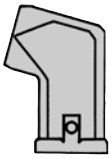
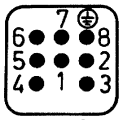
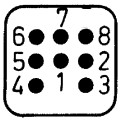
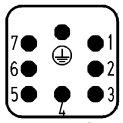
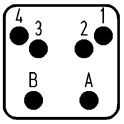
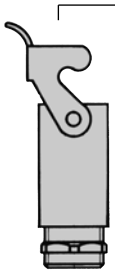
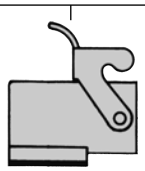
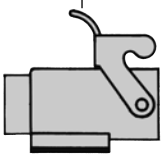
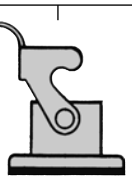
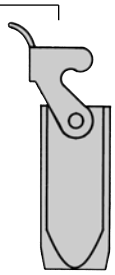
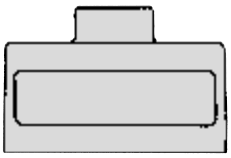
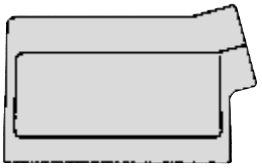
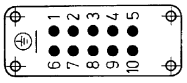
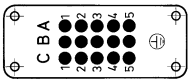
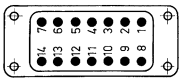
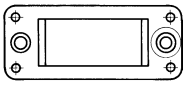
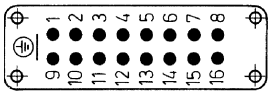
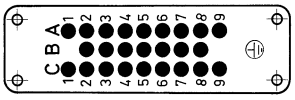
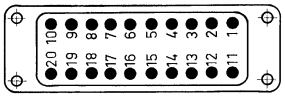
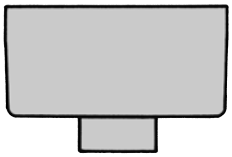
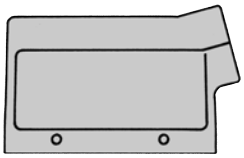
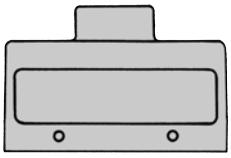
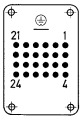
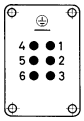
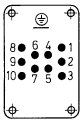
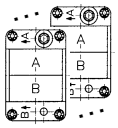
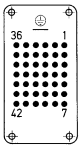
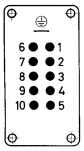
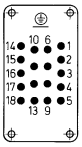
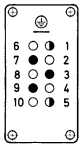
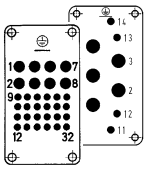
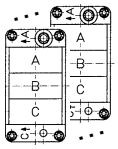
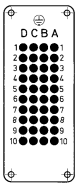
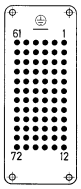
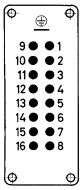
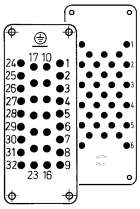
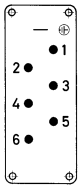
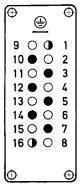
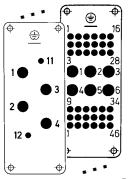
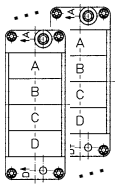
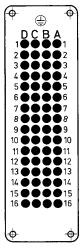
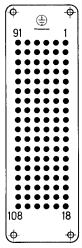
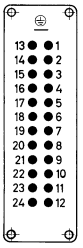
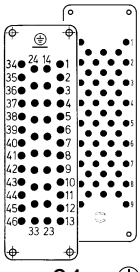
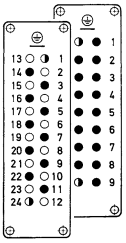
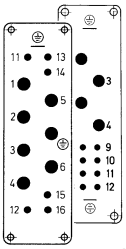
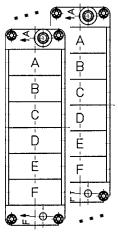
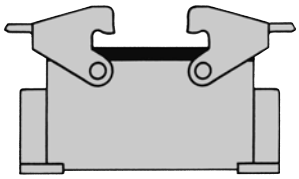
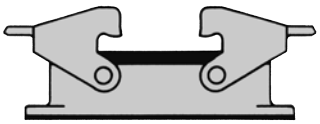
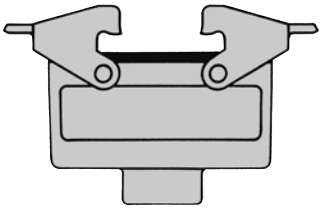
Summary Han®-sizes

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

Summary Han®-sizes

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

Types of hood/housing

Standard hoods/housings for industrial connectors

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

Han® M hoods/housings for more demanding environmental requirements

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

Han® EMC hoods/housings for higher EMC requirements

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

Han® HPR hoods/housings for harsh outdoor environments

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

Han-INOX® hoods/housings for harsh environments

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

Types of hood/housing

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

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

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

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

Recommended tightening torque for housings, bulkhead mounting

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

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

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

General remark for assembling

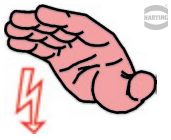
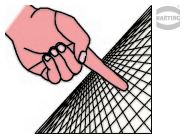
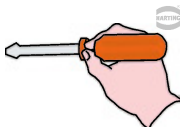
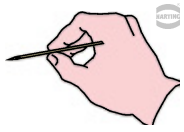
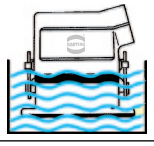
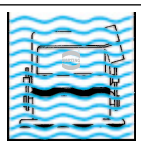
During assembly and handling of the connector, any kind of damage to the surface of the housing must be avoided to guarantee the correct surface protection.

Hoods/Housings connector insert protection

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

The following table shows the different degrees of protection.

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

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

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

How to order connectors

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

Cable entry protection

Universal cable glands

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

Cable gland with normal or multiple seal

Extensive range of accessories

Hoods

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

Male insert with

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

Female insert with

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

Housings

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

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

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

Accessories

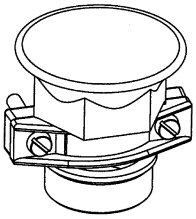
Protective covers available

Code and guide pins for coding

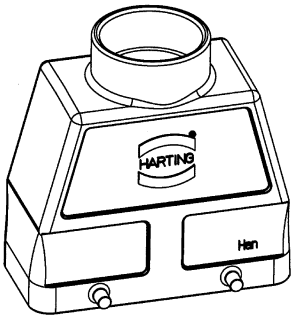
Special insert fixing screws for use without hoods and housings

Label according to CSA-approval

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

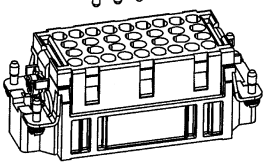


Cable clamp

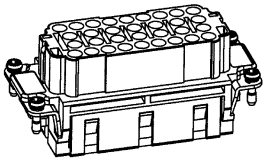


Hood

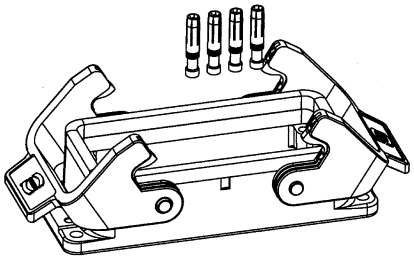
Male contacts



Male insert



Female insert



Female contacts

Housing

Part number explanation

Our computerized ordering system uses the following code: