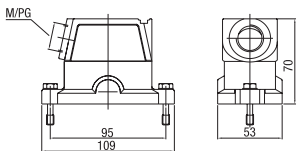

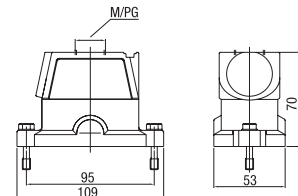

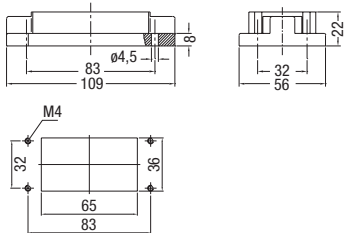
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry, Standard construction</b>					
		M25	16 21	<b>HIP</b> HIP.10/24.STS.1.16.G HIP.10/24.STS.1.21.G HIP.10/24.STS.1.M25.G  <b>HIP-K</b> HIP-K.10/24.STS.1.21.G HIP-K.10/24.STS.1.M25.G HIP-K.10/24.STS.1.M32.G	1-1102640-5 1-1102642-5 0-1106436-2
		M25 M32	21	<b>HIP-K</b> HIP-K.10/24.STS.1.21.G HIP-K.10/24.STS.1.M25.G HIP-K.10/24.STS.1.M32.G	2-1102642-5 0-1106436-4 0-1106436-6
		M25 M32	21	<b>EMV-K</b> EMV-K.10/24.STS.1.21.G EMV-K.10/24.STS.1.M25.G EMV-K.10/24.STS.1.M32.G	4-1102714-5 0-1106427-3 1-1106427-0
<b>Hood: Top entry</b>					
		M25	16 21	<b>HIP</b> HIP.10/24.STO.1.16.G HIP.10/24.STO.1.21.G HIP.10/24.STO.1.M25.G	1-1102644-5 1-1102646-5 0-1106436-1
		M25 M32	16	<b>HIP-K</b> HIP-K.10/24.STO.1.16.G HIP-K.10/24.STO.1.M25.G HIP-K.10/24.STO.1.M32.G	2-1102644-5 0-1106436-3 0-1106436-5
		M25	21	<b>EMV-K</b> EMV-K.10/24.STO.1.21.G EMV-K.10/24.STO.1.M25.G	4-1102715-5 0-1106427-4
<b>Surface mounted housing: Bottom entry</b>					
				<b>HIP</b> HIP.10/24.AG  <b>HIP-K</b> HIP-K.10/24.AG  <b>EMV-K</b> EMV-K.10/24.AG	1-1102647-5  2-1102647-5  4-1102718-5



## HIP.10/24, HIP-K.10/24, EMV-K.10/24 housings


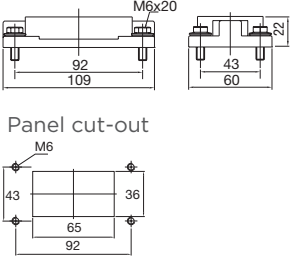

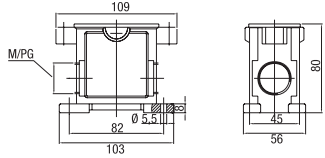

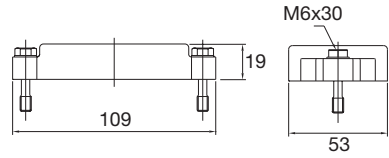
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Bottom entry</b>				
 			<b>HIP</b> HIP.10/24.AG.M6  <b>HIP-K</b> HIP-K.10/24.AG.M6  <b>EMV-K</b> EMV-K.10/24.AG.M6	1-1102612-5  2-1102612-5  4-1102720-5
<b>Surface mounted housing: Side entry</b>				
 	2xM32	21 2x21	<b>HIP</b> HIP.10/24.SG.1.21.G HIP.10/24.SG.2.21.G HIP.10/24.SG.2.M32.G  <b>HIP-K</b> HIP-K.10/24.SG.1.21.G HIP-K.10/24.SG.2.21.G  <b>EMV-K</b> EMV-K.10/24.SG.1.21.G EMV-K.10/24.SG.2.21.G EMV-K.10/24.SG.2.M32.G	1-1102610-5 1-1102611-5 0-1106435-1  5-1102610-5 2-1102611-5  5-1102716-5 4-1102717-5 0-1106426-2
<b>Protective covers for hoods and housing</b>				
 			<b>HIP</b> HIP/EMV.10/24.SKB  <b>HIP-K/EMV-K</b> HIP-K/EMV-K.10/24.SKB	3-1106202-5  4-1106202-5

## HWK 6/6 technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	6/6+PE

### INSERTS

Rated current	
Power contact .....	40A max
Signal contact .....	16A max
Working voltage	
Power contact .....	690V
Signal contact.....	400V
Test voltage urms	
Power contact .....	6KV
Signal contact.....	4KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA .....	600V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance	
Power contact .....	$\leq 0.3m\Omega$
Signal contact.....	$\leq 1m\Omega$
Terminal .....	Screw terminal
- mm <sup>2</sup>	
Power contact .....	2.5-10mm <sup>2</sup>
Signal contact.....	0.5-2.5mm <sup>2</sup>
- AWG	
Power contact .....	14-8
Signal contact.....	20-14
- Tightening/test torque	
Power contact .....	1.2 Nm
Signal contact.....	0.5 Nm

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

### CURRENT CARRYING CAPACITY


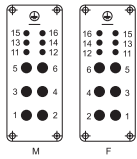
The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

## HWK 6/6 inserts

POWER 690V/35A SIGNAL 400V/16A

INSERTS FOR H16B HOOD/HOUSING

6/6 

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Screw terminal	Contact arrangement view from termination side			
		HWK6/6-012-M	T2106062101-000	
		HWK6/6-012-F		T2106062201-000

## HK4/0, HK4/2 technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	4/0, 4/2 + PE

### INSERTS

Rated current	
Power contact .....	80A max
Signal contact .....	16A max
(See current carrying capacity)	
Working voltage	
Power contact .....	690V
Signal contact .....	400V
Test voltage urms	
Power contact .....	8KV
Signal contact .....	6KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V/300V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

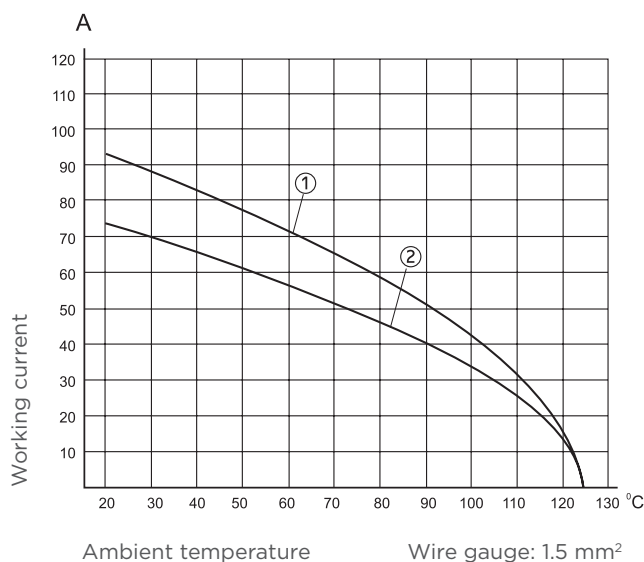
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance	
Power contact .....	$\leq 0.3m\Omega$
Signal contact .....	$\leq 1m\Omega$
Terminal .....	Screw terminal
- mm <sup>2</sup>	
Power contact .....	1.5-16mm <sup>2</sup>
Signal contact .....	0.5-2.5mm <sup>2</sup>
- AWG	
Power contact .....	16-6
Signal contact .....	20-14
- Tightening/test torque	
Power contact .....	1.2 Nm
Signal contact .....	0.5 Nm

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.




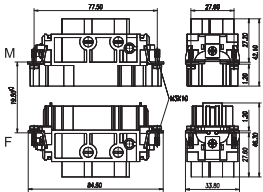
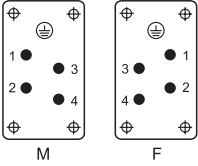
- 1 Wire gauge: 16mm<sup>2</sup>
- 2 Wire gauge: 10mm<sup>2</sup>


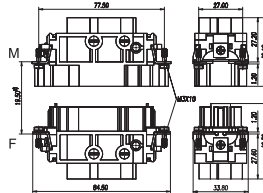
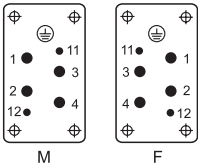
## HK4/0, HK4/2 inserts

INSERTS FOR H16B HOOD/HOUSING

690V/400V MAX. 80A/16A

4/0+⊕ 4/2+⊕

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Screw terminal	Size chart			
		HK4/0-004-M	T2100042101-000	
		HK4/0-004-F		T2100042201-000
Contact arrangement view from termination side				
				

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Screw terminal	Size chart			
		HK4/2-006-M	T2100062101-000	
		HK4/2-006-F		T2100062201-000
Contact arrangement view from termination side				
				

## HK12/2 technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	12/2 + PE

### INSERTS

Rated current	
Power contact .....	40A max
Signal contact .....	10A max
(See current carrying capacity)	
Working voltage	
Power contact .....	690V
Signal contact .....	250V
Test voltage urms	
Power contact .....	8KV
Signal contact .....	4KV
Pollution degree .....	3
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V/300V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

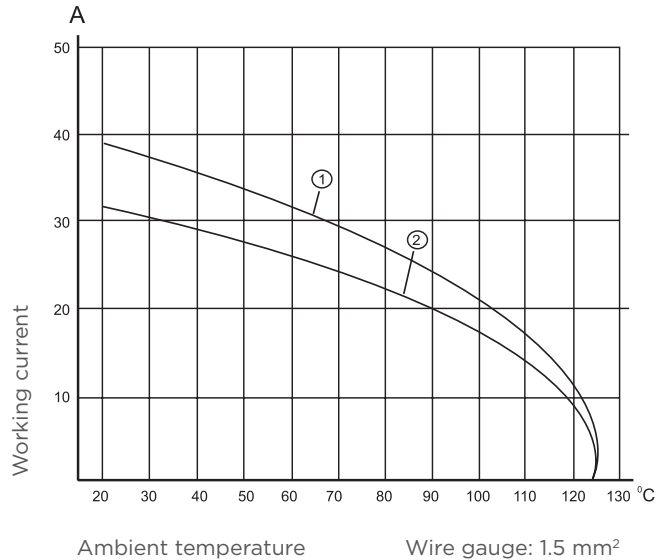
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance	
Power contact .....	$\leq 0.3m\Omega$
Signal contact.....	$\leq 3m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup>	
Power contact .....	1-6mm <sup>2</sup>
Signal contact.....	0.14-2.5mm <sup>2</sup>
- AWG	
Power contact .....	18-10
Signal contact.....	26-14

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 Wire gauge: 6.0mm<sup>2</sup>
- 2 Wire gauge: 4.0mm<sup>2</sup>



## HK6/36 technical characteristics

Specifications .....	DIN EN 60 664-1
.....	DIN EN 61 984
Number of contacts .....	6/36 + PE

### INSERTS

Rated current	
Power contact .....	40A max
Signal contact .....	10A max
(See current carrying capacity)	
Working voltage	
Power contact .....	690V
Signal contact .....	160V
Test voltage urms	
Power contact .....	6KV
Signal contact .....	2.5KV
Pollution degree .....	2
Insulation resistance .....	$\geq 10^{10}\Omega$
Material .....	Polycarbonate
Temperature range .....	-40°C... +125°C
Flammability acc. to UL94 .....	V0
Working voltage acc. to UL/CSA.....	600V/300V
Mechanical working life-mating cycles .....	$\geq 500$

### CONTACTS

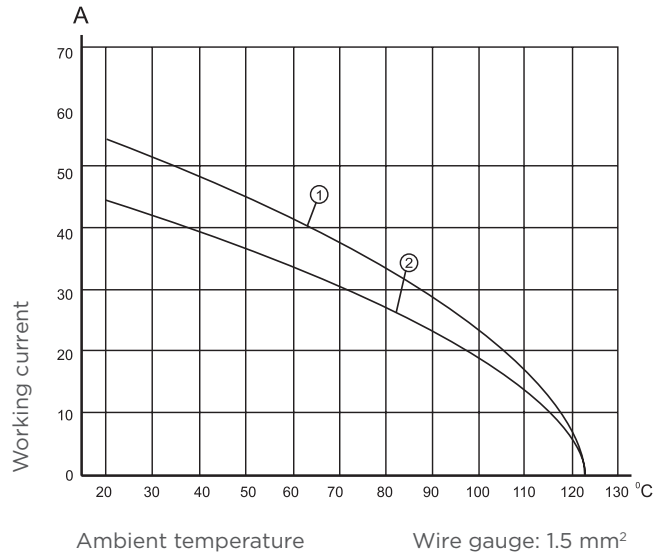
Material .....	Copper alloy
Surface .....	Hard silver-plated
.....	Hard gold-plated
Contact resistance	
Power contact .....	$\leq 0.3m\Omega$
Signal contact.....	$\leq 3m\Omega$
Terminal .....	Crimp terminal
- mm <sup>2</sup>	
Power contact .....	1-6mm <sup>2</sup>
Signal contact.....	0.14-2.5mm <sup>2</sup>
- AWG	
Power contact .....	18-10
Signal contact.....	26-14

### HOODS, HOUSINGS

Material .....	Die cast aluminium
Surface .....	Powder-coated (RAL 7037)
Locking element.....	Stainless steel, steel-zinc plated
Temperature range .....	-40°C... +125°C
Degree of protection acc. to DIN40 050 .....	IP65

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.




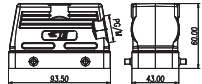

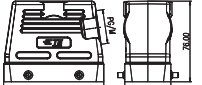





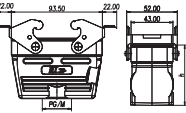

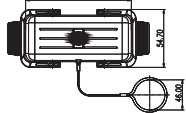

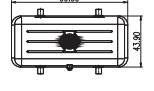
- 1 Wire gauge: 6.0mm<sup>2</sup>
- 2 Wire gauge: 4.0mm<sup>2</sup>






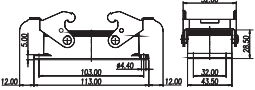

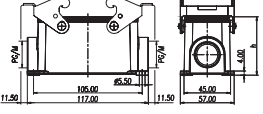

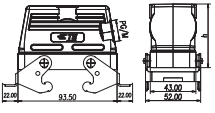

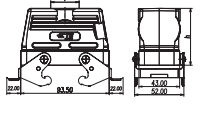

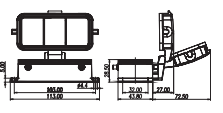
## H16B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	Low construction 	M20 M25 M32	PG16 PG21	H16B-TS-PG16 H16B-TS-PG21 H16B-TS-M20 H16B-TS-M25 H16B-TS-M32	T1210160116-000 T1210160121-000 T1210160120-000 T1210160125-000 T1210160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TSH-PG21 H16B-TSH-PG29 H16B-TSH-M25 H16B-TSH-M32 H16B-TSH-M40	T1230160121-000 T1230160129-000 T1230160125-000 T1230160132-000 T1230160140-000						
Hood: Top entry											
	Low construction 	M25 M32	PG16 PG21	H16B-TG-PG16 H16B-TG-PG21 H16B-TG-M25 H16B-TG-M32	T1220160116-000 T1220160121-000 T1220160125-000 T1220160132-000						
	High construction 	M25 M32 M40	PG21 PG29	H16B-TGH-PG21 H16B-TGH-PG29 H16B-TGH-M25 H16B-TGH-M32 H16B-TGH-M40	T1240160121-000 T1240160129-000 T1240160125-000 T1240160132-000 T1240160140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="533 1352 740 1442"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	74.5	M25 M32	PG21	H16B-TBFS-PG21 H16B-TBFS-M25 H16B-TBFS-M32	T1710161121-000 T1710161125-000 T1710161132-000
Construction	H										
Low	62.5										
High	74.5										
		M25 M32 M40	PG21 PG29	H16B-TBFHS-PG21 H16B-TBFHS-PG29 H16B-TBFHS-M25 H16B-TBFHS-M32 H16B-TBFHS-M40	T1750161121-000 T1750161129-000 T1750161125-000 T1750161132-000 T1750161140-000						
Protection covers for hoods											
				H16B-KDTP	T1010161400-000						
Housing protection cover											
				H16B-KDBP	T1010162100-000						

# H16B with 2 levers on the hoods/housings


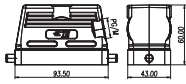

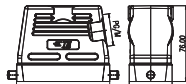

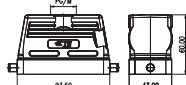

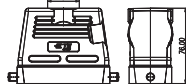

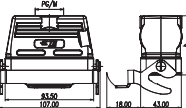

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number																								
Bulkhead mounted																													
				H16B-AGS	T1410161000-000																								
Surface mounted: Side entry																													
	 <table border="1" data-bbox="319 862 534 952"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>81</td> </tr> </table>	Construction	H	Low	56	Hight	81	1 Side entry Low construction M25 M25 High construction M25 M32 2 Side entry Low construction M25 M32 High construction M25 M32	PG21 PG21 PG21 PG29 PG21 PG29 PG21 PG29 PG21 PG29	H16B-SGRS-PG21 H16B-SGRS-M25 H16B-SGRS-2PG21 H16B-SGRS-2M25 H16B-SGRHS-PG21 H16B-SGRHS-PG29 H16B-SGRHS-M25 H16B-SGRHS-M32 H16B-SGRHS-2PG21 H16B-SGRHS-2PG29 H16B-SGRHS-2M25 H16B-SGRHS-2M32	T1440161121-000 T1440161125-000 T1440161221-000 T1440161225-000 T1470161121-000 T1470161129-000 T1470161125-000 T1470161132-000 T1470161221-000 T1470161229-000 T1470161225-000 T1470161232-000																		
Construction	H																												
Low	56																												
Hight	81																												
Side entry housing with two levers																													
		Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H16B-TSBS-PG16 H16B-TSBS-PG21 H16B-TSBS-M20 H16B-TSBS-M25 H16B-TSBHS-PG21 H16B-TSBHS-PG29 H16B-TSBHS-M25 H16B-TSBHS-M32	T1250163116-000 T1250163121-000 T1250163120-000 T1250163125-000 T1270163121-000 T1270163129-000 T1270163125-000 T1270163132-000																								
Top entry housing with two levers																													
	 <table border="1" data-bbox="319 1500 534 1590"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>60</td> </tr> <tr> <td>Hight</td> <td>76</td> </tr> </table>	Construction	H	Low	60	Hight	76	Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H16B-TGBS-PG16 H16B-TGBS-PG21 H16B-TGBS-M20 H16B-TGBS-M25 H16B-TGBHS-PG21 H16B-TGBHS-PG29 H16B-TGBHS-M25 H16B-TGBHS-M32	T1260163116-000 T1260163121-000 T1260163120-000 T1260163125-000 T1280163121-000 T1280163129-000 T1280163125-000 T1280163132-000																		
Construction	H																												
Low	60																												
Hight	76																												
Bulkhead mounted with 4 bolts																													
	With protection cover  <table border="1" data-bbox="311 1948 694 2027"> <tr> <td>Construction</td> <td>A</td> <td>B</td> <td>C</td> <td>D</td> <td>F</td> <td>G</td> <td>H</td> </tr> <tr> <td>Low</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>56</td> </tr> <tr> <td>Hight</td> <td>105</td> <td>117</td> <td>45</td> <td>57</td> <td>20</td> <td>65</td> <td>81</td> </tr> </table>	Construction	A	B	C	D	F	G	H	Low	105	117	45	57	20	65	56	Hight	105	117	45	57	20	65	81	1 Side entry Low construction M25 M25 High construction M25 M32 2 Side entry Low construction M25 M32 High construction M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H16B-AD-BO H16B-SDR-BO-PG21 H16B-SDR-BO-M25 H16B-SDR-BO-2PG21 H16B-SDR-BO-2M25 H16B-SDRH-BO-PG21 H16B-SDRH-BO-PG29 H16B-SDRH-BO-M25 H16B-SDRH-BO-M32 H16B-SDRH-BO-2PG21 H16B-SDRH-BO-2PG29 H16B-SDRH-BO-2M25 H16B-SDRH-BO-2M32	T1430160000-000 T1460160121-000 T1460160125-000 T1460160221-000 T1460160225-000 T1490160121-000 T1490160129-000 T1490160125-000 T1490160132-000 T1490160221-000 T1490160229-000 T1490160225-000 T1490160232-000
Construction	A	B	C	D	F	G	H																						
Low	105	117	45	57	20	65	56																						
Hight	105	117	45	57	20	65	81																						




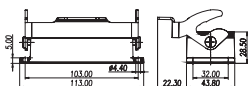

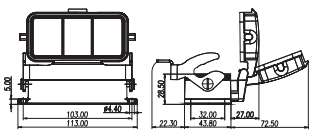

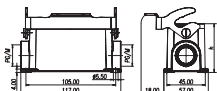

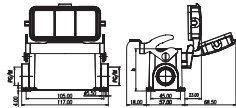
## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number						
Hood: Side entry										
		M25 M32	PG21 PG29 H16B-TS-RO-PG21 H16B-TS-RO-PG29 H16B-TS-RO-M25 H16B-TS-RO-M32	T1310160121-000 T1310160129-000 T1310160125-000 T1310160132-000						
		M25 M32 M40	PG21 PG29 H16B-TSH-RO-PG21 H16B-TSH-RO-PG29 H16B-TSH-RO-M25 H16B-TSH-RO-M32 H16B-TSH-RO-M40	T1330160121-000 T1330160129-000 T1330160125-000 T1330160132-000 T1330160140-000						
Hood: Top entry										
		M25 M32	PG21 PG29 H16B-TG-RO-PG21 H16B-TG-RO-PG29 H16B-TG-RO-M25 H16B-TG-RO-M32	T1320160121-000 T1320160129-000 T1320160125-000 T1320160132-000						
		M25 M32 M40	PG21 PG29 H16B-TGH-RO-PG21 H16B-TGH-RO-PG29 H16B-TGH-RO-M25 H16B-TGH-RO-M32 H16B-TGH-RO-M40	T1340160121-000 T1340160129-000 T1340160125-000 T1340160132-000 T1340160140-000						
Cable-to-cable hood										
	 <table border="1" data-bbox="534 1332 750 1422"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>Hight</td> <td>74.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	Hight	74.5	M25 M32  M25 M32 M40	PG21 PG29  PG21 PG29 H16B-TBF-LB-PG21 H16B-TBF-LB-PG29 H16B-TBF-LB-M25 H16B-TBF-LB-M32 H16B-TBFH-LB-PG21 H16B-TBFH-LB-PG29 H16B-TBFH-LB-M25 H16B-TBFH-LB-M32 H16B-TBFH-LB-M40	T1730163121-000 T1730163129-000 T1730163125-000 T1730163132-000 T1770163121-000 T1770163129-000 T1770163125-000 T1770163132-000 T1770163140-000
Construction	H									
Low	62.5									
Hight	74.5									
Protection covers for hoods										
			H16B-KDTP-LB	T1010161500-000						

## H16B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number							
Bulkhead mounted											
			H16B-AG-LB	T1500163000-000							
	With protection cover 		H16B-AD-LB	T1510163000-000							
Surface mounted: Side entry											
	 <table border="1" data-bbox="325 1146 544 1240"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	1 Side entry Low construction M20 M25 2 Side entry M20 M25 High construction M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SGR-LB-PG16 H16B-SGR-LB-PG21 H16B-SGR-LB-M20 H16B-SGR-LB-M25 H16B-SGR-LB-2PG16 H16B-SGR-LB-2PG21 H16B-SGR-LB-2M20 H16B-SGR-LB-2M25 H16B-SGRH-LB-PG21 H16B-SGRH-LB-PG29 H16B-SGRH-LB-M25 H16B-SGRH-LB-M32 H16B-SGRH-LB-2PG21 H16B-SGRH-LB-2PG29 H16B-SGRH-LB-2M25 H16B-SGRH-LB-2M32	T1610163116-000 T1610163121-000 T1610163120-000 T1610163125-000 T1610163216-000 T1610163221-000 T1610163220-000 T1610163225-000 T1650163121-000 T1650163129-000 T1650163125-000 T1650163132-000 T1650163221-000 T1650163229-000 T1650163225-000 T1650163232-000
Construction	H										
Low	56										
High	81										
	With protection cover  <table border="1" data-bbox="325 1563 544 1657"> <tr> <td>Construction</td> <td>H</td> </tr> <tr> <td>Low</td> <td>56</td> </tr> <tr> <td>High</td> <td>81</td> </tr> </table>	Construction	H	Low	56	High	81	1 Side entry Low construction M20 M25 2 Side entry M20 M25 High construction M25 M32 2 Side entry M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SDR-LB-PG16 H16B-SDR-LB-PG21 H16B-SDR-LB-M20 H16B-SDR-LB-M25 H16B-SDR-LB-2PG16 H16B-SDR-LB-2PG21 H16B-SDR-LB-2M20 H16B-SDR-LB-2M25 H16B-SDRH-LB-PG21 H16B-SDRH-LB-PG29 H16B-SDRH-LB-M25 H16B-SDRH-LB-M32 H16B-SDRH-LB-2PG21 H16B-SDRH-LB-2PG29 H16B-SDRH-LB-2M25 H16B-SDRH-LB-2M32	T1620163116-000 T1620163121-000 T1620163120-000 T1620163125-000 T1620163216-000 T1620163221-000 T1620163220-000 T1620163225-000 T1660163121-000 T1660163129-000 T1660163125-000 T1660163132-000 T1660163221-000 T1660163229-000 T1660163225-000 T1660163232-000
Construction	H										
Low	56										
High	81										

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings


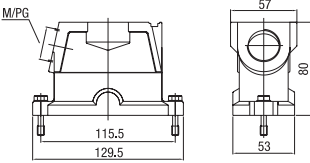

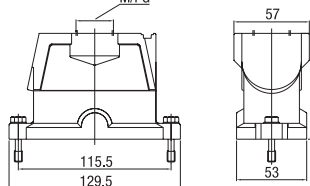

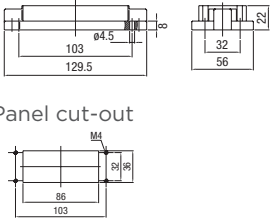

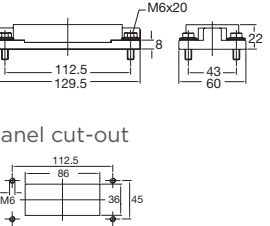
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number	
<b>Hood: Side entry</b>					
		M32	21 29	<b>HIP</b> HIP.16/40.STS.1.21.G HIP.16/40.STS.1.29.G HIP.16/40.STS.1.M32.G	1-1102649-5 1-1102651-5 0-1106454-2
		M32	29	<b>HIP-K</b> HIP-K.16/40.STS.1.29.G HIP-K.16/40.STS.1.M32.G	2-1102651-5 0-1106444-2
		M32	29 21	<b>EMV-K</b> EMV-K.16/40.STS.1.29.G EMV-K.16/40.STS.1.M32.G EMV-K.16/40.STS.1.21.G	4-1102723-5 0-1106446-4 4-1102722-5
<b>Hood: Top entry</b>					
		M32	21 29	<b>HIP</b> HIP.16/40.STO.1.21.G HIP.16/40.STO.1.29.G HIP.16/40.STO.1.M32.G	1-1102653-5 1-1102655-5 0-1106454-1
		M32	21 29	<b>HIP-K</b> HIP-K.16/40.STO.2.21.G HIP-K.16/40.STO.1.29.G HIP-K.16/40.STO.1.M32.G	0-1108534-1 2-1102655-5 0-1106444-1
		M32	29	<b>EMV-K</b> EMV-K.16/40.STO.1.29.G EMV-K.16/40.STO.1.M32.G	4-1102725-5 0-1106446-3
<b>Surface mounted housing: Bottom entry</b>					
	 <p>Panel cut-out</p>			<b>HIP</b> HIP.16/40.AG	1-1102656-5
				<b>HIP-K</b> HIP-K.16/40.AG	2-1102656-5
				<b>EMV-K</b> EMV-K.16/40.AG	4-1102728-5
	 <p>Panel cut-out</p>			<b>HIP</b> HIP.16/40.AG.M6	1-1102618-5
				<b>HIP-K</b> HIP-K.16/40.AG.M6	2-1102618-5
				<b>EMV-K</b> EMV-K.16/40.AG.M6	4-1102730-5

## HIP.16/40, HIP-K.16/40, EMV-K.16/40 housings



**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Side entry</b>				
	2xM32	21 2x21	<b>HIP</b> HIP.16/40.SG.1.21.G	1-1102616-5
			HIP.16/40.SG.2.21.G	1-1102617-5
			HIP.16/40.SG.2.M32.G	0-1106453-1
	2xM32	21 2x21	<b>HIP-K</b> HIP-K.16/40.SG.1.21.G	5-1102616-5
			HIP-K.16/40.SG.2.21.G	2-1102617-5
			HIP-K.16/40.SG.2.M32.G	0-1106443-1
	2xM32	21 2x21	<b>EMV-K</b> EMV-K.16/40.SG.1.21.Z	4-1102726-5
			EMV-K.16/40.SG.2.21.Z	4-1102727-5
			EMV-K.16/40.SG.2.M32.G	0-1106445-2
<b>Protective covers for housings</b>				
			<b>HIP</b> HIP/EMV.16/40.SKB	3-1106203-5
			<b>HIP-K</b> HIP-K.16/40.SKB	4-1106203-5

## HK4/8 technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts .....4/8 + PE

### INSERTS

Rated current  
 Power contact .....80A max  
 Signal contact ..... 16A max  
 (See current carrying capacity)  
 Working voltage  
 Power contact .....400V  
 Signal contact .....400V  
 Test voltage urms  
 Power contact .....6KV  
 Signal contact .....6KV  
 Pollution degree .....3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 .....V0  
 Working voltage acc. to UL/CSA..... 600V/400V  
 Mechanical working life-mating cycles ..... $\geq 500$

### CONTACTS

Material .....Copper alloy  
 Surface .....Hard silver-plated  
 .....Hard gold-plated  
 Contact resistance  
 Power contact .....  $\leq 0.1m\Omega$   
 Signal contact..... $\leq 5m\Omega$   
 Terminal ..... Crimp terminal  
 - mm<sup>2</sup>  
 Power contact .....1.5-16mm<sup>2</sup>  
 Signal contact..... 0.5-2.5mm<sup>2</sup>  
 - AWG  
 Power contact ..... 16-6  
 Signal contact..... 20-14

- Tightening/test torque

- Power contact

mm <sup>2</sup>	1.5	2.5	4	6	10	16
Nm	1.2	2	3	3	3	3

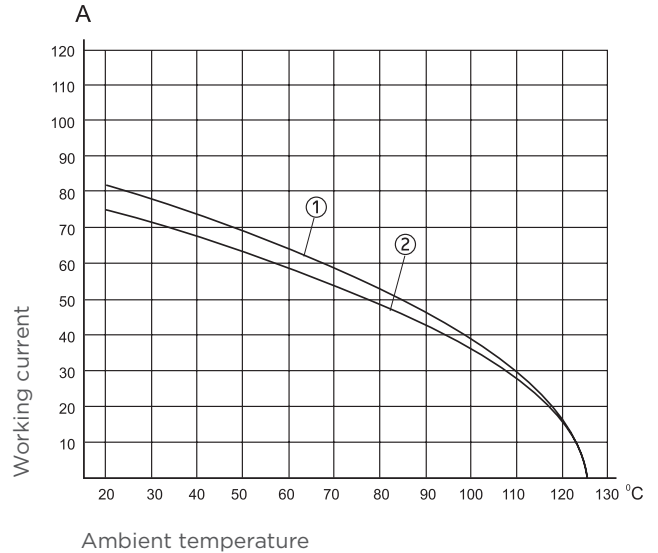
- Signal contact .....0.5 Nm

### HOODS, HOUSINGS

Material ..... Die cast aluminium  
 Surface .....Powder-coated (RAL 7037)  
 Locking element.....Stainless steel, steel-zinc plated  
 Temperature range ..... -40°C... +125°C  
 Degree of protection acc. to DIN40 050 .....IP65

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.



- 1 Wire gauge: 16mm<sup>2</sup>
- 2 Wire gauge: 10mm<sup>2</sup>


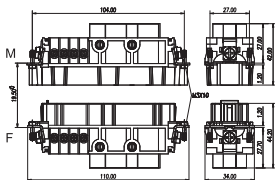
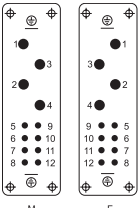


## HK4/8 inserts

INSERTS FOR H24B HOOD/HOUSING

690V/400V MAX. 80A/16A

4/8+  $\oplus$

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Screw terminal	Size chart			
		HK4/8-012-M	T2100122101-000	
		HK4/8-012-F		T2100122201-000
Contact arrangement view from termination side				
				

## HWK3/3/6 technical characteristics

Specifications .....DIN EN 60 664-1  
 ..... DIN EN 61 984  
 Number of contacts .....3/3/6 + PE

### INSERTS

Rated current  
 Power 1 contact..... 100A max  
 Power 2 contact..... 40A max  
 Signal contact..... 16A max  
 (See current carrying capacity)  
 Working voltage  
 Power 1 contact  
 Conductor - ground ..... 400V  
 Conductor - conductor..... 690V  
 Power 2 contact  
 Conductor - ground ..... 400V  
 Conductor - conductor..... 690V  
 Signal contact  
 Conductor - ground .....250V  
 Conductor - conductor ..... 400V  
 Test voltage urms  
 Power 1 contact..... 6KV  
 Power 2 contact..... 6KV  
 Signal contact ..... 3KV  
 Pollution degree ..... 3  
 Insulation resistance .....  $\geq 10^{10}\Omega$   
 Material ..... Polycarbonate  
 Temperature range ..... -40°C... +125°C  
 Flammability acc. to UL94 ..... V0

### CONTACTS

Material .....Copper alloy  
 Surface .....Hard silver-plated  
 ..... Hard gold-plated  
 Contact resistance  
 Power contact .....  $\leq 0.1m\Omega$   
 Signal contact.....  $\leq 5m\Omega$   
 Terminal ..... Screw terminal  
 - mm<sup>2</sup>  
 Power 1 contact.....16-35mm<sup>2</sup>  
 Power 2 contact..... 2.5-6mm<sup>2</sup>  
 Signal contact..... 0.5-2.5mm<sup>2</sup>  
 - AWG  
 Power 1 contact..... 16-6  
 Power 2 contact..... 20-14  
 Signal contact..... 20-14  
 - Tightening/test torque  
 - Power contact

mm <sup>2</sup>	1.5	2.5	4	6	10	16
Nm	1.2	2	3	3	3	3

- Signal contact ..... 0.5 Nm

### CURRENT CARRYING CAPACITY

The current carrying is limited by maximum temperature of materials for inserts and contacts including terminals. Control and test procedures according to DIN IEC 60512-3.

### HOODS, HOUSINGS

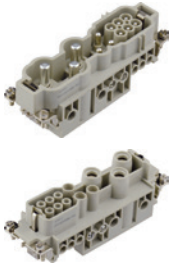
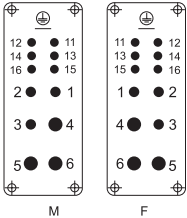
Material ..... Die cast aluminium  
 Surface .....Powder-coated (RAL 7037)  
 Locking element.....Stainless steel, steel-zinc plated  
 Temperature range ..... -40°C... +125°C  
 Degree of protection acc. to DIN40 050 .....IP65

## HWK3/3/6 inserts

INSERTS FOR H24B HOOD/HOUSING

690V MAX. 100A  
690V MAX. 40A  
400V MAX. 16A

3/3/6+Ⓢ

Dimensions (mm)		Type	Part Number	
			Male insert	Female insert
Screw terminal	Contact arrangement view from termination side			
		HK3/3/6-012-M	T2093362101-000	
		HK3/3/6-012-F		T2093362201-000

## CONTACTS

Material .....Copper alloy

Surface .....Hard silver-plated

.....Hard gold-plated

Contact resistance

Power contact ..... ≤0.1mΩ

Signal contact..... ≤5mΩ

Terminal ..... Screw terminal

100A contact pin

- mm<sup>2</sup>

Power 1 contact..... 16-35 mm<sup>2</sup>

Power 2 contact.....2.5-6 mm<sup>2</sup>

Signal contact..... 0.5-2.5 mm<sup>2</sup>

- AWG

Power 1 contact.....6-2

Power 2 contact..... 14-10

Signal contact..... 20-14

- Tightening/test torque


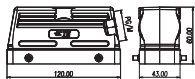

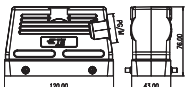

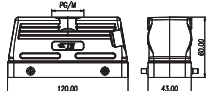

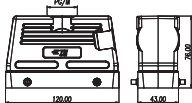

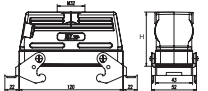

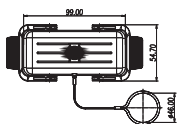

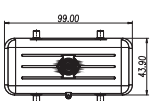
- Power contact

mm <sup>2</sup>	1.5	2.5	4	6	10	16
Nm	1.2	2	3	3	3	3

- Signal contact..... 0.5Nm


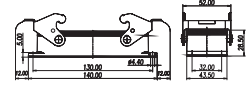

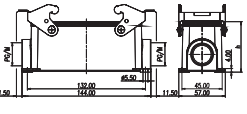

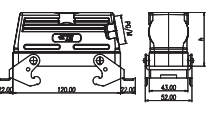

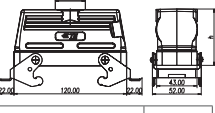

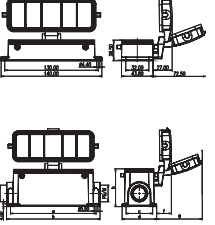
## H24B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	<p>Low construction</p> 	M25 M32	PG16 PG21	H24B-TS-PG16 H24B-TS-PG21 H24B-TS-M25 H24B-TS-M32	T1210240116-000 T1210240121-000 T1210240125-000 T1210240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TSH-PG21 H24B-TSH-PG29 H24B-TSH-M25 H24B-TSH-M32 H24B-TSH-M40	T1230240121-000 T1230240129-000 T1230240125-000 T1230240132-000 T1230240140-000						
Hood: Top entry											
	<p>Low construction</p> 	M25 M32	PG16 PG21	H24B-TG-PG16 H24B-TG-PG21 H24B-TG-M25 H24B-TG-M32	T1220240116-000 T1220240121-000 T1220240125-000 T1220240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TGH-PG21 H24B-TGH-PG29 H24B-TGH-M25 H24B-TGH-M32 H24B-TGH-M40	T1240240121-000 T1240240129-000 T1240240125-000 T1240240132-000 T1240240140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="533 1361 751 1451"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>78.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	78.5	M25 M32  M25 M32 M40	PG21  PG21 PG29	H24B-TBFS-PG21 H24B-TBFS-M25 H24B-TBFS-M32  H24B-TBFHS-PG21 H24B-TBFHS-PG29 H24B-TBFHS-M25 H24B-TBFHS-M32 H24B-TBFHS-M40	T1710241121-000 T1710241125-000 T1710241132-000  T1750241121-000 T1750241129-000 T1750241125-000 T1750241132-000 T1750241140-000
Construction	H										
Low	62.5										
High	78.5										
Protection covers for hoods											
				H24B-KDTP	T1010241400-000						
Housing protection cover											
				H24B-KDBP	T1010242100-000						


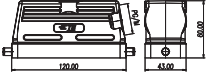

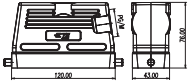

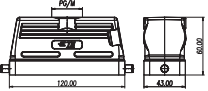

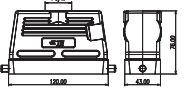

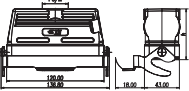

## H24B with 2 levers on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number																								
Bulkhead mounted																													
				H24B-AGS	T1410241000-000																								
Surface mounted: Side entry																													
		1 Side entry Low construction 2 Side entry High construction	M25	PG21	H24B-SGRS-PG21	T1440241121-000																							
			M25	PG21	H24B-SGRS-M25	T1440241125-000																							
			M25	PG21	H24B-SGRS-2PG21	T1440241221-000																							
			M32	PG29	H24B-SGRS-2M25	T1440241225-000																							
			M25	PG21	H24B-SGRHS-PG21	T1470241121-000																							
			M32	PG29	H24B-SGRHS-PG29	T1470241129-000																							
			M25	PG21	H24B-SGRHS-M25	T1470241125-000																							
			M32	PG29	H24B-SGRHS-M32	T1470241132-000																							
<table border="1"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>56</td></tr> <tr><td>High</td><td>81</td></tr> </table>		Construction	H	Low	56	High	81																						
Construction	H																												
Low	56																												
High	81																												
Side entry housing with two levers																													
		Low construction High construction	M20	PG16	H24B-TSBS-PG16	T1250243116-000																							
			M25	PG21	H24B-TSBS-PG21	T1250243121-000																							
			M25	PG21	H24B-TSBS-M20	T1250243120-000																							
			M25	PG29	H24B-TSBS-M25	T1250243125-000																							
			M25	PG21	H24B-TSBHS-PG21	T1270243121-000																							
			M32	PG29	H24B-TSBHS-PG29	T1270243129-000																							
<table border="1"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>60</td></tr> <tr><td>High</td><td>76</td></tr> </table>		Construction	H	Low	60	High	76																						
Construction	H																												
Low	60																												
High	76																												
Top entry housing with two levers																													
		Low construction High construction	M20	PG16	H24B-TGBS-PG16	T1260243116-000																							
			M25	PG21	H24B-TGBS-PG21	T1260243121-000																							
			M25	PG21	H24B-TGBS-M20	T1260243120-000																							
			M25	PG29	H24B-TGBS-M25	T1260243125-000																							
			M25	PG21	H24B-TGBHS-PG21	T1280243121-000																							
			M32	PG29	H24B-TGBHS-PG29	T1280243129-000																							
<table border="1"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>60</td></tr> <tr><td>High</td><td>76</td></tr> </table>		Construction	H	Low	60	High	76																						
Construction	H																												
Low	60																												
High	76																												
Bulkhead mounted with 4 bolts																													
	With protection cover 	1 Side entry Low construction 2 Side entry High construction	M25	PG21	H24B-AD-BO	T1430240000-000																							
			M25	PG21	H24B-SDR-BO-PG21	T1460240121-000																							
			M25	PG21	H24B-SDR-BO-M25	T1460240125-000																							
			M25	PG21	H24B-SDR-BO-2PG21	T1460240221-000																							
			M25	PG29	H24B-SDR-BO-2M25	T1460240225-000																							
			M25	PG21	H24B-SDRH-BO-PG21	T1490240121-000																							
			M32	PG29	H24B-SDRH-BO-PG29	T1490240129-000																							
			M25	PG21	H24B-SDRH-BO-M25	T1490240125-000																							
<table border="1"> <tr><td>Construction</td><td>A</td><td>B</td><td>C</td><td>D</td><td>F</td><td>G</td><td>H</td></tr> <tr><td>Low</td><td>132</td><td>144</td><td>45</td><td>57</td><td>20</td><td>65</td><td>56</td></tr> <tr><td>High</td><td>132</td><td>144</td><td>45</td><td>57</td><td>20</td><td>65</td><td>81</td></tr> </table>		Construction	A	B	C	D	F	G	H	Low	132	144	45	57	20	65	56	High	132	144	45	57	20	65	81				
Construction	A	B	C	D	F	G	H																						
Low	132	144	45	57	20	65	56																						
High	132	144	45	57	20	65	81																						
M25	PG29	H24B-SDRH-BO-2PG21	T1490240221-000																										
M32	PG29	H24B-SDRH-BO-2M25	T1490240225-000																										
M25	PG29	H24B-SDRH-BO-2M32	T1490240232-000																										


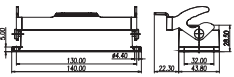

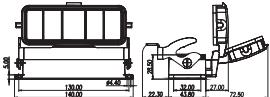

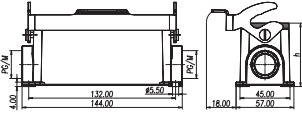

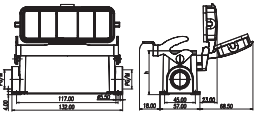
## H24B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)		Metr.	PG	Type	Part Number						
Hood: Side entry											
	<p>Low construction</p> 	M25 M32	PG21 PG29	H24B-TS-RO-PG21 H24B-TS-RO-PG29 H24B-TS-RO-M25 H24B-TS-RO-M32	T1310240121-000 T1310240129-000 T1310240125-000 T1310240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TSH-RO-PG21 H24B-TSH-RO-PG29 H24B-TSH-RO-M25 H24B-TSH-RO-M32 H24B-TSH-RO-M40	T1330240121-000 T1330240129-000 T1330240125-000 T1330240132-000 T1330240140-000						
Hood: Top entry											
	<p>Low construction</p> 	M25 M32	PG21 PG29	H24B-TG-RO-PG21 H24B-TG-RO-PG29 H24B-TG-RO-M25 H24B-TG-RO-M32	T1320240121-000 T1320240129-000 T1320240125-000 T1320240132-000						
	<p>High construction</p> 	M25 M32 M40	PG21 PG29	H24B-TGH-RO-PG21 H24B-TGH-RO-PG29 H24B-TGH-RO-M25 H24B-TGH-RO-M32 H24B-TGH-RO-M40	T1340240121-000 T1340240129-000 T1340240125-000 T1340240132-000 T1340240140-000						
Cable-to-cable hood											
	 <table border="1" data-bbox="531 1339 743 1429"> <thead> <tr> <th>Construction</th> <th>H</th> </tr> </thead> <tbody> <tr> <td>Low</td> <td>62.5</td> </tr> <tr> <td>High</td> <td>78.5</td> </tr> </tbody> </table>	Construction	H	Low	62.5	High	78.5	M25 M32	PG21 PG29	H24B-TBF-LB-PG21 H24B-TBF-LB-PG29 H24B-TBF-LB-M25 H24B-TBF-LB-M32	T1730242121-000 T1730242129-000 T1730242125-000 T1730242132-000
Construction	H										
Low	62.5										
High	78.5										
		M25 M32 M40	PG21 PG29	H24B-TBFH-LB-PG21 H24B-TBFH-LB-PG29 H24B-TBFH-LB-M25 H24B-TBFH-LB-M32 H24B-TBFH-LB-M40	T1770243121-000 T1770243129-000 T1770243125-000 T1770243132-000 T1770243140-000						
Protection covers for hoods											
				H24B-KDTP-LB	T1010241500-000						

## H24B with 1 lever on the hoods/housings

POWDER-COATED, RAL 7037

Dimensions (mm)	Metr.	PG	Type	Part Number								
Bulkhead mounted												
			H24B-AG-LB	T1500243000-000								
	With protection cover 		H24B-AD-LB	T1510243000-000								
Surface mounted: Side entry												
	 <table border="1" data-bbox="320 1176 539 1272"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>56</td></tr> <tr><td>High</td><td>81</td></tr> </table>	Construction	H	Low	56	High	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29 PG21 PG29	H24B-SGR-LB-PG16 H24B-SGR-LB-PG21 H24B-SGR-LB-M20 H24B-SGR-LB-M25 H24B-SGR-LB-2PG16 H24B-SGR-LB-2PG21 H24B-SGR-LB-2M20 H24B-SGR-LB-2M25 H24B-SGRH-LB-PG21 H24B-SGRH-LB-PG29 H24B-SGRH-LB-M25 H24B-SGRH-LB-M32 H24B-SGRH-LB-2PG21 H24B-SGRH-LB-2PG29 H24B-SGRH-LB-2M25 H24B-SGRH-LB-2M32	T1610243116-000 T1610243121-000 T1610243120-000 T1610243125-000 T1610243216-000 T1610243221-000 T1610243220-000 T1610243225-000 T1650243121-000 T1650243129-000 T1650243125-000 T1650243132-000 T1650243221-000 T1650243229-000 T1650243225-000 T1650243232-000
Construction	H											
Low	56											
High	81											
	With protection cover  <table border="1" data-bbox="320 1601 539 1697"> <tr><td>Construction</td><td>H</td></tr> <tr><td>Low</td><td>56</td></tr> <tr><td>High</td><td>81</td></tr> </table>	Construction	H	Low	56	High	81	Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	M20 M25 M20 M25 M25 M32 M25 M32	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H24B-SDR-LB-PG16 H24B-SDR-LB-PG21 H24B-SDR-LB-M20 H24B-SDR-LB-M25 H24B-SDR-LB-2PG16 H24B-SDR-LB-2PG21 H24B-SDR-LB-2M20 H24B-SDR-LB-2M25 H24B-SDRH-LB-PG21 H24B-SDRH-LB-PG29 H24B-SDRH-LB-M25 H24B-SDRH-LB-M32 H24B-SDRH-LB-2PG21 H24B-SDRH-LB-2PG29 H24B-SDRH-LB-2M25 H24B-SDRH-LB-2M32	T1620243116-000 T1620243121-000 T1620243120-000 T1620243125-000 T1620243216-000 T1620243221-000 T1620243220-000 T1620243225-000 T1660243121-000 T1660243129-000 T1660243125-000 T1660243132-000 T1660243221-000 T1660243229-000 T1660243225-000 T1660243232-000
Construction	H											
Low	56											
High	81											

## HIP.24/64, HIP-K.24/64, EMV-K.24/64 housings


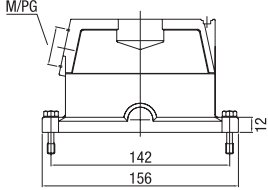

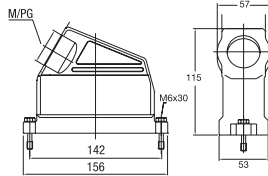

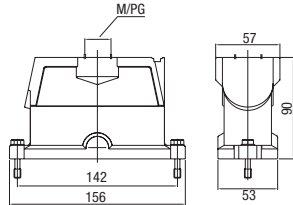
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Hood: Side entry, Standard construction</b>				
		M40	<b>HIP</b> HIP.24/64.STS.1.21.G HIP.24/64.STS.1.29.G HIP.24/64.STS.1.M40.G	1-1102658-5 1-1102660-5 0-1106473-2
		M40	<b>HIP-K</b> HIP-K.24/64.STS.1.29.G HIP-K.24/64.STS.1.M40.G	2-1102660-5 0-1106473-4
		M25 M32 M40	<b>EMV-K</b> EMV-K.24/64.STS.1.29.G EMV-K.24/64.STS.1.M25.G EMV-K.24/64.STS.1.M32.G EMV-K.24/64.STS.1.M40.G	4-1102755-5 0-1102983-1 0-1106461-8 0-1106461-3
		M40	<b>HIP</b> HIP-KF.24/64.STS.1.29.G HIP-KF.24/64.STS.1.36.G HIP-KF.24/64.STS.1.M40.G	1-1102622-5 1-1102623-5 0-1106474-1
		M40	<b>HIP-K</b> HIP-KF/K.24/64.STS.1.29.G HIP-KF/K.24/64.STS.1.36.G HIP-KF/K.24/64.STS.1.M40.G	2-1102622-5 2-1102623-5 0-1106474-2
		M40	<b>EMV-K</b> EMV-KF/K.24/64.STS.1.29.G EMV-KF/K.24/64.STS.1.36.G EMV-KF/K.24/64.STS.1.M40.G	4-1102732-5 4-1102733-5 0-1106462-2
<b>Hood: Top entry, Standard construction</b>				
		M40	<b>HIP</b> HIP.24/64.STO.1.21.G HIP.24/64.STO.1.29.G HIP.24/64.STO.1.M40.G	1-1102662-5 1-1102664-5 0-1106473-1
		2xM32 M40	<b>HIP-K</b> HIP-K.24/64.STO.1.29.G HIP-K.24/64.STO.2.M32.G HIP-K.24/64.STO.1.M40.G	2-1102664-5 0-1102792-1 0-1106473-3
		2xM40	<b>EMV-K</b> EMV-K.24/64.STO.1.29.G EMV-K.24/64.STO.1.M40.G	4-1102759-5 0-1106461-4
		2xM40		



## HIP.10/24, HIP-K.10/24, EMV-K.10/24 housings


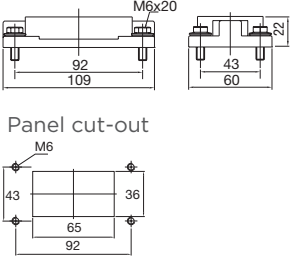

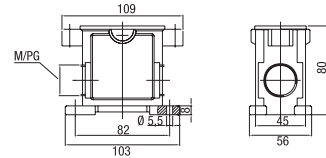

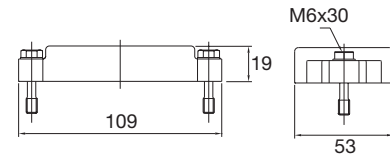
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Bottom entry</b>				
 			<b>HIP</b> HIP.10/24.AG.M6  <b>HIP-K</b> HIP-K.10/24.AG.M6  <b>EMV-K</b> EMV-K.10/24.AG.M6	1-1102612-5  2-1102612-5  4-1102720-5
<b>Surface mounted housing: Side entry</b>				
 	2xM32	21 2x21	<b>HIP</b> HIP.10/24.SG.1.21.G HIP.10/24.SG.2.21.G HIP.10/24.SG.2.M32.G  <b>HIP-K</b> HIP-K.10/24.SG.1.21.G HIP-K.10/24.SG.2.21.G  <b>EMV-K</b> EMV-K.10/24.SG.1.21.G EMV-K.10/24.SG.2.21.G EMV-K.10/24.SG.2.M32.G	1-1102610-5 1-1102611-5 0-1106435-1  5-1102610-5 2-1102611-5  5-1102716-5 4-1102717-5 0-1106426-2
<b>Protective covers for hoods and housing</b>				
 			<b>HIP</b> HIP/EMV.10/24.SKB  <b>HIP-K/EMV-K</b> HIP-K/EMV-K.10/24.SKB	3-1106202-5  4-1106202-5


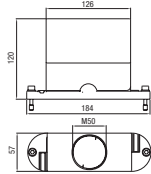

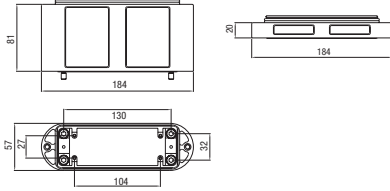

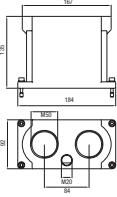

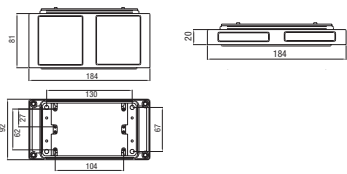
## HF-HIP-K 8/HF-EMV-K 8, HF-HIP-K 12/HF-EMV-K 12 housings

**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

### Screw lock on hood

Description	Metr.	PG	Type	Part Number
Hood				
		1xM50 1xM50 2xM40 2xM40	HF-HIP-K.8.Sto.1.M50G HF.8.EMV-K.8.Sto.1.M50G HF.HIP-K.8.Sto.2.M40G HF.EMV-K.8.Sto.2.M40G	0-1102839-4 0-1102839-3 0-1102839-2 0-1102839-1
Housing bottom				
		<b>Height</b> 20 mm 20 mm 81 mm 81 mm	HF-HIP-K.8.AG.N HF-EMV-K.8.AG.N HF-HIP-K.8.AG HF-EMV-K.8.AG	0-1102837-2 0-1102837-1 0-1102836-2 0-1102836-1
Hood				
		2xM40 2xM40 2xM50 2xM50	HF-HIP-K.12.Sto.2.M40G HF-EMV-K.12.Sto.2.M40G HF-HIP-K.12.Sto.2.M50G HF-EMV-K.12.Sto.2.M50G	0-1102840-2 0-1102840-1 0-1102840-4 0-1102840-3
Housing bottom				
		<b>Height</b> 20 mm 20 mm 81 mm 81 mm	HF-HIP-K.12.AG.N HF-EMV-K.12.AG.N HF-HIP-K.12.AG HF-EMV-K.12.AG	0-1102838-2 0-1102838-1 0-1102192-2 0-1102192-1

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## Connectors for Power Supply and Power Circuits

The demand for shortest possible periods of machine shutdowns and assembly times requires the use of connectors at the interfaces of the connector wires, as well as energy feeding and power circuits.

To satisfy the demand of the various applications the series Power Connector was designed.

On the basis of the standard series HSB.6/35 (power supply up to 35 A - 6-poles) the development and the elaboration of this series is being continued rigorously as a result, almost any application up to current of 350 A can be realized by using a series of different power contacts.

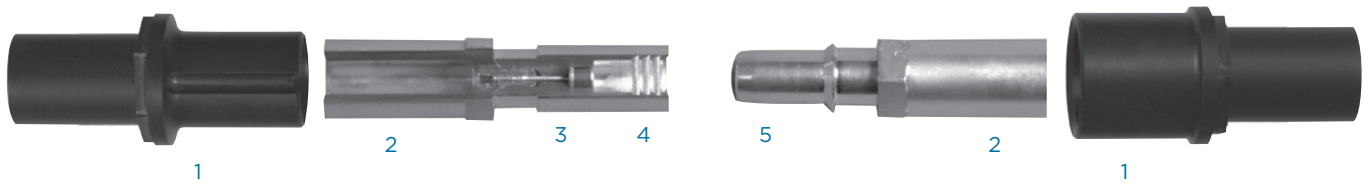
Due to the modular structure the different varieties of customer requirements in this sector can be met.

We also offer solutions for your application specific requirements.

### POWER CONTACT SERIE HPC GRADED BY DIMENSIONAL LEVELS UP TO 350 A FOR VARIOUS INDUSTRIAL APPLICATIONS

65 % higher current consumption than other available contact systems of the same size.  
F. e. Tulip contact 250 A - Coil spring contact 350 A.

## Coil Spring Power Contact



- 1 Insulating material plastic
- 2 Crimp ferrule
- 3 Female contact
- 4 Coil spring
- 5 Male contact

### CRIMP FERRULE

- Optimum material adaptation according to customer's application
- Adaptation to special customer wire size and crimping tools
- Same crimp ferrule for male, female and grounding contact
- Robust crimp ferrule for tough industrial applications

### MALE/FEMALE CONTACT


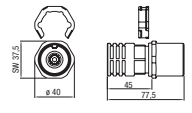

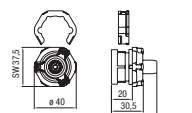

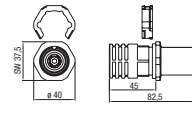

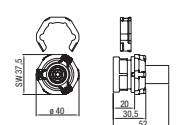
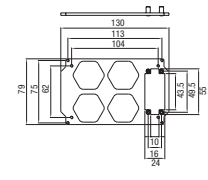
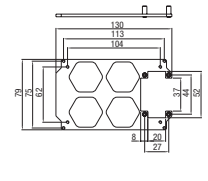
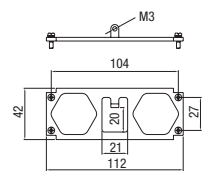
- Wear-resistant basic material
- Worn parts can be individually exchanged
- Surface coating according to customer application
- 30% reduced mating and pulling forces
- 50% increase of making cycles
- Variable wire termination

## Connector overview

<b>Series</b>	<b>HF-13</b>
<b>Power circuit</b>	<b>350A (3KV)</b>
Signal circuit	16A (400V)
Pollution degree	3(C)
Type of terminals	Crimp
<b>Pole Modul</b>	1
Page	16

## HF-13 module

350A/3KV


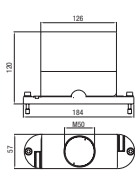

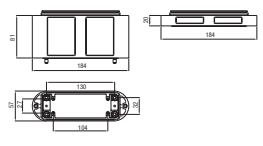
Description	Dimensions (mm)	Type	Part Number	
			Male insert	Female insert
		HF.13.Sti.	O-1110950-2	
		HF.13.Sti.E	O-1110950-4	
		HF.13.Bu.		O-1110951-2
		HF.13.Bu.E		O-1110951-4
			Top	Bottom
3 x for power 1 x for earth 1 x for signal (HA.10) Assembly in HF.12 Housings			O-1110955-3	O-1110955-1
3 x for power 1 x for earth 1 x for signal (HE.6) Assembly in HF.12 Housings			O-1110955-4	O-1110955-2
2 x for power 1 x signal Assembly in HF.8 Housings			O-1110960-2	O-1110960-1

## HF.8 housings

EMV-K: corrosion-resistant, black; HIP-K: black

### Screw lock on hood


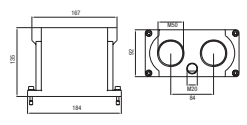

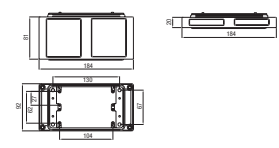
IP 68 / IP 69 K

Description	Metr.	Height	Type	Part Number
Hood				
 	1xM50		HF-HIP-K.8.Sto.1.M50G	0-1102839-4
	1xM50		HF.8.EMV-K.8.Sto.1.M50G	0-1102839-3
	2xM40		HF.HIP-K.8.Sto.2.M40G	0-1102839-2
	2xM40		HF.EMV-K.8.Sto.2.M40G	0-1102839-1
	2xM40+1xM16		HF.HIP.K8.Sto.2.M40G.1M16G	0-1102839-6
	2xM40+1xM16		HF.EMV.K8.Sto.2.M40G.1M16G	0-1102839-5
Housing bottom				
 		20	HF-HIP-K.8.AG.N	0-1102837-2
		20	HF-EMV-K.8.AG.N	0-1102837-1
		81	HF-HIP-K.8.AG	0-1102836-2
		81	HF-EMV-K.8.AG	0-1102836-1

## HF.12 housings

### Screw lock on hood

IP 68 / IP 69 K


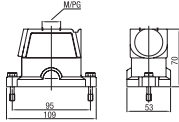

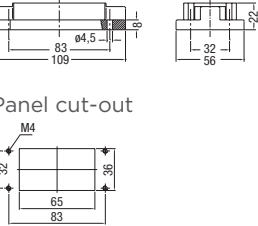

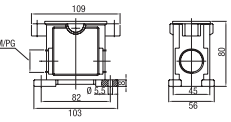
Description	Metr.	Height	Type	Part Number
Hood				
 	2xM40		HF-HIP-K.12.Sto.2.M40.1M20G	0-1102840-2
	2xM40		HF-EMV-K.12.Sto.2.M40.1M20G	0-1102840-1
	2xM50		HF-HIP-K.12.Sto.2.M50.1M20G	0-1102840-4
	2xM50		HF-EMV-K.12.Sto.2.M50.1M20G	0-1102840-3
Housing bottom				
 		20	HF-HIP-K.12.AG.N	0-1102838-2
		20	HF-EMV-K.12.AG.N	0-1102838-1
		81	HF-HIP-K.12.AG	0-1102192-2
		81	HF-EMVK-K.12.AG	0-1102192-1

## EMV-K 10/24 housings

**EMV-K:** Protection against electro magnetic interference, pressure-tight, corrosion-resistant

### Screw lock on hood

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
Hood: Top entry				
 	M25	21	EMV-K.10/24.Sto.1.21G EMV-K.10/24.Sto.1.M25G	4-1102715-5 0-1106427-4
Surface mounted housing: Bottom entry				
  <p>Panel cut-out</p>			EMV-K.10/24.AG	4-1102718-5
Surface mounted housing: side entry				
 	2xM32	21	EMV-K.10/24.SG.1.21G EMV-K.10/24.SG.2.M32G	4-1102716-5 0-1106426-2



## Crimping sleeves

CRIMPING SLEEVES FOR CONTACT SERIES HF-13

MAX. 350A

Description	Dimensions (mm)	Type	Part Number
Crimp barrel for pin-/socket side - shrink tube - crimp barrel - adapter		CH.50mm <sup>2</sup> -13/16mm	0-1110953-5
		CH.70mm <sup>2</sup> -13/16mm	0-1110953-6
		CH.95mm <sup>2</sup> -13/16mm	0-1110953-7
		CH.105mm <sup>2</sup> -13/16mm	0-1110953-8
		CH.120mm <sup>2</sup> -13/16mm	0-1110953-9
		CH.150mm <sup>2</sup> -13/16mm	1-1110953-1

## SUITABLE TOOL

Description		Type	Part Number
Crimping tool without crimping jaws		HSS-CSZ.2.5-70mm <sup>2</sup>	1-1105653-8
Crimping jaws for HSL, HSS		CB-HSS-CSZ.6mm <sup>2</sup> CB-HSS-CSZ.10mm <sup>2</sup> CB-HSS-CSZ.16mm <sup>2</sup> CB-HSS-CSZ.25mm <sup>2</sup> CB-HSS-CSZ.35mm <sup>2</sup> CB-HSS-CSZ.50mm <sup>2</sup> CB-HSS-CSZ.70mm <sup>2</sup>	2-1105653-8 3-1105653-8 4-1105653-8 5-1105653-8 6-1105653-8 7-1105653-8 8-1105653-8
Hydraulic Crimping tool		HF-CHZ	0-1110956-1
Dies		SET-50-150mm <sup>2</sup> 150mm <sup>2</sup> -KZ22 120mm <sup>2</sup> -KZ20 95mm <sup>2</sup> -KZ18 70mm <sup>2</sup> -KZ16 50mm <sup>2</sup> -KZ14	0-1110956-7 0-1110956-6 0-1110956-5 0-1110956-4 0-1110956-3 0-1110956-2



## IP68, IP65 Hoods and Housings overview



### 1. Specifications

DIN VDE 0110 Concerning clearance and clearance distances

DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 60 664-1

DIN EN 61 984


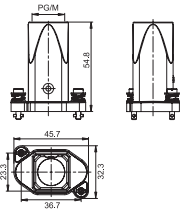

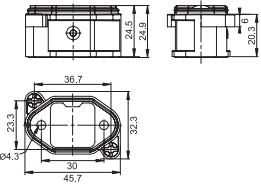

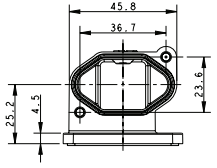
### 3. Approvals



RoHS


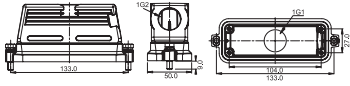

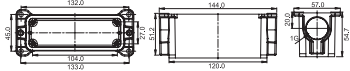
## HPR (IP68) series hoods/housings

### H3APR (IP68) SERIES

Opposite angle locking	Metr.	PG	Type	Part Number
Top entry				
		M20	PG16 H3APR-MTG-PG16 H3APR-MTG-M20	T1920030116-000 T1920030120-000
Bulkhead mounted: Bottom entry				
			H3APR-MAG	T1930030000-000
Bulkhead mounted: Side entry				
			H3APR-MAGS	T1946030000-000 (Black) T1946032000-000 (Grey) T1946031000-000 (Silver)


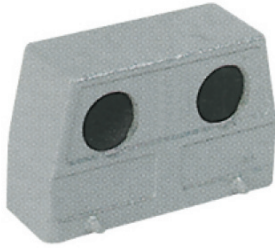
## HB hoods/housings with central locking lever

### HB (IP67) SERIES

Central locking		Size	Metr.	PG	Type	Part Number
		H24B	M25	PG21 PG29	<b>Top entry</b> H24BK-TGHC-PG21 H24BK-TGHC-PG29 H24BK-TGHC-M25 H24BK-TGHC-M32 H24BK-TGHC-M40	T1822242121-000 T1822242129-000 T1822242125-000 T1822242132-000 T1822242140-000
			M32 M40			PG21
Surface mounted side entry						
		H24B	M25	PG21 PG21	<b>1 side entry</b> H24BK-SGR-PG21 H24BK-SGR-M25	T1852242121-000 T1852242125-000
			M25		PG21	<b>2 side entry</b> H24BK-SGR-2PG21 H24BK-SGR-2M25

## Special hoods

### SPECIAL HOODS (IP65) SERIES

Double cable entry	Size	Metr.	PG	Type	Part Number
Hood: Top entry					
	H10B	2xM20	2xPG16	H10B-TGH-2PG16 H10B-TGH-2M20	T1240102116-000 T1240102120-000
	H16B	2xM25	2xPG21	H16B-TGH-2PG21 H16B-TGH-2M25	T1240162121-000 T1240162125-000
	H24B	2xM25	2xPG21	H24B-TGH-2PG21 H24B-TGH-2M25	T1240242121-000 T1240242125-000
Hood: Side entry					
	H10B	2xM20	2xPG16	H10B-TFH-2PG16 H10B-TFH-2M20	T1230102116-000 T1230102120-000
	H16B	2xM25	2xPG21	H16B-TFH-2PG21 H16B-TFH-2M25	T1230162121-000 T1230162125-000
	H24B	2xM25	2xPG21	H24B-TFH-2PG21 H24B-TFH-2M25	T1230242121-000 T1230242125-000

## HA series hoods/housings

H3A INCLUDE METAL AND PLASTIC SHELLS

H3A6 LEVERS INCLUDE METAL, PLASTIC AND STAINLESS STEEL

H3A metal hoods, housings	Metr.	PG	Type	H3A thermoplastic hoods, housings	Metr.	PG	Type
Top entry				Top entry			
	M20	PG11	H3A-MTG-PG11 H3A-MTG-M20		M20	PG11	H3A-TG-PG11 H3A-TG-M20
Side entry				Side entry			
	M20	PG11	H3A-MTS-PG11 H3A-MTS-M20		M20	PG11	H3A-TS-PG11 H3A-TS-M20
Bulkhead mounting: Bottom entry				Bulkhead mounting: Bottom entry			
			H3A-MAG				H3A-AG
Bulkhead mounting: Side entry				Bulkhead mounting: Side entry			
			H3A-MAGS				H3A-AGS
Surface mounting: Side entry				Surface mounting: Side entry			
	M16 M20	PG11	H3A-MAGSV-PG11 H3A-MAGSV-M16 H3A-MAGSV-M20		M16 M20	PG11	H3A-AGSV-PG11 H3A-AGSV-M16 H3A-AGSV-M20
Cable-to-cable hood				Cable-to-cable hood			
	M20	PG11	H3A-MTGVB-PG11 H3A-MTGVB-M20		M20	PG11	H3A-TGVB-PG11 H3A-TGVB-M20
Protection covers for hoods (thermoplastic)				Protection covers for hoods			
	Note: For mounted male insert and hood		H3A-KDTP		Note: For mounted male insert and hood		H3A-KDTP
Metal protection covers for hoods				Protection covers for hoods			
	Note: For mounted female insert and housings		H3A-KDB		Note: For mounted female insert and housings		H3A-KDBP (White) H3A-KDBPG (Grey)
				White	Grey		






## HA series hoods/housings

H10A INCLUDE METAL AND STAINLESS STEEL LEVER  
H16A INCLUDE METAL AND STAINLESS STEEL LEVER

H10A metal hoods, housings				H16A metal hoods, housings					
Metr.	PG	Type		Metr.	PG	Type			
Hood: Side entry				Hood: Side entry					
	Low construction High construction	M20 M25	PG16 PG21	H10A-TS-PG16 H10A-TS-PG21 H10A-TS-M20 H10A-TS-M25		Low construction High construction	M20 M25 M25	PG16 PG21 PG21	H16A-TS-PG16 H16A-TS-PG21 H16A-TS-M20 H16A-TS-M25 H16A-TSH-PG21 H16A-TSH-M25
Hood: Top entry				Hood: Top entry					
	Low construction High construction	M20 M25	PG16 PG21	H10A-TG-PG16 H10A-TG-PG21 H10A-TG-M20 H10A-TG-M25		Low construction High construction	M20 M25 M25	PG16 PG21 PG21	H16A-TG-PG16 H16A-TG-PG21 H16A-TG-M20 H16A-TG-M25 H16A-TGH-PG21 H16A-TGH-M25
Protection covers for hood				Protection covers for hood					
			H10A-KDT				H16A-KDT		
Bulkhead mounted				Bulkhead mounted					
			H10A-AGS				H16A-AGS		
			H10A-ADS				H16A-ADS		
Surface mounted: Side entry				Surface mounted: Side entry					
	1 Side entry 2 Side entry	M20 M25 M20 M25	PG16 PG21 PG16 PG21	H10A-SGRS-PG16 H10A-SGRS-PG21 H10A-SGRS-M20 H10A-SGRS-M25 H10A-SGRS-2PG16 H10A-SGRS-2PG21 H10A-SGRS-2M20 H10A-SGRS-2M25		1 Side entry 2 Side entry	M20 M25 M20 M25	PG16 PG21 PG16 PG21	H16A-SGRS-PG16 H16A-SGRS-PG21 H16A-SGRS-M20 H16A-SGRS-M25 H16A-SGRS-2PG16 H16A-SGRS-2PG21 H16A-SGRS-2M20 H16A-SGRS-2M25
	1 Side entry 2 Side entry	M20 M25 M20 M25	PG16 PG21 PG16 PG21	H10A-SDRMS-PG16 H10A-SDRMS-PG21 H10A-SDRMS-M20 H10A-SDRMS-M25 H10A-SDRMS-2PG16 H10A-SDRMS-2PG21 H10A-SDRMS-2M20 H10A-SDRMS-2M25		1 Side entry 2 Side entry	M20 M25 M20 M25	PG16 PG21 PG16 PG21	H16A-SDRS-PG16 H16A-SDRS-PG21 H16A-SDRS-M20 H16A-SDRS-M25 H16A-SDRS-2PG16 H16A-SDRS-2PG21 H16A-SDRS-2M20 H16A-SDRS-2M25
Cable-to-cable hood				Cable-to-cable hood					
	Low construction High construction	M20 M25 M25	PG16 PG21	H10A-TBFS-PG16 H10A-TBFS-M20 H10A-TBFS-M25 H10A-TBFHS-PG21 H10A-TBFHS-M25		Low construction High construction	M20 M25 M25	PG16 PG21	H16A-TBFS-PG16 H16A-TBFS-M20 H16A-TBFS-M25 H16A-TBFHS-PG21 H16A-TBFHS-M25



## HA series hoods/housings

H32A metal hoods, housings				H8A thermoplastic hoods, housings			
	Metr.	PG	Type		Metr.	PG	Type
Hood: Side entry				Hood: Side entry			
	M25 M32 M40	PG21 PG29 PG36	H32A-TS-PG21 H32A-TS-PG29 H32A-TS-PG36 H32A-TS-M25 H32A-TS-M32 H32A-TS-M40		M20	PG16	H8A-TS-PG16 H8A-TS-M20
Hood: Top entry				Hood: Top entry			
	M25 M32 M40	PG21 PG29 PG36	H32A-TG-PG21 H32A-TG-PG29 H32A-TG-PG36 H32A-TG-M25 H32A-TG-M32 H32A-TG-M40		M20	PG16	H8A-TG-PG16 H8A-TG-M20
Bulkhead mounted				Bulkhead mounted			
			H32A-AG				H8A-AG
Surface mounted: Side entry							
	1 Side entry M25 M32 2 Side entry M25 M32	PG21 PG29 PG21 PG29	H32A-SGR-PG21 H32A-SGR-PG29 H32A-SGR-M25 H32A-SGR-M32 H32A-SGR-2PG21 H32A-SGR-2PG29 H32A-SGR-2M25 H32A-SGR-2M32				

## H6B series hoods/housings












H6B LEVERS INCLUDE METAL, PLASTIC AND STAINLESS STEEL  
H6B COVERS INCLUDE PLASTIC AND METAL COVERS

H6B metal hoods	Metr.	PG	Type	H6B metal housings	Metr.	PG	Type
Hood: Side entry				Bulkhead mounted			
	M20 M25	PG16 PG21	H6B-TS-PG16 H6B-TS-PG21 H6B-TS-M20 H6B-TS-M25				H6B-AGS
	M20 M25 M32	PG21 PG29	H6B-TSH-PG21 H6B-TSH-PG29 H6B-TSH-M20 H6B-TSH-M25 H6B-TSH-M32				H6B-ADS
Hood: Top entry				Surface mounted: Side entry			
	M20 M25	PG16 PG21	H6B-TG-PG16 H6B-TG-PG21 H6B-TG-M20 H6B-TG-M25		Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H6B-SGRS-PG16 H6B-SGRS-PG21 H6B-SGRS-M20 H6B-SGRS-M25 H6B-SGRS-2PG16 H6B-SGRS-2PG21 H6B-SGRS-2M20 H6B-SGRS-2M25 H6B-SGRHS-PG21 H6B-SGRHS-PG29 H6B-SGRHS-M25 H6B-SGRHS-M32 H6B-SGRHS-2PG21 H6B-SGRHS-2PG29 H6B-SGRHS-2M25 H6B-SGRHS-2M32
	M20 M25 M32	PG21 PG29	H6B-TGH-PG21 H6B-TGH-PG29 H6B-TGH-M20 H6B-TGH-M25 H6B-TGH-M32		Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H6B-SDRS-PG16 H6B-SDRS-PG21 H6B-SDRS-M20 H6B-SDRS-M25 H6B-SDRS-2PG16 H6B-SDRS-2PG21 H6B-SDRS-2M20 H6B-SDRS-2M25 H6B-SDRHS-PG21 H6B-SDRHS-PG29 H6B-SDRHS-M25 H6B-SDRHS-M32 H6B-SDRHS-2PG21 H6B-SDRHS-2PG29 H6B-SDRHS-2M25 H6B-SDRHS-2M32
Cable-to-cable hood							
	Low construction M20 M25 High construction M20 M25 M32	PG16 PG21 PG29	H6B-TBFS-PG16 H6B-TBFS-M20 H6B-TBFS-M25 H6B-TBFHS-PG21 H6B-TBFHS-PG29 H6B-TBFHS-M20 H6B-TBFHS-M25 H6B-TBFHS-M32				
Protection covers for hoods							
			H6B-KDTP				

## H10B with 2 levers on the hoods/housings

H10B LEVERS INCLUDE METAL, PLASTIC AND STAINLESS STEEL

H10B COVERS INCLUDE PLASTIC AND METAL COVERS

H10B metal hoods	Metr.	PG	Type	H10B metal housings	Metr.	PG	Type	
Hood: Side entry				Bulkhead mounted				
	M20 M25	PG16 PG21	H10B-TS-PG16 H10B-TS-PG21 H10B-TS-M20 H10B-TS-M25				H10B-AGS	
Hood: Top entry				Surface mounted: Side entry				
	M20 M25 M32	PG21 PG29	H10B-TSH-PG21 H10B-TSH-PG29 H10B-TSH-M20 H10B-TSH-M25 H10B-TSH-M32		Low construction 1 Side entry 2 Side entry	M20 M25	PG16 PG21	H10B-SGRS-PG16 H10B-SGRS-PG21 H10B-SGRS-M20 H10B-SGRS-M25 H10B-SGRS-2PG16 H10B-SGRS-2PG21 H10B-SGRS-2M20 H10B-SGRS-2M25
					High construction 1 Side entry 2 Side entry	M20 M25 M32	PG21 PG29	H10B-SGRHS-PG21 H10B-SGRHS-PG29 H10B-SGRHS-M25 H10B-SGRHS-M32 H10B-SGRHS-2PG21 H10B-SGRHS-2PG29 H10B-SGRHS-2M25 H10B-SGRHS-2M32
	M20 M25	PG16 PG21	H10B-TG-PG16 H10B-TG-PG21 H10B-TG-M20 H10B-TG-M25	Side entry housing with two levers				
	M20 M25 M32	PG21 PG29	H10B-TGH-PG21 H10B-TGH-PG29 H10B-TGH-M20 H10B-TGH-M25 H10B-TGH-M32		Low construction	M20 M25	PG16 PG21	H10B-TSBS-PG16 H10B-TSBS-PG21 H10B-TSBS-M20 H10B-TSBS-M25
					High construction	M25 M32	PG21 PG29	H10B-TSBHS-PG21 H10B-TSBHS-PG29 H10B-TSBHS-M25 H10B-TSBHS-M32
Cable-to-cable hood				Top entry housing with two levers				
	Low construction M20 M25	PG16	H10B-TBFS-PG16 H10B-TBFS-M20 H10B-TBFS-M25		Low construction	M20 M25	PG16 PG21	H10B-TGBS-PG16 H10B-TGBS-PG21 H10B-TGBS-M20 H10B-TGBS-M25
	High construction M25 M32	PG21 PG29	H10B-TBFHS-PG21 H10B-TBFHS-PG29 H10B-TBFHS-M25 H10B-TBFHS-M32		High construction	M25 M32	PG21 PG29	H10B-TGBHS-PG21 H10B-TGBHS-PG29 H10B-TGBHS-M25 H10B-TGBHS-M32
Protection covers for hoods				Bulkhead mounted with 4 bolts				
			H10B-KDTP		Low construction 1 Side entry 2 Side entry	M20 M25	PG16 PG21	H10B-AD-BO H10B-SDR-BO-PG16 H10B-SDR-BO-PG21 H10B-SDR-BO-M20 H10B-SDR-BO-M25 H10B-SDR-BO-2PG16 H10B-SDR-BO-2PG21 H10B-SDR-BO-2M20 H10B-SDR-BO-2M25
Housing protection cover					High construction 1 Side entry 2 Side entry	M20 M25 M32	PG21 PG29	H10B-SDRH-BO-PG21 H10B-SDRH-BO-PG29 H10B-SDRH-BO-M25 H10B-SDRH-BO-M32 H10B-SDRH-BO-2PG21 H10B-SDRH-BO-2PG29 H10B-SDRH-BO-2M25 H10B-SDRH-BO-2M32
			H10B-KDBP		M25 M32	PG21 PG29		

## H10B with 1 lever on the hoods/housings

H10B LEVERS INCLUDE METAL, PLASTIC AND STAINLESS STEEL  
H10B COVERS INCLUDE PLASTIC AND METAL COVERS

H10B metal hoods	Metr.	PG	Type	H10B metal housings	Metr.	PG	Type
Hood: Side entry				Bulkhead mounted			
	M20 M25	PG16 PG21	H10B-TS-RO-PG16 H10B-TS-RO-PG21 H10B-TS-RO-M20 H10B-TS-RO-M25				H10B-AG-LB
	M20 M25 M32	PG21 PG29	H10B-TSH-RO-PG21 H10B-TSH-RO-PG29 H10B-TSH-RO-M20 H10B-TSH-RO-M25 H10B-TSH-RO-M32				H10B-AD-LB
Hood: Top entry				Surface mounted: Side entry			
	M20 M25	PG16 PG21	H10B-TG-RO-PG16 H10B-TG-RO-PG21 H10B-TG-RO-M20 H10B-TG-RO-M25		1 Side entry Low construction 2 Side entry	PG16 PG21 PG16 PG21	H10B-SGR-LB-PG16 H10B-SGR-LB-PG21 H10B-SGR-LB-M20 H10B-SGR-LB-M25 H10B-SGR-LB-2PG16 H10B-SGR-LB-2PG21 H10B-SGR-LB-2M20 H10B-SGR-LB-2M25
					1 Side entry High construction 2 Side entry	PG21 PG29 PG21 PG29	H10B-SGRH-LB-PG21 H10B-SGRH-LB-PG29 H10B-SGRH-LB-M25 H10B-SGRH-LB-M32 H10B-SGRH-LB-2PG21 H10B-SGRH-LB-2PG29 H10B-SGRH-LB-2M25 H10B-SGRH-LB-2M32
	M20 M25 M32	PG21 PG29	H10B-TGH-RO-PG21 H10B-TGH-RO-PG29 H10B-TGH-RO-M20 H10B-TGH-RO-M25 H10B-TGH-RO-M32		1 Side entry Low construction 2 Side entry	PG16 PG21 PG16 PG21	H10B-SDR-LB-PG16 H10B-SDR-LB-PG21 H10B-SDR-LB-M20 H10B-SDR-LB-M25 H10B-SDR-LB-2PG16 H10B-SDR-LB-2PG21 H10B-SDR-LB-2M20 H10B-SDR-LB-2M25
					1 Side entry High construction 2 Side entry	PG21 PG29 PG21 PG29	H10B-SDRH-LB-PG21 H10B-SDRH-LB-PG29 H10B-SDRH-LB-M25 H10B-SDRH-LB-M32 H10B-SDRH-LB-2PG21 H10B-SDRH-LB-2PG29 H10B-SDRH-LB-2M25 H10B-SDRH-LB-2M32
Cable-to-cable hood							
	M20 M25	PG16	H10B-TBF-LB-PG16 H10B-TBF-LB-M20 H10B-TBF-LB-M25				
	M25 M32	PG21 PG29	H10B-TBFH-LB-PG21 H10B-TBFH-LB-PG29 H10B-TBFH-LB-M25 H10B-TBFH-LB-M32				
Protection covers for hoods							
			H10B-KDTP-LB				

## H16B with 2 levers on the hoods/housings

H16B LEVERS INCLUDE METAL, PLASTIC AND STAINLESS STEEL  
H16B COVERS INCLUDE PLASTIC AND METAL COVERS

H16B metal hoods	Metr.	PG	Type	H16B metal housings	Metr.	PG	Type	
Hood: Side entry				Bulkhead mounted				
	M25 M32	PG16 PG21	H16B-TS-PG16 H16B-TS-PG21 H16B-TS-M25 H16B-TS-M32				H16B-AGS	
	M25 M32 M40	PG21 PG29	H16B-TSH-PG21 H16B-TSH-PG29 H16B-TSH-M25 H16B-TSH-M32 H16B-TSH-M40	Surface mounted: Side entry				
					Low construction 1 Side entry 2 Side entry	M25 M25	PG21 PG21	H16B-SGRS-PG21 H16B-SGRS-M25 H16B-SGRS-2PG21 H16B-SGRS-2M25
					High construction 1 Side entry 2 Side entry	M25 M32 M25 M32	PG21 PG29 PG21 PG29	H16B-SGRHS-PG21 H16B-SGRHS-PG29 H16B-SGRHS-M25 H16B-SGRHS-M32 H16B-SGRHS-2PG21 H16B-SGRHS-2PG29 H16B-SGRHS-2M25 H16B-SGRHS-2M32
Hood: Top entry				Side entry housing with two levers				
	M25 M32	PG16 PG21	H16B-TG-PG16 H16B-TG-PG21 H16B-TG-M25 H16B-TG-M32		Low construction High construction	M20 M25 M25 M32	PG16 PG21 PG21 PG29	H16B-TSBS-PG16 H16B-TSBS-PG21 H16B-TSBS-M20 H16B-TSBS-M25 H16B-TSBHS-PG21 H16B-TSBHS-PG29 H16B-TSBHS-M25 H16B-TSBHS-M32
	M25 M32 M40	PG21 PG29	H16B-TGH-PG21 H16B-TGH-PG29 H16B-TGH-M25 H16B-TGH-M32 H16B-TGH-M40	Top entry housing with two levers				
					Low construction High construction	M20 M25 M25 M32	PG16 PG21 PG21 PG29	H16B-TGBS-PG16 H16B-TGBS-PG21 H16B-TGBS-M20 H16B-TGBS-M25 H16B-TGBHS-PG21 H16B-TGBHS-PG29 H16B-TGBHS-M25 H16B-TGBHS-M32
Cable-to-cable hood				Bulkhead mounted with 4 bolts				
	Low construction High construction	M25 M32 M25 M32 M40	PG21 PG21 PG29	H16B-TBFS-PG21 H16B-TBFS-M25 H16B-TBFS-M32 H16B-TBFHS-PG21 H16B-TBFHS-PG29 H16B-TBFHS-M25 H16B-TBFHS-M32 H16B-TBFHS-M40				H16B-AD-BO
Protection covers for hoods					1 Side entry Low construction	M25 M25	PG21 PG21	H16B-SDR-BO-PG21 H16B-SDR-BO-M25 H16B-SDR-BO-2PG21 H16B-SDR-BO-2M25
			H16B-KDTP		High construction 1 Side entry 2 Side entry	M25 M32	PG21 PG29	H16B-SDRH-BO-PG21 H16B-SDRH-BO-PG29 H16B-SDRH-BO-M25 H16B-SDRH-BO-M32
Housing protection cover					High construction 1 Side entry 2 Side entry	M25 M32	PG21 PG29	H16B-SDRH-BO-2PG21 H16B-SDRH-BO-2PG29 H16B-SDRH-BO-2M25 H16B-SDRH-BO-2M32
			H16B-KDBP			M25 M32		

## H16B with 1 lever on the hoods/housings

H16B LEVERS INCLUDE METAL, PLASTIC AND STAINLESS STEEL  
H16B COVERS INCLUDE PLASTIC AND METAL COVERS

H16B metal hoods	Metr.	PG	Type	H16B metal housings	Metr.	PG	Type
Hood: Side entry				Bulkhead mounted			
	M25 M32	PG21 PG29	H16B-TS-RO-PG21 H16B-TS-RO-PG29 H16B-TS-RO-M25 H16B-TS-RO-M32				H16B-AG-LB
	M25 M32 M40	PG21 PG29	H16B-TSH-RO-PG21 H16B-TSH-RO-PG29 H16B-TSH-RO-M25 H16B-TSH-RO-M32 H16B-TSH-RO-M40				H16B-AD-LB
Hood: Top entry				Surface mounted: Side entry			
	M25 M32	PG21 PG29	H16B-TG-RO-PG21 H16B-TG-RO-PG29 H16B-TG-RO-M25 H16B-TG-RO-M32		Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SGR-LB-PG16 H16B-SGR-LB-PG21 H16B-SGR-LB-M20 H16B-SGR-LB-M25 H16B-SGR-LB-2PG16 H16B-SGR-LB-2PG21 H16B-SGR-LB-2M20 H16B-SGR-LB-2M25 H16B-SGRH-LB-PG21 H16B-SGRH-LB-PG29 H16B-SGRH-LB-M25 H16B-SGRH-LB-M32 H16B-SGRH-LB-2PG21 H16B-SGRH-LB-2PG29 H16B-SGRH-LB-2M25 H16B-SGRH-LB-2M32
	M25 M32 M40	PG21 PG29	H16B-TGH-RO-PG21 H16B-TGH-RO-PG29 H16B-TGH-RO-M25 H16B-TGH-RO-M32 H16B-TGH-RO-M40		Low construction 1 Side entry 2 Side entry High construction 1 Side entry 2 Side entry	PG16 PG21 PG16 PG21 PG21 PG29 PG21 PG29	H16B-SDR-LB-PG16 H16B-SDR-LB-PG21 H16B-SDR-LB-M20 H16B-SDR-LB-M25 H16B-SDR-LB-2PG16 H16B-SDR-LB-2PG21 H16B-SDR-LB-2M20 H16B-SDR-LB-2M25 H16B-SDRH-LB-PG21 H16B-SDRH-LB-PG29 H16B-SDRH-LB-M25 H16B-SDRH-LB-M32 H16B-SDRH-LB-2PG21 H16B-SDRH-LB-2PG29 H16B-SDRH-LB-2M25 H16B-SDRH-LB-2M32
Cable-to-cable hood							
	Low construction M25 M32 High construction M25 M32 M40	PG21 PG29 PG21 PG29	H16B-TBF-LB-PG21 H16B-TBF-LB-PG29 H16B-TBF-LB-M25 H16B-TBF-LB-M32 H16B-TBFH-LB-PG21 H16B-TBFH-LB-PG29 H16B-TBFH-LB-M25 H16B-TBFH-LB-M32 H16B-TBFH-LB-M40				
Protection covers for hoods							
			H16B-KDTP-LB				



## H24B with 2 levers on the hoods/housings

H24B LEVERS INCLUDE METAL, PLASTIC AND STAINLESS STEEL  
H24B COVERS INCLUDE PLASTIC AND METAL COVERS

H24B metal hoods	Metr.			H24B metal housings	Metr.	PG	Type
Hood: Side entry				Bulkhead mounted			
	M25 M32	PG16 PG21	H24B-TS-PG16 H24B-TS-PG21 H24B-TS-M25 H24B-TS-M32				H24B-AGS
Hood: Side entry				Surface mounted: Side entry			
	M25 M32 M40	PG21 PG29	H24B-TSH-PG21 H24B-TSH-PG29 H24B-TSH-M25 H24B-TSH-M32 H24B-TSH-M40		Low construction 1 Side entry / 2 Side entry M25 M25 High construction 1 Side entry / 2 Side entry M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H24B-SGRS-PG21 H24B-SGRS-M25 H24B-SGRS-2PG21 H24B-SGRS-2M25 H24B-SGRHS-PG21 H24B-SGRHS-PG29 H24B-SGRHS-M25 H24B-SGRHS-M32 H24B-SGRHS-2PG21 H24B-SGRHS-2PG29 H24B-SGRHS-2M25 H24B-SGRHS-2M32
Hood: Top entry				Side entry housing with two levers			
	M25 M32	PG16 PG21	H24B-TG-PG16 H24B-TG-PG21 H24B-TG-M25 H24B-TG-M32		Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H24B-TSBS-PG16 H24B-TSBS-PG21 H24B-TSBS-M20 H24B-TSBS-M25 H24B-TSBHS-PG21 H24B-TSBHS-PG29 H24B-TSBHS-M25 H24B-TSBHS-M32
Hood: Top entry				Top entry housing with two levers			
	M25 M32 M40	PG21 PG29	H24B-TGH-PG21 H24B-TGH-PG29 H24B-TGH-M25 H24B-TGH-M32 H24B-TGH-M40		Low construction M20 M25 High construction M25 M32	PG16 PG21 PG21 PG29	H24B-TGBS-PG16 H24B-TGBS-PG21 H24B-TGBS-M20 H24B-TGBS-M25 H24B-TGBHS-PG21 H24B-TGBHS-PG29 H24B-TGBHS-M25 H24B-TGBHS-M32
Cable-to-cable hood				Bulkhead mounted with 4 bolts			
	Low construction M25 M32 High construction M25 M32 M40	PG21 PG21 PG29	H24B-TBFS-PG21 H24B-TBFS-M25 H24B-TBFS-M32 H24B-TBFHS-PG21 H24B-TBFHS-PG29 H24B-TBFHS-M25 H24B-TBFHS-M32 H24B-TBFHS-M40				H24B-AD-BO
Protection covers for hoods				Housing protection cover			
			H24B-KDTP		Low construction 1 Side entry / 2 Side entry M25 M25 High construction 1 Side entry / 2 Side entry M25 M32 M25 M32	PG21 PG21 PG21 PG29 PG21 PG29	H24B-SDR-BO-PG21 H24B-SDR-BO-M25 H24B-SDR-BO-2PG21 H24B-SDR-BO-2M25 H24B-SDRH-BO-PG21 H24B-SDRH-BO-PG29 H24B-SDRH-BO-M25 H24B-SDRH-BO-M32 H24B-SDRH-BO-2PG21 H24B-SDRH-BO-2PG29 H24B-SDRH-BO-2M25 H24B-SDRH-BO-2M32
			H24B-KDBP				

## H24B with 1 lever on the hoods/housings

H24B metal hoods	Metr.	PG	Type	H24B metal housings	Metr.	PG	Type
Hood: Side entry				Bulkhead mounted			
	M25 M32	PG21 PG29	H24B-TS-RO-PG21 H24B-TS-RO-PG29 H24B-TS-RO-M25 H24B-TS-RO-M32				H24B-AG-LB
	M25 M32 M40	PG21 PG29	H24B-TSH-RO-PG21 H24B-TSH-RO-PG29 H24B-TSH-RO-M25 H24B-TSH-RO-M32 H24B-TSH-RO-M40				H24B-AD-LB
Hood: Top entry				Surface mounted: Side entry			
	M25 M32	PG21 PG29	H24B-TG-RO-PG21 H24B-TG-RO-PG29 H24B-TG-RO-M25 H24B-TG-RO-M32		M20 M25	PG16 PG21	H24B-SGR-LB-PG16 H24B-SGR-LB-PG21 H24B-SGR-LB-M20 H24B-SGR-LB-M25 H24B-SGR-LB-2PG16 H24B-SGR-LB-2PG21 H24B-SGR-LB-2M20 H24B-SGR-LB-2M25
	M25 M32 M40	PG21 PG29	H24B-TGH-RO-PG21 H24B-TGH-RO-PG29 H24B-TGH-RO-M25 H24B-TGH-RO-M32 H24B-TGH-RO-M40				
Cable-to-cable hood							
	Low construction M25 M32	PG21 PG29	H24B-TBF-LB-PG21 H24B-TBF-LB-PG29 H24B-TBF-LB-M25 H24B-TBF-LB-M32		M20 M25	PG16 PG21	H24B-SDR-LB-PG16 H24B-SDR-LB-PG21 H24B-SDR-LB-M20 H24B-SDR-LB-M25 H24B-SDR-LB-2PG16 H24B-SDR-LB-2PG21 H24B-SDR-LB-2M20 H24B-SDR-LB-2M25
	High construction M25 M32 M40	PG21 PG29	H24B-TBFH-LB-PG21 H24B-TBFH-LB-PG29 H24B-TBFH-LB-M25 H24B-TBFH-LB-M32 H24B-TBFH-LB-M40				
Protection covers for hoods							
			H24B-KDTP-LB		M25 M32	PG21 PG29	H24B-SDRH-LB-PG21 H24B-SDRH-LB-PG29 H24B-SDRH-LB-M25 H24B-SDRH-LB-M32 H24B-SDRH-LB-2PG21 H24B-SDRH-LB-2PG29 H24B-SDRH-LB-2M25 H24B-SDRH-LB-2M32



## H32B with 2 levers on the hoods/housings

H32B with 2 levers on the hoods, housings				H32B with 1 levers on the hoods, housings			
	Metr.	PG	Type		Metr.	PG	Type
Hood: Side entry				Hood: Side entry			
	M25 M32 M40 M50	PG29 PG36	H32B-TS-PG29 H32B-TS-PG36 H32B-TS-M25 H32B-TS-M32 H32B-TS-M40 H32B-TS-M50		M25 M32 M40 M50	PG29 PG36	H32B-TS-RO-PG29 H32B-TS-RO-PG36 H32B-TS-RO-M25 H32B-TS-RO-M32 H32B-TS-RO-M40 H32B-TS-RO-M50
Hood: Top entry				Hood: Top entry			
	M25 M32 M40 M50	PG29 PG36 PG42	H32B-TG-PG29 H32B-TG-PG36 H32B-TG-PG42 H32B-TG-M25 H32B-TG-M32 H32B-TG-M40 H32B-TG-M50		M25 M32 M40 M50	PG29 PG36 PG42	H32B-TG-RO-PG29 H32B-TG-RO-PG36 H32B-TG-RO-PG42 H32B-TG-RO-M25 H32B-TG-RO-M32 H32B-TG-RO-M40 H32B-TG-RO-M50
Bulkhead mounted				Bulkhead mounted			
			H32B-AG				H32B-AG-LB
Surface mounted: Side entry				Surface mounted: Side entry			
	1 Side entry M32 M40 M50 M63 2 Side entry M32 M40 M50 M63	PG29 PG36 PG42 PG29 PG36 PG42	H32B-SGR-PG29 H32B-SGR-PG36 H32B-SGR-PG42 H32B-SGR-M32 H32B-SGR-M40 H32B-SGR-M50 H32B-SGR-M63 H32B-SGR-2PG29 H32B-SGR-2PG36 H32B-SGR-2PG42 H32B-SGR-2M32 H32B-SGR-2M40 H32B-SGR-2M50 H32B-SGR-2M63				H32B-AD-LB
Cable-to-cable hood				Surface mounted: Side entry			
	M32 M40 M50 M63	PG29 PG36 PG42	H32B-TBF-PG29 H32B-TBF-PG36 H32B-TBF-PG42 H32B-TBF-M32 H32B-TBF-M40 H32B-TBF-M50 H32B-TBF-M63		1 Side entry M32 M40 2 Side entry M32 M40	PG29 PG29	H32B-SGR-LB-PG29 H32B-SGR-LB-M32 H32B-SGR-LB-M40 H32B-SGR-LB-2PG29 H32B-SGR-LB-2M32 H32B-SGR-LB-2M40
Protection covers for hoods				Protection covers for hoods			
			H32B-KDB		1 Side entry M32 M40 2 Side entry M32 M40	PG29 PG29	H32B-SDR-LB-PG29 H32B-SDR-LB-M32 H32B-SDR-LB-M40 H32B-SDR-LB-2PG29 H32B-SDR-LB-2M32 H32B-SDR-LB-2M40

## H48B series hoods/housings

H48B metal hoods	Metr.	PG	Type	EMC metal hoods	Metr.	PG	Type
Hood: Side entry				Hood: Side entry			
	M32 M40 M50 M63	PG29 PG36 PG42	H48B-TS-PG29 H48B-TS-PG36 H48B-TS-PG42 H48B-TS-M32 H48B-TS-M40 H48B-TS-M50 H48B-TS-M63				H6B-TSH-EMCS H10B-TSH-EMCS H16B-TSH-EMCS H24B-TSH-EMCS
Hood: Top entry				Hood: Top entry			
	M32 M40 M50 M63	PG29 PG36 PG42	H48B-TG-PG29 H48B-TG-PG36 H48B-TG-PG42 H48B-TG-M32 H48B-TG-M40 H48B-TG-M50 H48B-TG-M63				H6B-TGH-EMCS H10B-TGH-EMCS H16B-TGH-EMCS H24B-TGH-EMCS
Bulkhead mounted				Bulkhead mounted			
			H48B-AG				H6B-AG-EMCS H10B-AG-EMCS H16B-AG-EMCS H24B-AG-EMCS
			H48B-AD-LB				H3A-MTS-EMC-M20 H3A-MTS-EMC-PG11 H6B-TSBHS-EMC H10B-TSBHS-EMC H16B-TSBHS-EMC H24B-TSBHS-EMC
Surface mounted: Side entry				Hood: Top entry			
	M32 M40 M50	PG29 PG36 PG42	H48B-SGR-PG29 H48B-SGR-PG36 H48B-SGR-PG42 H48B-SGR-M32 H48B-SGR-M40 H48B-SGR-M50				H3A-MTG-EMC-PG11 H3A-MTG-EMC-M20 H6B-TGBHS-EMC H10B-TGBHS-EMC H16B-TGBHS-EMC H24B-TGBHS-EMC
	M32 M40 M50	PG29 PG36 PG42	H48B-SGR-2PG29 H48B-SGR-2PG36 H48B-SGR-2PG42 H48B-SGR-2M32 H48B-SGR-2M40 H48B-SGR-2M50				
Surface mounted with cover				Bulkhead mounted			
	M32 M40 M50	PG29 PG36 PG42	H48B-SDR-PG29 H48B-SDR-PG36 H48B-SDR-PG42 H48B-SDR-M32 H48B-SDR-M40 H48B-SDR-M50				H3A-MAG-S-EMC H3A-MAG-EMC H3A-MAGS-EMC H6B-AG-BO-EMC H10B-AG-BO-EMC H16B-AG-BO-EMC H24B-AG-BO-EMC
	M32 M40 M50	PG29 PG36 PG42	H48B-SDR-2PG29 H48B-SDR-2PG36 H48B-SDR-2PG42 H48B-SDR-2M32 H48B-SDR-2M40 H48B-SDR-2M50				

## HIP.24/64, HIP-K.24/64, EMV-K.24/64 housings


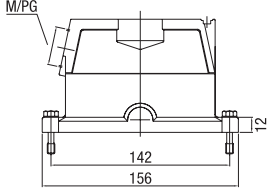

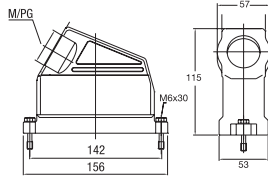

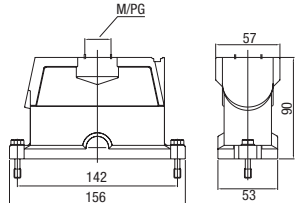
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number			
<b>Hood: Side entry, Standard construction</b>							
		M40	21 29	<b>HIP</b> HIP.24/64.STS.1.21.G HIP.24/64.STS.1.29.G HIP.24/64.STS.1.M40.G	1-1102658-5 1-1102660-5 0-1106473-2		
		M40	29	<b>HIP-K</b> HIP-K.24/64.STS.1.29.G HIP-K.24/64.STS.1.M40.G	2-1102660-5 0-1106473-4		
		M25 M32 M40	29	<b>EMV-K</b> EMV-K.24/64.STS.1.29.G EMV-K.24/64.STS.1.M25.G EMV-K.24/64.STS.1.M32.G EMV-K.24/64.STS.1.M40.G	4-1102755-5 0-1102983-1 0-1106461-8 0-1106461-3		
		M40	29 36	<b>HIP</b> HIP-KF.24/64.STS.1.29.G HIP-KF.24/64.STS.1.36.G HIP-KF.24/64.STS.1.M40.G	1-1102622-5 1-1102623-5 0-1106474-1		
		M40	29 36	<b>HIP-K</b> HIP-KF/K.24/64.STS.1.29.G HIP-KF/K.24/64.STS.1.36.G HIP-KF/K.24/64.STS.1.M40.G	2-1102622-5 2-1102623-5 0-1106474-2		
		M40	29 36	<b>EMV-K</b> EMV-KF/K.24/64.STS.1.29.G EMV-KF/K.24/64.STS.1.36.G EMV-KF/K.24/64.STS.1.M40.G	4-1102732-5 4-1102733-5 0-1106462-2		
		<b>Hood: Top entry, Standard construction</b>					
				M40			
				2xM32 M40	21 29	<b>HIP</b> HIP.24/64.STO.1.21.G HIP.24/64.STO.1.29.G HIP.24/64.STO.1.M40.G	1-1102662-5 1-1102664-5 0-1106473-1
M40 2xM40	29			<b>HIP-K</b> HIP-K.24/64.STO.1.29.G HIP-K.24/64.STO.2.M32.G HIP-K.24/64.STO.1.M40.G	2-1102664-5 0-1102792-1 0-1106473-3		
2xM40	29			<b>EMV-K</b> EMV-K.24/64.STO.1.29.G EMV-K.24/64.STO.1.M40.G	4-1102759-5 0-1106461-4		
		2xM40					

## HIP.24/64, HIP-K.24/64, EMV-K.24/64 housings


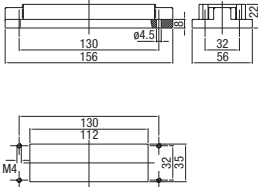

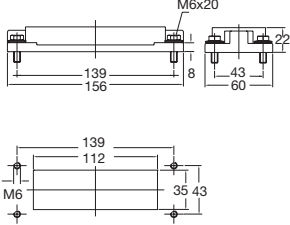
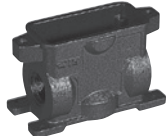
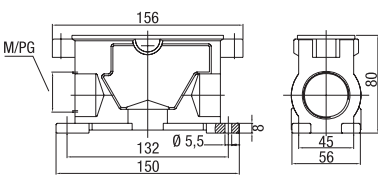

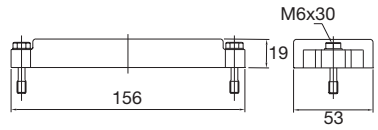
**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, housings corrosion-resistant, black

Pressure-tight up to 5 bar

IP 68 / IP 69 K

Description	Metr.	PG	Type	Part Number
<b>Surface mounted housing: Bottom entry, Standard construction</b>				
			<b>HIP</b> HIP.24/64.AG	1-1102665-5
			<b>HIP-K</b> HIP-K.24/64.AG	2-1102665-5
			<b>EMV-K</b> EMV-K.24/64.AG	4-1102760-5
			<b>HIP</b> HIP.24/64.AG.M6	1-1102626-5
			<b>HIP-K</b> HIP-K.24/64.AG.M6	2-1102626-5
			<b>HIP-K</b> HIP-K.24/64.AG.M6.D	2-1102628-5
			<b>HIP-K</b> HIP-K-1.24/64.AG.M6.D	0-1108533-1
			<b>EMV-K</b> EMV-K.24/64.AG.M6	4-1102736-5
<b>Surface mounted housing: Side entry, Standard construction</b>				
		2xM40	29 2x29	<b>HIP</b> HIP.24/64.SG.1.29.G HIP.24/64.SG.2.29.G HIP.24/64.SG.2.M40.G 1-1102624-5 1-1102625-5 0-1106472-1
			29 2x29	<b>HIP-K</b> HIP-K.24/64.SG.1.29.G HIP-K.24/64.SG.2.29.G HIP-K.24/64.SG.2.M40.G 5-1102624-5 2-1102625-5 0-1106472-2
			29 2x29	<b>EMV-K</b> EMV-K.24/64.SG.1.29.G EMV-K.24/64.SG.2.29.G EMV-K.24/64.SG.2.M40.G 4-1102734-5 4-1102735-5 0-1106460-2
<b>Protective cover housings</b>				
			<b>HIP</b> HIP/EMV.24/64.SKB	3-1106204-5
			<b>HIP-K/EMV-K</b> HIP-K/EMV-K.24/64.SKB	4-1106204-5


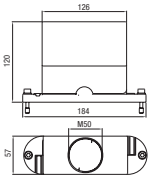

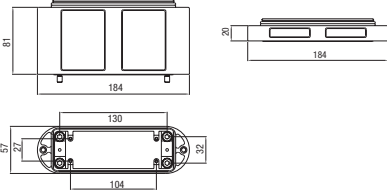

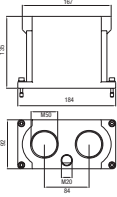

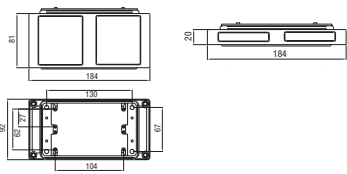
## HF-HIP-K 8/HF-EMV-K 8, HF-HIP-K 12/HF-EMV-K 12 housings

**HIP:** Pressure-tight, silver-grey

**HIP-K:** Housings corrosion-resistant, black, according to DIN IEC 68 T2-52 and ASTM B117-09 > 1000h

**EMV-K:** Protection against electro-magnetic interference, pressure-tight, IP68 - IP69K, housings corrosion-resistant, black

### Screw lock on hood


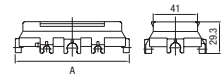

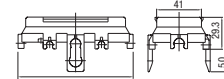

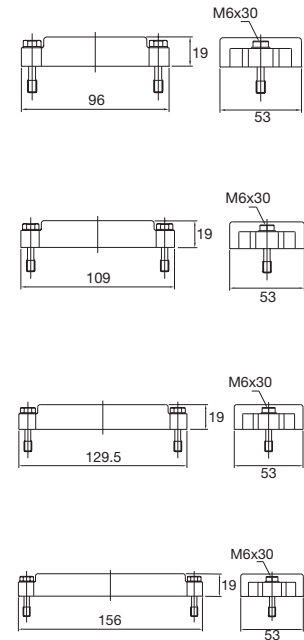
Description	Metr.	PG	Type	Part Number
Hood				
		1xM50 1xM50 2xM40 2xM40	HF-HIP-K.8.Sto.1.M50G HF.8.EMV-K.8.Sto.1.M50G HF.HIP-K.8.Sto.2.M40G HF.EMV-K.8.Sto.2.M40G	0-1102839-4 0-1102839-3 0-1102839-2 0-1102839-1
Housing bottom				
		<b>Height</b> 20 mm 20 mm 81 mm 81 mm	HF-HIP-K.8.AG.N HF-EMV-K.8.AG.N HF-HIP-K.8.AG HF-EMV-K.8.AG	0-1102837-2 0-1102837-1 0-1102836-2 0-1102836-1
Hood				
		2xM40 2xM40 2xM50 2xM50	HF-HIP-K.12.Sto.2.M40G HF-EMV-K.12.Sto.2.M40G HF-HIP-K.12.Sto.2.M50G HF-EMV-K.12.Sto.2.M50G	0-1102840-2 0-1102840-1 0-1102840-4 0-1102840-3
Housing bottom				
		<b>Height</b> 20 mm 20 mm 81 mm 81 mm	HF-HIP-K.12.AG.N HF-EMV-K.12.AG.N HF-HIP-K.12.AG HF-EMV-K.12.AG	0-1102838-2 0-1102838-1 0-1102192-2 0-1102192-1

## Protective covers for hoods/housings

Reinforced plastic shell (UV-resistant), Versions with/without attachment string


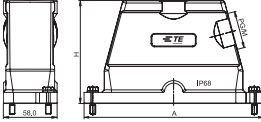
Metal-Version

Size 3, 4, 6 + 8

Description	Type	Part Number							
Protective cover for hoods and housings with bolts									
 <p>Size 6/8</p>	 <table border="1" data-bbox="438 616 630 705"> <thead> <tr> <th>Size</th> <th>A=mm</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>105</td> </tr> <tr> <td>8</td> <td>132</td> </tr> </tbody> </table>	Size	A=mm	6	105	8	132	<p>SKP.6 SKP.8</p> <p>with attachment string SKP.6.F SKP.8.F</p>	<p>0-1110684-3 0-1110661-3</p> <p>0-1106258-3 0-1106258-4</p>
Size	A=mm								
6	105								
8	132								
Protective cover for hoods with central locking clip									
 <p>Size 6/8</p>	 <table border="1" data-bbox="438 873 630 963"> <thead> <tr> <th>Size</th> <th>A=mm</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>105</td> </tr> <tr> <td>8</td> <td>132</td> </tr> </tbody> </table>	Size	A=mm	6	105	8	132	<p>SKP.6/R SKP.8/R</p> <p>with attachment string SKP.6/R.F SKP.8/R.F</p>	<p>0-1110684-4 0-1110661-4</p> <p>0-1106259-3 0-1106259-4</p>
Size	A=mm								
6	105								
8	132								
Protective covers for housings series HIP, EMV, EMV-K									
		<p><b>HIP</b> HIP/EMV.6/16.SKB</p> <p><b>HIP-K</b> HIP-K/EMV-K.6/16.SKB</p> <p><b>HIP</b> HIP/EMV.10/24.SKB</p> <p><b>HIP-K/EMV-K</b> HIP-K/EMV-K.10/24.SKB</p> <p><b>HIP</b> HIP/EMV.16/40.SKB</p> <p><b>HIP-K</b> HIP-K.16/40.SKB</p> <p><b>HIP</b> HIP/EMV.24/64.SKB</p> <p><b>HIP-K/EMV-K</b> HIP-K/EMV-K.24/64.SKB</p>	<p>3-1106201-5</p> <p>4-1106201-5</p> <p>3-1106202-5</p> <p>4-1106202-5</p> <p>3-1106203-5</p> <p>4-1106203-5</p> <p>3-1106204-5</p> <p>4-1106204-5</p>						

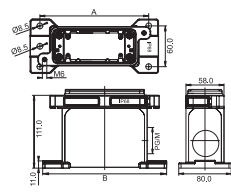
# HPR (IP68) series hoods/housings

## HBPR (IP68) SERIES

Opposite angle locking	Size	Metr.	PG	Type	Part Number															
Hood: Side entry																				
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	H24BPR	193	111																	
	H6BPR-TSH-PG21	T1910060121-000																		
	H6BPR-TSH-PG29	T1910060129-000																		
	H6BPR-TSH-M20	T1910060120-000																		
	H6BPR-TSH-M25	T1910060125-000																		
	H6BPR-TSH-M32	T1910060132-000																		
	H10BPR	M20 M25 M32	PG16 PG21 PG29	H10BPR-TSH-PG16	T1910100116-000															
				H10BPR-TSH-PG21	T1910100121-000															
				H10BPR-TSH-PG29	T1910100129-000															
				H10BPR-TSH-M20	T1910100120-000															
	H10BPR-TSH-M25	T1910100125-000																		
H10BPR-TSH-M32	T1910100132-000																			
H16BPR	M25 M32 M40	PG16 PG21 PG29	H16BPR-TSH-PG16	T1910160116-000																
			H16BPR-TSH-PG21	T1910160121-000																
			H16BPR-TSH-PG29	T1910160129-000																
			H16BPR-TSH-M25	T1910160125-000																
H16BPR-TSH-M32	T1910160132-000																			
H16BPR-TSH-M40	T1910160140-000																			
H24BPR	M25 M32 M40	PG16 PG21 PG29	H24BPR-TSH-PG16	T1910240116-000																
			H24BPR-TSH-PG21	T1910240121-000																
			H24BPR-TSH-PG29	T1910240129-000																
			H24BPR-TSH-M25	T1910240125-000																
H24BPR-TSH-M32	T1910240132-000																			
H24BPR-TSH-M40	T1910240140-000																			
Hood: Top entry																				
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	SIZE	A	H																	
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	H6BPR-TGH-PG21	T1920060121-000																		
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	H6BPR-TGH-M20	T1920060120-000																		
	H6BPR-TGH-M25	T1920060125-000																		
	H6BPR-TGH-M32	T1920060132-000																		
	H10BPR	M20 M25 M32	PG16 PG21 PG29	H10BPR-TGH-PG16	T1920100116-000															
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				H10BPR-TGH-PG29	T1920100129-000															
				H10BPR-TGH-M20	T1920100120-000															
	H10BPR-TGH-M25	T1920100125-000																		
H10BPR-TGH-M32	T1920100132-000																			
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## HPR (IP68) series hoods/housings


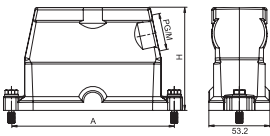

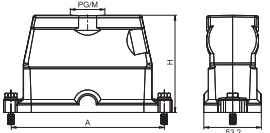

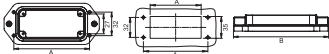

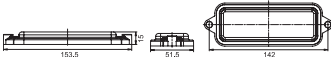
### HBPR (IP68) SERIES

Opposite angle locking	Size	Metr.	PG	Type	Part Number																																
Bulkhead mounted																																					
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C	A	A	B																																		
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Straight surface mounted																																					
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SIZE	A	B																																			
H10BPR	140	169																																			
Cover																																					
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A	A																																				
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Frame																																					
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# HPR (IP68) series hoods/housings

## HBPR (IP68) SERIES

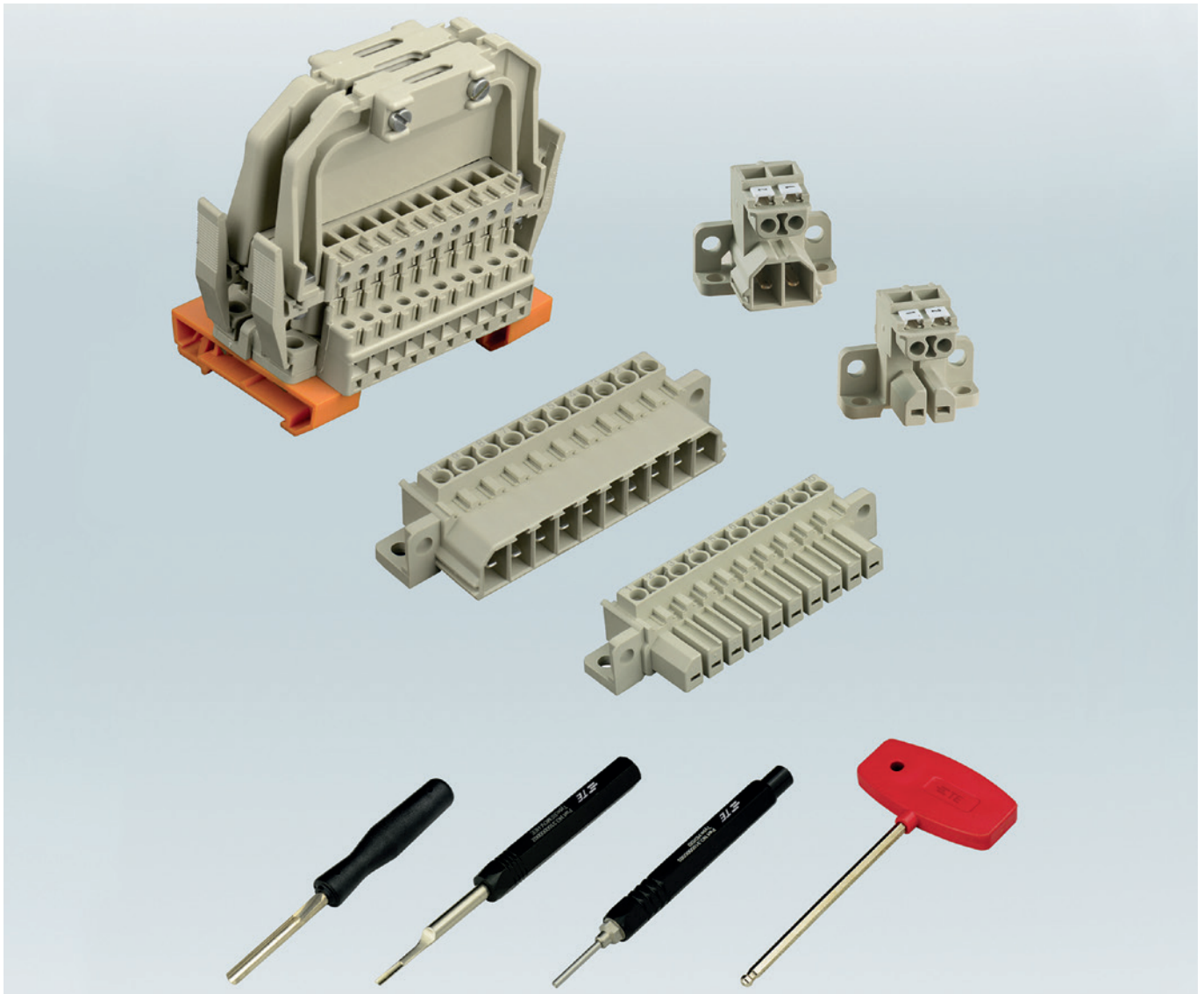
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Cover																									
		H24BPR		H24BPR-KDBP	T1990240000-000																				

All specifications subject to change. Consult TE Connectivity for latest design specifications. Contact TE for assistance with any part number configuration.





## Tools and inserts and rail mounting elements



### 1. Specifications

DIN VDE 0110 Concerning clearance and clearance distances

DIN VDE 0627 Connectors and plug devices

### 2. Standards

DIN EN 60 664-1

DIN EN 61 984












### 3. Approvals



RoHS

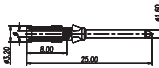

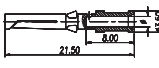
## Tools and accessories

### Crimping tools and remove tools

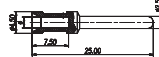


<p><b>Crimp tool</b></p> <p>Wire range: 0.5-4.0mm<sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts</p>			<p><b>Crimp tool</b></p> <p>Wire range: 4.0-10.0mm<sup>2</sup> Used for CMM/CMF contacts</p>		
<b>Type</b>	CRIMPBOX-0.5/4		<b>Type</b>	CRIMPBOX-4.0/10.0	
<b>Part Number</b>	T3100000001-000		<b>Part Number</b>	T3100001001-000	
<p><b>Crimp tool</b></p> <p>Wire range: 0.14-4.0mm<sup>2</sup> Suitable for CDM/CDF and CEM/CEF contacts with locator and die</p>			<p><b>Remove tool</b></p> <p>Used for CDM/CDF contact series</p>		
<b>Type</b>	RSZ.HE-HN.D-HVT		<b>Type</b>	REMOV-HD	
<b>Part Number</b>	1-1105851-8		<b>Part Number</b>	T3100000003-000	
<p><b>Remove tool</b></p> <p>Used for CEM/CMF contact series</p>			<p><b>Remove tool</b></p> <p>Used for 5A contacts (Ø1mm)</p>		
<b>Type</b>	REMOV-HEE	REMOV-HEEE	<b>Material</b>	Metal	Plastic
<b>Part Number</b>	T3100000002-000	T3100000016-000	<b>Part Number</b>	T3100000017-000	T3100000018-000
<p><b>Remove tool</b></p> <p>Used for CMM/CMF contact series</p>					
<b>Type</b>	REMOV-MM				
<b>Part Number</b>	T3100000013-000				
<b>Axial screw tool and crimping tool</b>					
<p><b>M3 screw driver</b></p> <p>Used for HA/HE inserts</p>			<p><b>Tool</b></p> <p>Used for 100A inserts</p>		
<b>Type</b>	SCREWD-M3		<b>Type</b>	HEXA-D1	
<b>Part Number</b>	T3100000009-000		<b>Part Number</b>	T3100000010-000	
<p><b>Tool</b></p> <p>Used for 40A inserts</p>			<p><b>Crimping tool</b></p> <p>Wire range: 10.0-120.0mm<sup>2</sup> Used for 200A contacts</p>		
<b>Type</b>	HEXA-D2		<b>Type</b>	CRIMPBOX-10/120	
<b>Part Number</b>	T3100000012-000		<b>Part Number</b>	T3100000015-000	

## Crimp contacts

### 10A Contact

Tech data Material: copper alloy Contact resistance: $\leq 3m\Omega$ Terminal: crimp connection CDM/Male	10A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	8.0	CDM-0.14	T2020001002-000	DDM-0.14	T2020011002-000
		0.5	20	8.0	CDM-0.5	T2020001005-000	DDM-0.5	T2020011005-000
		0.75	18	8.0	CDM-0.75	T2020001008-000	DDM-0.75	T2020011008-000
		1.0	18	8.0	CDM-1.0	T2020001010-000	DDM-1.0	T2020011010-000
		1.5	16	8.0	CDM-1.5	T2020001015-000	DDM-1.5	T2020011015-000
		2.5	14	6.0	CDM-2.5	T2020001025-000	DDM-2.5	T2020011025-000
CDF/Female	10A Female crimp contacts 	0.14-0.37	26-22	8.0	CDF-0.14	T2020002002-000	DDF-0.14	T2020012002-000
		0.5	20	8.0	CDF-0.5	T2020002005-000	DDF-0.5	T2020012005-000
		0.75	18	8.0	CDF-0.75	T2020002008-000	DDF-0.75	T2020012008-000
		1.0	18	8.0	CDF-1.0	T2020002010-000	DDF-1.0	T2020012010-000
		1.5	16	8.0	CDF-1.5	T2020002015-000	DDF-1.5	T2020012015-000
		2.5	14	6.0	CDF-2.5	T2020002025-000	DDF-2.5	T2020012025-000


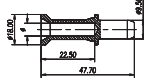

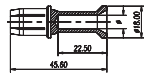
### 16A Contact

Tech data Material: copper alloy Contact resistance: $\leq 1m\Omega$ Terminal: crimp connection CEM/Male	16A Male crimp contacts 	Wire gauge		Strip- ping length mm	Crimp contacts, silver-plated		Crimp contacts, gold-plated	
		mm <sup>2</sup>	AWG		Type	Part Number	Type	Part Number
		0.14-0.37	26-22	7.5	CEM-0.3	T2030001002-000	DEM-0.3	T2030011002-000
		0.5	20	7.5	CEM-0.5	T2030001005-000	DEM-0.5	T2030011005-000
		0.75	18	7.5	CEM-0.75	T2030001008-000	DEM-0.75	T2030011008-000
		1.0	18	7.5	CEM-1.0	T2030001010-000	DEM-1.0	T2030011010-000
		1.5	16	7.5	CEM-1.5	T2030001015-000	DEM-1.5	T2030011015-000
		2.5	14	7.5	CEM-2.5	T2030001025-000	DEM-2.5	T2030011025-000
		4.0	12	7.5	CEM-4.0	T2030001040-000	DEM-4.0	T2030011040-000
		CEF/Female	16A Female crimp contacts 	0.14-0.37	26-22	7.5	CEF-0.3	T2030002002-000
		0.5	20	7.5	CEF-0.5	T2030002005-000	DEF-0.5	T2030012005-000
		0.75	18	7.5	CEF-0.75	T2030002008-000	DEF-0.75	T2030012008-000
		1.0	18	7.5	CEF-1.0	T2030002010-000	DEF-1.0	T2030012010-000
		1.5	16	7.5	CEF-1.5	T2030002015-000	DEF-1.5	T2030012015-000
		2.5	14	7.5	CEF-2.5	T2030002025-000	DEF-2.5	T2030012025-000
		4.0	12	7.5	CEF-4.0	T2030002040-000	DEF-4.0	T2030012040-000



## Crimp contacts

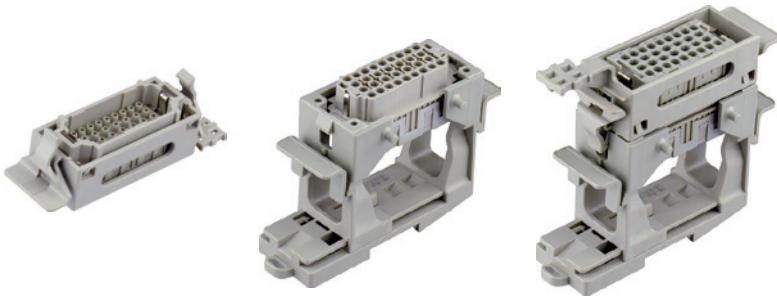
### 200A Contact

<b>Tech data</b> <b>Material:</b> copper <b>Contact resistance:</b> $\leq 0.3\text{m}\Omega$ <b>Terminal:</b> crimp connection <b>CHM/Male</b> 	<b>200A Male crimp contacts</b> 	<b>Wire gauge</b>	<b>Ø</b>	<b>Stripping length</b>	<b>Crimp contacts, silver-plated</b>	
		<b>mm<sup>2</sup></b>		<b>mm</b>	<b>Type</b>	<b>Part Number</b>
		25	7.0	22.5	CHM-25	T2060001025-000
		35	8.2	22.5	CHM-35	T2060001035-000
		50	10.0	22.5	CHM-50	T2060001050-000
		70	11.5	22.5	CHM-70	T2060001070-000
<b>CHF/Female</b> 	<b>200A Female crimp contacts</b> 	25	7.0	22.5	CHF-25	T2060002025-000
		35	8.2	22.5	CHF-35	T2060002035-000
		50	10.0	22.5	CHF-50	T2060002050-000
		70	11.5	22.5	CHF-70	T2060002070-000

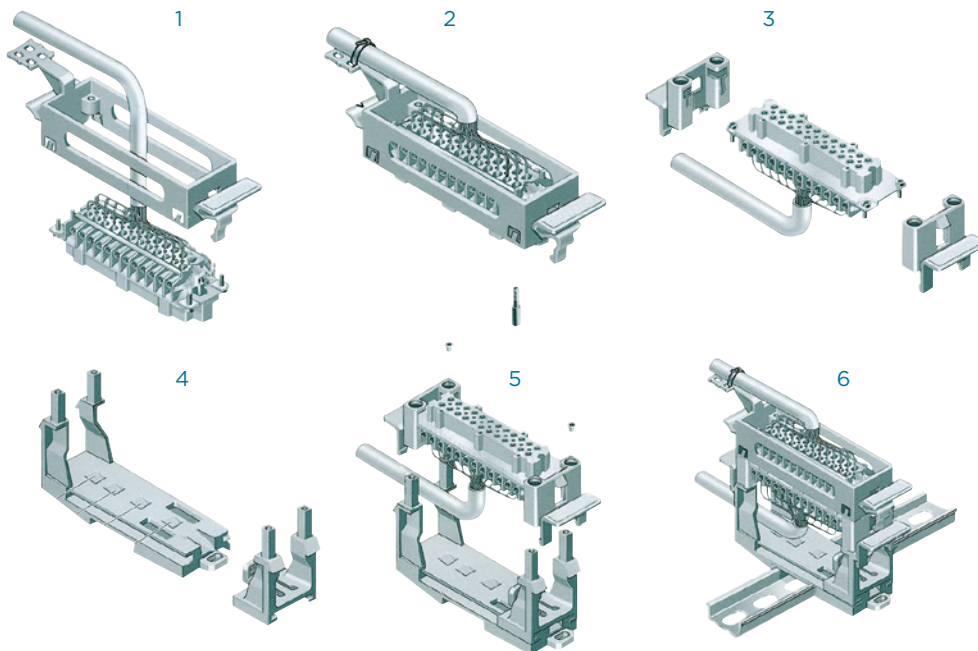
### PCB Adapter

			
<b>Type</b>	PCB-adapter-EE	<b>Type</b>	CEF-adapter
<b>Part Number</b>	T2040000000-000	<b>Part Number</b>	T2030002000-000

## Insert mounting element




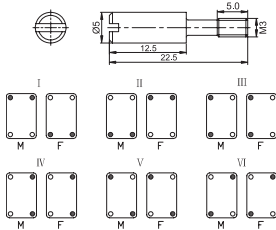

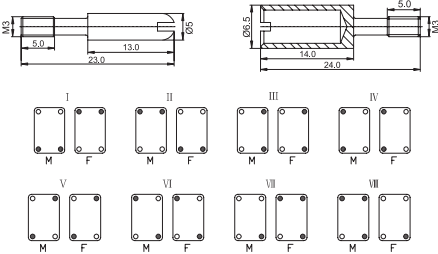

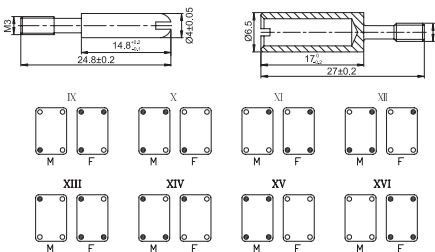
Set	Parts order	Type	Part Number	
Insert mounting with carrier element				
	H6B set	Top	H6B-Rail-top	T1870062101-000
		Base	HB-Rail-base	T1870002201-000
	H10B set	Top	H10B-Rail-top	T1870102101-000
		Base	HB-Rail-base	T1870002201-000
	H16B set	Top	H16B-Rail-top	T1870162101-000
		Base	HB-Rail-base	T1870002201-000
	H24B set	Top	H24B-Rail-top	T1870242101-000
		Base	HB-Rail-base	T1870002201-000



- 1 Attach insert in top carrier element
- 2 Set up strain relief e.g. by cable ties
- 3 Attach fixing clamps to base insert
- 4 Adjust base element to the dimensions of the insert
- 5 Attach base assembly to base element
- 6 Connect top and base inserts



## Installation elements


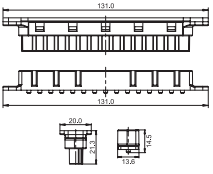
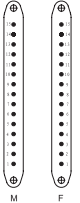

Coding of hoods/housings and inserts		Type	Part Number
<p>Standard code pin (Stainless steel)</p> 		<p>Ordinary type CODING-PIN-M3-TM CODING-PIN-M3-TF</p> <p>Stainless steel CODING-PIN-M3-STM CODING-PIN-M3-STF</p>	<p>Ordinary type T0931000423-000 T0931006524-000</p> <p>Stainless steel T0932000423-000 T0932006524-000</p>
<p>Guiding pins (Stainless steel)</p> 		<p>Ordinary type King-size CODING-PIN-M3-LTM CODING-PIN-M3-LTF</p> <p>Stainless steel, King-size CODING-PIN-M3-LSTM CODING-PIN-M3-LSTF</p>	<p>Ordinary type King-size T0931000425-000 T0931006527-000</p> <p>Stainless steel, King-size T0931100425-000 T0931106527-000</p>
<p>Guiding pins (screw thread extended)</p> 		<p>Ordinary type (screw thread extended) CODING-PIN-M3-LTM CODING-PIN-M3-LTF</p> <p>Stainless steel (screw thread extended) CODING-PIN-M3-STM CODING-PIN-M3-STF</p>	<p>Ordinary type (screw thread extended) T0931100425-000 T0931106527-000</p> <p>Ordinary type (screw thread extended) T0931100423-000 T0931106524-000</p>

## HEE-015 insert

INSERTS MOUNTING WITHOUT HOOD/HOUSING

200V MAX. 16A

15+  $\oplus$

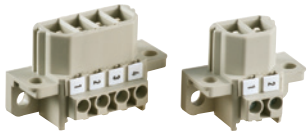
Dimensions (mm)	Type	Part Number	
		Male insert	Female insert
Crimp terminal (Order crimp contacts separately)			
		HEE-015-M	T2800152101-000
		HEE-015-F	T2800152201-000
Contact arrangement view from termination side 	Panel cut out for inserts for use without hoods/housings 		

Order crimp contacts separately




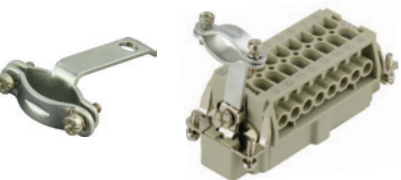
Female contact type: CSF-1.5

Female contact p/n: T0080002015-010

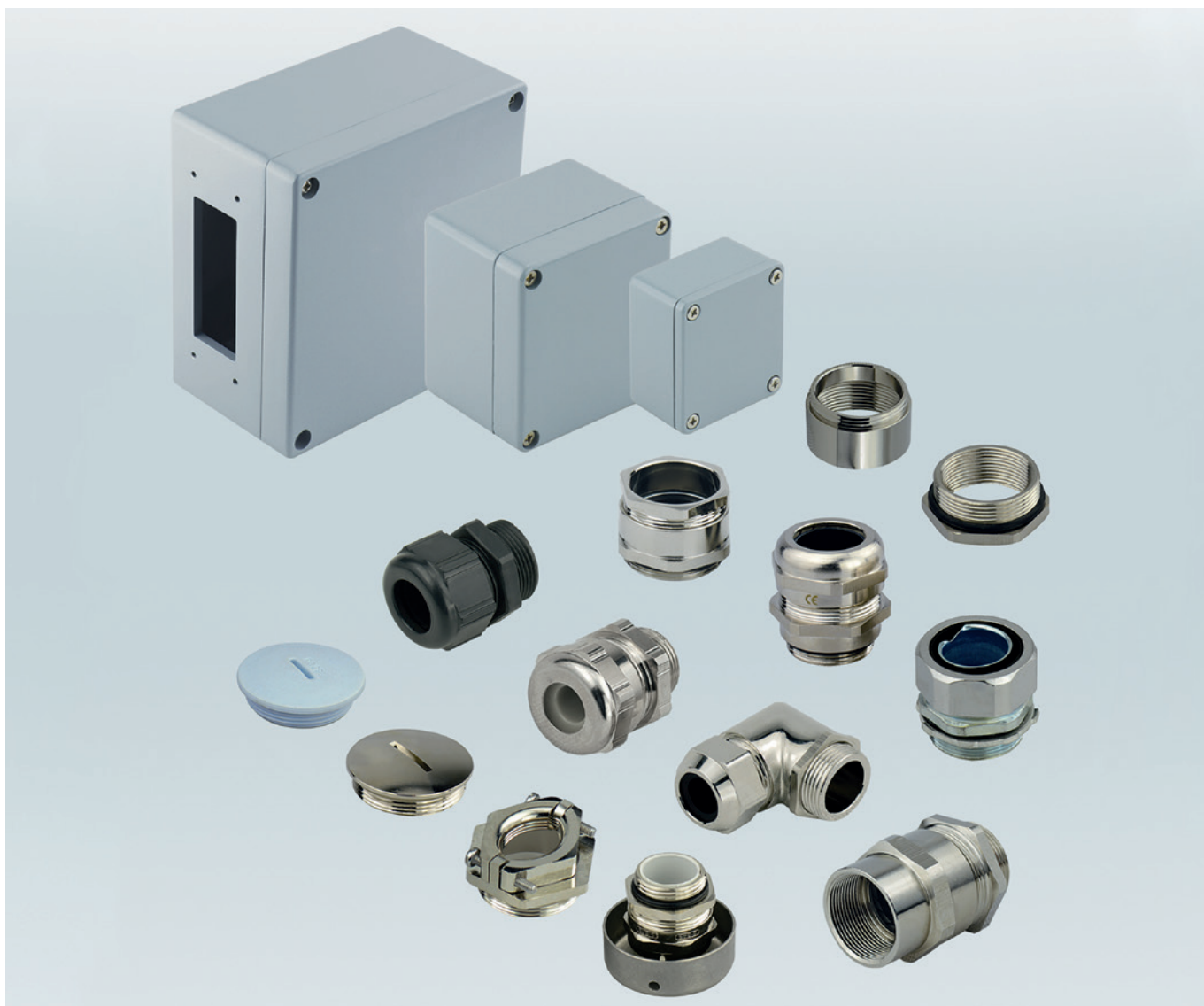
## Other connectors

		Designation	Type	Part Number
<p><b>3-poles connector</b></p> <p><b>Rated:</b> 25A, 500V</p> <p><b>Contact surface:</b> Silver plated</p> <p><b>Flammability acc. to UL94:</b> V0</p> <p><b>Terminal:</b> Screw terminal</p>		<p>3 poles male insert 3 poles female insert</p>	<p>HCC-003-M HCC-003-F</p>	<p>T2100032101-000 T2100032201-000</p>

## Installation elements

Grip frame, screw adapter and screw	Type	Part Number
<p>H24B grip frame (further variants are available on request)</p> 	HB-SB-024	T3403121350-000
<p>Screw adapter and screw</p> 	<p>HB-GDZ-S</p> <p>HB-GDZ-X</p>	<p>T3403121000-000</p> <p>T3403122000-000</p>
<p>M5 Screw</p> 	FIX-M5	T0932406003-000
<p>Extend earth terminal</p> 	EXTEND-PE	T0926003000-000

## Cable glands and accessories



Cable glands made from plastic and brass  
EMC cable glands

For hazardous areas in accordance with  
DIN EN 50014  
DIN EN 50019




RoHS


## Cable fittings and accessories

### Cross reference from PG thread to metric thread



PG	M
PG11	M20
PG13.5	M25
PG16	M32
PG21	M40
PG29	M50
PG36	
PG42	

	Metr.	PG	Clamp range (mm)	Type	Part Number	
Cable glands, brass nicked plated						
 <p><b>Material:</b> Nickel plated brass  <b>Press seal material:</b> PA  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP68</p>		PG7	2-5 3-6.5	DLX-7-MTS DLX-7-MS	T3609070111-000 T3609070101-000	
		PG9	2-6 4-8	DLX-9-MTS DLX-9-MS	T3609090111-000 T3609090101-000	
		PG11	3-7 5-10	DLX-11-MTS DLX-11-MS	T3609110111-000 T3609110101-000	
		PG13.5	5-9 6-12	DLX-13-MTS DLX-13-MS	T3609130111-000 T3609130101-000	
		PG16	7-12 10-14	DLX-16-MTS DLX-16-MS	T3609160111-000 T3609160101-000	
		PG21	9-16 13-18	DLX-21-MTS DLX-21-MS	T3609210111-000 T3609210101-000	
		PG29	13-20 18-25	DLX-29-MTS DLX-29-MS	T3609290111-000 T3609290101-000	
		PG36	20-26 22-32	DLX-36-MTS DLX-36-MS	T3609360111-000 T3609360101-000	
		PG42	25-31 32-38	DLX-42-MTS DLX-42-MS	T3609420111-000 T3609420101-000	
		PG48	29-35 37-44	DLX-48-MTS DLX-48-MS	T3609480111-000 T3609480101-000	
	M12 X 1.5			2-5 3-6.5	DLX-12-MT DLX-12-M	T3609120112-000 T3609120102-000
	M16 X 1.5			2-6 4-8 5-10	DLX-16-MT DLX-16-M DLX-16-MB	T3609160112-000 T3609160102-000 T3609160122-000
	M20 X 1.5			5-9 6-12 10-14	DLX-20-MT DLX-20-M DLX-20-MB	T3609200112-000 T3609200102-000 T3609200122-000
	M25 X 1.5			9-16 13-18	DLX-25-MT DLX-25-M	T3609250112-000 T3609250102-000
M32 X 1.5			13-20 18-25	DLX-32-MT DLX-32-M	T3609320112-000 T3609320102-000	
M40 X 1.5			20-26 22-32	DLX-40-MT DLX-40-M	T3609400112-000 T3609400102-000	
M50 X 1.5			25-31 32-38	DLX-50-MT DLX-50-M	T3609500112-000 T3609500102-000	
M63 X 1.5			29-35 37-44	DLX-63-MT DLX-63-M	T3609630112-000 T3609630102-000	

## Cable fittings and accessories

	Metr.	PG	Clamp range (mm)	Type	Part Number	
Cable glands, polyamide						
 <p> <b>Material:</b> Polyamide  <b>Press seal material:</b> PA  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP68         </p>		PG7	2-5 3-6.5	DLX-7-PT DLX-7-P	T3209070161-000 T3209070160-000	
		PG9	2-6 4-8	DLX-9-PT DLX-9-P	T3209090161-000 T3209090160-000	
		PG11	3-7 5-10	DLX-11-PT DLX-11-P	T3209110161-000 T3209110160-000	
		PG13.5	5-9 6-12	DLX-13-PT DLX-13-P	T3209130161-000 T3209130160-000	
		PG16	7-12 10-14	DLX-16-PT DLX-16-P	T3209160161-000 T3209160160-000	
		PG21	9-16 13-18	DLX-21-PT DLX-21-P	T3209210161-000 T3209210160-000	
		PG29	13-20 18-25	DLX-29-PT DLX-29-P	T3209290161-000 T3209290160-000	
		PG36	20-26 22-32	DLX-36-PT DLX-36-P	T3209360161-000 T3209360160-000	
		PG42	25-31 32-38	DLX-42-PT DLX-42-P	T3209420161-000 T3209420160-000	
		PG48	29-35 37-44	DLX-48-PT DLX-48-P	T3209480161-000 T3209480160-000	
	M12 X 1.5			2-5 3-6.5	DLX-12-PMT DLX-12-PM	T3209120112-000 T3209120102-000
	M16 X 1.5			2-6 4-8	DLX-16-PMT DLX-16-PM	T3209160112-000 T3209160102-000
	M20 X 1.5			5-9 6-12	DLX-20-PMT DLX-20-PM	T3209200112-000 T3209200102-000
	M25 X 1.5			9-16 13-18	DLX-25-PMT DLX-25-PM	T3209250112-000 T3209250102-000
	M32 X 1.5			13-20 18-25	DLX-32-PMT DLX-32-PM	T3209320112-000 T3209320102-000
	M40 X 1.5			20-26 22-32	DLX-40-PMT DLX-40-PM	T3209400112-000 T3209400102-000
	M50 X 1.5			25-31 32-38	DLX-50-PMT DLX-50-PM	T3209500112-000 T3209500102-000
	M63 X 1.5			29-35 37-44	DLX-63-PMT DLX-63-PM	T3209630112-000 T3209630102-000



## Cable fittings and accessories

	Metr.	PG	Clamp range (mm)	Type	Part Number	
Multiple sealing insert metal cable gland						
 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> TPE/EPDM  <b>Temperature range:</b> -40°C ~ + 100°C  <b>Protection:</b> IP65  <b>Seal material colors:</b> White            (other colors need consulting)</p>		PG13.5	2 x 3	DLX-13-KMS	T3729130101-000	
		PG16	3 x 4	DLX-16-KMS	T3729160101-000	
		PG16	2 x 5	DLX-16-KMS	T3729160201-000	
		PG21	4 x 6.5	DLX-21-1KMS	T3729210101-000	
		PG21	3 x 7	DLX-21-2KMS	T3729210201-000	
		PG21	2 x 6	DLX-21-3KMS	T3729210301-000	
		PG21	2 x 8	DLX-21-4KMS	T3729210401-000	
		PG29	6 x 6.5	DLX-29-1KMS	T3729290101-000	
		PG29	4 x 9	DLX-29-2KMS	T3729290201-000	
		PG29	3 x 9	DLX-29-3KMS	T3729290301-000	
		PG36	5 x 9	DLX-36-1KMS	T3729360101-000	
		PG36	6 x 8	DLX-36-2KMS	T3729360201-000	
		PG42	4 x 12	DLX-42-1KMS	T3729420101-000	
		PG42	5 x 10	DLX-42-2KMS	T3729420201-000	
		PG48	6 x 12	DLX-48-1KMS	T3729480101-000	
		PG48	3 x 18	DLX-48-2KMS	T3729480201-000	
	M16 X 1.5			2 x 3	DLX-16-KM	T3729160102-000
	M20 X 1.5			3 x 4	DLX-20-KM	T3729200102-000
	M20 X 1.5			2 x 5	DLX-20-KM	T3729200202-000
	M25 X 1.5			4 x 6.5	DLX-25-1KM	T3729250102-000
	M25 X 1.5			3 x 7	DLX-25-2KM	T3729250202-000
	M25 X 1.5			2 x 6	DLX-25-3KM	T3729250302-000
	M25 X 1.5			2 x 8	DLX-25-4KM	T3729250402-000
	M32 X 1.5			6 x 6.5	DLX-32-1KM	T3729320102-000
	M32 X 1.5			4 x 9	DLX-32-2KM	T3729320202-000
	M32 X 1.5			3 x 9	DLX-32-3KM	T3729320302-000
	M40 X 1.5			5 x 9	DLX-40-1KM	T3729400102-000
M40 X 1.5			6 x 8	DLX-40-2KM	T3729400202-000	
M50 X 1.5			4 x 12	DLX-50-1KM	T3729500102-000	
M50 X 1.5			5 x 10	DLX-50-2KM	T3729500202-000	
M63 X 1.5			6 x 12	DLX-63-1KM	T3729630102-000	
M63 X 1.5			3 x 18	DLX-63-2KM	T3729630202-000	
Multiple sealing insert nylon cable gland						
 <p><b>Material:</b> PA  <b>Seal material:</b> EPDM  <b>Temperature range:</b> -40°C ~ + 100°C  <b>Protection:</b> IP65  <b>Seal material colors:</b> White            (other colors need consulting)</p>		PG13.5	2 x 3	DLX-13-KPMS	T3229130101-000	
		PG16	3 x 4	DLX-16-KPMS	T3229160101-000	
		PG16	2 x 5	DLX-16-KPMS	T3229160201-000	
		PG21	4 x 6.5	DLX-21-1KPMS	T3229210101-000	
		PG21	3 x 7	DLX-21-2KPMS	T3229210201-000	
		PG21	2 x 6	DLX-21-3KPMS	T3229210301-000	
		PG21	2 x 8	DLX-21-4KPMS	T3229210401-000	
		PG29	6 x 6.5	DLX-29-1KPMS	T3229290101-000	
		PG29	4 x 9	DLX-29-2KPMS	T3229290201-000	
		PG29	3 x 9	DLX-29-3KPMS	T3229290301-000	
		PG36	5 x 9	DLX-36-1KPMS	T3229360101-000	
		PG36	6 x 8	DLX-36-2KPMS	T3229360201-000	
		PG42	4 x 12	DLX-42-1KPMS	T3229420101-000	
		PG42	5 x 10	DLX-42-2KPMS	T3229420201-000	
		PG48	6 x 12	DLX-48-1KPMS	T3229480101-000	
		PG48	3 x 18	DLX-48-2KPMS	T3229480201-000	
	M16 X 1.5			2 x 3	DLX-16-KPM	T3229160102-000
	M20 X 1.5			3 x 4	DLX-20-KPM	T3229200102-000
	M20 X 1.5			2 x 5	DLX-20-KPM	T3229200202-000
	M25 X 1.5			4 x 6.5	DLX-25-1KPM	T3229250102-000
	M25 X 1.5			3 x 7	DLX-25-2KPM	T3229250202-000
	M25 X 1.5			2 x 6	DLX-25-3KPM	T3229250302-000
	M25 X 1.5			2 x 8	DLX-25-4KPM	T3229250402-000
	M32 X 1.5			6 x 6.5	DLX-32-1KPM	T3229320102-000
	M32 X 1.5			4 x 9	DLX-32-2KPM	T3229320202-000
	M32 X 1.5			3 x 9	DLX-32-3KPM	T3229320302-000
	M40 X 1.5			5 x 9	DLX-40-1KPM	T3229400102-000
M40 X 1.5			6 x 8	DLX-40-2KPM	T3229400202-000	
M50 X 1.5			4 x 12	DLX-50-1KPM	T3229500102-000	
M50 X 1.5			5 x 10	DLX-50-2KPM	T3229500202-000	
M63 X 1.5			6 x 12	DLX-63-1KPM	T3229630102-000	
M63 X 1.5			3 x 18	DLX-63-2KPM	T3229630202-000	









## Cable fittings and accessories

	Metr.	PG	Clamp range (mm)	Type	Part Number
Metal glands with multiple seal					
 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP65</p>		PG9	5-10	DSM-9	T3201090101-000
		PG11	7-12	DSM-11	T3201110101-000
		PG13.5	7-12	DSM-13	T3201130101-000
		PG16	7-15	DSM-16	T3201160101-000
		PG21	10-19	DSM-21	T3201210101-000
		PG29	18-27	DSM-29	T3201290101-000
		PG36	24-32	DSM-36	T3201360101-000
		PG42	30-39	DSM-42	T3201420101-000
		PG48	36-45	DSM-48	T3201480101-000
	M12		5-10	DSM-12-M	T3201120102-000
	M16		6.5-10	DSM-16-M	T3201160102-000
	M20		8.5-13.5	DSM-20-M	T3201200102-000
	M25		13-20	DSM-25-M	T3201250102-000
	M32		19-28	DSM-32-M	T3201320102-000
	M40		24-34	DSM-40-M	T3201400102-000
	M50		34-40	DSM-50-M	T3201500102-000
	M63		39-46	DSM-63-M	T3201630102-000
Metal glands with multiple seal					
 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP54</p>		PG9	8-10	DSM-9-S	T3211090101-000
		PG11	10-12	DSM-11-S	T3211110101-000
		PG13.5	12-14	DSM-13-S	T3211130101-000
		PG16	14-16	DSM-16-S	T3211160101-000
		PG21	17-19	DSM-21-S	T3211210101-000
		PG29	23-25	DSM-29-S	T3211290101-000
		PG36	33-35	DSM-36-S	T3211360101-000
		PG42	39-41	DSM-42-S	T3211420101-000
		PG48	45-47	DSM-48-S	T3211480101-000
	M12		5-7	DSM-12-SM	T3211120102-000
	M16		8-10	DSM-16-SM	T3211160102-000
	M20		10-12	DSM-20-SM	T3211200102-000
	M25		15-17	DSM-25-SM	T3211250102-000
	M32		24-26	DSM-32-SM	T3211320102-000
	M40		28-30	DSM-40-SM	T3211400102-000
	M50		39-41	DSM-50-SM	T3211500102-000
	M63		45-47	DSM-63-SM	T3211630102-000



## Cable fittings and accessories

	Metr.	PG	Clamp range (mm)	Type	Part Number
Metal glands with multiple seal					
 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP65</p>		PG9	5-10	DCSM-9	T3101090101-000
		PG11	7-12	DCSM-11	T3101110101-000
		PG13.5	7-12	DCSM-13	T3101130101-000
		PG16	7-15	DCSM-16	T3101160101-000
		PG21	10-19	DCSM-21	T3101210101-000
		PG29	18-27	DCSM-29	T3101290101-000
		PG36	24-32	DCSM-36	T3101360101-000
		PG42	30-39	DCSM-42	T3101420101-000
		PG48	36-45	DCSM-48	T3101480101-000
	M12		5-10	DCSM-12-M	T3101120102-000
	M16		6.5-10	DCSM-16-M	T3101160102-000
	M20		8.5-13.5	DCSM-20-M	T3101200102-000
	M25		13-20	DCSM-25-M	T3101250102-000
	M32		19-28	DCSM-32-M	T3101320102-000
	M40		24-34	DCSM-40-M	T3101400102-000
	M50		34-40	DCSM-50-M	T3101500102-000
	M63		39-46	DCSM-63-M	T3101630102-000
Metal glands with multiple seal					
 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP54</p>		PG9	8-10	DCSM-9-S	T3111090101-000
		PG11	10-12	DCSM-11-S	T3111110101-000
		PG13.5	12-14	DCSM-13-S	T3111130101-000
		PG16	14-16	DCSM-16-S	T3111160101-000
		PG21	17-19	DCSM-21-S	T3111210101-000
		PG29	23-25	DCSM-29-S	T3111290101-000
		PG36	33-35	DCSM-36-S	T3111360101-000
		PG42	39-41	DCSM-42-S	T3111420101-000
		PG48	45-47	DCSM-48-S	T3111480101-000
	M12		5-7	DCSM-12-SM	T3111120102-000
	M16		8-10	DCSM-16-SM	T3111160102-000
	M20		10-12	DCSM-20-SM	T3111200102-000
	M25		15-17	DCSM-25-SM	T3111250102-000
	M32		24-26	DCSM-32-SM	T3111320102-000
	M40		28-30	DCSM-40-SM	T3111400102-000
	M50		39-41	DCSM-50-SM	T3111500102-000
	M63		45-47	DCSM-63-SM	T3111630102-000

## Cable fittings and accessories

	Metr.	PG	Clamp range (mm)	Type	Part Number	
Multiple seal						
 <p><b>Seal material:</b> NBR <b>Temperature range:</b> -40°C ~ +100°C <b>Protection:</b> IP65</p>		PG9	5-10	MSL-9	T3100090001-000	
		PG11	7-12	MSL-11	T3100110101-000	
		PG13.5	7-12	MSL-13	T3100130001-000	
		PG16	7-15	MSL-16	T3100160001-000	
		PG21	10-19	MSL-21	T3100210001-000	
		PG29	18-27	MSL-29	T3100290001-000	
		PG36	24-32	MSL-36	T3100360001-000	
		PG42	30-39	MSL-42	T3100420001-000	
		PG48	36-45	MSL-48	T3100480001-000	
	M12		5-10	MSL-12-M	T3100120002-000	
	M16		6.5-10	MSL-16-M	T3100160002-000	
	M20		8.5-13.5	MSL-20-M	T3100200002-000	
	M25		13-20	MSL-25-M	T3100250002-000	
	M32		19-28	MSL-32-M	T3100320002-000	
	M40		24-34	MSL-40-M	T3100400002-000	
	M50		34-40	MSL-50-M	T3100500002-000	
	M63		39-46	MSL-63-M	T3100630002-000	
	Normal seal					
	 <p><b>Seal material:</b> NBR <b>Temperature range:</b> -40°C ~ +100°C <b>Protection:</b> IP54</p>		PG9	8-10	SGL-9	T0910004109-000
		PG11	10-12	SGL-11	T0910004111-000	
		PG13.5	12-14	SGL-13	T0910004113-000	
		PG16	14-16	SGL-16	T0910004116-000	
		PG21	17-19	SGL-21	T0910004121-000	
		PG29	23-25	SGL-29	T0910004129-000	
		PG36	33-35	SGL-36	T0910004136-000	
		PG42	39-41	SGL-42	T0910004142-000	
		PG48	45-47	SGL-48	T0910004148-000	
M12			5-7	SGL-12-M	T3300120002-000	
M16			8-10	SGL-16-M	T3300160002-000	
M20			10-12	SGL-20-M	T3300200002-000	
M25			15-17	SGL-25-M	T3300250002-000	
M32			24-26	SGL-32-M	T3300320102-000	
M40			28-30	SGL-40-M	T3300400002-000	
M50			39-41	SGL-50-M	T3300500002-000	
M63			45-47	SGL-63-M	T3300630002-000	

## Cable fittings and accessories

	Metr.	PG	Clamp range (mm)	Type	Part Number	
Metal clamp glands with multiple seal						
 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP65</p>		PG9	6.5-10	ZSM-9	T3135090101-000	
			PG11	7.5-12	ZSM-11	T3135110101-000
			PG13.5	8.5-13.5	ZSM-13	T3135130101-000
			PG16	10.5-16	ZSM-16	T3135160101-000
			PG21	13-20	ZSM-21	T3135210101-000
			PG29	19-28	ZSM-29	T3135290101-000
			PG36	24-34	ZSM-36	T3135360101-000
			PG42	34-40	ZSM-42	T3135420101-000
			PG48	39-46	ZSM-48	T3135480101-000
	M16			6.5-10	ZSM-16-M	T3135160121-000
	M20			7.5-12	ZSM-20-M	T3135200121-000
	M25			13-20	ZSM-25-M	T3135250121-000
	M32			19-28	ZSM-32-M	T3135320121-000
	M40			24-34	ZSM-40-M	T3135400121-000
	M50			34-40	ZSM-50-M	T3135500121-000
	M63			39-46	ZSM-63-M	T3135630121-000
	Metal clamp glands with normal seal					
	 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP54</p>		PG7	6-8	ZSM-7-S	T3115070101-000
				PG9	8-10	ZSM-9-S
			PG11	10-12	ZSM-11-S	T3115110101-000
			PG13.5	12-14	ZSM-13-S	T3115130101-000
			PG16	14-16	ZSM-16-S	T3115160101-000
			PG21	17-19	ZSM-21-S	T3115210101-000
			PG29	26-28	ZSM-29-S	T3115290101-000
			PG36	33-35	ZSM-36-S	T3115360101-000
			PG42	39-41	ZSM-42-S	T3115420101-000
			PG48	43-45	ZSM-48-S	T3115480101-000
M12				6-8	ZSM-12-SM	T3115120121-000
M16				8-12	ZSM-16-SM	T3115160121-000
M20				10-12	ZSM-20-SM	T3115200121-000
M25				12-14	ZSM-25-SM	T3115250121-000
M32				17-19	ZSM-32-SM	T3115320121-000
M40				25-27	ZSM-40-SM	T3115400121-000
M50				39-41	ZSM-50-SM	T3115500121-000
M63				43-45	ZSM-63-SM	T3115630121-000



## Cable fittings and accessories

	Metr.	PG	Clamp range (mm)	Type	Part Number
<b>Metal clamp glands</b>					
 <p><b>Material:</b> Nickel plated brass <b>Temperature range:</b> -40°C ~ +100°C</p>		PG7	5.5-8	KSM-7-MS	T3105070101-000
		PG9	6.5-10	KSM-9-MS	T3105090101-000
		PG11	7.5-12	KSM-11-MS	T3105110101-000
		PG13.5	8.5-14	KSM-13-MS	T3105130101-000
		PG16	9.5-16	KSM-16-MS	T3105160101-000
		PG21	12-21	KSM-21-MS	T3105210101-000
		PG29	19-30	KSM-29-MS	T3105290101-000
		PG36	25-37	KSM-36-MS	T3105360101-000
		PG42	31-43	KSM-42-MS	T3105420101-000
		PG48	35-48	KSM-48-MS	T3105480101-000
	M12		5-7.5	KSM-12-M	T3105120121-000
	M16		7-10	KSM-16-M	T3105160121-000
	M20		10-14	KSM-20-M	T3105200121-000
	M25		12-21.5	KSM-25-M	T3105250121-000
	M32		16-27	KSM-32-M	T3105320121-000
	M40		23-33	KSM-40-M	T3105400121-000
	M50		25-38.5	KSM-50-M	T3105500121-000
	M63		39-46	KSM-63-M	T3105630121-000
	<b>Metal flexible tube fittings</b>				
 <p><b>Material:</b> Zinc alloy <b>Seal material:</b> PA <b>Temperature range:</b> -40°C ~ +100°C <b>Protection:</b> IP40-IP65</p>		PG11	Ø6	NTC-11-MS	T3510111201-000
		PG13.5	Ø8	NTC-13-MTS	T3510130124-000
		PG13.5	Ø10	NTC-13-MS	T3510130114-000
		PG13.5	Ø12	NTC-13-MES	T3510130134-000
		PG16	Ø10	NTC-16-MTS	T3510160124-000
		PG16	Ø12	NTC-16-MS	T3510160114-000
		PG16	Ø16	NTC-16-MES	T3510161501-000
		PG21	Ø16	NTC-21-MTS	T3510210124-000
		PG21	Ø20	NTC-21-MS	T3510212001-000
		PG29	Ø20	NTC-29-MTS	T3510290124-000
		PG29	Ø25	NTC-29-MS	T3510292501-000
		PG36	Ø32	NTC-36-MS	T3510363201-000
		PG42	Ø38	NTC-42-MS	T3510420114-000
		PG48	Ø51	NTC-48-MS	T3510480114-000
	M12 X 1.5		Ø6	NTC-12-M	T3510120124-000
	M16 X 1.5		Ø8	NTC-16-MT	T3510161002-000
	M16 X 1.5		Ø10	NTC-16-M	T3510160102-000
	M16 X 1.5		Ø12	NTC-16-ME	T3510160122-000
	M20 X 1.5		Ø10	NTC-20-MT	T3510201602-000
	M20 X 1.5		Ø12	NTC-20-M	T3510201202-000
	M20 X 1.5		Ø16	NTC-20-MT	T3510201502-000
	M25 X 1.5		Ø16	NTC-25-MT	T3510251502-000
	M25 X 1.5		Ø20	NTC-25-M	T3510252002-000
	M32 X 1.5		Ø20	NTG-32-MT	T3510320112-000
	M32 X 1.5		Ø25	NTC-32-M	T3510322002-000
	M40 X 1.5		Ø32	NTC-40-M	T3510403202-000
	M50 X 1.5		Ø38	NTC-50-M	T3510500102-000
M63 X 1.5		Ø51	NTC-63-M	T3510635102-000	

## Cable fittings and accessories


	Metr.	PG	Clamp range (mm)	Type	Part Number	
Nylon flexible tube fittings						
 <p><b>Material:</b> PA <b>Temperature range:</b> -40°C ~ +100°C <b>Protection:</b> IP65</p>		PG7	AD 10.0	NTC-7-PMS	T3511070701-000	
			PG9	AD 13.0	NTC-9-PMS	T3511091001-000
			PG11	AD 15.8	NTC-11-PMS	T351111201-000
			PG13.5	AD 18.5	NTC-13-PMES	T3511131401-000
			PG13.5	AD 21.2	NTC-13-PMZS	T3511131401-001
			PG16	AD 21.2	NTC-16-PMS	T3511161701-000
			PG21	AD 28.5	NTC-21-PMS	T3511212301-000
			PG29	AD 34.5	NTC-29-PMS	T3511292901-000
			PG36	AD 42.5	NTC-36-PMS	T3511363601-000
			PG42	AD 54.5	NTC-42-PMS	T3511424301-000
			PG48	AD 54.5	NTC-48-PMS	T3511484801-000
		M10 X 1.5		AD 10.0	NTC-10-PM	T3511100602-000
		M12 X 1.5		AD 10.0	NTC-12-PMT	T3511120702-000
		M12 X 1.5		AD 13.0	NTC-12-PM	T3511120702-001
		M16 X 1.5		AD 13.0	NTC-16-PMT	T3511161002-000
		M16 X 1.5		AD 15.8	NTC-16-PM	T3511161202-000
		M20 X 1.5		AD 18.5	NTC-20-PMT	T3511201402-000
		M20 X 1.5		AD 21.2	NTC-20-PM	T3511201702-000
		M25 X 1.5		AD 21.2	NTC-25-PMT	T3511251702-000
		M25 X 1.5		AD 25.8	NTC-25-PM	T3511252002-000
		M25 X 1.5		AD 28.5	NTC-25-PME	T3511252302-000
		M32 X 1.5		AD 28.5	NTC-32-PMT	T3511322302-000
		M32 X 1.5		AD 31.5	NTC-32-PM	T3511322602-000
		M32 X 1.5		AD 34.5	NTC-32-PME	T3511322902-000
		M40 X 1.5		AD 34.5	NTC-40-PMT	T3511402802-000
		M40 X 1.5		AD 42.5	NTC-40-PM	T3511403602-000
		M50 X 1.5		AD 42.5	NTC-50-PMT	T3511503502-000
		M50 X 1.5		AD 54.5	NTC-50-PM	T3511504802-000
	M63 X 1.5		AD 54.5	NTC-63-PM	T3511634802-000	
Nylon blind plugs						
 <p><b>Material:</b> PA <b>Temperature range:</b> -20°C ~ +70°C <b>Protection:</b> IP65</p>		PG9		DN-9-P	T3169090101-000	
			PG11		DN-11-P	T3169110101-000
			PG13.5		DN-13-P	T3169130101-000
			PG16		DN-16-P	T3169160101-000
			PG21		DN-21-P	T3169210101-000
			PG29		DN-29-P	T3169290101-000
			PG36		DN-36-P	T3169360101-000
			PG42		DN-42-P	T3169420101-000
			PG48		DN-48-P	T3169480101-000
		M12		5-7.5	DN-12-PM	T3169120121-000
		M16		7-10	DN-16-PM	T3169160111-000
		M20		10-14	DN-20-PM	T3169200111-000
		M25		12-21.5	DN-25-PM	T3169250111-000
		M32		16-27	DN-32-PM	T3169320111-000
		M40		23-33	DN-40-PM	T3169400111-000
		M50		25-38.5	DN-50-PM	T3169500111-000
	M63		39-46	DN-63-PM	T3169630111-000	

## Cable fittings and accessories



	Metr.	PG	Type	Part Number	
<b>Metal blind plugs</b>					
 <p><b>Material:</b> Nickel plated brass  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP65</p>		PG7	BLIND-7-MS	T3165070101-000	
			PG9	BLIND-9-MS	T3165090101-000
			PG11	BLIND-11-MS	T3165110101-000
			PG13.5	BLIND-13-MS	T3165130101-000
			PG16	BLIND-16-MS	T3165160101-000
			PG21	BLIND-21-MS	T3165210101-000
			PG29	BLIND-29-MS	T3165290101-000
			PG36	BLIND-36-MS	T3165360101-000
			PG42	BLIND-42-MS	T3165420101-000
			PG48	BLIND-48-MS	T3165480101-000
	M12 X 1.5			BLIND-12-M	T3165120111-000
	M16 X 1.5			BLIND-16-M	T3165160111-000
	M20 X 1.5			BLIND-20-M	T3165200111-000
	M25 X 1.5			BLIND-25-M	T3165250111-000
	M32 X 1.5			BLIND-32-M	T3165320111-000
	M40 X 1.5			BLIND-40-M	T3165400111-000
	M50 X 1.5			BLIND-50-M	T3165500111-000
M63 X 1.5			BLIND-63-M	T3165630111-000	
<b>Nylon blind plugs</b>					
 <p><b>Material:</b> PA  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP65</p>		PG7	BLIND-7-P	T3166070101-000	
			PG9	BLIND-9-P	T3166090101-000
			PG11	BLIND-11-P	T3166110101-000
			PG13.5	BLIND-13-P	T3166130101-000
			PG16	BLIND-16-P	T3166160101-000
			PG21	BLIND-21-P	T3166210101-000
			PG29	BLIND-29-P	T3166290101-000
			PG36	BLIND-36-P	T3166360101-000
			PG42	BLIND-42-P	T3166420101-000
			PG48	BLIND-48-P	T3166480101-000
	M12 X 1.5			BLIND-12-PM	T3166120111-000
	M16 X 1.5			BLIND-16-PM	T3166160111-000
	M20 X 1.5			BLIND-20-PM	T3166200111-000
	M25 X 1.5			BLIND-25-PM	T3166250111-000
	M32 X 1.5			BLIND-32-PM	T3166320111-000
	M40 X 1.5			BLIND-40-PM	T3166400111-000
	M50 X 1.5			BLIND-50-PM	T3166500111-000
M63 X 1.5			BLIND-63-PM	T3166630111-000	



## Cable fittings and accessories

	Metr.	PG	Type	Part Number	
Metal blind plugs					
 <p><b>Material:</b> Nickel plated brass  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP65</p>		PG7	BLIND-7-HMS	T3165070201-000	
			PG9	BLIND-9-HMS	T3165090201-000
			PG11	BLIND-11-HMS	T3165110201-000
			PG13.5	BLIND-13-HMS	T3165130201-000
			PG16	BLIND-16-HMS	T3165160201-000
			PG21	BLIND-21-HMS	T3165210201-000
			PG29	BLIND-29-HMS	T3165290201-000
			PG36	BLIND-36-HMS	T3165360201-000
			PG42	BLIND-42-HMS	T3165420201-000
			PG48	BLIND-48-HMS	T3165480201-000
	M12 X 1.5			BLIND-12-HM	T3165120211-000
	M16 X 1.5			BLIND-16-HM	T3165160211-000
	M20 X 1.5			BLIND-20-HM	T3165200211-000
	M25 X 1.5			BLIND-25-HM	T3165250211-000
	M32 X 1.5			BLIND-32-HM	T3165320211-000
	M40 X 1.5			BLIND-40-HM	T3165400211-000
	M50 X 1.5			BLIND-50-HM	T3165500211-000
M63 X 1.5			BLIND-63-HM	T3165630211-000	


## Cable fittings and accessories

	Metr.	PG	Type	Part Number	
Metal lock units					
 <p><b>Material:</b> Nickel plated brass <b>Temperature range:</b> -40°C ~ +100°C</p>		PG7	LN-7-MS	T3161070001-000	
			PG9	LN-9-MS	T3161090001-000
			PG11	LN-11-MS	T3161110001-000
			PG13.5	LN-13-MS	T3161130001-000
			PG16	LN-16-MS	T3161160001-000
			PG21	LN-21-MS	T3161210001-000
			PG29	LN-29-MS	T3161290001-000
			PG36	LN-36-MS	T3161360001-000
			PG42	LN-42-MS	T3161420001-000
			PG48	LN-48-MS	T3161480001-000
	M12 X 1.5			LN-12-M	T3161120050-000
	M16 X 1.5			LN-16-M	T3161160050-000
	M20 X 1.5			LN-20-M	T3161200050-000
M25 X 1.5			LN-25-M	T3161250050-000	
M32 X 1.5			LN-32-M	T3161320050-000	
M40 X 1.5			LN-40-M	T3161400050-000	
M50 X 1.5			LN-50-M	T3161500050-000	
M63 X 1.5			LN-63-M	T3161630050-000	
Nylon lock units					
 <p><b>Material:</b> PA <b>Temperature range:</b> -40°C ~ +100°C</p>		PG7	LN-7-P	T3262070001-000	
			PG9	LN-9-P	T3262090001-000
			PG11	LN-11-P	T3262110001-000
			PG13.5	LN-13-P	T3262130001-000
			PG16	LN-16-P	T3262160001-000
			PG21	LN-21-P	T3262210001-000
			PG29	LN-29-P	T3262290001-000
			PG36	LN-36-P	T3262360001-000
			PG42	LN-42-P	T3262420001-000
			PG48	LN-48-P	T3262480001-000
	M12 X 1.5			LN-12-PM	T3262120050-000
	M16 X 1.5			LN-16-PM	T3262160050-000
	M20 X 1.5			LN-20-PM	T3262200050-000
M25 X 1.5			LN-25-PM	T3262250050-000	
M32 X 1.5			LN-32-PM	T3262320050-000	
M40 X 1.5			LN-40-PM	T3262400050-000	
M50 X 1.5			LN-50-PM	T3262500050-000	
M63 X 1.5			LN-63-PM	T3262630050-000	


## Cable fittings and accessories

	Metr.	PG	Type	Part Number
<b>Metal increasers</b>				
 <p><b>Material:</b> Nickel plated brass <b>Temperature range:</b> -40°C ~ +100°C</p>	M16-M20 M20-M25 M25-M32 M32-M40 M40-M50 M50-M63	PG7-PG9 PG9-PG11 PG11-PG13.5 PG11-PG16 PG13.5-PG16 PG13.5-PG21 PG16-PG21 PG21-PG29 PG29-PG36 PG36-PG42	INCR-7/9-PG INCR-9/11-PG INCR-11/13-PG INCR-11/16-PG INCR-13/16-PG INCR-13/21-PG INCR-16/21-PG INCR-21/29-PG INCR-29/36-PG INCR-36/42-PG INCR-16/20-M INCR-20/25-M INCR-25/32-M INCR-32/40-M INCR-40/50-M INCR-50/63-M	T3033070901-000 T3033091101-000 T3033111301-000 T3033111601-000 T3033131601-000 T3033132101-000 T3033162101-000 T3033212901-000 T3033293601-000 T3033364201-000 T3033162050-000 T3033202550-000 T3033253250-000 T3033324050-000 T3033405050-000 T3033506350-000
		<b>Metal reducers</b>		
 <p><b>Material:</b> Nickel plated brass <b>Temperature range:</b> -40°C ~ +100°C</p>	M16-M12 M20-M12 M20-M16 M25-M20 M32-M20 M32-M25 M40-M25 M40-M32 M50-M32 M50-M40 M63-M40 M63-M50	PG9-PG7 PG11-PG7 PG13.5-PG9 PG13.5-PG11 PG16-PG9 PG16-PG11 PG16-PG13.5 PG21-PG11 PG21-PG13.5 PG21-PG16 PG29-PG16 PG29-PG21 PG36-PG21 PG36-PG29 PG42-PG29 PG42-PG36 PG48-PG36 PG48-PG42	REDU-9/7-PG REDU-11/7-PG REDU-13/9-PG REDU-13/11-PG REDU-16/9-PG REDU-16/11-PG REDU-16/13-PG REDU-21/11-PG REDU-21/13-PG REDU-21/16-PG REDU-29/16-PG REDU-29/21-PG REDU-36/21-PG REDU-36/29-PG REDU-42/29-PG REDU-42/36-PG REDU-48/36-PG REDU-48/42-PG REDU-16/12-M REDU-20/12-M REDU-20/16-M REDU-25/20-M REDU-32/20-M REDU-32/25-M REDU-40/25-M REDU-40/32-M REDU-50/32-M REDU-50/40-M REDU-63/40-M REDU-63/50-M	T3071090701-000 T3071110701-000 T3071130901-000 T3071131101-000 T3071160901-000 T3071161101-000 T3071161301-000 T3071211101-000 T3071211301-000 T3071211601-000 T3071291601-000 T3071292101-000 T3071362101-000 T3071362901-000 T3071422901-000 T3071423601-000 T3071483601-000 T3071484201-000 T3071161250-000 T3071201250-000 T3071201650-000 T3071252050-000 T3071322050-000 T3071322550-000 T3071402550-000 T3071403250-000 T3071503250-000 T3071504050-000 T3071634050-000 T3071635050-000


## Cable fittings and accessories

			Type	Dimension	Part Number
Cable clamper					
 <p><b>Material:</b> Metal <b>Protection:</b> IP65</p>			BK 14	12-14	T1918121400-000
			BK 18	14-18	T1918121800-000
			BK 22	18-22	T1922182200-000
			BK 26	22-26	T1926222600-000
			BK 32	26-32	T1932263200-000
			BK 34	30-34	T1934303400-000
			BK 38	34-38	T1912063800-000
			BK 42	38-42	T1942384200-000
			BK 48	42-48	T1912064800-000
			BK 52	48-52	T1912065200-000
			BK 56	52-56	T1912065600-000
			BK 60	56-60	T1912066000-000
			BK 64	60-64	T1964566400-000
C-Type rail	T 19 0000 0000-000	rail adaptor system	BK 70	64-70	T1970667000-000


Cable clamper					
Direct installation yokes		SKT3-8SC	3-8	T3920030801-000	
		SKT4-13SC	4-13.5	T3920041301-000	
		SKT10-20SC	10-20	T3920102001-000	
		SKT15-32SC	15-32	T3920153201-000	
Direct rail mounting		SKTP3-8SC	3-8	T3930030801-000	
		SKTP4-13SC	4-13.5	T3930041301-000	
		SKTP10-20SC	10-20	T3930102001-000	
Mounting rails		SKTP15-32SC	15-32	T3930153201-000	
		SKT2-6	2-6	T3910020601-000	
		SKT3-8	3-8	T3910030801-000	
Quick installation yokes		SKT4-13.5	4-13.5	T3910041301-000	
		SKT10-20	10-20	T3910102001-000	
		SKT15-32	15-32	T3910153201-000	
		QSKT 1-6	1.5-6.5	T3930010600-000	
		QSKT 5-11	5-11	T3930051100-000	
		QSKT 10-17	10-17	T3930101700-000	

		Type	Dimension	Type	Part Number
Clips					
 <p><b>Material:</b> Stainless steel <b>Temperature range:</b> -40°C ~ +105°C</p>		AD10	10	Clip-06	T3310010000-000
		AD13	13	Clip-09	T3310013000-000
		AD15.8	15	Clip-11	T3310015000-000
		AD21.2	22	Clip-16	T3310022000-000
		AD28.5	28	Clip-21	T3310028000-000
		AD34.5	34	Clip-29	T3310034000-000
		AD42.5	40	Clip-36	T3310040000-000
		AD54.5	54	Clip-48	T3310054000-000
		AD80	79	Clip-70	T3310079000-000
		AD106	105	Clip-95	T3310105000-000



## Cable fittings and accessories

	Metr.	PG	Clamp range	Type	Part Number	
Metal cable gland						
 <p><b>Material:</b> Nickel plated brass  <b>Press seal material:</b> PA  <b>Seal material:</b> NBR  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP68</p>		PG7	2-5 3-6.5	DLX-7-NMTS DLX-7-NMS	T3629070111-000 T3629070101-000	
		PG9	2-6 4-8	DLX-9-NMTS DLX-9-NMS	T3629090111-000 T3629090101-000	
		PG11	3-7 5-10	DLX-11-NMTS DLX-11-NMS	T3629110111-000 T3629110101-000	
		PG13.5	5-9 6-12	DLX-13-NMTS DLX-13-NMS	T3629130111-000 T3629130101-000	
		PG16	7-12 10-14	DLX-16-NMTS DLX-16-NMS	T3629160111-000 T3629160101-000	
		PG21	9-16 13-18	DLX-21-NMTS DLX-21-NMS	T3629210111-000 T3629210101-000	
		PG29	13-20 18-25	DLX-29-NMTS DLX-29-NMS	T3629290111-000 T3629290101-000	
		PG36	20-26 22-32	DLX-36-NMTS DLX-36-NMS	T3629360111-000 T3629360101-000	
		PG42	25-31 32-38	DLX-42-NMTS DLX-42-NMS	T3629420111-000 T3629420101-000	
		PG48	29-35 37-44	DLX-48-NMTS DLX-48-NMS	T3629480111-000 T3629480101-000	
	M12 X 1.5			2-5 3-6.5	DLX-12-NMT DLX-12-NM	T3629120112-000 T3629120102-000
	M16 X 1.5			2-6 4-8	DLX-16-NMT DLX-16-NM	T3629160112-000 T3629160102-000
	M20 X 1.5			5-9 6-12	DLX-20-NMT DLX-20-NM	T3629200112-000 T3629200102-000
	M25 X 1.5			9-16 13-18	DLX-25-NMT DLX-25-NM	T3629250112-000 T3629250102-000
	M32 X 1.5			13-20 18-25	DLX-32-NMT DLX-32-NM	T3629320112-000 T3629320102-000
	M40 X 1.5			20-26 22-32	DLX-40-NMT DLX-40-NM	T3629400112-000 T3629400102-000
	M50 X 1.5			25-31 32-38	DLX-50-NMT DLX-50-NM	T3629500112-000 T3629500102-000
M63 X 1.5			29-35 37-44	DLX-63-NMT DLX-63-NM	T3629630112-000 T3629630102-000	

### Angled metal cable glands

 <p><b>Material:</b> Nickel plated brass  <b>Temperature range:</b> -40°C ~ +100°C  <b>Protection:</b> IP68</p>		PG11	Ø11	STUD-9-MS	T3265090901-000
		PG13.5	Ø14	STUD-11-MS	T3265111101-000
		PG16	Ø16	STUD-13-MS	T3265131301-000
		PG21	Ø18	STUD-16-MS	T3265160101-000
		PG29	Ø21	STUD-21-MS	T3265212101-000
		PG36	Ø31	STUD-29-MS	T3265292901-000
	M16 X 1.5		Ø12	STUD-16-M	T3265161611-000
	M20 X 1.5		Ø15.5	STUD-20-M	T3265202011-000
	M25 X 1.5		Ø20.5	STUD-25-M	T3265252511-000
	M32 X 1.5		Ø27.5	STUD-32-M	T3265252511-000
M40 X 1.5		Ø34.5	STUD-40-M	T3265404011-000	

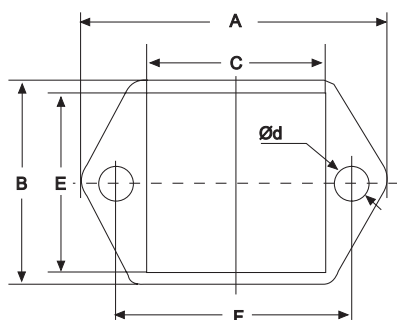
## Cable fittings and accessories

	Metr.	PG	Clamp range	Type	Part Number	
Metal cable gland						
 <p><b>Material:</b> Nickel plated brass  <b>Seal material:</b> NBR  <b>Temperature range:</b> -30°C ~ +100°C  <b>Protection:</b> IP55</p>		PG7	6-8	VSM-7-MS	T3105070101-000	
			PG9	5-10	VSM-9-MS	T3105090101-000
			PG11	7-12	VSM-11-MS	T3105110101-000
			PG13.5	7-12	VSM-13-MS	T3105130101-000
			PG16	7-15	VSM-16-MS	T3105160101-000
			PG21	10-19	VSM-21-MS	T3105210101-000
			PG29	18-27	VSM-29-MS	T3105290101-000
			PG36	24-32	VSM-36-MS	T3105360101-000
			PG42	30-39	VSM-42-MS	T3105420101-000
			PG48	36-45	VSM-48-MS	T3105480101-000
		M12 X 1.5		4.5-7	VSM-12-M	T3105120021-000
		M16 X 1.5		6.5-9	VSM-16-M	T3105160021-000
		M20 X 1.5		6.5-9	VSM-20-M	T3105200021-000
		M20 X 1.5		6-11.5	VSM-20T-M	T3105200121-000
		M25 X 1.5		8-13	VSM-25-M	T3105250021-000
		M25 X 1.5		12.5-18	VSM-25T-M	T3105250121-000
	M32 X 1.5		17-26	VSM-32-M	T3105320021-000	
	M40 X 1.5		17-26	VSM-40-M	T3105400021-000	
	M50 X 1.5		27-32	VSM-50-M	T3105500021-000	
	M50 X 1.5		35-38.5	VSM-50T-M	T3105500121-000	
	M63 X 1.5		38-44	VSM-63-M	T3105630021-000	
Extender						
 <p><b>Material:</b> Nickel plated brass  <b>Temperature range:</b> -40°C ~ +100°C</p>		PG11		STUD-PG11	T333311112-000	
			PG13.5		STUD-PG13.5	T333313132-000
			PG16		STUD-PG16	T333316162-000
			PG21		STUD-PG21	T333321212-000
			PG29		STUD-PG29	T333329292-000
			PG36		STUD-PG36	T333336362-000
		M12 X 1.5			STUD-M12	T333312121-000
		M16 X 1.5			STUD-M16	T333316161-000
		M20 X 1.5			STUD-M20	T333320201-000
		M25 X 1.5			STUD-M25	T333325251-000
		M32 X 1.5			STUD-M32	T333332321-000
		M40 X 1.5			STUD-M40	T333340401-000
		M50 X 1.5			STUD-M50	T333350501-000
	M63 X 1.5			STUD-M63	T333363631-000	

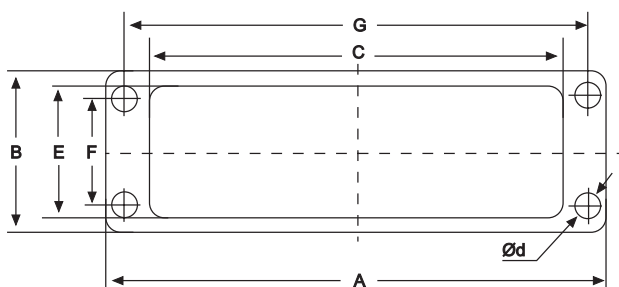
## Cable fittings and accessories

	Metr.	PG	Type	Part Number
Inside and outside thread adapter				
 <p><b>Material:</b> Nickel plated brass <b>Temperature range:</b> -40°C ~ +100°C</p>	M12 X 1.5 M16 X 1.5 M20 X 1.5 M25 X 1.5 M32 X 1.5 M40 X 1.5 M50 X 1.5 M63 X 1.5	PG11	STUD-PG11	T3333111102-000
		PG13.5	STUD-PG13.5	T3333131302-000
		PG16	STUD-PG16	T3333161602-000
		PG21	STUD-PG21	T3333212102-000
		PG29	STUD-PG29	T3333292902-000
		PG36	STUD-PG36	T3333363602-000
		M12 X 1.5	STUD-M12	T3333121201-000
		M16 X 1.5	STUD-M16	T3333161601-000
		M20 X 1.5	STUD-M20	T3333202001-000
		M25 X 1.5	STUD-M25	T3333252501-000
		M32 X 1.5	STUD-M32	T3333323201-000
		M40 X 1.5	STUD-M40	T3333404001-000
		M50 X 1.5	STUD-M50	T3333505001-000
M63 X 1.5	STUD-M63	T3333636301-000		
Cable gland clamps				
 <p><b>Material:</b> Nickel plated brass <b>Temperature range:</b> -30°C ~ +100°C <b>Protection:</b> IP65</p>			WSM-16-MS	T3125160111-000
			WSM-21-MS	T3125210111-000
			WSM-32-M	T3125320001-000

## Housings mounting dimensions



H3A housing



H10A, H16A, H32A/HA series housings  
H6B, H10B, H16B, H24B, H32B,  
H48B/HB series housings

Shell type	Mounted type	Dimensions (mm)						
		A	B	C	E	F	G	Ød
H3A	Bulkhead	40	28	21	21	30	-	3.2
	Surface	40	28	-	-	30	-	3.2
H10A	Bulkhead	81	29.5	57.5	24	17.5	70	3.4
	Surface	80	50	-	-	40	48	4.5
H16A	Bulkhead	96	29.5	73.7	24	17.5	86	3.4
	Surface	96	50	-	-	40	64	4.5
H32A	Bulkhead	102	56	74.2	48.4	42	92	4.4
	Surface	106	57	-	-	46	94	5.5
H6B	Bulkhead	80	43	52.2	35	32	70	4.4
	Surface	82	52	-	-	40	70	5.5
H10B	Bulkhead	93	43	65.2	35	32	83	4.3
	Surface	94	52	-	-	40	82	5.5
H16B	Bulkhead	113	43	85.5	35	32	103	4.3
	Surface	117	57	-	-	45	105	5.5
H24B	Bulkhead	140	43	112.2	35	32	130	4.3
	Surface	144	57	-	-	45	132	5.5
H32B	Bulkhead	124	79	85.5	71	65	110	5.4
	Surface	124.5	81	-	-	67	112	5.4
H48B	Bulkhead	165	90	124	82	70	148	6.4
	Surface	132	120	-	-	106	111	6.5



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0-0164160-4	111	0-1102839-2	273	0-1103092-1	195
0-0164161-4	111	0-1102839-2	295	0-1103092-2	195
0-0164161-9	111	0-1102839-3	100	0-1103092-3	195
0-0166824-2	111	0-1102839-3	153	0-1103092-4	195
0-1102192-1	100	0-1102839-3	268	0-1103092-5	195
0-1102192-1	153	0-1102839-3	273	0-1103092-8	195
0-1102192-1	268	0-1102839-3	295	0-1103092-9	195
0-1102192-1	273	0-1102839-4	100	0-1106258-3	296
0-1102192-1	295	0-1102839-4	153	0-1106258-4	296
0-1102192-2	100	0-1102839-4	268	0-1106259-3	296
0-1102192-2	153	0-1102839-4	295	0-1106259-4	296
0-1102192-2	268	0-1102839-4	273	0-1106401-2	36
0-1102192-2	273	0-1102839-5	273	0-1106401-2	59
0-1102192-2	295	0-1102839-6	273	0-1106401-2	188
0-1102792-1	99	0-1102840-1	100	0-1106401-3	36
0-1102792-1	152	0-1102840-1	153	0-1106401-3	59
0-1102792-1	266	0-1102840-1	268	0-1106401-3	188
0-1102792-1	293	0-1102840-1	273	0-1106401-4	36
0-1102836-1	100	0-1102840-1	295	0-1106401-4	59
0-1102836-1	153	0-1102840-2	100	0-1106401-4	188
0-1102836-1	268	0-1102840-2	153	0-1106402-2	35
0-1102836-1	273	0-1102840-2	268	0-1106402-2	58
0-1102836-1	295	0-1102840-2	273	0-1106402-2	187
0-1102836-2	100	0-1102840-2	295	0-1106402-3	35
0-1102836-2	153	0-1102840-3	100	0-1106402-3	58
0-1102836-2	268	0-1102840-3	153	0-1106402-3	187
0-1102836-2	273	0-1102840-3	268	0-1106407-1	36
0-1102836-2	295	0-1102840-3	273	0-1106407-1	59
0-1102837-1	100	0-1102840-3	295	0-1106407-1	188
0-1102837-1	153	0-1102840-4	100	0-1106407-2	36
0-1102837-1	268	0-1102840-4	153	0-1106407-2	59
0-1102837-1	273	0-1102840-4	268	0-1106407-2	188
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0-1102837-2	100	0-1102840-4	295	0-1106408-1	58
0-1102837-2	153	0-1102855-1	111	0-1106408-1	187
0-1102837-2	268	0-1102855-6	111	0-1106408-2	35
0-1102837-2	273	0-1102877-1	44	0-1106408-2	58
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0-1102838-1	273	0-1102983-1	99	0-1106413-3	123
0-1102838-1	295	0-1102983-1	152	0-1106415-2	123
0-1102838-2	100	0-1102983-1	266	0-1106416-3	73
0-1102838-2	153	0-1102983-1	293	0-1106416-3	122
0-1102838-2	268	0-1103072-1	194	0-1106416-4	73
0-1102838-2	273	0-1103072-2	194	0-1106416-4	122
0-1102838-2	295	0-1103073-3	193	0-1106424-1	123
0-1102839-1	100	0-1103073-4	193	0-1106424-2	123
0-1102839-1	153	0-1103074-1	196	0-1106425-1	73
0-1102839-1	268	0-1103074-2	196	0-1106425-1	122
0-1102839-1	273	0-1103074-3	196	0-1106425-2	73
0-1102839-1	295	0-1103074-4	196	0-1106425-2	122
0-1102839-2	100	0-1103074-5	196	0-1106425-3	73
0-1102839-2	153	0-1103074-6	196	0-1106425-3	122

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T1010032300-000	34	T1210100121-000	127	T1220100121-000	127
T1010032300-000	57	T1210100121-000	238	T1220100121-000	238
T1010032300-000	186	T1210100125-000	76	T1220100125-000	76
T1010033100-000	33	T1210100125-000	127	T1220100125-000	127
T1010033100-000	56	T1210100125-000	238	T1220100125-000	238
T1010033100-000	185	T1210160116-000	85	T1220160116-000	85
T1010033200-000	34	T1210160116-000	137	T1220160116-000	137
T1010033200-000	57	T1210160116-000	172	T1220160116-000	172
T1010033200-000	186	T1210160116-000	252	T1220160116-000	252
T1010061400-000	71	T1210160120-000	85	T1220160121-000	85
T1010061400-000	120	T1210160125-000	85	T1220160121-000	137
T1010101400-000	76	T1210160120-000	137	T1220160121-000	172
T1010101400-000	127	T1210160125-000	137	T1220160121-000	252
T1010101400-000	238	T1210160120-000	172	T1220160125-000	85
T1010101500-000	78	T1210160125-000	172	T1220160125-000	137
T1010101500-000	129	T1210160120-000	252	T1220160125-000	172

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T1220160132-000	85	T1230100132-000	76	T1240102120-000	280
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T1220160132-000	172	T1230100132-000	238	T1240160121-000	137
T1220160132-000	252	T1230102116-000	280	T1240160121-000	172
T1220240116-000	94	T1230102120-000	280	T1240160121-000	252
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T1220240116-000	262	T1230160121-000	137	T1240160125-000	137
T1220240121-000	94	T1230160121-000	172	T1240160125-000	172
T1220240121-000	147	T1230160121-000	252	T1240160125-000	252
T1220240121-000	262	T1230160129-000	85	T1240160129-000	85
T1220240125-000	94	T1230160129-000	137	T1240160129-000	137
T1220240125-000	147	T1230160129-000	172	T1240160129-000	172
T1220240125-000	262	T1230160129-000	252	T1240160129-000	252
T1220240132-000	94	T1230160132-000	85	T1240160132-000	85
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T1220240132-000	262	T1230160132-000	172	T1240160132-000	172
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T1220320125-000	158	T1230160140-000	252	T1240160140-000	252
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T1230100129-000	127	T1240100132-000	238	T1250163116-000	173

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T1250163120-000	86	T1260243120-000	148	T1280103129-000	239
T1250163120-000	138	T1260243120-000	263	T1280103132-000	77
T1250163120-000	173	T1260243121-000	95	T1280103132-000	128
T1250163120-000	253	T1260243121-000	148	T1280103132-000	239
T1250163121-000	86	T1260243121-000	263	T1280163121-000	86
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T1250163121-000	173	T1260243125-000	148	T1280163121-000	173
T1250163121-000	253	T1260243125-000	263	T1280163121-000	253
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T1250163125-000	138	T1270103121-000	128	T1280163125-000	138
T1250163125-000	173	T1270103121-000	239	T1280163125-000	173
T1250163125-000	253	T1270103125-000	77	T1280163125-000	253
T1250243116-000	95	T1270103125-000	128	T1280163129-000	86
T1250243116-000	148	T1270103125-000	239	T1280163129-000	138
T1250243116-000	263	T1270103129-000	77	T1280163129-000	173
T1250243120-000	95	T1270103129-000	128	T1280163129-000	253
T1250243120-000	148	T1270103129-000	239	T1280163132-000	86
T1250243120-000	263	T1270103132-000	77	T1280163132-000	138
T1250243121-000	95	T1270103132-000	128	T1280163132-000	173
T1250243121-000	148	T1270103132-000	239	T1280163132-000	253
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T1260163125-000	253	T1280103125-000	77	T1310100125-000	240
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T1260243116-000	263	T1280103129-000	77	T1310160121-000	174



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T1310160125-000	87	T1319031111-000	34	T1320160121-000	174
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T1310160129-000	87	T1319031111-000	57	T1320160125-000	174
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T1310160132-000	87	T1319100120-000	38	T1320160129-000	174
T1310160132-000	139	T1319100125-000	38	T1320160129-000	254
T1310160132-000	174	T1319100116-000	38	T1320160132-000	87
T1310160132-000	254	T1319100121-000	38	T1320160132-000	139
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T1319030120-000	33	T1320100125-000	240	T1320480132-000	164
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T1330060125-000	71	T1339160121-000	40	T1340240129-000	149

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T1340240140-000	96	T1440101216-000	239	T1440322163-000	104
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T1319080125-000	193	T1440101225-000	239	T1440322236-000	104
T1410101000-000	77	T1440161121-000	86	T1440322236-000	158
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T1410161000-000	86	T1440161121-000	253	T1440322240-000	158
T1410161000-000	138	T1440161125-000	86	T1440322240-000	179
T1410161000-000	173	T1440161125-000	138	T1440322242-000	104
T1410161000-000	253	T1440161125-000	173	T1440322242-000	158
T1410241000-000	95	T1440161125-000	253	T1440322242-000	179
T1410241000-000	148	T1440161221-000	86	T1440322250-000	104
T1410241000-000	263	T1440161221-000	138	T1440322250-000	158
T1410322000-000	104	T1440161221-000	173	T1440322250-000	179
T1410322000-000	158	T1440161221-000	253	T1440322263-000	104
T1410322000-000	179	T1440161225-000	86	T1440322263-000	158
T1419320000-000	42	T1440161225-000	138	T1440322263-000	179
T1419320000-000	68	T1440161225-000	173	T1449320121-000	42
T1430100000-000	77	T1440161225-000	253	T1449320121-000	68
T1460100116-000	77	T1440241121-000	95	T1449320125-000	42
T1430100000-000	128	T1440241121-000	148	T1449320125-000	68
T1460100116-000	128	T1440241121-000	263	T1449320129-000	42
T1430100000-000	239	T1440241125-000	95	T1449320129-000	68
T1460100116-000	239	T1440241125-000	148	T1449320132-000	42
T1430160000-000	86	T1440241125-000	263	T1449320132-000	68
T1460160121-000	86	T1440241221-000	95	T1449320221-000	42
T1430160000-000	138	T1440241221-000	148	T1449320221-000	68
T1460160121-000	138	T1440241221-000	263	T1449320225-000	42
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T1440101121-000	77	T1440322140-000	158	T1460100125-000	239
T1440101121-000	128	T1440322140-000	179	T1460100216-000	77
T1440101121-000	239	T1440322142-000	104	T1460100216-000	128
T1440101125-000	77	T1440322142-000	158	T1460100216-000	239



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T1460100220-000	239	T1470161121-000	138	T1490100121-000	128
T1460100221-000	77	T1470161121-000	173	T1490100121-000	239
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T1460160221-000	138	T1470161132-000	138	T1490100221-000	128
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T1460240225-000	148	T1470161232-000	173	T1490160125-000	173
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T1509101000-000	38	T1610103120-000	241	T1610243120-000	265
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T1510062100-000	72	T1610103125-000	79	T1610243125-000	97

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T1620480129-000	164	T1650062121-000	121	T1650163221-000	140
T1620480132-000	109	T1650062125-000	72	T1650163221-000	175
T1620480132-000	164	T1650062125-000	121	T1650163221-000	255



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T1650163225-000	255	T1660103129-000	130	T1660243129-000	150
T1650163229-000	88	T1660103129-000	241	T1660243129-000	265
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T1650163229-000	175	T1660103132-000	130	T1660243132-000	150
T1650163229-000	255	T1660103132-000	241	T1660243132-000	265
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T1650163232-000	140	T1660103221-000	130	T1660243221-000	150
T1650163232-000	175	T1660103221-000	241	T1660243221-000	265
T1650163232-000	255	T1660103225-000	79	T1660243225-000	97
T1650243121-000	97	T1660103225-000	130	T1660243225-000	150
T1650243121-000	150	T1660103225-000	241	T1660243225-000	265
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T1650243125-000	97	T1660103229-000	130	T1660243229-000	150
T1650243125-000	150	T1660103229-000	241	T1660243229-000	265
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T1650243129-000	150	T1660103232-000	241	T1660243232-000	265
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T1660103121-000	130	T1660243121-000	150	T1710322132-000	104
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T1710322140-000	158	T1739030111-000	185	T1750241121-000	262
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T1710322163-000	158	T1739031120-000	186	T1750241132-000	262
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