

Han® industrial connectors with degree of protection IP 65 / IP 67 represent the worldwide standard for safe installation, quick commissioning and easy servicing of machines and plants.











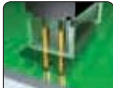


The use of Han® connectors enables efficient and cost-effective modular structures of machines and plants.

The outstanding properties of Han® connectors are reflected by their versatility, application bandwidth and ruggedness. The advantages of the Han® connector family that users know from installation tasks are also available for direct device connections. The Han® connectors support the installation of automation systems in control cabinets and of IP 65 / IP 67 distributed devices using identical connectors.

Key user benefits: Investment and operational security.

Application profile:

CONNECTION TYPE		ENVIRONMENT		APPLICATION						
Board to Board	Cable/ Wire to Board	IP 20	IP 65 / IP 67	Data	Signal	Power	high performance			
							Data transfer rate	Shielding	Number of contacts, contact density	Voltage, working current

Cable termination			PCB termination			Application standard	
Han-Quick Lock®	IDC	Crimp	THT	SMC	SMT		
						ECOFAST	
Screw	Cage clamp	Axial screw	Press-in			Housing integration	
						separate housing	integrated housing
							

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Han® connectors with degree of protection IP 65 / IP 67 are established as the worldwide standard for industrial connectors. This standard connector can also be used directly as appliance connector.

The rugged housings are equipped with secure interlock mechanisms that protect the contact inserts from external negative influences such as dust, dampness and mechanical stress. On the appliance side, the connector contacts are routed in the bulkhead mount module, soldered directly onto the PCB and are aligned precisely to the bulkhead frame. This results in appliance connections that are resistant to any environmental stress.

The Han® appliance connectors offer comprehensive solutions based on connector inserts for data, signal and power lines up to 32 A per contact. The Han® 3A housing can be equipped for

communication applications with copper-bound RJ45 modules, 4-pole (Cat. 5) and 8-pole (Cat. 6) and optical LC modules.

The power contact inserts are available for the Han® 3A, Han® Compact and Han® B housing variants. The cables can be wired to the contact inserts by way of crimp, screw or cage clamp terminals, or using the patented Quick-Lock® quick connection technology for on-site assembly.

HARTING highlights its Han® 3A appliance connector series with versatile hybrid contact inserts for wiring data and power lines using a single connector and cable. This functionality results in a reduction of insertion points and cabling by more than 50%.

Han® connectors with high degree of protection can be used for wiring appliances, terminal boxes and control cabinets.



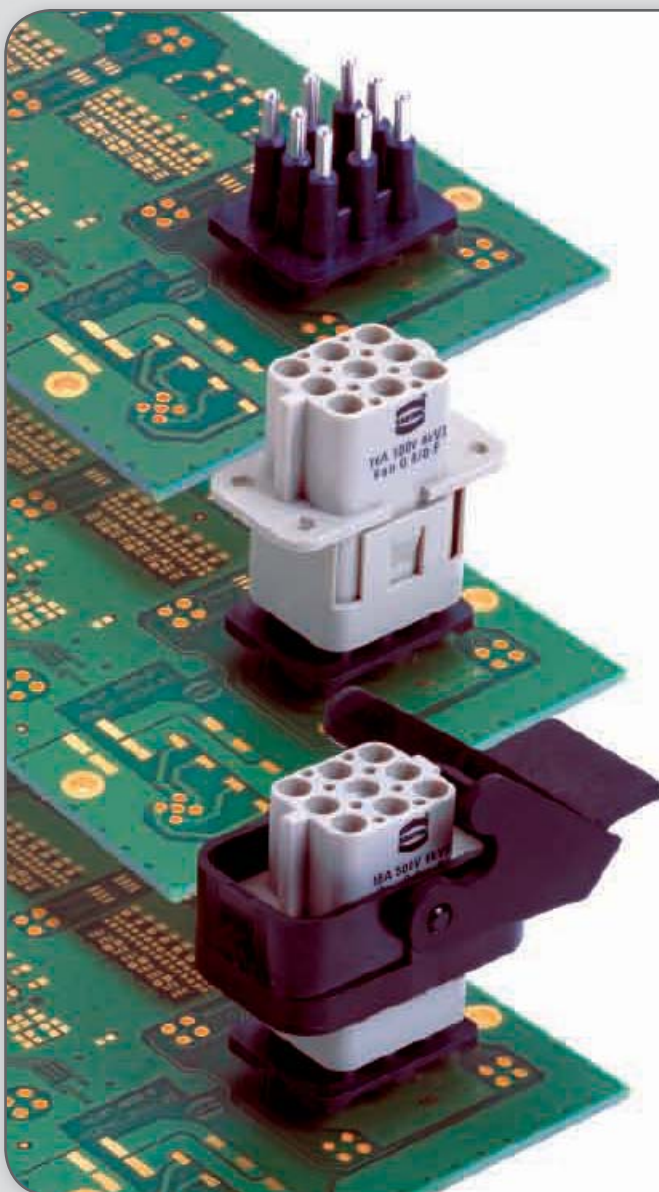
Han® APPLIANCE CONNECTORS:

The PCB-Adapter of HARTING can be used to convert Han® industrial connectors into fully-fledged PCB connectors. The modular PCB adapters enable the implementation of various Han® contact inserts.

The PCB Adapter concept:

- The PCB adapter is processed as component in a standard soldering process and is a fixed part of the PCB.
- The contact insert of the Han® industrial connector is simply plugged in after the soldering process has been completed.
- The bulkhead mount housing with the bracket interlock is mounted to the appliance housing.

This modularity guarantees the availability of a wide range of contact inserts and connector housings for the assembly of a multitude of rugged IP 65 / IP 67 appliance connectors for data, signal and power lines.



SCALABLE HYBRID APPLIANCE CONNECTION USING Han® CONNECTORS:

The hybrid appliance connector series enable the cost-effective combination of Fieldbus/Ethernet communication and power supply lines in a single cable and connector.

The contact insert combination for communication and for the power supply to the appliance is soldered directly to the PCB. The bulkhead mount housing can be adapted directly to the housing shape, or be mounted as separate unit to the appliance housing. HARTING offers cable solutions for smaller batches which can be used to connect the contact insert to the PCB.

Key user benefits: A tailored appliance connection is always available for small- and large-scale appliance series.





Han® 3A RJ45 device side

Advantages

- Simple mounting
- RJ45 plug-compatible
- Different versions cover all applications
- Coding (4 variants) possible

Technical characteristics

Number of ports	2 / 1x Han® 3A RJ45 (IP 65 / IP 67)
Copper / termination	1x RJ45 (Twisted Pair) (IP 20)
Transmission performance	Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Mounting	screw-on type on steel plate walls
Degree of protection	IP 65 / IP 67
Mating cycles	min. 500
Temperature range	– 40 °C up to + 70 °C
Housing material	
Plastic version	Polycarbonate, black, UL 94 V-0
Metal version	Zinc die-cast, powder coating, grey

Identification

Part No.

Drawing

Dimensions in mm

Housing bulkhead mounting

Plastic version, black
Metal version Standard
Metal version M



09 20 003 0327
09 20 003 0301
09 37 003 0301

with fixed cover
and with seal
Metal version Standard



09 20 003 0306

Adapter

for fixing of RJ45 female
with fixing clip
without fixing clip

09 45 515 0020
09 45 515 0022

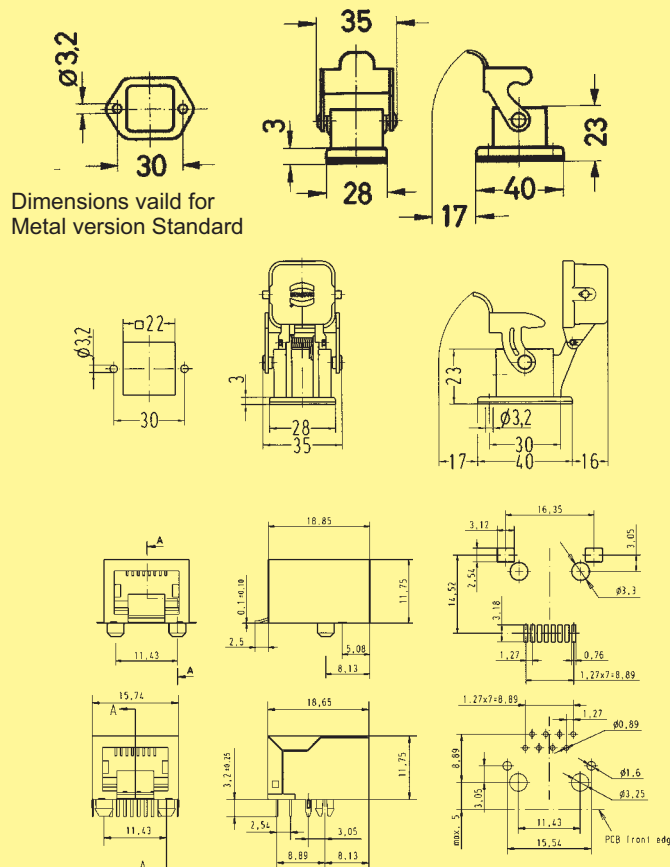
RJ45 Buchsen Cat. 5

Solder variant SMD,
90° angled

09 45 551 1100¹⁾
09 45 551 1110²⁾

Solder variant overmolded,
90° angled

09 45 551 1102¹⁾



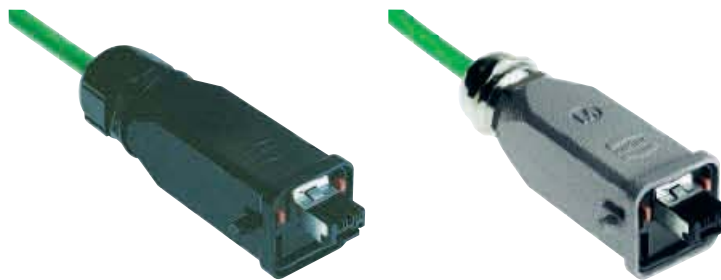
¹⁾ Packaging: Blister à 120 pieces

²⁾ Packaging: Tape & Reel à 130 pieces



Han® 3A RJ45-panel feed-throughs and couplings

Identification		Part No.	Drawing	Dimensions in mm
panel feed-through set, 8 poles incl. housing bulkhead mounting and instruction manual				
Plastic version, black	straight	09 45 225 1100		
	angled	09 45 225 1108		
Metal version Standard	straight	09 45 215 1100		
	angled	09 45 215 1108		
Metal version Standard with self-closing protective cap	straight	09 45 215 1103		
Metal version M	straight	09 45 215 1102		
	angled	09 45 215 1109		
Coding pin set for 4 different codings		09 45 820 0000	Dimensions vaild for plastic version, straight	
Double coupling, 8 poles incl. installation frame metal				
Plastic version, black		09 45 225 1107		
Metal version Standard		09 45 215 1107		
Metal version M		09 45 215 1110		
Coding pin set for 4 different codings		09 45 820 0000		
Protection cover for panel feed-through IP 65 / IP 67 with seal				
Plastic version, black		09 20 003 5449		
Metal version Standard, grey		09 20 003 5425		
Metal version M, black		09 37 003 5405		
			Dimensions vaild for plastic version	



Han® 3A connector RJ45, 4-poles

Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Tool-less field-assembly with *HARAX*® rapid termination in IDC technology
- Category of transmission Cat. 5
- Compact design and very robust housing
- Suitable for termination of solid and stranded cables
- Up to 10 x reconductable
- PROFINET compatible
- Min. 500 mating cycles

Technical characteristics

Connector type	Han® 3A Connector RJ45 acc. to IEC 61076-3-106 variant 5
Number of contacts	4
Transmission performance	Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	fully shielded, 360° shielding contact
Cable termination	tool-less with IDC contacts
Cable diameter	
stranded	AWG 24/7 - AWG 22/7
solid	AWG 23/1 - AWG 22/1
Cable outer diameter	6.0 mm – 9.0 mm
Degree of protection	IP 65/67
Temperature range	– 40 °C up to + 70 °C
Housing material	
Plastic version	Polycarbonate, UL 94 V-0, black
Metal versions	
Standard	Zinc die-cast, powder coating grey
M-version	Zinc die-cast, powder coating black

Identification

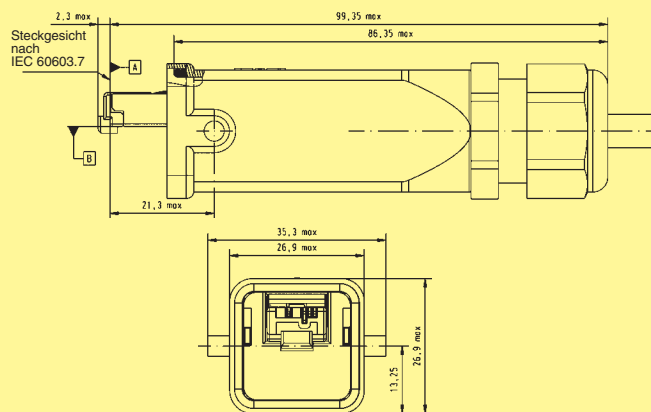
Part No.

Drawing

Dimensions in mm

Han® 3A connector set RJ45, 4-poles
incl. housing, cable gland
and instruction manual

Plastic version	straight	09 45 125 1100
	angled	09 45 125 1104
Metal version Standard	straight	09 45 115 1100
	angled	09 45 115 1104
Metal version M	straight	09 45 115 1102
	angled	09 45 115 1106
Coding pin set		09 45 820 0000



Dimensions valid for plastic version, straight



Han® 3A connector set RJ45, 8-poles

Advantages

- RJ45 Ethernet-Data connector suitable for industry
- Field-assembly with mounting tool
- Category of transmission Cat. 6
- Compact design and very robust housing
- Min. 500 mating cycles

Reference note:

For cat. 6 patch cords it is recommended to use 1 connector with a white wire manager and one with a blue cable manager, in order to optimise the crosstalk between different signal pairs.

Further informations see also page 01.08.

Technical characteristics

Connector type	Han® 3A Connector RJ45
Number of contacts	8
Transmission performance	Category 6 / Class E up to 250 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100/1000 Mbit/s
Shielding	fully shielded, 360° shielding contact
Cable termination	with piercing contacts
Cable diameter	AWG 27/7 - AWG 24/7, stranded
Cable outer diameter	6.0 mm – 8.0 mm
Degree of protection	IP 65 / IP 67
Temperature range	– 40 °C up to + 70 °C
Housing material	
Plastic version	Polycarbonate, UL 94 V-0, black
Metal versions	
Standard	Zinc die-cast, powder coating grey
M-version	Zinc die-cast, powder coating black

Identification	Part No.	Drawing	Dimensions in mm
Han® 3A connector set RJ45, 8-poles incl. housing, cable gland and instruction manual		Mating face acc. to IEC 60 603-7	
Plastic version, black	Wire manager white Wire manager blue		
	09 45 125 1500 09 45 125 1510		
Metal version Standard	Wire manager white Wire manager blue		
	09 45 115 1500 09 45 115 1510		
Metal version M	Wire manager white Wire manager blue		
	09 45 115 1502 09 45 115 1512		
Coding pin set	09 45 820 0000		
			<p>Dimensions valid for metal version Standard</p>



Han® 3A 2x LC duplex

Advantages

- Compact, space-saving Design
- Just one LWL modul for high mechanical load
- High packing density
- A & B parts identification according to TIA 568 standard

Technical characteristics

Degree of protection	IP 65 / IP 67
Temperature range	-40 °C up to +70 °C
Housing material	Zinc die-cast powder coating black

Identification	Part No.	Drawing	Dimensions in mm
Components device side*			
Multimode GOF	09 57 467 0001 000		
Singlemode GOF	09 57 467 0002 000		
	projected		
Connector			
Multimode GOF	09 57 407 0001 000		
Singlemode GOF	09 57 407 0002 000		
	in projected		



Han® 3A RJ45 Hybrid

Advantages

- RJ45 Ethernet-Data connector suitable for industry with Power contacts for hybrid applications
- Field-assembly with mounting tool
- Category of transmission Cat. 5
- Compact design and very robust housing
- Suitable for termination with solid and stranded cables
- Protection against direct contact on cable and device side according to EN 60529

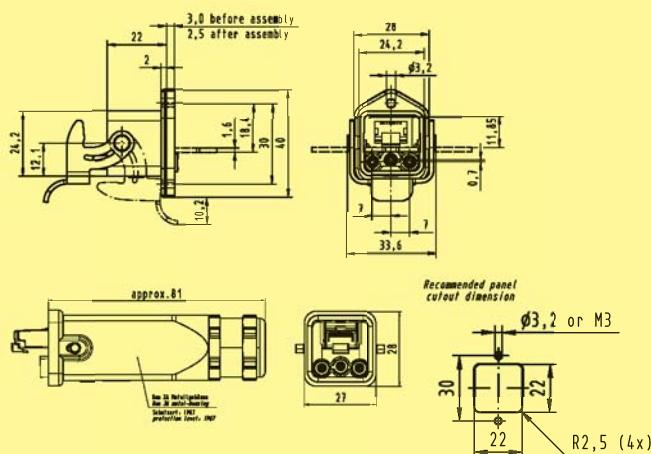
Reference note:

For cat. 6 patch cords it is recommended to use 1 connector with a white cable manager and one with a blue cable manager, in order to optimise the crosstalk between different signal pairs.

Technical characteristics

Degree of protection	IP 65 / IP 67
Mating interface	RJ45, 8-poles acc. to IEC 60 603-7 plus 3x power
Temperature range	– 40 °C up to + 70 °C
Housing material	Zinc die-cast, powder coating black
Data	
Transmission performance	Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	fully shielded, 360° shielding contact
Cable diameter stranded	AWG 27/7 - AWG 24/7
Power	
Number of contacts	3 (AC: L1, PE, N / DC: V+, GND, V-)
Working voltage	300 V AC/DC
Working current	12 A @ 70 °C (see current carrying capacity Han D® contacts)
Cable diameter	2.5 mm ²

Identification	Part No.	Drawing	Dimensions in mm
Components device side incl. 3x Han D® female contacts			
AC version	09 57 368 0500 000		
DC version	09 57 368 0501 000		
Cable side Connector incl. 3x Han D® male contacts			
AC version	09 57 308 0500 000		
DC version	09 57 308 0501 000		





Hybrid cable assembly

Identification	Part No.	Drawing	Dimensions in mm
Hybrid cable, double ended, 4 x 2 x AWG 26/7 + 3 x 2.5 mm² <p>Length: 1 m AC version DC version</p> <p>Length: 5 m AC version DC version</p> <p>Length: 10 m AC version DC version</p> <p>Length: 20 m AC version DC version</p>	<p>33 57 211 0010 001 33 57 211 0010 002</p> <p>33 57 211 0050 001 33 57 211 0050 002</p> <p>33 57 211 0100 001 33 57 211 0100 002</p> <p>33 57 211 0200 001 33 57 211 0200 002</p>	<p>double ended</p> <p>a = length</p> <p>Protection level: IP 65 / IP 67</p> <p>Data part: Transmission properties in accordance with ISO/IEC 11 801:2002: Class D</p> <p>single ended</p> <p>a = length</p>	<p>Min. bending radius: single: 5 x OD repeated: 10 x OD</p>
Hybrid cable, single ended, 4 x 2 x AWG 26/7 + 3 x 2.5 mm² <p>Length: 1 m AC version DC version</p> <p>Length: 5 m AC version DC version</p> <p>Length: 10 m AC version DC version</p> <p>Length: 20 m AC version DC version</p>	<p>33 57 111 0010 002 33 57 111 0010 001</p> <p>33 57 111 0050 002 33 57 111 0050 001</p> <p>33 57 111 0100 002 33 57 111 0100 001</p> <p>33 57 111 0200 002 33 57 111 0200 001</p>	<p>single ended</p> <p>a = length</p>	
Hybrid outdoor cable <p>Length: 10 m</p> <p>Length: 20 m</p> <p>Length: 500 m</p>	<p>33 57 851 0100 001</p> <p>33 57 851 0200 001</p> <p>33 57 851 5000 001</p>	<p>PVC jacket 4 x 2 x AWG 26/7 + 3x2.5 mm² Outer diameter: 12 mm Min. bending radius: single: 5 x OD repeated: 10 x OD</p>	



Advantages

- Small form factor (compared to SC and ST®)
- Compact, space-saving Design
- Combined to only one LWL-modul for high mechanical load
- High packing density
- A & B parts identification according to TIA 568 standard

Degree of protection	IP 65 / IP 67
Temperature range	-40°C up to +70°C
Data	
Mating module	LC duplex (2 fibres)
Cable diameter	6.0 ... 9.0 mm
Power	
Number of contacts	3(AC: L1, PE, N / DC: V+, GND, V-)
Working voltage	300 V AC/DC
Working current	12 A @ 70°C
Number of contacts	3(AC: L1, PE, N / DC: V+, GND, V-)
Housing material	Aluminium die-cast, black

Identification	Part No.	Drawing	Dimensions in mm
Components device side Power: 3x Han D® male contacts			
Data: Multimode GOF	AC	09 57 568 0500 000	
	DC	09 57 568 0510 000	
Data: Singlemode GOF	AC	09 57 568 0501 000	
	DC	09 57 568 0511 000	
Connector Power: 3x Han D® female contacts			
Data: Multimode GOF	AC	09 57 508 0500 000	
	DC	09 57 508 0510 000	
Data: Singlemode GOF	AC	09 57 508 0501 000	
	DC	09 57 508 0511 000	





Han® 3A RJ45, Hybrid

General information

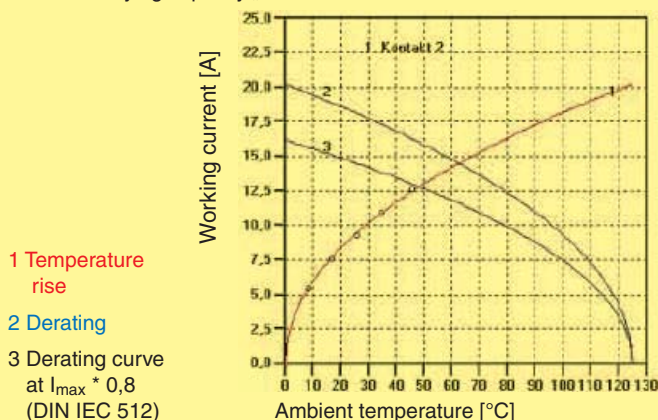
With the RJ Industrial Hybrid connector, HARTING has developed an interface solution that integrates the data lines and the power supply into one connector for hybrid Ethernet networks. The connector's geometry nevertheless maintains a clear separation between the data and the power contacts. This brings a significant reduction in the costs of installation and of field devices suitable for industrial application with hybrid cabling.

The panel feed through is compatible with RJ45 connectors, which means that the standard patch cables for service and test purposes can be used. The data lines are connected at the rear via an RJ45 jack, while the power lines use a cage clamp terminal.

Optional the hybrid interface can be integrated in the device directly, thus preventing the use of rear side data lines.

The four power contacts of the hybrid module have also been designed with HARAX® rapid termination technology, allowing stranded cables of up to 1.5 mm² to be connected.

Current carrying capacity „Power contacts“



Technical characteristics

Connector

Degree of protection	IP 65 / IP 67
Mating interface	RJ45, 4-poles acc. to IEC 60 603-7 plus 4x power
Temperature range	– 40 °C up to + 70 °C
Housing material	
Plastic version	UL 94 V-0, black
Metal version	Zinc die-cast, grey
Mating cycles	min. 500
Mounting	field-assembly

Data

Transmission performance

	Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, prEN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	fully shielded, 360° shielding contact
Cable diameter	
stranded	AWG 24/7 - AWG 22/7
solid	AWG 23/1 - AWG 22/1
Cable outer diameter	10.0 mm – 11.0 mm

Power

Number of contacts	4 for cable diameter 1,5 mm ² stranded
Working voltage	48 V
Working current	see current carrying capacity



UL approved (E102079)

Panel feed-through

Mating interface
extern:

RJ45 female
acc. to IEC 60603-7
plus 4 x power

Mating interface
intern:

RJ45 female
acc. to IEC 60603-7
4 x power via cable cage clamp
1.5 mm²



I



II



III



IV

Han® 3A, Hybrid, components device side panel feed-throughs

Identification	Part No.	Drawing	Dimensions in mm
RJ45 female for direct device integration solder variant SMD 90° angled I	09 45 551 1100 ¹⁾ 09 45 551 1110 ²⁾		pcb layout
Power module with 4 contacts for direct device integration II	09 45 525 0040		
Housing bulkhead mounting separate incl. flat seal for direct device integration Plastic version Metal version Standard III	09 45 525 0021 10 12 005 1004		
panel feed-throughsset incl. housing bulkhead mounting and instruction manual Plastic version, black Metal version Standard IV	09 45 225 1300 10 12 005 1002		
Protection cover for panel feed-through IP 65 / IP 67 Plastic version, black Metal version Standard, grey	09 20 003 5449 09 20 003 5425		

1) Packaging: Blister à 120 pieces

2) Packaging: Tape & Reel à 130 pieces

Technical characteristics and general informations see page 04.12



Han® 3A RJ45, Hybrid

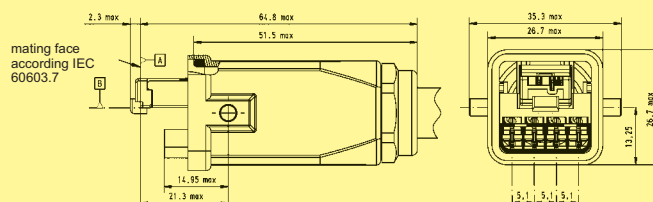
Identification	Part No.	Drawing	Dimensions in mm
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Connector set

Incl. housing and cable gland and instruction manual

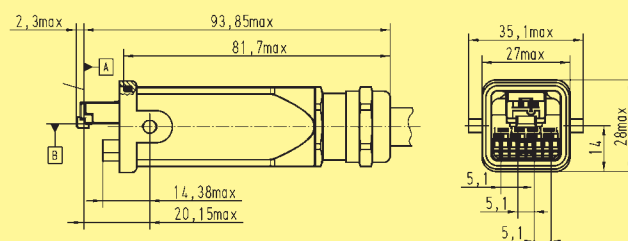
Plastic version, black

09 45 125 1300



Metal version

10 12 005 2001



Protection cover for connector

IP 65 / IP 67 without seal

Plastic version, black

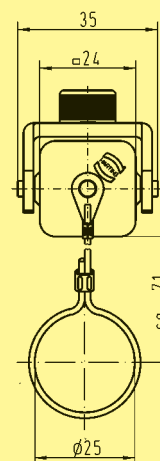
09 20 003 5442

Metal version Standard, grey

09 20 003 5422

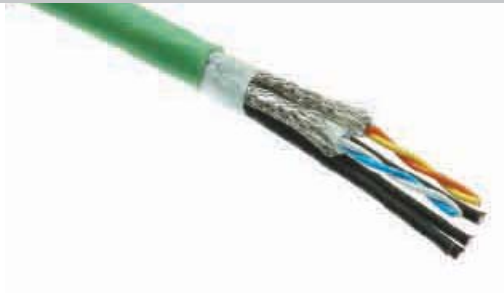
Metal version M

09 37 003 5402



Dimensions valid for plastic version

Han



PROFINET Type B cable, Hybrid
Industrial Cat. 5 Hybrid cable, 4-wire + 4x Power
to make up Hybrid system cables

Advantages

- Robust design for industrial environment
- PROFINET-conform
- Additional power supply
- Hybrid Cat. 5 cable, 4-wire + 4x Power

Technical characteristics

Cable construction	Twisted Pair + 4 Power cables, double shielded
Core structure	2 x 2 x AWG 22/7 + 4 x 1.5 mm² (conductor 84 x 0.15 mm²)
Sheath material	FRNC
Cable outer diameter	10.3 mm
Transmission performance	Category 5 / Class D up to 100 MHz acc. to ISO/IEC 11 801:2002, EN 50 173-1
Transmission rate	10/100 Mbit/s
Shielding	Shielding foil and shielding braid
Temperature range	– 20 °C up to + 70 °C
Standard lengths	10 m / 20 m / 50 m / 100 m
Colour	green
Printing	HARTING specific printing

Identification	Part No.	Drawing	Dimensions in mm
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PROFINET Type B cable, Hybrid
Industrial Cat. 5 Hybrid cable,
4-wire + 4x Power

- 10 m ring
- 20 m ring
- 50 m ring
- 100 m ring

- 09 45 600 0310
- 09 45 600 0330
- 09 45 600 0340
- 09 45 600 0300





Features

General Description


The Han-Brid® series allows the connection of a data interface and a power supply in a single space saving connector. This means that it is now possible to provide data transmission and power to devices in a single bus structure. This hybrid connector family includes provision for connection of a max. 50 V, 10 A power supply together with a range of inserts for connection of a variety of data protocols and transmission medias:

- Han-Brid® F.O. for plastic (POF) or for HCS®* optical fibre
- Han-Brid® Cu for shielded twisted pair.
- Han-Brid® Quintax 3 A for shielded 4 wire bus systems (2 pair STP)
- Han-Brid® RJ45 C for Ethernet application
- Han-Brid® USB / Firewire for fast data transmission

Han-Brid® inserts fit to the standard plastic as well as metal hoods and housings with seal of the Han® 3 A series offering a degree of protection IP 65 according to DIN EN 60 529.

For harsher environments Han® 3 HPR hoods and housings with a degree of protection of IP 68 can be used.

Power supply

- Han D® male and female with standard crimp contacts
- Rated current 10 A
- Rated voltage 50 V
- Wire gauge 0.14 - 2.5 mm²
- Approval 

* HCS® Hard Clad Silica (is registered trade mark of the SpecTran Corporation)

Data interfaces

Han-Brid® F.O.

- Is suitable for all HP Versatile Link (Horizontal Package) transmitters and receivers
- Data rates: Standard 12 Mbit/s, suitable for all common fieldbus systems
- Insert allows integration of HP standard contacts for POF and HCS®* fibres
- Temperature range -40 °C ... +70 °C

Han-Brid® Cu

- For termination of a shielded twisted pair
- Insert for 2x Han D® male or female contacts
- Connection of the shield by means of shielding plate and fixing clamps
- Connection of the device side can be realized either by a printed circuit board as a modular version or as part of the appliance PCB
- Insert for bulkhead mounted housing or the coupling housing are always equipped with a screening spring

Bus Terminator

- Active bus terminator in male and female version
- Standard Han® 3 A hoods and housings
- Power supply to the termination network via electrical contacts of Han-Brid®
- Integrated, galvanically separated DC/DC converter 24 V / 5 V

Han-Brid® Quintax 3 A

- Possibility to terminate shielded 4 wires conductors (2 pair STP)
- Suitable for all 4-wire bus systems
- Suitable for shielded cable conductor diameter 3 – 9.5 mm
- Transmission of shielding separately from the hood's ground
- Connections are carried out acc. to DIN EN 50 173, Cat. 5
- Temperature range -40 °C ... +70 °C

Han-Brid® RJ45 C

- Suitable for standard RJ45 Plug and Jack, shielded version
- Connections provided for conductors acc. to DIN EN 50 173, Cat. 5
- Termination from the device side is carried out via a PCB, two versions are possible: modular version or as part of the appliance PCB
- Assembly with standard tools
- Insert for 2 Han-D® male or female contacts offers the combination with electrical bus connector
- Rated current 10 A
- Rated voltage 24 V
- Wire gauge 0.14 - 2.5 mm²

Han-Brid® USB

- Insert for all Han® 3 A hoods and housings
- Hood with glued sealing
- Simple and low-cost termination via insert of a patch cable
- Strain-relief via cable tie

Han-Brid® FireWire

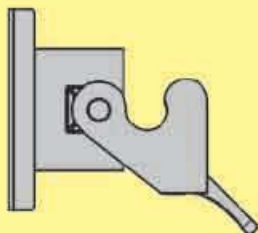
- Insert for all Han® 3 A hoods and housings
- Hood with glued sealing
- Simple and low-cost termination via insert of a patch cable
- Strain-relief via cable tie
- Compatible to IEEE 1394

* HCS® Hard Clad Silica (is registered trade mark of the SpecTran Corporation)

Overview (Sample: Han-Brid® Cu)

Thermoplastic
09 20 003 0320 (light grey)
09 20 003 0327 (black)

Metal
09 20 003 0301



Device side
09 12 006 2611
09 12 006 2695
09 12 006 2694

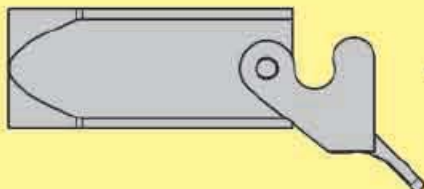
Cable side
09 12 006 3111

Thermoplastic
09 20 003 0423 (light grey)
09 20 003 0426 (black)
19 20 003 0423 (light grey)
19 20 003 0427 (black)

Metal
09 20 003 1443
19 20 003 1443

Thermoplastic
09 20 003 0720 (light grey)
09 20 003 0727 (black)
19 20 003 0720 (light grey)
19 20 003 0727 (black)

Metal
09 20 003 1750
19 20 003 1750



Device side
09 12 006 2701
09 12 006 2795
09 12 006 2794

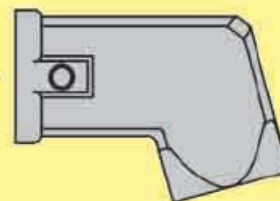
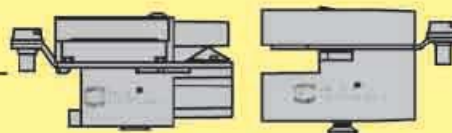
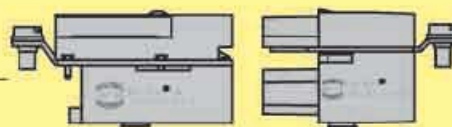
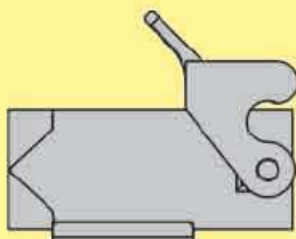
Cable side
09 12 006 3001

Thermoplastic
09 20 003 0623 (light grey)
09 20 003 0626 (black)
19 20 003 0623 (light grey)
19 20 003 0627 (black)

Metal
09 20 003 1643
19 20 003 1643


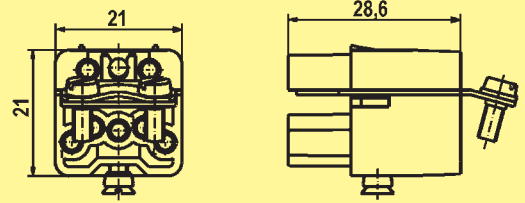

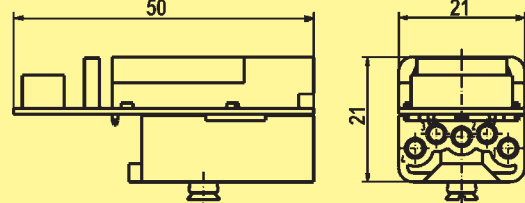

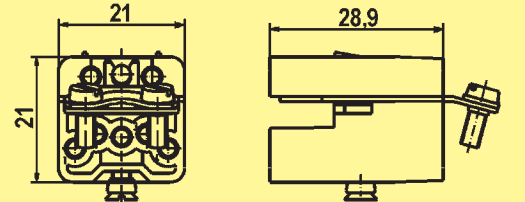

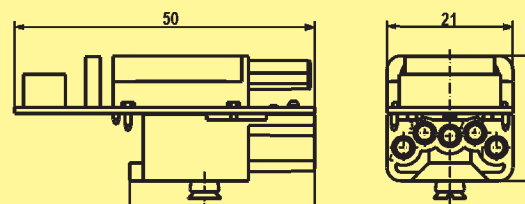
Thermoplastic
09 20 003 0220 (light grey)
09 20 003 0227 (light grey)
19 20 003 0220 (light grey)
19 20 003 0227 (black)


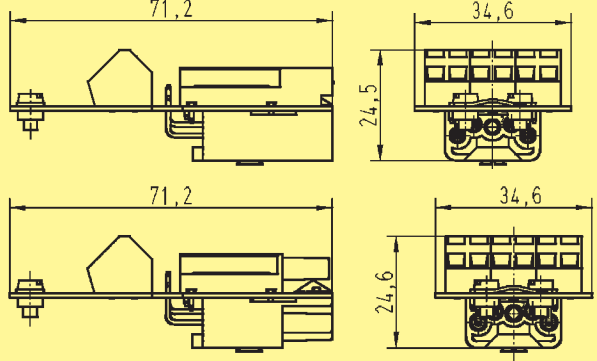

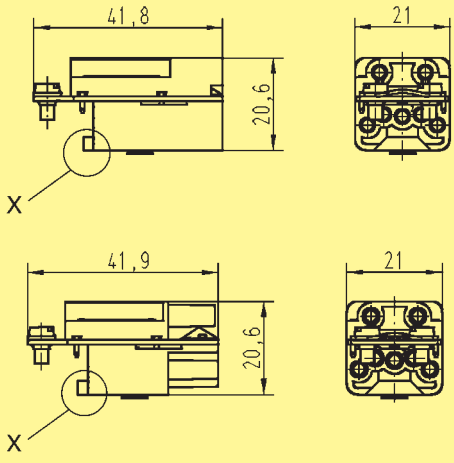


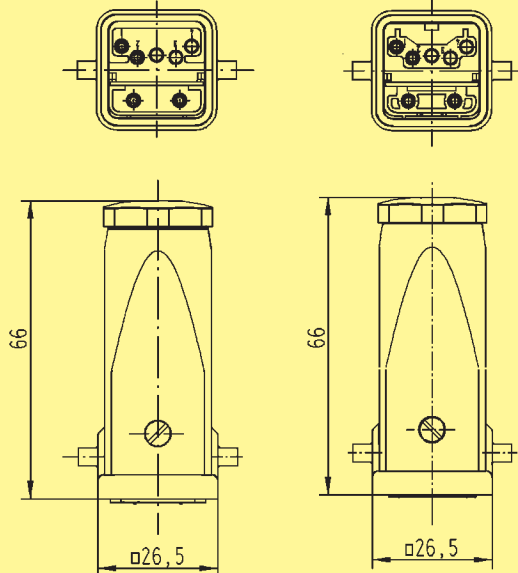
Metal
09 20 003 1250
19 20 003 1250



Hybrid field bus connector
for shielded twisted pair
+ 4 electrical contacts 10 A
+ option for PE




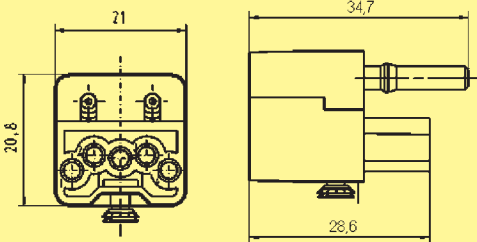

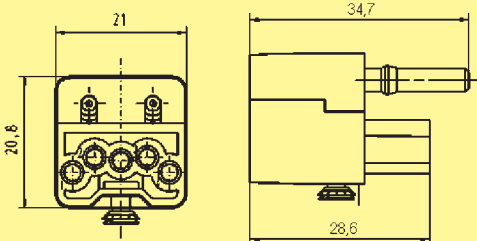

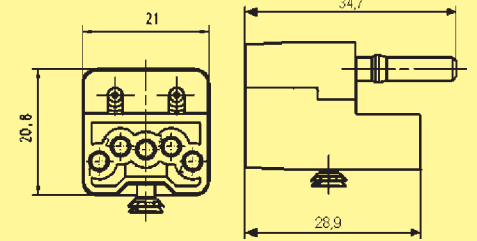

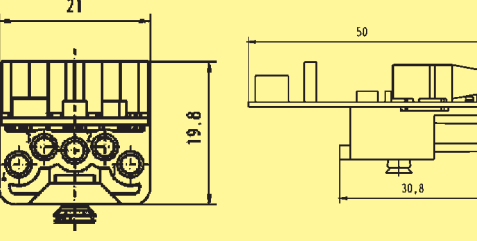
Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Cable side Female insert 	09 12 006 3111		 View from termination side	
Device side Male insert 	09 12 006 2611 Also available as single part loaded 09 12 002 2611 unloaded 09 12 002 3011	Also available as single part unloaded 09 12 004 3011	 View from termination side	
Cable side Male insert 	09 12 006 3001		 View from termination side	
Device side Female insert 	09 12 006 2701 Also available as single part loaded 09 12 002 2701 unloaded 09 12 002 3101	Also available as single part unloaded 09 12 004 3101	 View from termination side	

Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Panel feed through with cage clamp 	09 12 006 2695	09 12 006 2795		
Coupling / Panel feed through  <p>X = Cutting off the fin allows the use in cable to cable housings</p>	09 12 006 2694	09 12 006 2794		
Bus terminator Plastic hoods/housings  Hoods/Housings, metal 	09 12 006 2691	09 12 006 2791		

Stock items in bold type

Hybrid field bus connector
with F.O. transmitter and receiver
+ 4 electrical contacts 10 A
+ option for PE



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Cable side F.O. (m) + Han D® (f) 	Also available as single part for POF 09 12 004 2711 for POF crimpless 09 12 004 2713 for HCS®* fibre 09 12 004 2716	Also available as single part for POF 09 12 004 3111 for POF crimpless 09 12 004 3113 for HCS®* fibre 09 12 004 3116	 View from termination side	
Device side F.O. (f) + Han D® (m) 	for POF 09 12 004 2611 for POF crimpless 09 12 004 2611 for HCS®* fibre 09 12 004 2611	for POF 09 12 004 3011 for POF crimpless 09 12 004 3011 for HCS®* fibre 09 12 004 3011	 View from termination side	
Cable side F.O. (m) + Han D® (m) 	Also available as single part for POF 09 12 004 2601 for POF crimpless 09 12 004 2603 for HCS®* fibre 09 12 004 2606	Also available as single part for POF 09 12 004 3001 for POF crimpless 09 12 004 3003 for HCS®* fibre 09 12 004 3006	 View from termination side	
Device side F.O. (f) + Han D® (f) 	for POF 09 12 004 2701 for POF crimpless 09 12 004 2701 for HCS®* fibre 09 12 004 2701	for POF 09 12 004 3101 for POF crimpless 09 12 004 3101 for HCS®* fibre 09 12 004 3101	 View from termination side	

* HCS®=Hard Clad Silica (is registered trade mark of the SpecTran Corporation)

Stock items in bold type

4 contacts + shielding
+ 2 power contacts
suitable in Han® 3 A metric
hoods and housings

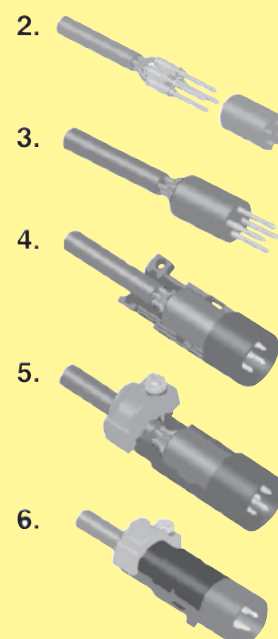
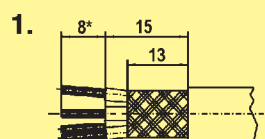


Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Quintax insert 	09 15 003 3001	09 15 003 3101		
Quintax contacts Zinc alloy Order crimp contacts separately (see page)06.55 Special clamp for cable diameter 3 - 6 and 6 - 9.5 mm included in delivery range	09 15 004 3013	09 15 004 3113		

Assembly instructions

Quintax-Z-contact

- Strip cable acc. to drawing 1 and fold the shielding over the cable.
- Crimp Han D® contacts onto the wires.
- Insert Han D® contacts into corresponding cavities of insulator until they are snapped in.
- Fit the insert including the cable into the opened shielded bushing. The coding pin of the shielded bushing has to meet the groove of the insulator.
- Clamp the tilt over the shielding onto the cable by means of the special clamp (small opening for cable diameter of 3 - 6 mm, large opening for cable diameter of 6 - 9.5 mm).
- Check the wiring.
- Close the shielded bushing with the cover and insert it into the corresponding cavity of the Quintax Module as usual.



Hybrid network connector
+ 2 electrical contacts 10 A



Identification

Part number

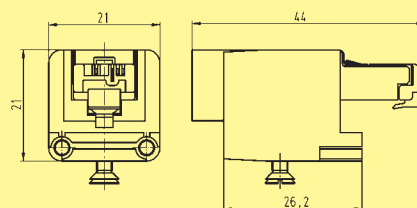
Drawing

Dimensions in mm

Han-Brid® RJ45 C
with RJ Industrial



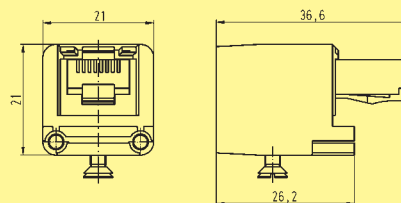
09 12 003 3011



Han-Brid® RJ45 C
with Stewart RJ45



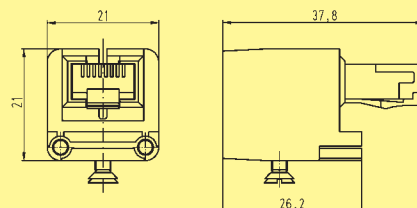
09 12 003 3021



Han-Brid® RJ45 C
with HIROSE RJ45



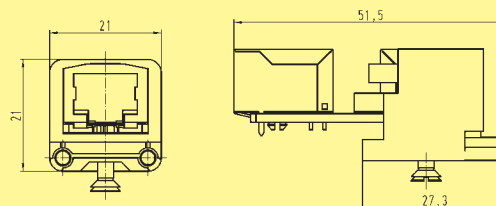
09 12 003 3031



Panel feed through
straight



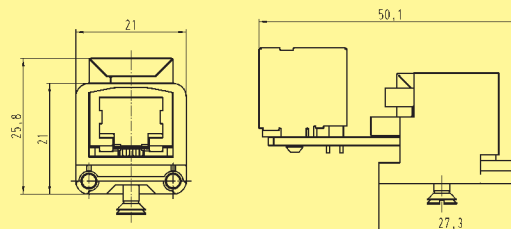
09 12 003 2774



Panel feed through
angled



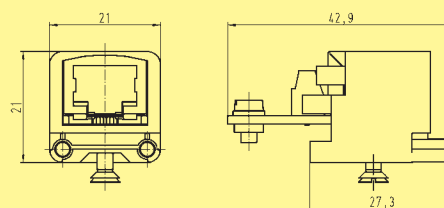
09 12 003 2776



Panel feed through
with 4-pole terminal block



09 12 003 2770



Han-Brid® USB

Features

- Insert for all Han® 3 A hoods and housings
- Hood with glued sealing
- Simple and low-cost termination via insert of a patch cable
- Strain-relief via cable tie

Technical characteristics

USB style A, 2.0 Standard

Specifications DIN VDE 0110
DIN EN 61 984

Number of contacts	4
Electrical data	
acc. to EN 61 984	1 A 50 V 0.8 kV 3
Rated current	1 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Material	Polycarbonate
Insulation resistance	$\geq 10^{10} \Omega$
Contact resistance	$\geq 4 \text{ m}\Omega$
Temperature range	-40 °C ... 85 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 500

Han-Brid® FireWire

Features

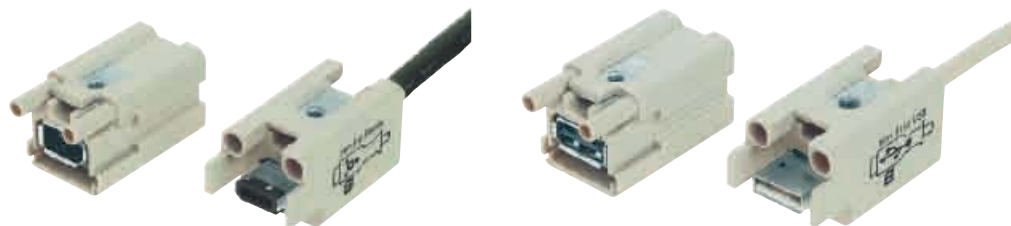
- Insert for all Han® 3 A hoods and housings
- Hood with glued sealing
- Simple and low-cost termination via insert of a patch cable
- Strain-relief via cable tie
- Compatible to IEEE 1394


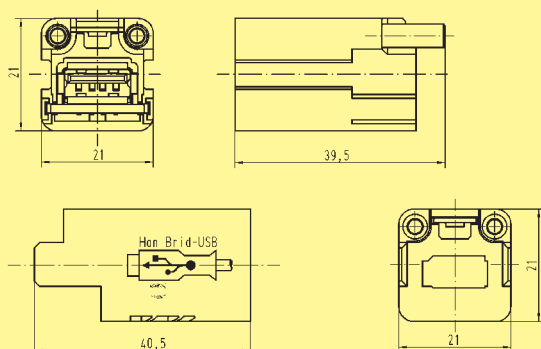

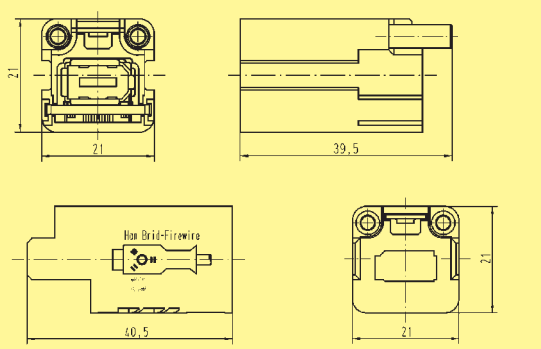
Technical characteristics

Firewire IEEE 1394

Specifications DIN VDE 0110
DIN EN 61 984

Number of contacts	6
Electrical data	
acc. to EN 61 984	1 A 50 V 0.8 kV 3
Rated current	1 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Material	Polycarbonate
Insulation resistance	$\geq 10^{10} \Omega$
Contact resistance	$\geq 4 \text{ m}\Omega$
Temperature range	-40 °C ... 85 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 500



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Han-Brid® USB 	09 12 001 2794	09 12 001 3091		
Han-Brid® FireWire 	09 12 001 2774	09 12 001 3071		



Insert	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Order contacts separately	09 12 005 3001	09 12 005 3101		

¹⁾ Distance for contact max. 21 mm

PCB-adapter	Part No.		Drawing	Dimensions in mm
with PE contact panel for Han® Q 5/0	09 12 000 9905			

Adapter

PE contact panel

Solder contacts	Part No.		Drawing	Dimensions in mm
	Male contact	Female contact		
to connect the PCB-adapter	09 33 000 6195	09 33 000 6295		

Housing	Part No.		Drawing	Dimensions in mm
bulkead mounting	09 62 003 0304			

Further informations see HARTING catalogue "Industrial Connectors Han®, chapter Q"

Stock items in bold type

Features

- ❑ Robust design
- ❑ Suitable for EMC housings
- ❑ Low wiring costs
- ❑ Additional robust and secure PE-connection between housing and PCB

Technical characteristics

Approvals



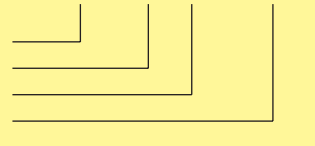
Inserts

Number of contacts 5

Electrical data
acc. to DIN EN 61 984

10 A 230/400 V 4 kV 3

Working current
Working voltage conductor – ground
Working voltage conductor – conductor
Rated impulse voltage
Pollution degree

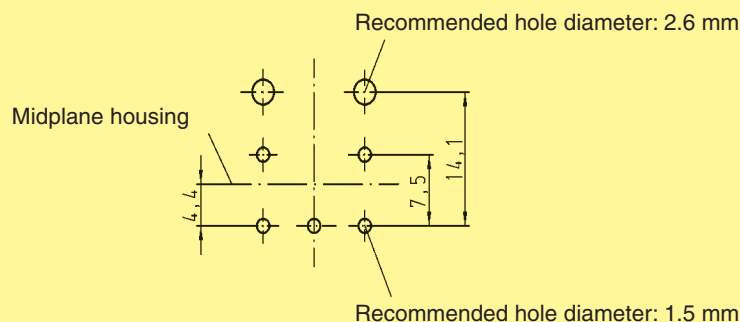


- pollution degree 2 also 10 A 320/500 V 4 kV 2

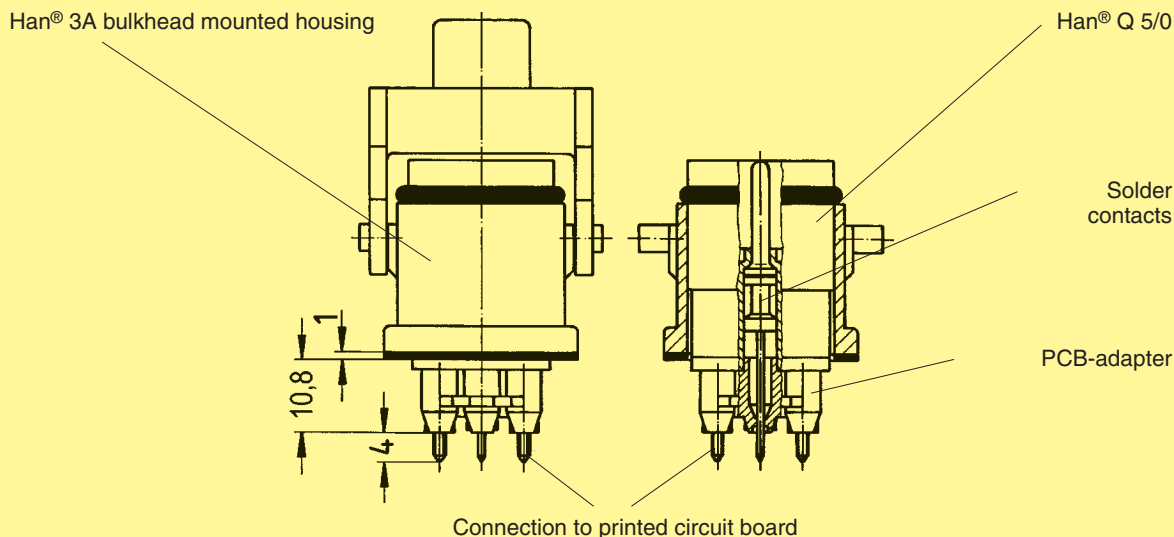
Working voltage
acc. to UL/CSA 400 V

Insulation resistance $\geq 10^{10} \Omega$
Material Polycarbonate
Limiting temperatures - 40 °C ... +125 °C
Flammability acc. to UL 94 V 0
Mechanical working life
- Mating cycles ≥ 500


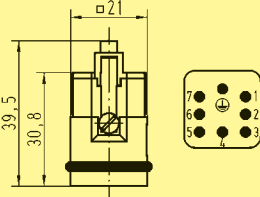
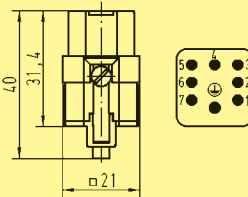
Layout of printed circuit boards

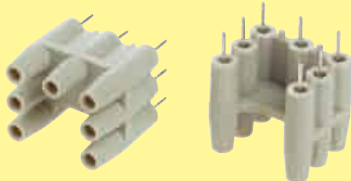
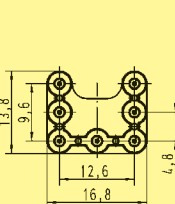
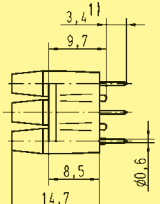



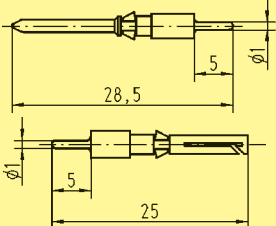
Assembly situation


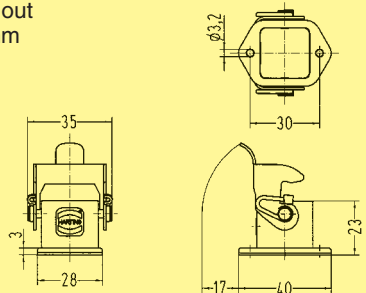




Insert	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Order contacts separately				
	09 12 007 3001	09 12 007 3101		
Coding	09 12 000 9901	09 12 000 9902		

PCB-adapter	Part No.	Drawing	Dimensions in mm
for PCB up to 2.4 mm			
	09 12 000 9908		

Solder contacts	Part No.		Drawing	Dimensions in mm
	Male contact	Female contact		
to connect the PCB-adapter				
	09 15 000 6190	09 15 000 6290		

Housing	bulhead mounting	Part No.	Drawing	Dimensions in mm
		09 20 003 0301		

Further informations see HARTING catalogue "Industrial Connectors Han®, chapter Q"

Stock items in bold type

Features

- ❑ Robust design
- ❑ Suitable for standard and EMC housings
- ❑ Low cost wiring
- ❑ High contact density

Technical characteristics

Approvals



Inserts

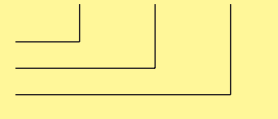
Number of contacts

7

Electrical data
acc. to DIN EN 61 984

7.5 A 250 V 4 kV 3

Working current
Working voltage
Rated impulse voltage
Pollution degree



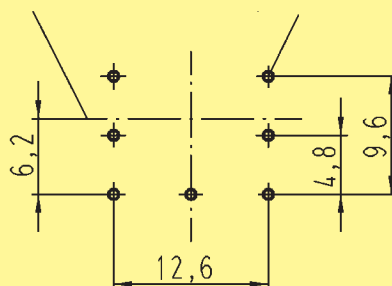
Insulation resistance
Material
Limiting temperatures
Flammability acc. to UL 94
Mechanical working life
- Mating cycles

$\geq 10^{10} \Omega$
Polycarbonate
- 40 °C ... +125 °C
V 0
 ≥ 500

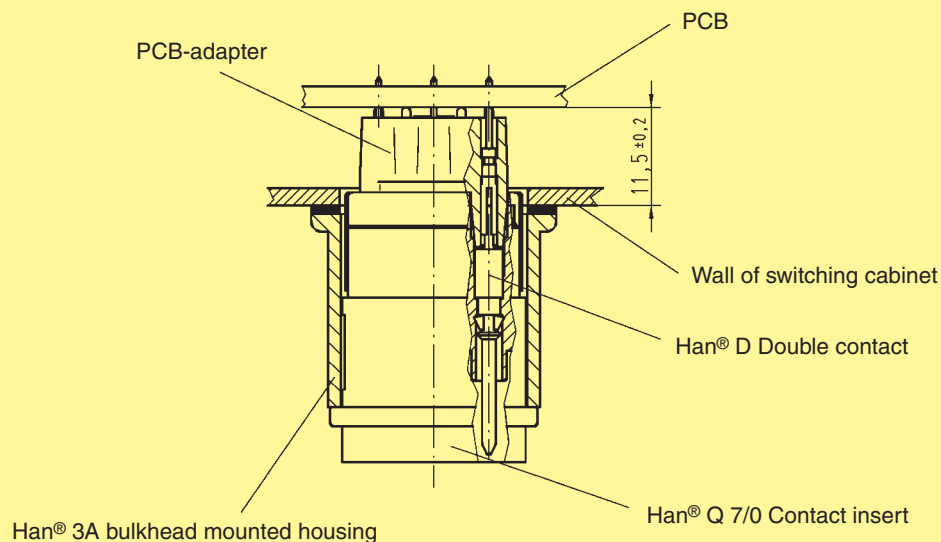
Layout of printed circuit boards


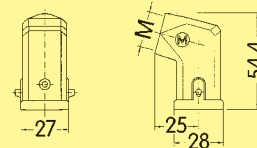

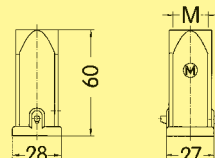
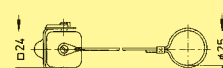

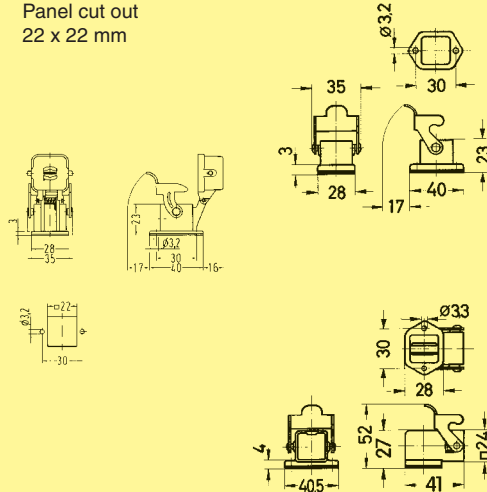




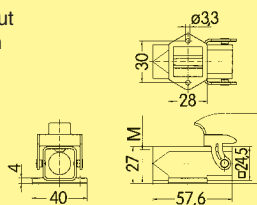
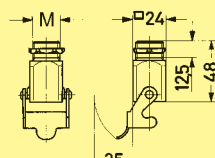


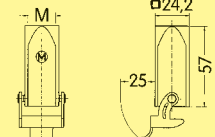
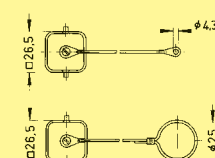
Midplane housing

Recommended hole diameter: 0.8 mm


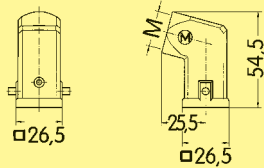

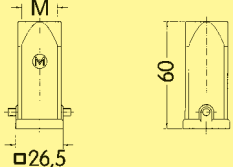
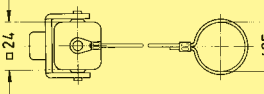


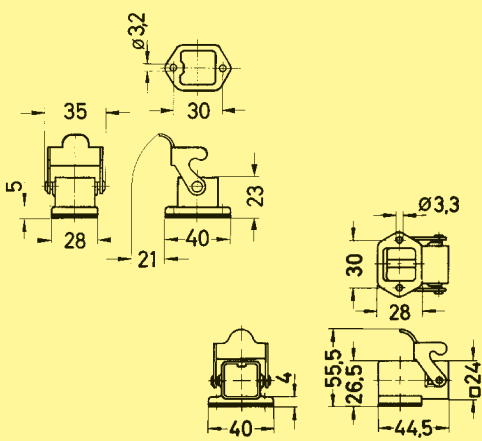

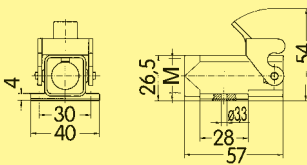

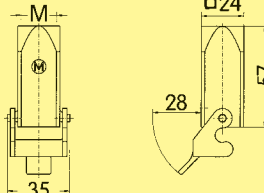
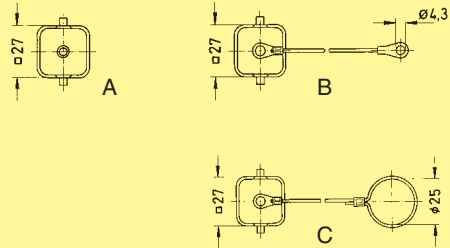


Assembly situation




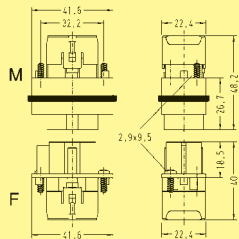
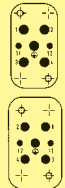
Identification			Part No.	M	Drawing	Dimensions in mm
Hoods	Hood side-entry		19 20 003 1640	20		
	Hood top-entry		19 20 003 1440	20		
	Protection covers for hoods		09 20 003 5422 ¹⁾ 09 20 003 5421 ²⁾			
Housings	Housings bulkhead mounting		09 20 003 0301		<p>Panel cut out 22 x 22 mm</p> 	
	with fixed cover		09 20 003 0305 ¹⁾			
	without sealing		09 20 003 0306 ²⁾			
	with sealing		09 20 003 0801			
	Housing surface mounting		19 20 003 1250	20	<p>Panel cut out 22 x 22 mm</p> 	
	1 side-entry		19 20 003 1252	20		
	bottom closed					
	Housing screw mounting		19 20 003 1150	20		
Hood cable to cable		19 20 003 1750	20			
Protection covers for housings		09 20 003 5426 ¹⁾ 09 20 003 5425 ²⁾				
	for hoods cable to cable	09 20 003 5428 ¹⁾ 09 20 003 5427 ²⁾				


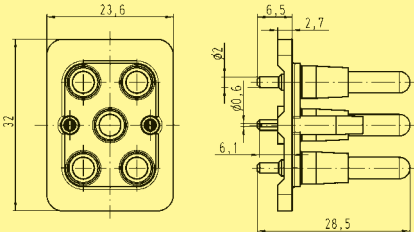
¹⁾ for mounted male insert ²⁾ for mounted female insert

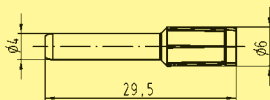
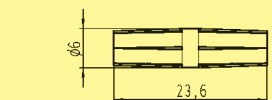
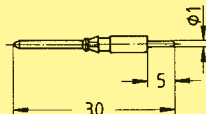
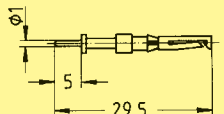
Identification		Part No.	M	Drawing	Dimensions in mm
Hoods	Hoods side-entry	 grey 19 20 003 0620 black 19 20 003 0627	20 20		
	Hoods top-entry	 grey 19 20 003 0420 black 19 20 003 0427	20 20		
	Protection covers for hoods	09 20 003 5442 ¹⁾ 09 20 003 5441 ²⁾			
	Housings bulkhead mounting	 grey 09 20 003 0320 black 09 20 003 0327  grey 09 20 003 0820 black 09 20 003 0827	— — — —		
	Housings surface mounting 1 side-entry	 grey 19 20 003 0220 black 19 20 003 0227	20 20		
Housings	Hoods cable to cable	 grey 19 20 003 0720 black 19 20 003 0727	20 20		
	Protection covers for housings	A 09 20 003 5407 ¹⁾ ³⁾ 09 20 003 5408²⁾³⁾ B 09 20 003 5445²⁾ 09 20 003 5446 ¹⁾ 09 20 003 5447 ²⁾ ³⁾ C 09 20 003 5448 ¹⁾ 09 20 003 5449 ²⁾			
	Protection covers for hoods cable to cable				


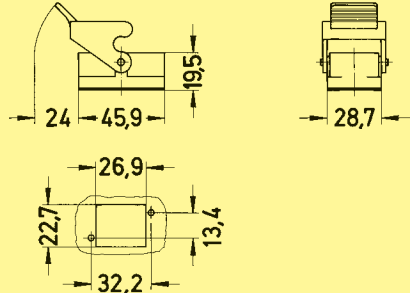
¹⁾ for mounted male insert
²⁾ for mounted female or Han-Brid® insert
³⁾ for metal housings and cable to cable hoods also



Insert	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Order contacts separately				
	09 12 006 3041	09 12 006 3141		Contact arrangement View from termination side 

PCB-adapter	Part No.	Drawing	Dimensions in mm
for PCBs up to 2.4 mm			
	09 12 006 9901		

Han® Q 4/2 double contacts	Part No.		Drawing	Dimensions in mm
	Male contact	Female contact		
to connect the PCB adapter Power contact	09 32 000 6180	09 32 000 6280		
Signal contact	09 15 000 6191	09 15 000 6293		

Housing	bulhead mounting	Part No.	Drawing	Dimensions in mm
Plastic				
		09 12 008 0327	Panel cut out 	

Further informations see HARTING catalogue
"Industrial Connectors Han®, chapter Q"

Stock items in bold type

Features

- ❑ Robust Design
- ❑ Suitable for Han-Compact® hoods and housings
- ❑ Low wiring costs
- ❑ High contact density

Technical characteristics

Approvals



Number of contacts 4/2 + PE

Electrical data acc. to DIN EN 61 984

Power area	30 A 400/690 V 6 kV 2
Rated current	30 A
Rated voltage	
conductor - ground	400 V
conductor - conductor	690 V
Rated impulse voltage	6 kV
Pollution degree	2
Signal area	7.5 A 250 V 4 kV 2
Rated current	7.5 A
Rated voltage	250 V
Rated impulse voltage	4 kV
Pollution degree	2

Insulation resistance $\geq 10^{10} \Omega$

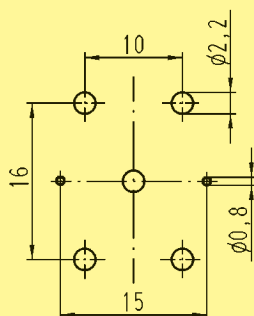
Material LCP

Limiting temperatures -40 °C ... +125 °C

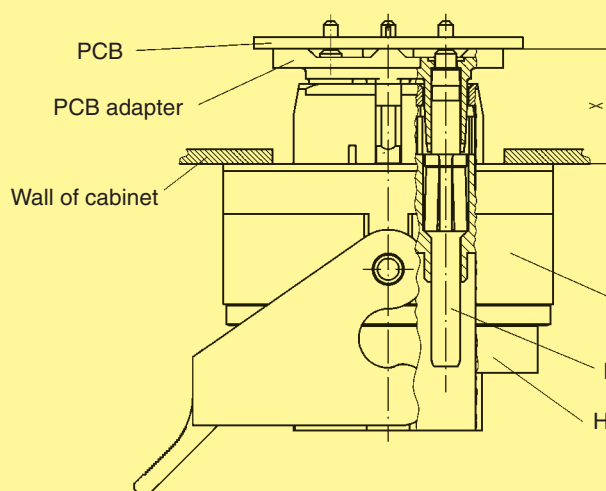
Flammability acc. to UL 94 V 0

Mechanical working life ≥ 500 mating cycles

Layout of printed circuit boards


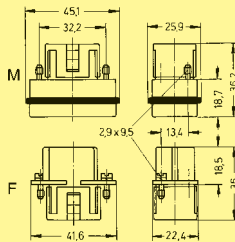




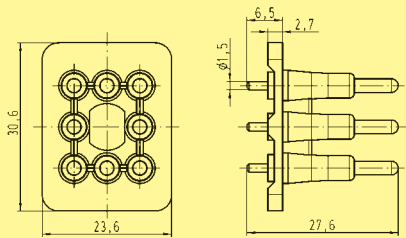
Assembly situation


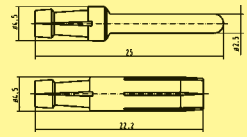



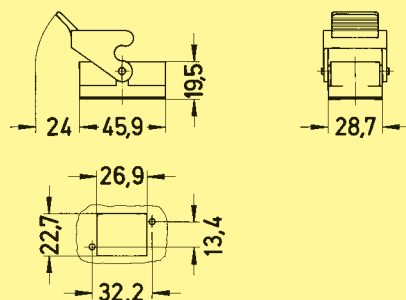
X = 16⁺¹ with signal contact
16⁺² without signal contact



Insert	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Order contacts separately 	09 12 008 3001	09 12 008 3101		Contact arrangement View from termination side 

PCB-adapter	Part No.	Drawing	Dimensions in mm
for PCBs up to 1.6 mm 	09 12 008 9901		

Han® Q 8/0 double contacts to connect the PCB adapter	Part No.		Drawing	Dimensions in mm
	Male contact	Female contact		
	09 33 000 6180	09 33 000 6280		

Housing	Part No.	Drawing	Dimensions in mm
bulhead mounting Plastic 	09 12 008 0327	Panel cut out 	

Further informations see HARTING catalogue
"Industrial Connectors Han®, chapter Q"

Stock items in bold type

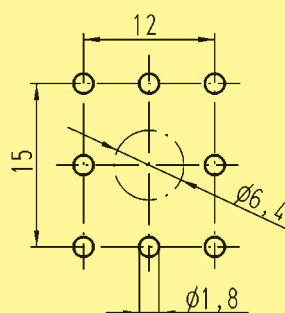
Features

- ❑ Robust Design
- ❑ Suitable for Han-Compact® hoods and housings
- ❑ Low wiring costs
- ❑ High contact density

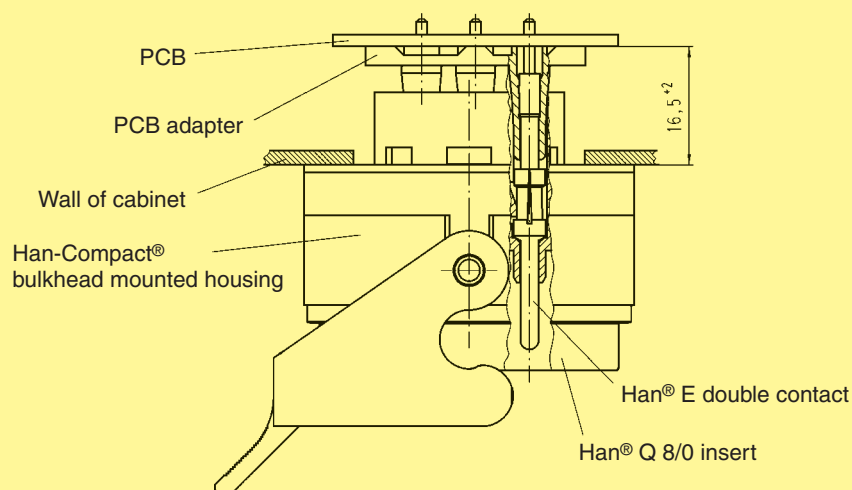
Technical characteristics

Approvals	
Number of contacts	8
Electrical data acc. to DIN EN 61 984	
Rated current	16 A 230/400 V 4 kV 2
Rated voltage	16 A
conductor - ground	230 V
conductor - conductor	400 V
Rated impulse voltage	4 kV
Pollution degree	2
Insulation resistance	$\geq 10^{10} \Omega$
Material	LCP
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	≥ 500 mating cycles


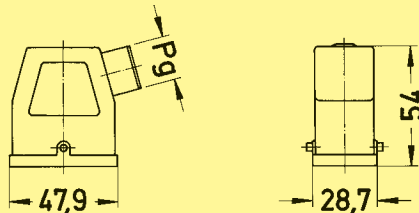

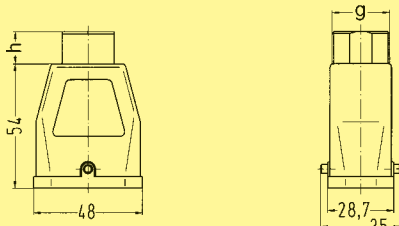

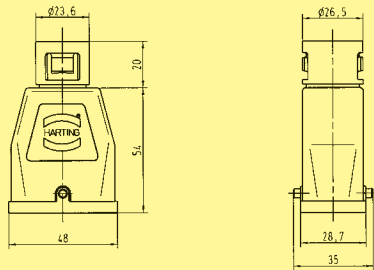

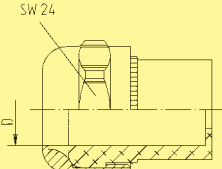
Layout of printed circuit boards



Assembly situation


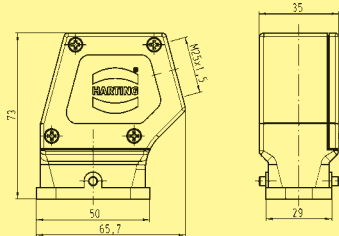

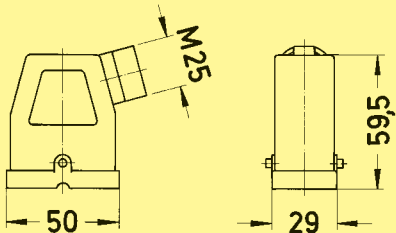

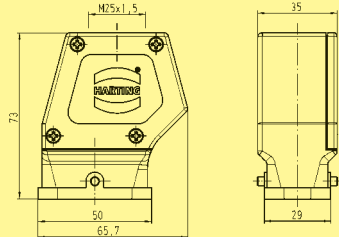

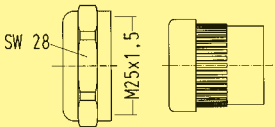


thermoplastic / metal

Identification	Part number	Drawing	Dimensions in mm																		
<div>Hoods</div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Hoods</div><div>Thermoplastic</div><div>side-entry</div><div>Cable gland order separately</div></div> <div></div> <div>09 12 008 0527</div> <div>Pg 16</div> <div></div>																					
<div>Hoods</div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Hoods</div><div>Thermoplastic</div><div>top-entry</div><div>Cable gland order separately</div></div> <div></div> <div>19 12 008 0429 09 12 008 0427 09 12 008 0429</div> <div>M 25 Pg 16 Pg 21</div> <div><table><tr><td>h</td><td>g</td></tr><tr><td>14</td><td>M 25x1.5</td></tr><tr><td>13</td><td>Pg 16</td></tr><tr><td>13</td><td>Pg 21</td></tr></table></div>	h	g	14	M 25x1.5	13	Pg 16	13	Pg 21													
h	g																				
14	M 25x1.5																				
13	Pg 16																				
13	Pg 21																				
<div>Hoods</div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Hoods</div><div>Thermoplastic</div><div>top-entry</div><div>Cable gland order separately</div></div> <div></div> <div>09 12 008 0428</div> <div>Pg 16</div> <div></div>																					
<div>Cable seal</div> <div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Thermoplastic</div><div>for hoods</div><div>Thrust bolt and insert</div></div> <div></div> <div>09 00 000 5059 19 12 000 5157 19 12 000 5158 09 00 000 5157 09 00 000 5158</div> <div>Pg 16 M 25 M 25 Pg 21 Pg 21</div> <div><table><tr><th></th><th colspan="2">cable</th></tr><tr><th></th><th>min.</th><th>max.</th></tr><tr><td>09 00 000 5059</td><td>11.5 mm</td><td>15.5 mm</td></tr><tr><td>19 12 000 5157</td><td>10.5 mm</td><td>14 mm</td></tr><tr><td>19 12 000 5158</td><td>14 mm</td><td>17 mm</td></tr><tr><td>09 00 000 5157</td><td>14 mm</td><td>18 mm</td></tr><tr><td>09 00 000 5158</td><td>17 mm</td><td>20.5 mm</td></tr></table></div>		cable			min.	max.	09 00 000 5059	11.5 mm	15.5 mm	19 12 000 5157	10.5 mm	14 mm	19 12 000 5158	14 mm	17 mm	09 00 000 5157	14 mm	18 mm	09 00 000 5158	17 mm	20.5 mm
	cable																				
	min.	max.																			
09 00 000 5059	11.5 mm	15.5 mm																			
19 12 000 5157	10.5 mm	14 mm																			
19 12 000 5158	14 mm	17 mm																			
09 00 000 5157	14 mm	18 mm																			
09 00 000 5158	17 mm	20.5 mm																			


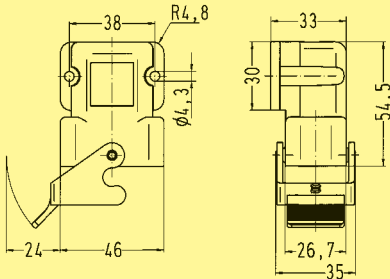

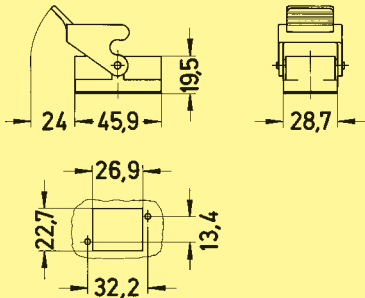

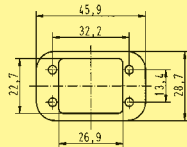

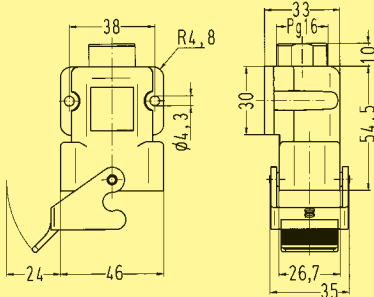

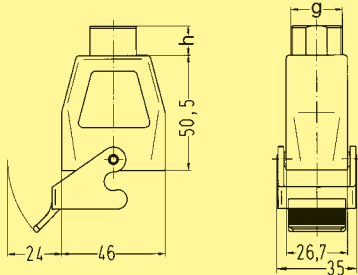
Stock items in bold type

thermoplastic / metal

Identification	Part number	Drawing	Dimensions in mm												
<div>Hoods</div> <div>Hoods</div> <div>Metal side-entry</div> <div>Cable gland order separately</div> <div></div>	<div>19 12 008 0526</div>	<div>M 25</div>	<div></div>												
<div>Hoods</div> <div>Metal side-entry</div> <div>Cable gland order separately</div> <div></div>	<div>black chromated</div> <div>19 12 008 0501</div> <div>black powder coated</div> <div>19 12 708 0501</div> <div>matt nickel plated</div> <div>19 12 008 0502</div>	<div>M 25</div> <div>M 25</div> <div>M 25</div>	<div></div>												
<div>Hoods</div> <div>Metal top-entry</div> <div>Cable gland order separately</div> <div></div>	<div>19 12 008 0426</div>	<div>M 25</div>	<div></div>												
<div>Cable seal</div> <div>Metal for hoods</div> <div>Thrust bolt and insert</div> <div></div>	<div>19 12 000 5057</div> <div>19 12 000 5058</div>	<div>M 25</div> <div>M 25</div>	<div></div> <div><table><tr><th></th><th colspan="2">cable</th></tr><tr><th></th><th>min.</th><th>max.</th></tr><tr><td>19 12 000 5057</td><td>10.5 mm</td><td>14 mm</td></tr><tr><td>19 12 000 5058</td><td>14 mm</td><td>17 mm</td></tr></table></div>		cable			min.	max.	19 12 000 5057	10.5 mm	14 mm	19 12 000 5058	14 mm	17 mm
	cable														
	min.	max.													
19 12 000 5057	10.5 mm	14 mm													
19 12 000 5058	14 mm	17 mm													


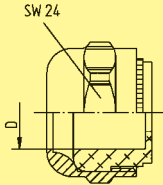

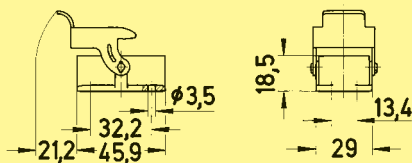
Identification	Part number		Drawing	Dimensions in mm
	for male insert	for female insert		
Protection covers Thermoplastic for male insert	without sealing 09 12 008 5407	with sealing 09 12 008 5408		

thermoplastic / metal

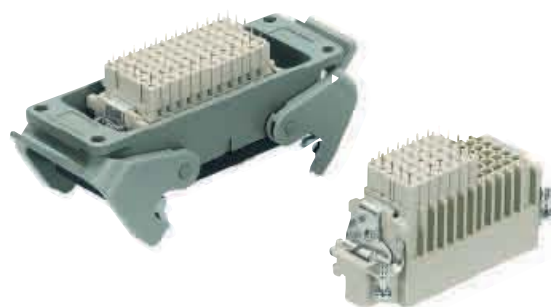
Identification	Part number	Drawing	Dimensions in mm						
<div>Housings</div> <div>Housings, bulkhead mounting</div> <div>Thermoplastic angled</div> <div></div>	09 12 008 0902	Pg 16							
<div>Housings, bulkhead mounting</div> <div>Thermoplastic</div> <div></div>	09 12 008 0327	Pg 16							
<div>Gasket for housings bulkhead mounting</div> <div>Han® Q 8/0</div> <div></div>	09 12 000 9912								
<div>Housings, surface mounting</div> <div>Thermoplastic angled</div> <div>Cable gland order separately</div> <div></div>	09 12 008 0901	Pg 16							
<div>Hoods, cable to cable</div> <div>Thermoplastic</div> <div>Cable gland order separately</div> <div></div>	09 12 008 0727 19 12 008 0729	Pg 16 M 25	 <table border="1"><thead><tr><th>h</th><th>g</th></tr></thead><tbody><tr><td>13</td><td>Pg 16</td></tr><tr><td>14</td><td>M 25x1.5</td></tr></tbody></table>	h	g	13	Pg 16	14	M 25x1.5
h	g								
13	Pg 16								
14	M 25x1.5								

Stock items in bold type

thermoplastic / metal

Identification	Part number	Drawing	Dimensions in mm									
<div>Housings</div> <div>Cable seal</div> <div>Thermoplastic for housings Thrust bolt and insert</div> <div></div>	09 00 000 5058	Pg 16	<div></div> <table><tr><td></td><td colspan="2">cable</td></tr><tr><td></td><td>min.</td><td>max.</td></tr><tr><td>09 00 000 5058</td><td>11.5 mm</td><td>15.5 mm</td></tr></table>		cable			min.	max.	09 00 000 5058	11.5 mm	15.5 mm
	cable											
	min.	max.										
09 00 000 5058	11.5 mm	15.5 mm										
<div>Housings, bulkhead mounting</div> <div>Metal</div> <div></div>	<div>black chromated 09 12 008 0301</div> <div>black powder coated 09 12 708 0301</div> <div>matt nickel plated 09 12 008 0303</div>		<div></div>									

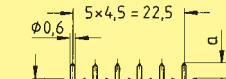
Han


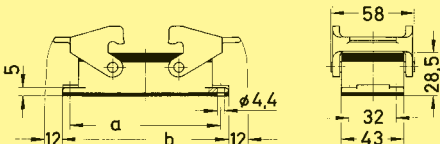


Insert	Size	Male insert (M)	Female insert (F)	Part No.	Drawing	Dimensions in mm
Order contacts separately						1) Distance for contact max. 21 mm
Han® 24 DD	6 B	09 16 024 3001	09 16 024 3101			
Han® 42 DD	10 B	09 16 042 3001	09 16 042 3101			
Han® 72 DD	16 B	09 16 072 3001	09 16 072 3101			
Han® 108 DD	24 B	09 16 108 3001	09 16 108 3101			

	a	b
24 DD	44	51
42 DD	57	64
72 DD	77.5	84.5
108 DD	104	111

Han DD® double contacts	to connect the PCB-adapter	Part No.		Drawing	Dimensions in mm
		Male contacts	Female contacts		
		09 15 000 6191	09 15 000 6291		

PCB adapter	Part No.	Drawing	Dimensions in mm						
for PCBs up to 1.6 mm for PCBs up to 2.4 mm	09 16 000 9905 09 16 000 9908		<table><tr><th></th><th>a</th></tr><tr><td>09 16 000 9905</td><td>2.6</td></tr><tr><td>09 16 000 9908</td><td>3.4</td></tr></table>		a	09 16 000 9905	2.6	09 16 000 9908	3.4
	a								
09 16 000 9905	2.6								
09 16 000 9908	3.4								

Housing	Size	Part No.	Drawing	Dimensions in mm																				
	6 B 10 B 16 B 24 B	09 30 006 0301 09 30 010 0301 09 30 016 0301 09 30 024 0301	 <table><thead><tr><th>Size</th><th>a</th><th>b</th><th>Panel cut out</th></tr></thead><tbody><tr><td>6 B</td><td>70</td><td>80</td><td>48 x 35</td></tr><tr><td>10 B</td><td>83</td><td>93</td><td>60 x 35</td></tr><tr><td>16 B</td><td>103</td><td>113</td><td>82 x 35</td></tr><tr><td>24 B</td><td>130</td><td>140</td><td>108 x 35</td></tr></tbody></table>	Size	a	b	Panel cut out	6 B	70	80	48 x 35	10 B	83	93	60 x 35	16 B	103	113	82 x 35	24 B	130	140	108 x 35	Size 6 B with 1 locking lever
Size	a	b	Panel cut out																					
6 B	70	80	48 x 35																					
10 B	83	93	60 x 35																					
16 B	103	113	82 x 35																					
24 B	130	140	108 x 35																					

Further informations see HARTING catalogue "Industrial Connectors Han®, chapter DD"

Features

- ❑ Robust design
- ❑ Suitable for standard and EMC housing
- ❑ Low wiring costs
- ❑ Higher contact density

Technical characteristics

Approvals



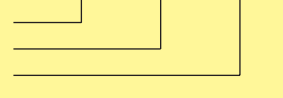
Inserts

Number of contacts 24, 42, 72, 108

Electrical data
acc. to DIN VDE 0627

7.5 A 250 V 4 kV 3

Working current
Working voltage
Rated impulse voltage
Pollution degree



Working voltage
acc. to UL

250 V

Testing voltage U_{rms}

2 kV

Insulation resistance

$\geq 10^{10} \Omega$

Material

Polyamide

Limiting temperatures

- 40 °C / +125 °C

Flammability acc. to UL 94

HB

Mechanical working life

≥ 500

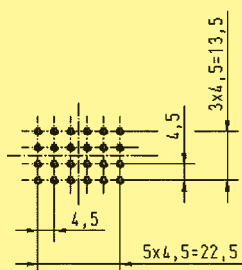
- Mating cycles

Wire gauge

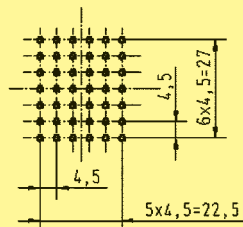
0.14 - 2.5 mm²

Layout of printed circuit boards

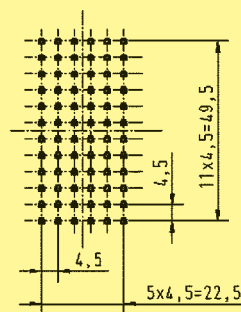
Han[®] 24 DD



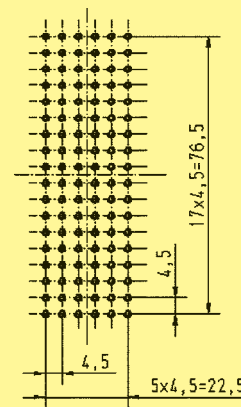
Han[®] 42 DD



Han[®] 72 DD

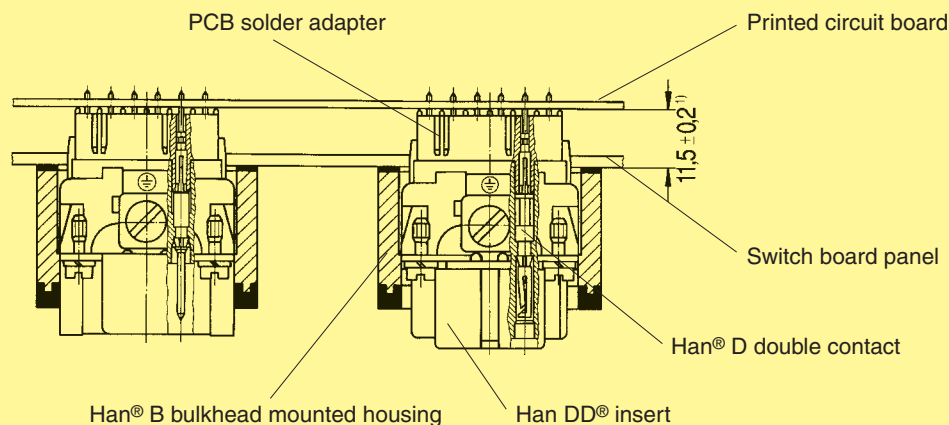


Han[®] 108 DD




Recommended hole diameter: 0.8 mm

Assembly situation



¹⁾ for Han[®] B EMC hoods/housings spacing of 12.5 ± 0.2 is necessary as no flange seal is used.



Inserts	Size	Part No.		Drawing	Dimensions in mm															
		Male insert (M)	Female insert (F)																	
Order contacts separately					1) Distance for contact max. 21 mm <table><tr><td></td><td>a</td><td>b</td></tr><tr><td>6 E</td><td>44</td><td>51</td></tr><tr><td>10 E</td><td>57</td><td>64</td></tr><tr><td>16 E</td><td>77.5</td><td>84.5</td></tr><tr><td>24 E</td><td>104</td><td>111</td></tr></table>		a	b	6 E	44	51	10 E	57	64	16 E	77.5	84.5	24 E	104	111
	a	b																		
6 E	44	51																		
10 E	57	64																		
16 E	77.5	84.5																		
24 E	104	111																		
Han® 6 E	6 B	09 33 006 2602	09 33 006 2702																	
Han® 10 E	10 B	09 33 010 2602	09 33 010 2702																	
Han® 16 E	16 B	09 33 016 2602	09 33 016 2702																	
Han® 24 E	24 B	09 33 024 2602	09 33 024 2702																	

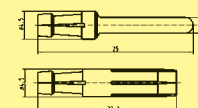
Han E [®] double contacts	Male contacts	Female contacts	Drawing	Dimensions in mm

to connect the PCB-adapter



09 33 000 6180

09 33 000 6280

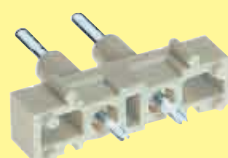


PCB adapter

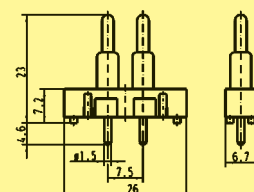
Part No.

Drawing

Dimensions in mm



09 33 000 9996



Housing

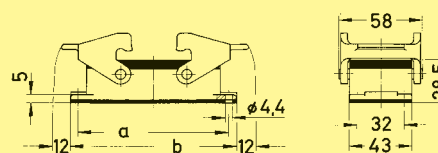
Size

Part No.

Drawing

Dimensions in mm


 6 B
 10 B
 16 B
 24 B

09 30 006 0301
09 30 010 0301
09 30 016 0301
09 30 024 0301


Size	a	b	Panel cut out
6 B	70	80	48 x 35
10 B	83	93	60 x 35
16 B	103	113	82 x 35
24 B	130	140	108 x 35

Size 6 B with 1 locking lever

Further informations see HARTING catalogue "Industrial Connectors Han[®], chapter E"

Features

- ❑ Robust design
- ❑ Suitable for standard and EMC housings
- ❑ Low wiring costs
- ❑ Counter connector available with screw, crimp or cage clamp termination

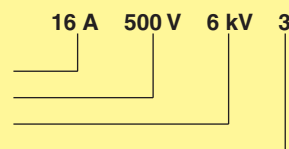
Technical characteristics

Inserts

Number of contacts 6, 10, 16, 24

Electrical data
acc. to DIN EN 61 984

Working current
Working voltage
Rated impulse voltage
Pollution degree

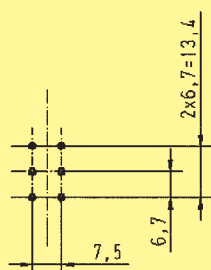


Insulation resistance
Material
Limiting temperatures
Flammability acc. to UL 94
Mechanical working life
- Mating cycles
Wire gauge

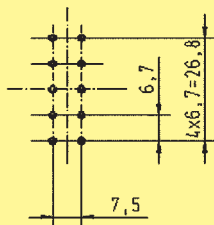
$\geq 10^{10} \Omega$
Polycarbonate
- 40 °C / +125 °C
V 0
 ≥ 500
0.5 - 4 mm²

Layout of printed circuit boards

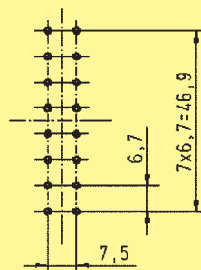
Han® 6 E



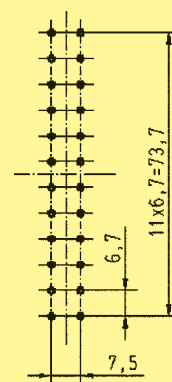
Han® 10 E



Han® 16 E

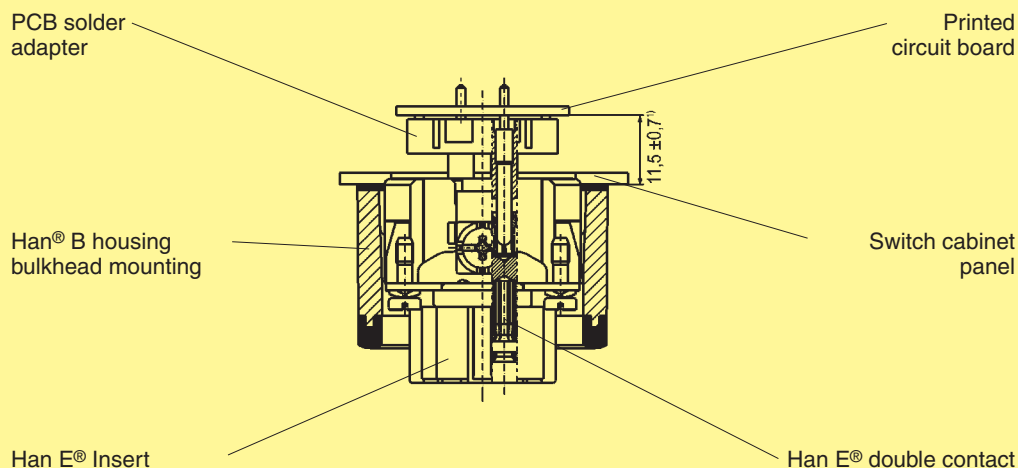


Han® 24 E






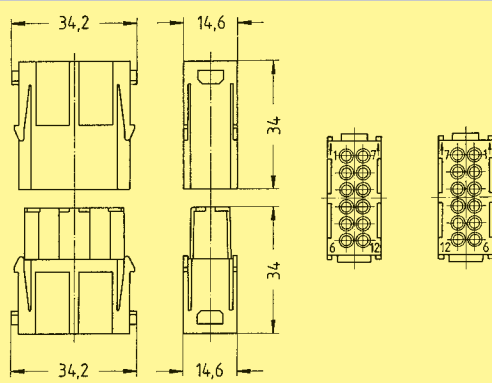


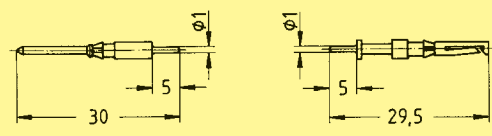


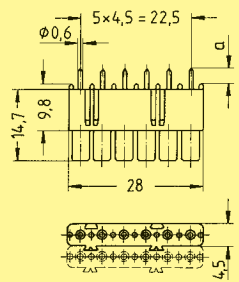
Recommended hole diameter: 1.8 mm


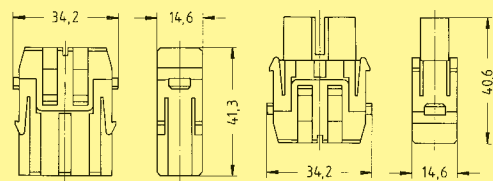


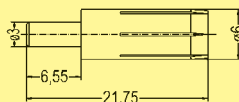
Assembly situation



¹⁾ for Han® B EMC hoods/housings spacing of 12.5 ± 0.7 is necessary as no flange seal is used

Hinged frame	No. of modules	Part No.		Size	Figure
		Male insert (M)	Female insert (F)		
	1	09 14 000 0304	09 14 000 0304	10 A	Drawings and further details see HARTING catalogue "Industrial Connectors Han®, chapter 06".
	2	09 14 006 0303	09 14 006 0313	6 B	
	3	09 14 010 0303	09 14 010 0313	10 B	
	4	09 14 016 0303	09 14 016 0313	16 B	
	6	09 14 024 0303	09 14 024 0313	24 B	

Identification	Part No.		Drawing	Dimensions in mm						
	Male insert (M)	Female insert (F)								
Han DD® module PCB termination/ crimp termination										
	09 14 012 3001	09 14 012 3101								
Han D® double contacts to connect the PCB										
	09 15 000 6191	09 15 000 6291								
PCB adapter for PCBs up to 1.6 mm for PCBs up to 2.4 mm				<table><tr><td></td><td>a</td></tr><tr><td>09 16 000 9905</td><td>2.6</td></tr><tr><td>09 16 000 9908</td><td>3.4</td></tr></table>		a	09 16 000 9905	2.6	09 16 000 9908	3.4
	a									
09 16 000 9905	2.6									
09 16 000 9908	3.4									
	09 16 000 9905 09 16 000 9908									

Han® axial screw module	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Axial screw termination Cable side 	09 14 002 2601	09 14 002 2701		
PCB adaption Device side 	09 14 002 2603	09 14 002 2703		
Solder contact 	09 32 000 6295			

Stock items in bold type

Features

- ❑ Modular assembly
- ❑ Robust design
- ❑ Suitable for standard and EMC housings
- ❑ Low wiring costs

Technical characteristics

Han DD® module with PCB-adapter

Number of contacts	12
Working current	7.5 A
Working voltage	250 V
Wire gauge	0.14 - 2.5 mm ²

Han® axial screw module for PCB adaption

Number of contacts	2
Working current	40 A
Working voltage	500 V
Wire gauge	2.5 - 10 mm ²

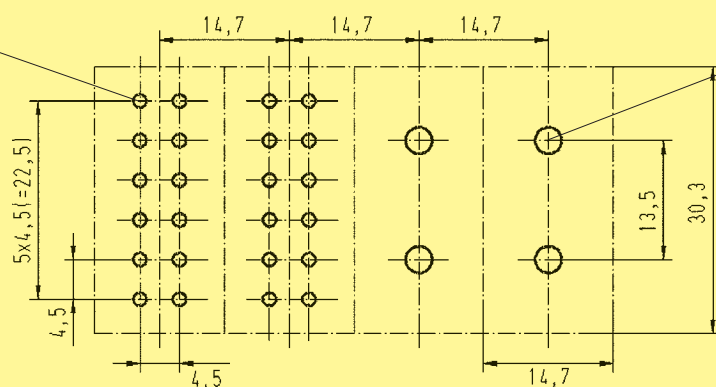
Han

Layout of printed circuit boards

Depiction

Recommended
hole diameter: 0,8 mm

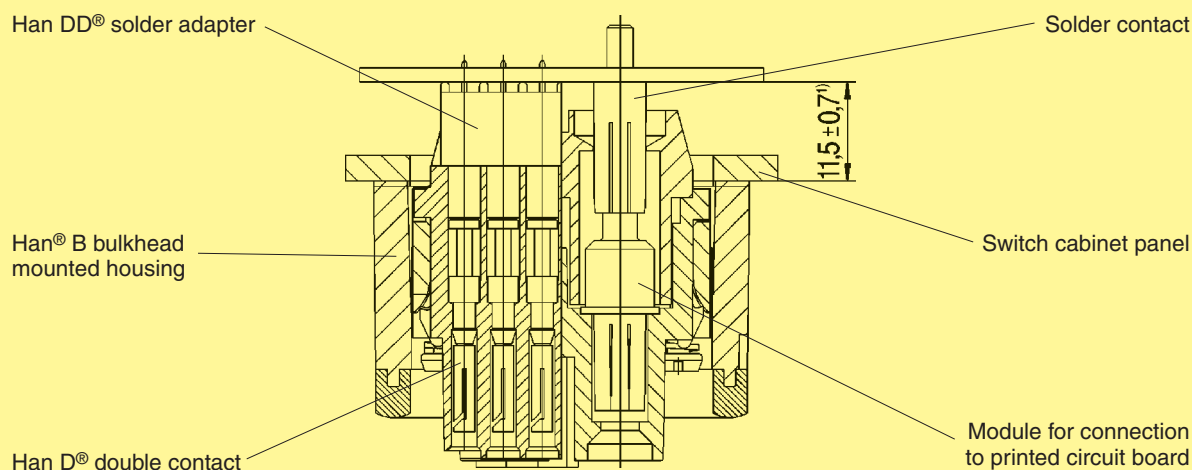
Recommended
hole diameter: 3,2 mm



Han DD® module

Han® axial screw module 40 A

Assembly situation



¹⁾ for Han® B EMC hoods/housings spacing of 12.5 ± 0.7 is necessary as no flange seal is used

- Secondary mating between industrial connector and printed circuit board.
- No higher force is applied on the soldering joint when mating the industrial connector due to an additional mating point.
- No wiring between printed circuit board and industrial connector necessary.
- thus no wiring faults
⇒ no testing, no costs
- Connecting times are minimized.
- Easy handling is time and cost saving.
- The production of mechanical and electrical / electronical components can be completely separated.
- Possibility to reach a higher degree of automation in the production (i. e. wave soldering of the PCBs).



Han DD® and Han® Q 5/0 PCB-adapter
Wilhelm Fette GmbH, Germany

Han E® PCB-adapter

