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Features

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

Technical characteristics

Approvals



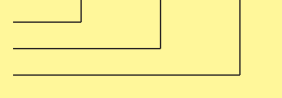
Inserts

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}
Insulation resistance

2 kV
 $\geq 10^{10} \Omega$

Material

Polyamide

Limiting temperatures

- 40 °C / +125 °C

Flammability acc. to UL 94

HB

Mechanical working life

≥ 500

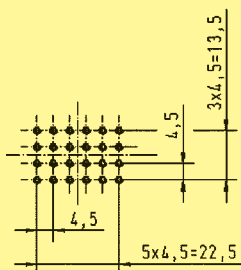
- Mating cycles

Wire gauge

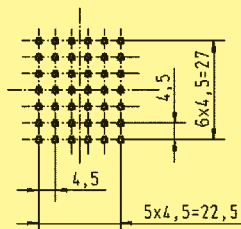
0.14 - 2.5 mm²

Layout of printed circuit boards

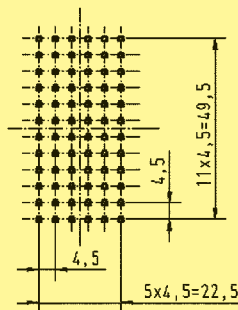
Han[®] 24 DD



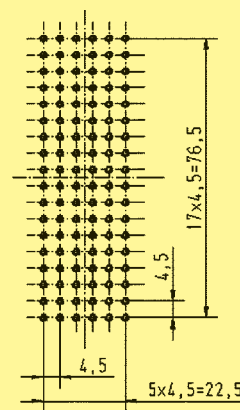
Han[®] 42 DD



Han[®] 72 DD

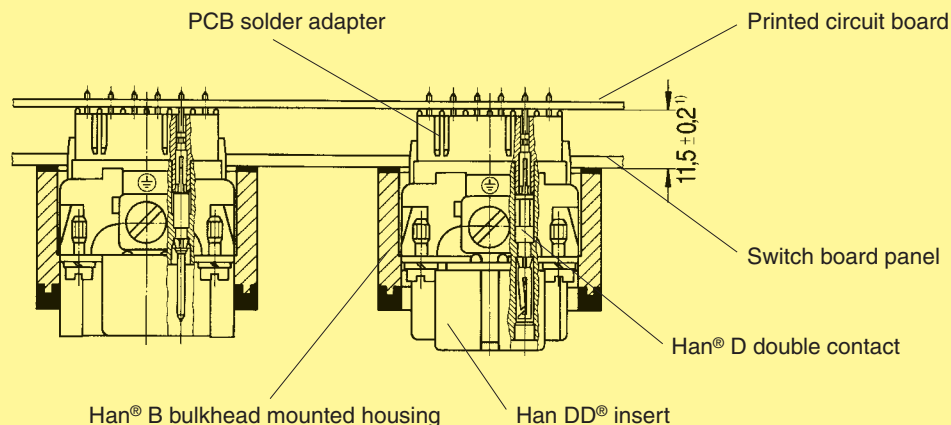


Han[®] 108 DD

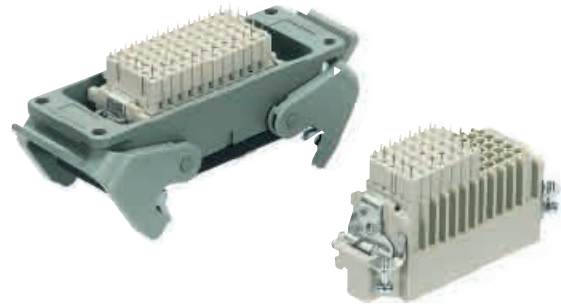


Recommended hole diameter: 0.8 mm

Assembly situation



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



Insert	Size	Part No.		Drawing	Dimensions in mm																				
		Male insert (M)	Female insert (F)																						
Order contacts separately					1) Distance for contact max. 21 mm <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> </tr> </thead> <tbody> <tr> <td>24 DD</td> <td>44</td> <td>51</td> </tr> <tr> <td>42 DD</td> <td>57</td> <td>64</td> </tr> <tr> <td>72 DD</td> <td>77.5</td> <td>84.5</td> </tr> <tr> <td>108 DD</td> <td>104</td> <td>111</td> </tr> </tbody> </table>		a	b	24 DD	44	51	42 DD	57	64	72 DD	77.5	84.5	108 DD	104	111					
	a	b																							
24 DD	44	51																							
42 DD	57	64																							
72 DD	77.5	84.5																							
108 DD	104	111																							
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																						
Han DD [®] double contacts		Part No.		Drawing	Dimensions in mm																				
to connect the PCB-adapter		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 border="1"> <thead> <tr> <th></th> <th>a</th> </tr> </thead> <tbody> <tr> <td>09 16 000 9905</td> <td>2.6</td> </tr> <tr> <td>09 16 000 9908</td> <td>3.4</td> </tr> </tbody> </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 border="1"> <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 chapter DD																									

PCB-Adapter

Features

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

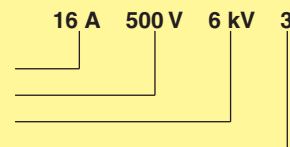
Technical characteristics

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

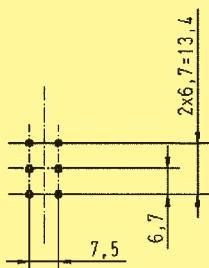


Insulation resistance
Material
Limiting temperatures
Flammability acc. to UL 94
Mechanical working life
- Mating cycles
Wire gauge

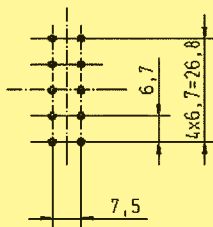
$\geq 10^{10} \Omega$
Polycarbonate
- 40 °C / +125 °C
V 0
 ≥ 500
0.5 - 4 mm²

Layout of printed circuit boards

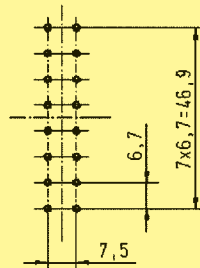
Han[®] 6 E



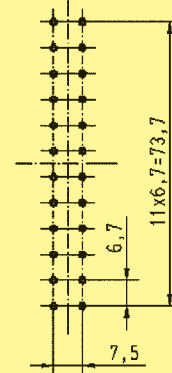
Han[®] 10 E



Han[®] 16 E

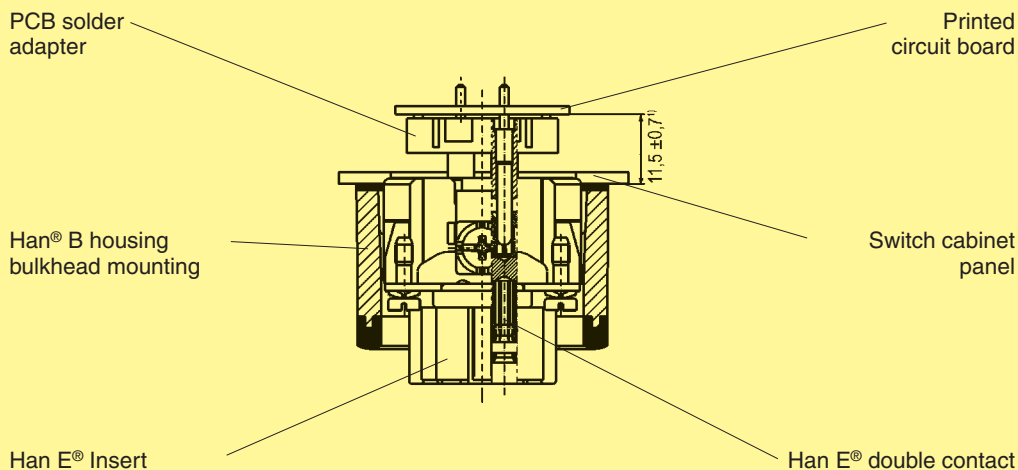


Han[®] 24 E



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

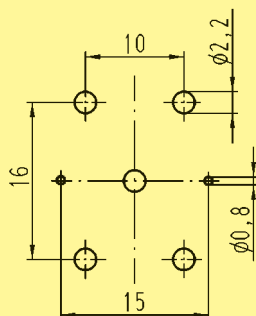
Features

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

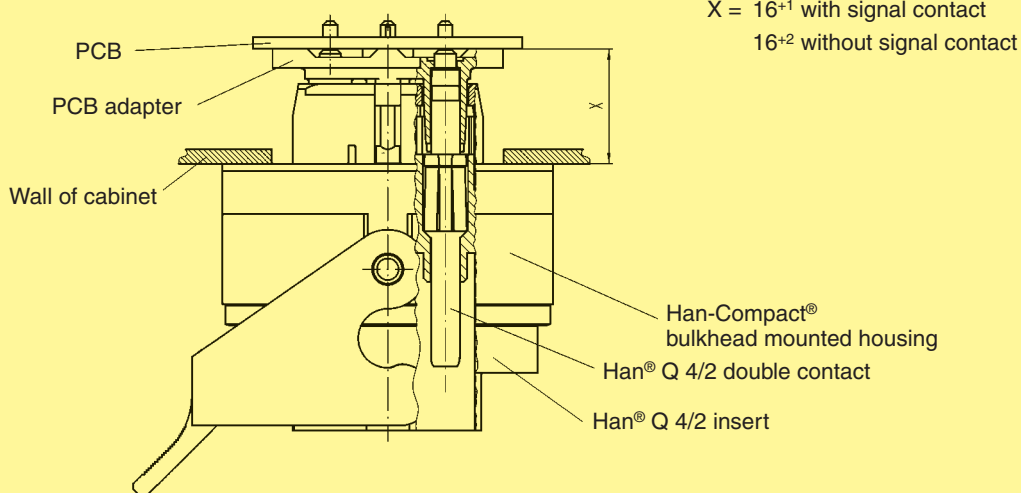
Technical characteristics

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




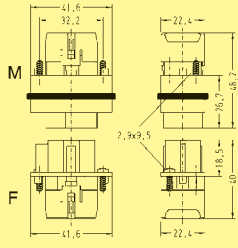

Assembly situation


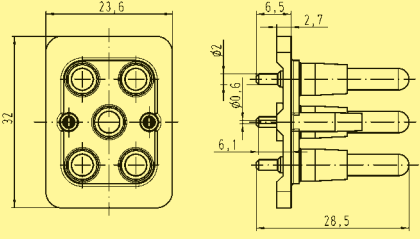



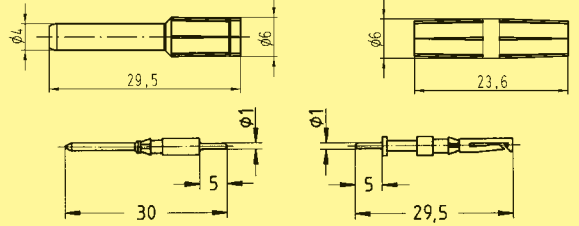



Device side


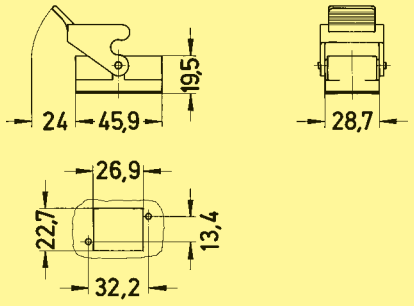
Cable side

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		

PCB-Adapter

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

Further informations see chapter Q

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

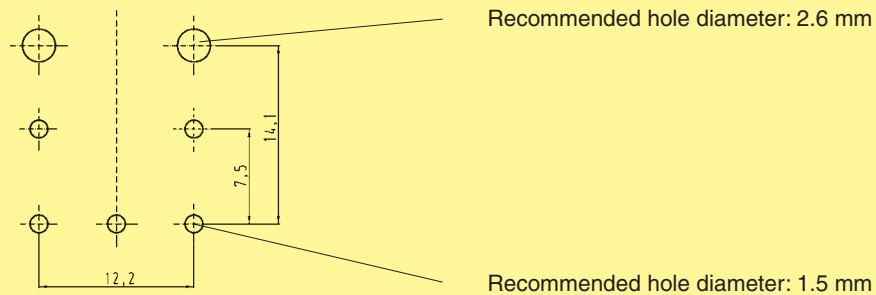
	10 A	230/400 V	4 kV	3
Working current	[Line to 10 A]			
Working voltage conductor – ground	[Line to 230/400 V]			
Working voltage conductor – conductor	[Line to 230/400 V]			
Rated impulse voltage	[Line to 4 kV]			
Pollution degree	[Line to 3]			

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

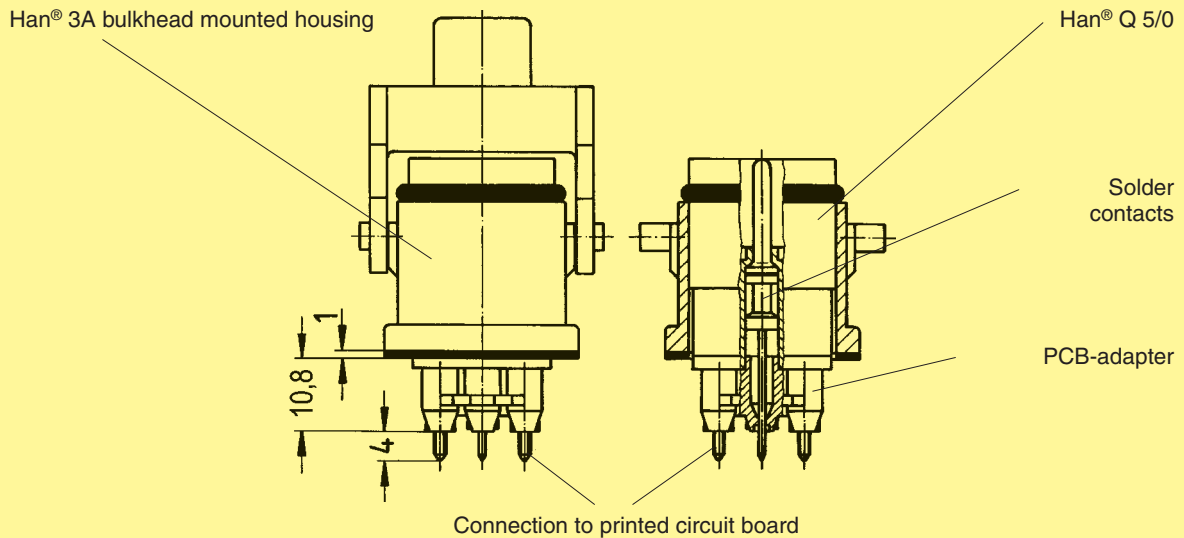
Working voltage
acc. to UL/CSA 400 V

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

Layout of printed circuit boards



Assembly situation



PCB-Adapter



Device side	Insert		Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)				
	Order contacts separately		09 12 005 3001	09 12 005 3101	<p>1) Distance for contact max. 21 mm</p>	
	PCB-adapter		Part No.		Drawing	Dimensions in mm
	with PE contact panel for Han® Q 5/0		09 12 000 9905		<p>Adapter PE contact panel</p>	
	Solder contacts		Part No.		Drawing	Dimensions in mm
	to connect the PCB-adapter		Male contact	Female contact		
			09 33 000 6195	09 33 000 6295		
	Housing bulkead mounting		Part No.		Drawing	Dimensions in mm
			09 62 003 0304		<p>Panel cut out 22 x 22 mm</p>	
Cable side	Further informations see chapter Q					

PCB-Adapter

Features

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

Technical characteristics

Approvals



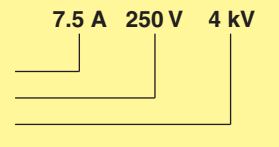
Inserts

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



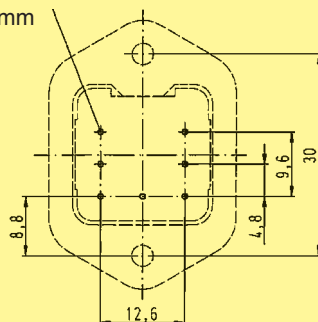
Insulation resistance
Material
Limiting temperatures
Flammability acc. to UL 94
Mechanical working life
- Mating cycles

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

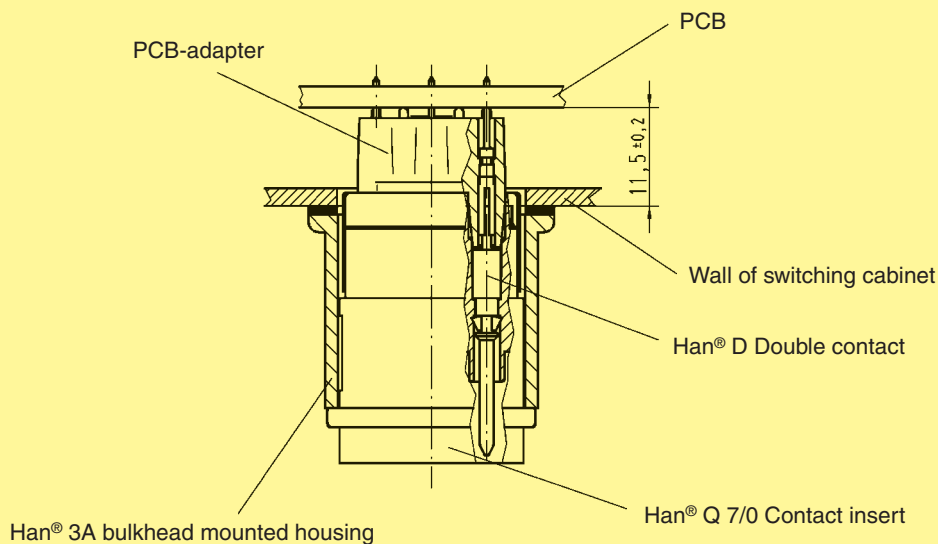
Layout of printed circuit boards

Recommended hole diameter: 0.8 mm

Dimensions in mm



Assembly situation





Device side	Insert		Part No.		Drawing	Dimensions in mm		
	Male insert (M)	Female insert (F)						
Device side	Order contacts separately		09 12 007 3001	09 12 007 3101				
	Coding						09 12 000 9901	09 12 000 9902
	PCB-adapter						Part No.	
	for PCB up to 2.4 mm		09 12 000 9908					
Device side	Solder contacts		Part No.		Drawing	Dimensions in mm		
	to connect the PCB-adapter		Male contact	Female contact				
			09 15 000 6190	09 15 000 6290				
Cable side	Housing bulkead mounting		Part No.		Drawing	Dimensions in mm		
			09 20 003 0301		<p>Panel cut out 22 x 22 mm</p>			
Further informations see chapter Q								

PCB-Adapter

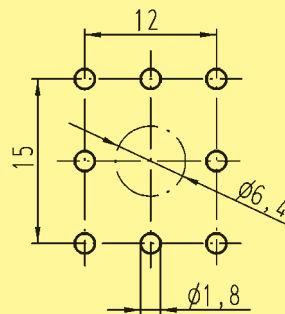
Features

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

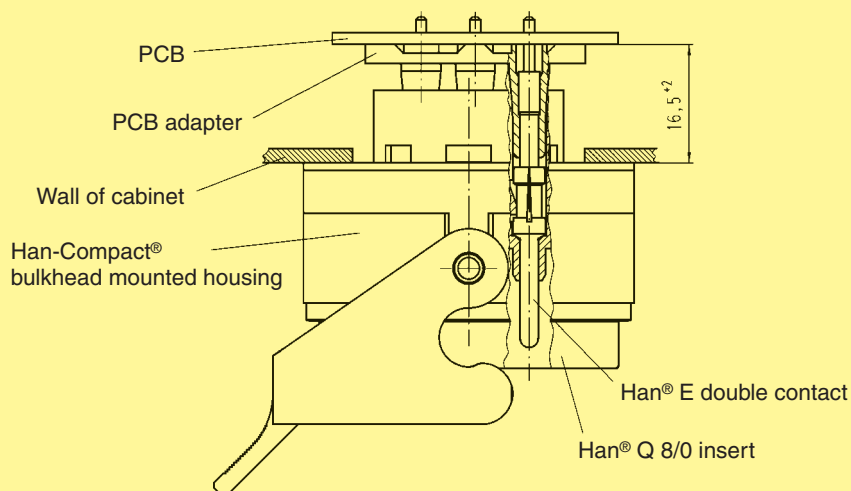
Technical characteristics

Approvals	
Number of contacts	8
Electrical data acc. to DIN EN 61 984	16 A 230/400 V 4 kV 2
Rated current	16 A
Rated voltage	
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





Device side	Insert		Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)	Male insert (M)	Female insert (F)		
	Order contacts separately		09 12 008 3001	09 12 008 3101	<p>Contact arrangement View from termination side</p>	
	PCB-adapter for PCBs up to 1.6 mm			09 12 008 9901		
	Han® Q 8/0 double contacts to connect the PCB adapter		Male contact	Female contact		
			09 33 000 6180	09 33 000 6280		
	Housing bulhead mounting Plastic					
				09 12 008 0327		
Cable side	Further informations see chapter Q					

PCB-Adapter

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 adaptations

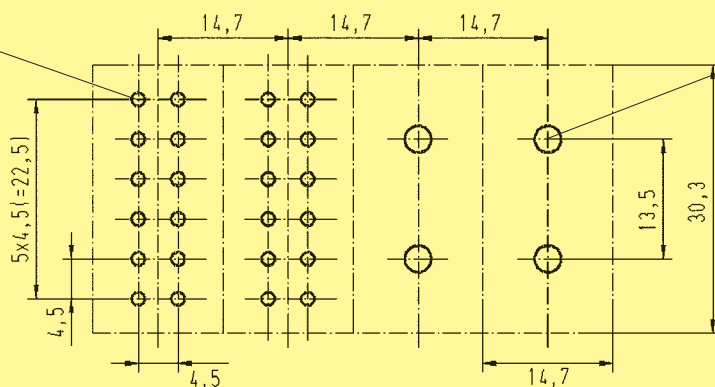
Number of contacts	2
Working current	40 A
Working voltage	500 V
Wire gauge	2.5 - 10 mm ²

Layout of printed circuit boards

Depiction

Recommended hole diameter: 0,8 mm

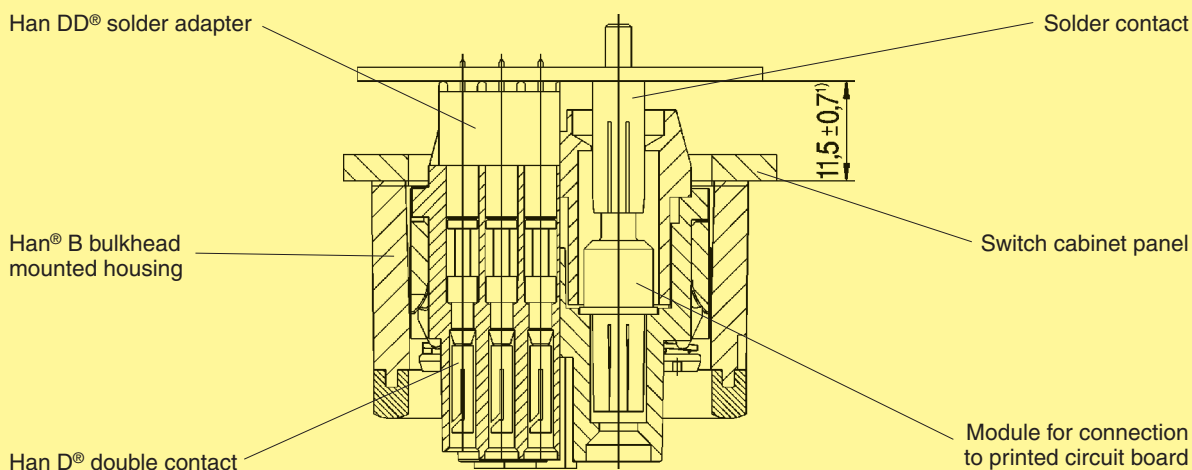
Recommended hole diameter: 3,2 mm



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

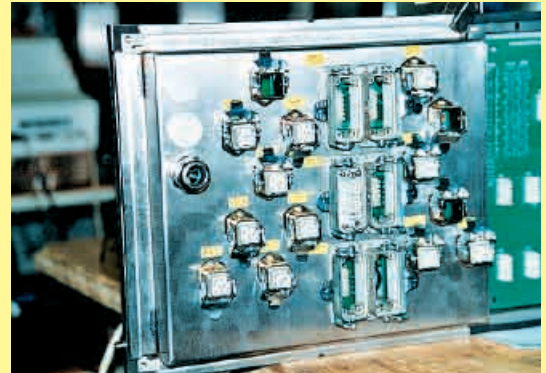
Hinged frame	No. of modules	Part No.		Size	Figure
		Male insert (M)	Female insert (F)		
	1	09 14 000 0304	09 14 000 0304	10 A	Drawings and further details see chapter 06
	2	09 14 006 0303	09 14 006 0313	6 B	
	3	09 14 010 0303	09 14 010 0313	10 B	
	4	09 14 016 0303	09 14 016 0313	16 B	
	5	09 14 024 0303	09 14 024 0313	24 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 	09 16 000 9905 09 16 000 9908			<table border="1"> <thead> <tr> <th></th> <th>a</th> </tr> </thead> <tbody> <tr> <td>09 16 000 9905</td> <td>2.6</td> </tr> <tr> <td>09 16 000 9908</td> <td>3.4</td> </tr> </tbody> </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									

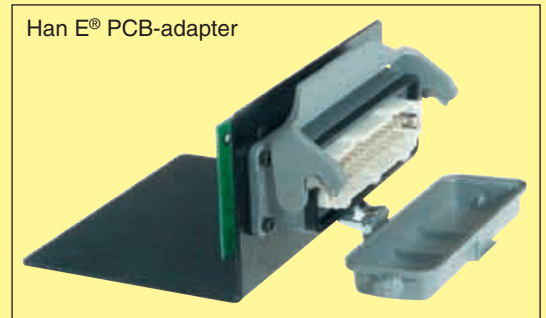
PCB-Adapter

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			

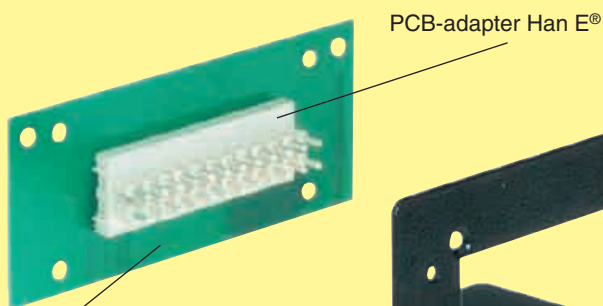
- Secondary mating between industrial connector and printed circuit board.
- No higher force is applied on the soldering joint when mating the industrial connector due to an additional mating point.
- No wiring between printed circuit board and industrial connector necessary.
- thus no wiring faults
⇒ 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



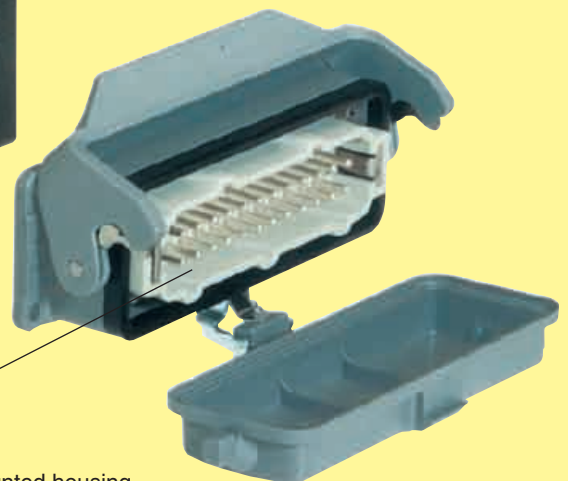
Han E® PCB-adapter



PCB-adapter Han E®

Printed circuit board

Switch cabinet panel



Han E® connector in a bulkhead mounted housing