

Power Distribution

Page

Han-Power®	PD10
Han-Power® S	PD10.02
Han-Power® T	PD10.04
Han® Q 8/0	PD20
Han® Q 4/2	PD30
System cables	PD60
Accessories	PD90



Power
Distribution

PD
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-
02

Technical characteristics

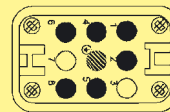
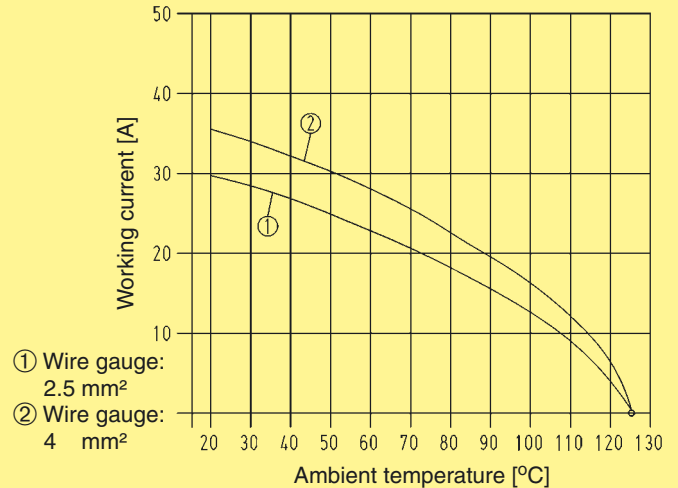
Specifications	DIN VDE 61 984 DIN VDE 0110
Inserts Han® Q 8/0	
Number of contacts	6 + PE
Rated current (partly loaded)	25 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Insulation resistance	≥ 10 ¹⁰ Ω
Flammability acc. to UL 94	V 0
Mechanical working life	≥ 500 mating cycles
Han® E contacts	
Material	Copper alloy
Surface: hard silver plated	3 μm Ag
Contact resistance	≤ 1 mΩ
Crimp terminal – mm ²	2.5 - 4 mm ²
– 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 ¹⁰ 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 ²	2.5 - 6 mm ²
– 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 ²	
Number of single strands	50 x 0.25 mm Ø
Outer diameter	3.6 mm Ø
Wire gauge 4 mm ²	
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.



Han® Q 8/0 partly loaded with wire gauge 7 x 4 mm²

Features

- 6 IDCs + PE for 2.5 mm² up to 4 mm² 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 mm²
 - Power supply structure: 7 x 4 mm² (Han-Power® S) / 7 x 2.5 mm² (Han-Power® T)
- 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 mm² up to 4 mm². For the distribution of the device Han-Compact® hoods or cable to cable housings are used.

Han-Power® S

Power supply

with 1 Han-Compact® hood
with Han® Q 4/2

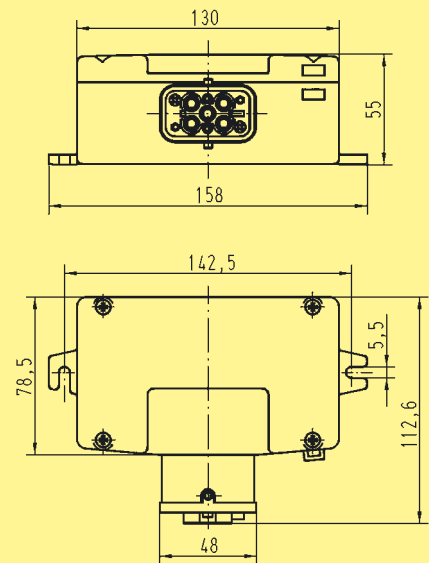


09 12 008 4804

Part No.

Drawing

Dimensions in mm



Cabling systems in fixed lengths

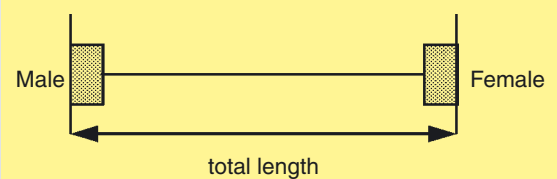
Cable lengths in m

(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: 5 x 4 mm ²	

20 88 641 1015
20 88 641 1030
20 88 641 1050
20 88 641 1100
20 88 641 1150
20 88 641 1300

Part No.

Drawing



Power Distribution

Panel feed through sealings



Blind grommet

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

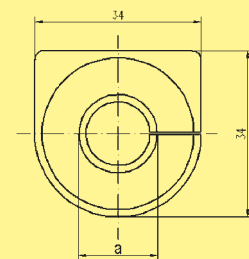
09 12 000 9974

Part No.

Drawing

Cable-ø

7 – 10
10 – 13
13 – 16
16 – 19
19 – 22



Han-Power® S

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

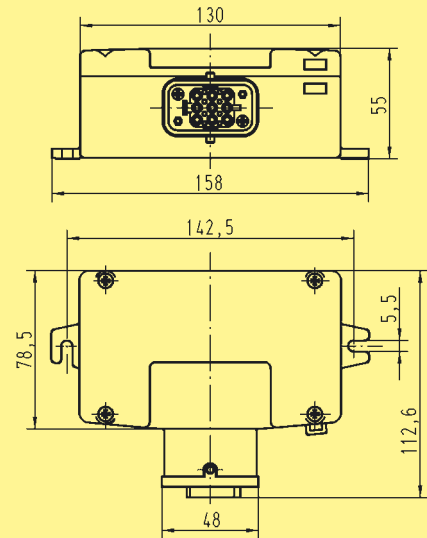


Suitable Panel Feed Through sealings
see page PD10.02

Part No.

09 12 008 4801

Drawing



Dimensions in mm

Cabling systems in fixed lengths

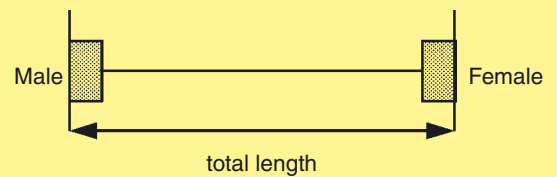
Cable lengths in m

(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 ²	

Part No.

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

Drawing



Han-Power® S

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

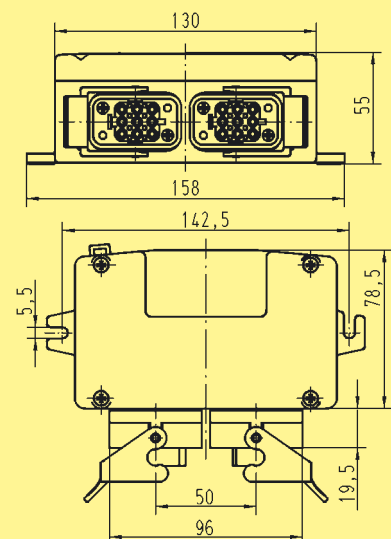


Suitable Panel Feed Through sealings
see page PD10.02

Part No.

09 12 008 4802

Drawing



Dimensions in mm

Cabling systems in fixed lengths

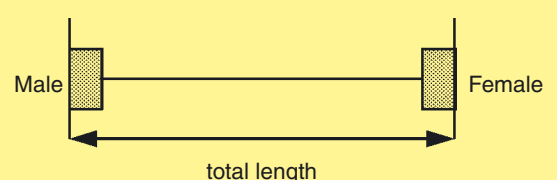
Cable lengths in m

(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 ²	

Part No.

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

Drawing



Stock items in bold type

Description

The Han-Power® T connector is applied for the assembly of serial power bus. Due to the T-functionality several users (i.e. motors, etc.) can be connected in series, as long as the total does not exceed the maximum current. The energy supply is realized by means of a terminal block with screw termination. The energy transmission as well as the device interface are realized by means of a Han® Q 8/0 connector.

Han-Power® T

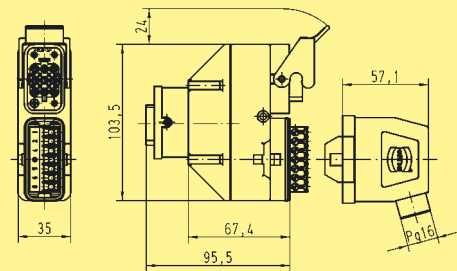
Part No.

Drawing

Dimensions in mm



09 12 008 4701



Cable gland please order separately
see page PD90.02

Han-Power® T with cable

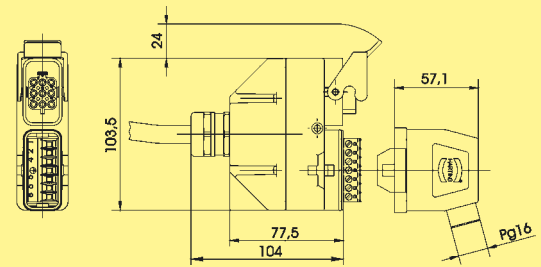
Part No.

Drawing

Dimensions in mm



09 12 008 4707



Included in delivery: 3 m pre-assembled cable

Features

- 6 screw terminations + PE for max. 4 mm² wire gauges
- Space-saving and compact design
- Leading protective ground in Han® Q 8/0 insert
- Assembly with standard tools
- T-functionality for max. 500 V:
 - energy bus structure: 7 x 4 mm²
 - power supply structure: 7 x 2.5 mm²
- T-piece with pre-assembled cable (valid only for 09 12 008 4707)
 - 7 x 2.5 mm² wire gauge
 - maximum cable length 3 m

Number of contacts

8 +



Inserts

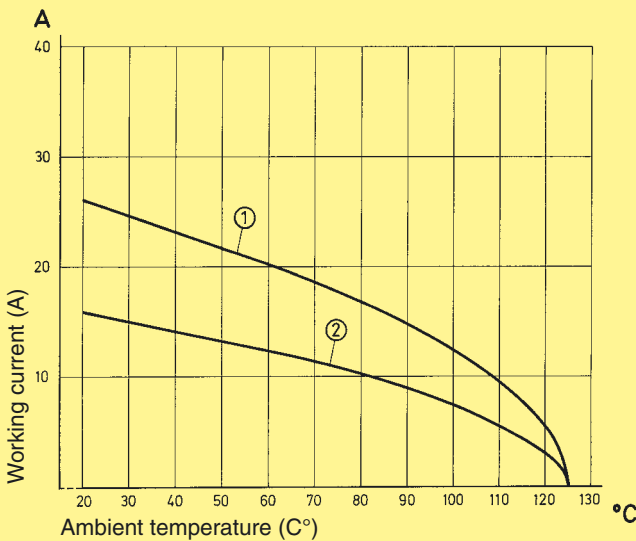
Features

- 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

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.



Control and test procedures according to DIN IEC 512-3

Wire gauge: ① 2.5 mm²
② 1.5 mm²

Technical characteristics

Specifications
DIN VDE 0627
DIN VDE 0110
DIN EN 61 984

Approvals

Inserts

Number of contacts	8 + PE
Electrical data acc. to DIN EN 61 984	16 A 500 V 6 kV 3
Rated current	16 A
Rated voltage	230/400 V
Rated impulse voltage	4 kV
Pollution degree	2
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 ¹⁰ 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	3 μm Ag 2 μm Au over 3 μm Ni
- hard-silver plated	
- hard-gold plated	
Contact resistance	< 1 mΩ
Crimp terminal	0.5 - 2.5 mm ² partly loaded up to 4 mm ² is possible
- mm ²	
- 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 60 529 in locked position	IP 65

* DESINA is a registered trademark

Number of contacts

8 +



Inserts

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

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

Power Distribution

PD 20-02

Stock items in bold type

Number of contacts

4/2 +



Inserts

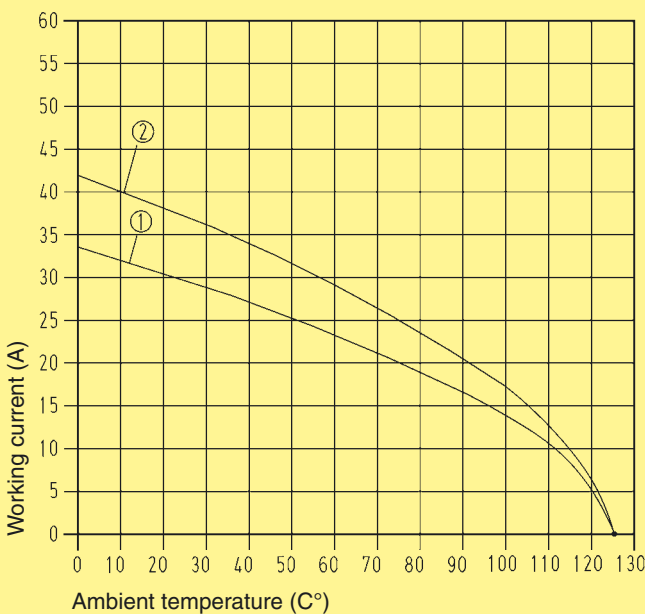
Features

- ❑ 2 contact rooms for power contacts Han D® 10 A
- ❑ Leading protective ground (40 A)
- ❑ Protection against contact with the fingers acc. IEC 60 529
- ❑ Insert is suitable for the hoods and housings of the series Han-Compact® (not suitable for 19 12 008 0501, 09 12 008 0301)
- ❑ The power contacts can be removed with the aid of a removal tool from the termination side
- ❑ 3 coding possibilities by using a coding pin instead of the fixing screw

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.



Wire gauge ① 2,5 mm²
 ② 4 mm²
 power contacts

Technical characteristics

Specifications

DIN VDE 0627
 DIN VDE 0110
 DIN EN 61 984

Inserts

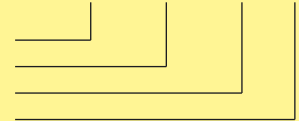
Number of contacts

4/2 + PE

Electrical data
 acc. to DIN EN 61 984

40 A 400/690 V 6 kV 3

Rated current
 Rated voltage
 Testing voltage
 Pollution degree



Insulation resistance

≥ 10¹⁰ Ω

Material

Polycarbonate

Temperature range

- 40 °C ... + 125 °C

Flammability acc. to UL 94

V 0

Mechanical working life

- mating cycles

≥ 500

Han® C contacts (Power contacts)

Material

Copper alloy

Surface

- hard-silver plated

5 µm Ag

Contact resistance

Crimp terminal

- mm²

≤ 3 mΩ
 2.5 - 6 mm²

- AWG

14 - 10

Max. insulation OD

5 mm

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 60 529

IP 65

in locked position

Number of contacts

4/2 +



Inserts


Identification	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Crimp terminal Order crimp contacts separately	09 12 006 3041	09 12 006 3141		<p>Contact arrangement View from termination side</p>

Identification	Wire gauge (mm²)	Part No.		Drawing	Dimensions in mm																												
		Male contacts	Female contacts																														
Crimp contacts Han C® contacts Power contacts silver plated	2.5 4.0 6.0	09 32 000 6105 09 32 000 6107 09 32 000 6108	09 32 000 6205 09 32 000 6207 09 32 000 6208	<table border="1"> <thead> <tr> <th>Wire gauge</th> <th></th> <th>∅</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>2.25</td> <td>9</td> </tr> <tr> <td>4.0 mm²</td> <td>AWG 12</td> <td>2.85</td> <td>9.6</td> </tr> <tr> <td>6.0 mm²</td> <td>AWG 10</td> <td>3.5</td> <td>9.6</td> </tr> </tbody> </table>	Wire gauge		∅	Stripping length	2.5 mm²	AWG 14	2.25	9	4.0 mm²	AWG 12	2.85	9.6	6.0 mm²	AWG 10	3.5	9.6													
Wire gauge		∅	Stripping length																														
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Crimp contacts Han D® contacts Power contacts silver plated	0.14-0.37 0.5 0.75 1.0 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	<table border="1"> <thead> <tr> <th>Wire gauge</th> <th></th> <th>∅</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>0.90 mm</td> <td>8 mm</td> </tr> <tr> <td>0.5 mm²</td> <td>AWG 20</td> <td>1.10 mm</td> <td>8 mm</td> </tr> <tr> <td>0.75 mm²</td> <td>AWG 18</td> <td>1.30 mm</td> <td>8 mm</td> </tr> <tr> <td>1 mm²</td> <td>AWG 18</td> <td>1.45 mm</td> <td>8 mm</td> </tr> <tr> <td>1.5 mm²</td> <td>AWG 16</td> <td>1.75 mm</td> <td>8 mm</td> </tr> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>2.25 mm</td> <td>6 mm</td> </tr> </tbody> </table>	Wire gauge		∅	Stripping length	0.14-0.37 mm²	AWG 26-22	0.90 mm	8 mm	0.5 mm²	AWG 20	1.10 mm	8 mm	0.75 mm²	AWG 18	1.30 mm	8 mm	1 mm²	AWG 18	1.45 mm	8 mm	1.5 mm²	AWG 16	1.75 mm	8 mm	2.5 mm²	AWG 14	2.25 mm	6 mm	
Wire gauge		∅	Stripping length																														
0.14-0.37 mm²	AWG 26-22	0.90 mm	8 mm																														
0.5 mm²	AWG 20	1.10 mm	8 mm																														
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1.5 mm²	AWG 16	1.75 mm	8 mm																														
2.5 mm²	AWG 14	2.25 mm	6 mm																														

Power Distribution

PD 30-02

Stock items in bold type

DESINA [®] conforming product 
 For more information conc. DESINA: www.desina.de



Cabling system Han[®] Q 8/0
 Energy bus transmission

Identification

Hoods

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

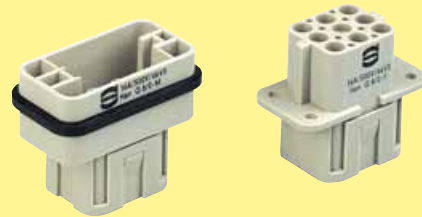
Insert

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

Cable

Outer diameter D < 14 mm
 Material outside jacket PUR
 Construction:
 – electrical (power supply) 7 x 2.5 mm²

Components

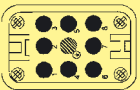
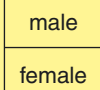


Technical characteristics

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
	Optional reserved for N	L2	–	Reserved for (+ 24 V)	Reserved for (0 V)	L3	–	L1	PE
									

Han-InduNet[®] Cabling System



DESINA® conforming product
 For more information conc. DESINA: www.desina.de



Cabling system Han[®] Q 4/2
 Energy bus transmission

Identification

Hoods

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

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 mm²

Components




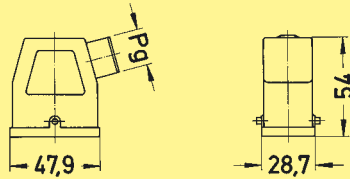

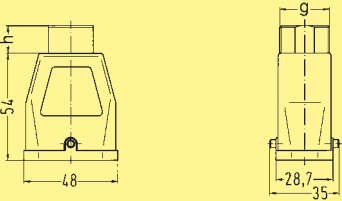

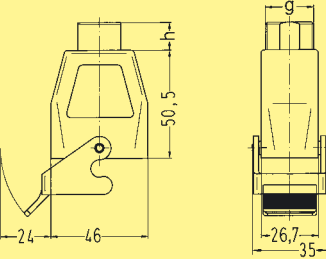

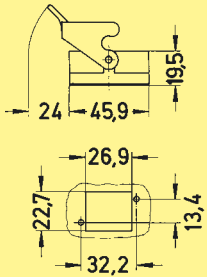

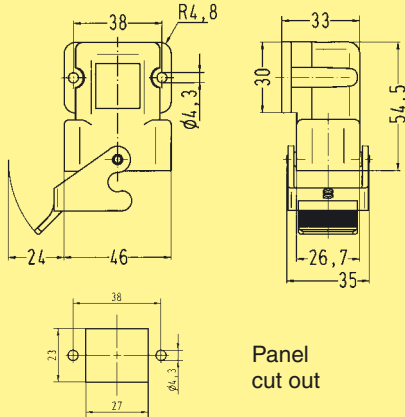
Technical characteristics

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] 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)	PE
	female							

Identification	Part No.		Drawing	Dimensions in mm						
Hood Cable gland order separately 	09 12 008 0527	Pg 16								
Hoods Cable gland order separately 	09 12 008 0427 19 12 008 0429	Pg 16 M 25		<table border="1" data-bbox="1321 680 1497 815"> <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									
Cable to cable hoods Cable gland order separately 	09 12 008 0727 19 12 008 0729	Pg 16 M 25		<table border="1" data-bbox="1321 1010 1497 1144"> <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									
Bulkhead mounted housing 	09 12 008 0327		 <p data-bbox="1241 1507 1318 1559">Panel cut out</p>							
Bulkhead mounted housing angled version 	09 12 008 0902		 <p data-bbox="1241 2000 1318 2051">Panel cut out</p>							

Accessories

Part No.

Drawing

Dimensions in mm

Protection covers

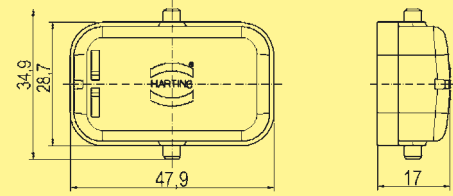


for male insert
cover without sealing

09 12 008 5407

for female insert
cover with sealing

09 12 008 5408



Panel Feed Through Sealings



Blind grommet

09 12 000 9969

09 12 000 9970

09 12 000 9971

09 12 000 9972

09 12 000 9973

09 12 000 9974

Cable-ø

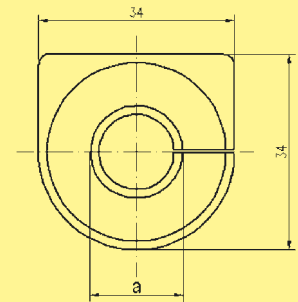
7 – 10

10 – 13

13 – 16

16 – 19

19 – 22



Cable glands

order separately



Pg 16

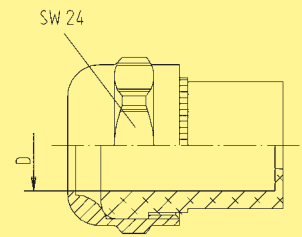
09 00 000 5059

M 25

19 12 000 5057

19 12 000 5058

SW	Cable [mm] min.	max.
24	11.5	15.5
24	10.5	14.0
24	14.0	17.0



Crimping tool

09 99 000 0021



HARTING- crimping tool

09 99 000 0110

Wire gauge
0.5 - 2.5 mm²



Locator

09 99 000 0111



order separately

Stock items in bold type