

## Technical characteristics

Specifications DIN VDE 61 984  
DIN VDE 0110

### Inserts Han® Q 8/0

Number of contacts	6 + PE
Rated current (partly loaded)	25 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Insulation resistance	≥ 10 <sup>10</sup> Ω
Flammability acc. to UL 94	V 0
Mechanical working life	≥ 500 mating cycles

### Han® E contacts

Material	Copper alloy
Surface: hard silver plated	3 μm Ag
Contact resistance	≤ 1 mΩ
Crimp terminal – mm <sup>2</sup>	2.5 - 4 mm <sup>2</sup>
– AWG	18 - 12

### Inserts Han® Q 4/2

Number of contacts	4/2 + PE
Rated current	40 A
Rated voltage	400 / 690 V
Rated impulse voltage	6 kV
Pollution degree	3
Insulation resistance	≥ 10 <sup>10</sup> Ω
Temperature range	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	≥ 500 mating cycles

### Han® C contacts

Material	Copper alloy
Surface: hard silver plated	5 μm Ag
Contact resistance	≤ 0.3 mΩ
Crimp terminal – mm <sup>2</sup>	2.5 - 6 mm <sup>2</sup>
– AWG	14 - 10
Max. insulation diameter of single strand	5 mm

### Hoods/housings

Material	Polycarbonate
Colour	RAL 9005
Sealing	NBR
Temperature range	
– Connecting temperature	-25 °C ... +40 °C
– Working temperature	-25 °C ... +80 °C
Flammability acc. to UL 94	V 0
Protection degree acc. to DIN 40 050 in locked position	IP 65

### Cable

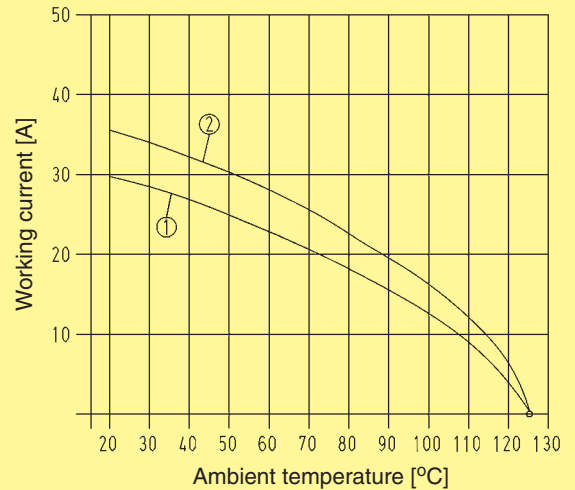
Design of conductor	acc. to DIN VDE 0295 and DIN VDE 0281
Single strand	
Wire gauge 2.5 mm <sup>2</sup>	
Number of single strands	50 x 0.25 mm Ø
Outer diameter	3.6 mm Ø
Wire gauge 4 mm <sup>2</sup>	
Number of single strands	56 x 0.30 mm Ø
Outer diameter	4.2 mm Ø

## Current carrying capacity

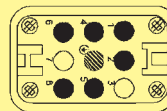
### Current carrying capacity

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

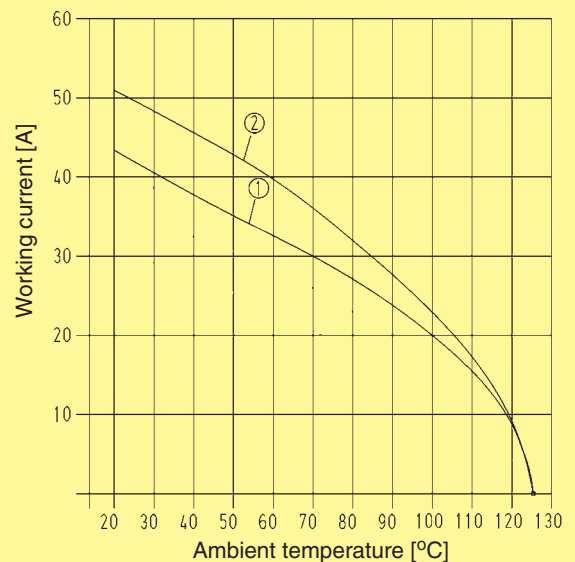
Control and test procedures according to DIN IEC 60 512-3.



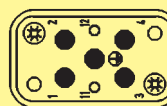
- ① Han® Q 8/0 wire gauge: 2.5 mm<sup>2</sup>
- ② Han® Q 8/0 wire gauge: 4 mm<sup>2</sup>



Han® Q 8/0 partly loaded with wire gauge 7 x 4 mm<sup>2</sup>



- ① Han® Q 4/2 wire gauge: 4 mm<sup>2</sup>
- ② Han® Q 4/2 wire gauge: 6 mm<sup>2</sup>



Han® Q 4/2 fully loaded with wire gauge 4 x 6 mm<sup>2</sup>

## Features

- 6 IDCs + PE for 2.5 mm<sup>2</sup> up to 6 mm<sup>2</sup> wire gauge
- No interruption of the energy supply
- Space-saving and compact design
- Leading protective ground within the insert
- Assembly with standard tools
- T-functionality for max. 500 V:
  - Energy bus structure: 7 x 4 mm<sup>2</sup> or 7 x 6 mm<sup>2</sup>
  - Power supply structure: 7 x 4 mm<sup>2</sup> (Han-Power® S)  
7 x 2.5 mm<sup>2</sup> (Han-Power® S)
- Marking of the terminal strip for the contact arrangement
- Power supply
  - Han-Power® S: Power supply has to be realized with 1 x Han® Q 8/0 in a Han-Compact® cable to cable hood.
  - Han-Power® S: Power supply has to be realized with 2 x Han® Q 8/0 in Han-Compact® hoods.
  - Han-Power® S: Power supply has to be realized with 1 x Han® Q 4/2 in a Han-Compact® cable to cable hood.

## Description

The Han-Power® S connector is suitable for the assembly of serial power bus. Having assembled the energy supply Han-Power® S can be inserted at any place of the power cable. The cable mantle has to be removed, the conductor is placed **without** interruption in the IDC. Han-Power® S is suitable for cables with single strands manufactured acc. to DIN VDE 0281/ DIN VDE 0295 with wire gauges of 2.5 mm<sup>2</sup> up to 6 mm<sup>2</sup>. For the distribution of the device Han-Compact® hoods or cable to cable housings are used.

## Panel feed through sealings



Blind grommet

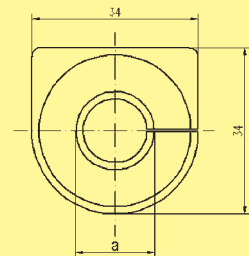
### Part No.

**09 12 000 9969**  
**09 12 000 9970**  
**09 12 000 9971**  
**09 12 000 9972**  
**09 12 000 9973**

**09 12 000 9974**

### Drawing

Cable-ø  
 7 – 10  
 10 – 13  
 13 – 16  
 16 – 19  
 19 – 22



## Han-Power® S 1 x Han® Q 8/0

Part No.

Drawing

Dimensions in mm

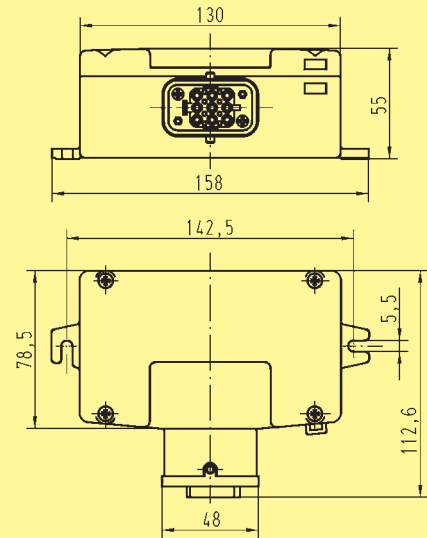
### Power supply

with 1 Han-Compact® hood  
with Han® Q 8/0



Suitable Panel Feed Through sealings  
see page PD10.02

**09 12 008 4801**



## Cabling systems in fixed lengths

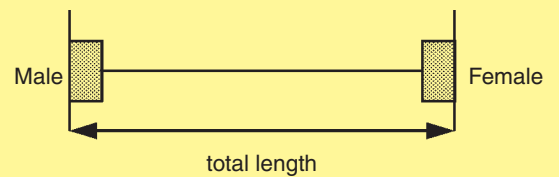
Part No.

Drawing

### Cable lengths in m

(total length)	1.5
pre-assembled on both sides,	3
plastic hood, black,	5
top entry,	10
cable to cable hood with male insert	15
and hood with female insert	30
Cable: 7 x 2.5 mm <sup>2</sup>	

**20 88 841 0015**  
**20 88 841 0030**  
**20 88 841 0050**  
**20 88 841 0100**  
**20 88 841 0150**  
**20 88 841 0300**



## Han-Power® S 2 x Han® Q 8/0

Part No.

Drawing

Dimensions in mm

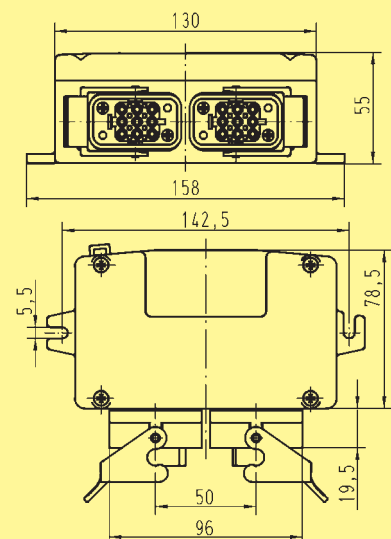
### Power supply

with 2 screwed Han-Compact®  
bulkhead mounted housings  
with 2 x Han® Q 8/0



Suitable Panel Feed Through sealings  
see page PD10.02

**09 12 008 4802**



## Cabling systems in fixed lengths

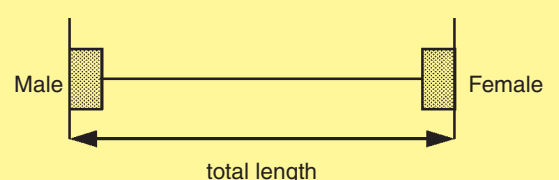
Part No.

Drawing

### Cable lengths in m

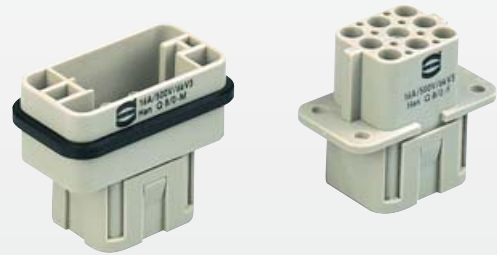
(total length)	1.5
pre-assembled on both sides,	3
plastic hood, black,	5
top entry,	10
cable to cable hood with male insert	15
and hood with female insert	30
Cable: 7 x 2.5 mm <sup>2</sup>	

**20 88 821 0015**  
**20 88 821 0030**  
**20 88 821 0050**  
**20 88 821 0100**  
**20 88 821 0150**  
**20 88 821 0300**



Number of contacts

8 +



Inserts

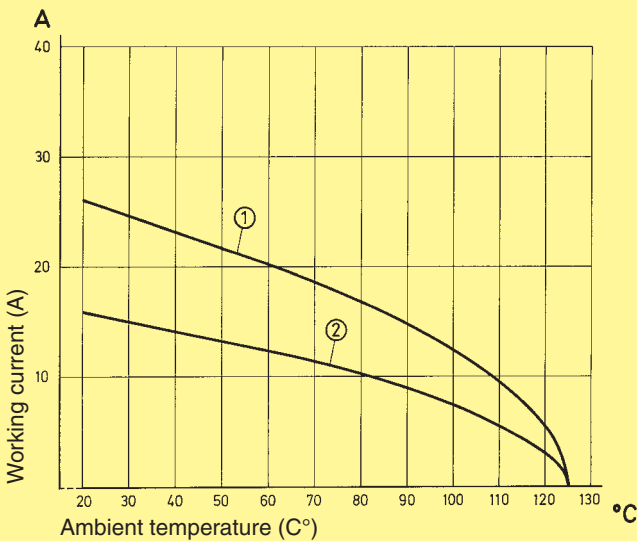
### Features

- 8 contact chambers taking the Han E® power contacts
- Space-saving and compact design
- Leading protective ground
- Crimp terminal with standard Han E® contacts
- Use of standard tools
- Insert is suitable for the hoods and housings of the series Han® Q 8/0
- The contacts can be removed with the aid of a removal tool from the termination side
- DESINA** conform product
- ISO 23570

### Current carrying capacity

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512-3.



Control and test procedures according to DIN IEC 512-3

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

### Technical characteristics

Specifications  
DIN VDE 0627  
DIN VDE 0110  
DIN EN 61984

Approvals

#### Inserts

Number of contacts	8 + PE								
Electrical data acc. to DIN EN 61984	<table border="1"> <tr> <td>Rated current</td> <td>16 A</td> </tr> <tr> <td>Rated voltage</td> <td>500 V</td> </tr> <tr> <td>Rated impulse voltage</td> <td>6 kV</td> </tr> <tr> <td>Pollution degree</td> <td>3</td> </tr> </table>	Rated current	16 A	Rated voltage	500 V	Rated impulse voltage	6 kV	Pollution degree	3
Rated current	16 A								
Rated voltage	500 V								
Rated impulse voltage	6 kV								
Pollution degree	3								
Mounted metal hood	16 A 230/400 V 4 kV								
- Pollution degree 2 also	16 A 400/690 V 6 kV 2								
Rated voltage acc. to UL/CSA	600 V								
Insulation resistance	≥ 10 <sup>10</sup> Ω								
Material	Polycarbonate								
Temperature range	- 40 °C ... + 125 °C								
Flammability acc. to UL 94	V 0								
Mechanical working life - mating cycles	≥ 500								

#### Contacts

Material	Copper alloy
Surface	<ul style="list-style-type: none"> <li>- hard-silver plated 3 μm Ag</li> <li>- hard-gold plated 2 μm Au over 3 μm Ni</li> </ul>
Contact resistance	< 1 mΩ
Crimp terminal	0.5 - 2.5 mm <sup>2</sup>
- mm <sup>2</sup>	partly loaded up to 4 mm <sup>2</sup> is possible
- AWG	20 - 14

#### Plastic hoods/housings

Material	Polycarbonate RAL 9005
Locking element	Polyamide RAL 9005
Flammability acc. to UL 94	V 0
Hood/Housings seal	NBR
Temperature range	- 40 °C ... + 125 °C
Degree of protection acc. to DIN EN 60529 in locked position	IP 65

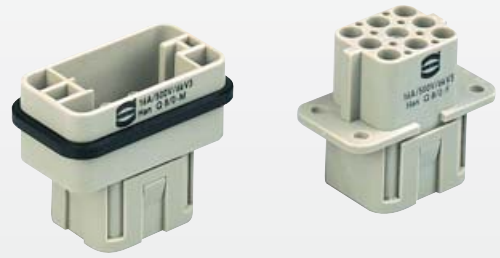
Han-Power

15  
14

\* DESINA is a registered trademark

Number of contacts

8 +



Inserts

Identification	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
<b>Crimp terminal</b> Crimp contacts order separately	<b>09 12 008 3001</b>	<b>09 12 008 3101</b>	<p>Contact arrangement View from termination side</p>	

Identification	Wire gauge (mm²)	Part No.		Drawing	Dimensions in mm																		
		Male contacts	Female contacts																				
<b>Crimp contacts</b> Han E® contacts  Power contacts silver plated 	1.5 2.5 4.0	<b>09 33 000 6104</b> <b>09 33 000 6102</b> <b>09 33 000 6107</b>	<b>09 33 000 6204</b> <b>09 33 000 6202</b> <b>09 33 000 6207</b>	<p>Working contact Identification      Relay contact</p> <p>Identification of crimp contacts</p> <table border="1"> <thead> <tr> <th rowspan="2">Identification</th> <th colspan="2">Wire gauge</th> <th rowspan="2">Stripping length</th> </tr> <tr> <th>mm²</th> <th>AWG</th> </tr> </thead> <tbody> <tr> <td>2 grooves</td> <td>1.5 mm²</td> <td>AWG 16</td> <td>7.5 mm</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm²</td> <td>AWG 14</td> <td>7.5 mm</td> </tr> <tr> <td>no grooves</td> <td>4.0 mm²</td> <td>AWG 12</td> <td>7.5 mm</td> </tr> </tbody> </table>	Identification	Wire gauge		Stripping length	mm²	AWG	2 grooves	1.5 mm²	AWG 16	7.5 mm	3 grooves	2.5 mm²	AWG 14	7.5 mm	no grooves	4.0 mm²	AWG 12	7.5 mm	
Identification	Wire gauge		Stripping length																				
	mm²	AWG																					
2 grooves	1.5 mm²	AWG 16	7.5 mm																				
3 grooves	2.5 mm²	AWG 14	7.5 mm																				
no grooves	4.0 mm²	AWG 12	7.5 mm																				

Han-Power

ISO 23 570



Cabling system Han<sup>®</sup> Q 8/0  
Energy bus transmission

## Identification

### Hoods

Han-Compact<sup>®</sup> hoods  
Cable glands order separately  
Plastic version Polycarbonate

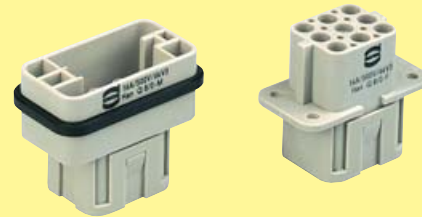
### Insert

Han<sup>®</sup> Q 8/0 male and female are available with standard crimp contacts Han<sup>®</sup> E, silver (optional gold) plated

### Cable

Outer diameter D < 14 mm  
Material outside jacket PUR  
Construction:  
– electrical (power supply) 7 x 2.5 mm<sup>2</sup>

## Components



## Technical characteristics

Temperature range  
– little movements - 40 °C ... + 90 °C  
– permanent movements - 20 °C ... + 70 °C  
Degree of protection IP 65 / IP 67  
Operating rated voltage [DC] 500 V  
Operating rated current 25 A

## Features

- Chemical application conditions:  
very resistant to oil and chemicals

Contact arrangement	1	2	3	4	5	6	7	8	PE	
	male	Optional reserved for N	L2	–	Reserved for (+ 24 V)	Reserved for (0 V)	L3	–	L1	PE
	female									

ISO 23 570

Cabling system Han® Q 4/2  
Energy bus transmission



## Identification

### Hoods

Han-Compact® hoods  
Cable glands order separately  
Plastic version Polycarbonate

## Components



### Insert

Han® Q 4/2 male and female are available with standard crimp contacts Han® C, silver (optional gold) plated



### Cable

Outer diameter D < 14 mm  
Material outside jacket PUR  
Construction:  
– electrical (power supply) 5 x 4.0 mm<sup>2</sup>




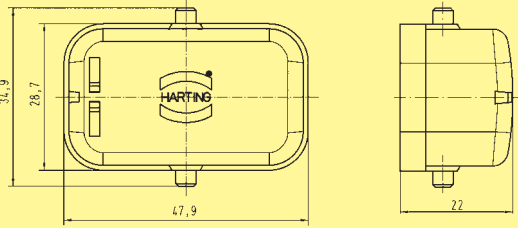



## Technical characteristics

Temperature range  
– little movements - 40 °C ... + 90 °C  
– permanent movements - 20 °C ... + 70 °C  
Degree of protection IP 65 / IP 67  
Operating rated voltage [DC] 400/690 V  
Operating rated current 25 A

## Features

- Chemical application conditions:  
very resistant to oil and chemicals

Contact arrangement	1	2	3	4	11	12	PE
	male	L1	L2	L3	N	Reserved for (0 V)	Reserved for (+ 24 V)
	female						PE

Accessories	Part No.	Drawing	Dimensions in mm
<p>Protection covers</p>  <p>for male insert cover without sealing</p> <p>for female insert cover with sealing</p>	<p>09 12 008 5407</p> <p>09 12 008 5408</p>		
<p>Crimping tool</p>	<p>09 99 000 0021</p>		
<p>HARTING-crimping tool</p> <p>Locator</p>	<p>09 99 000 0110</p> <p>09 99 000 0111</p>	<p>Wire gauge 0.5 - 2.5 mm<sup>2</sup></p>  <p>↑  order separately</p>	