

Han® PCB-adapter

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Features

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

Technical characteristics

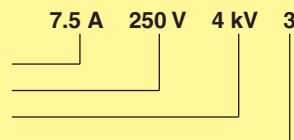
Approvals



Inserts

Number of contacts 24, 42, 72, 108

Electrical data
acc. to DIN VDE 0627



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

- Mating cycles

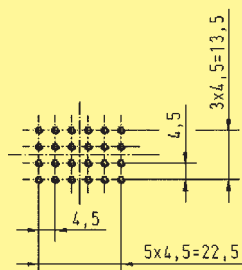
≥ 500

Wire gauge

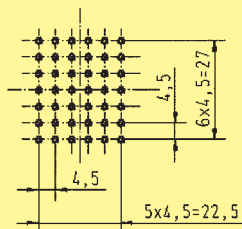
0.14 - 2.5 mm²

Layout of printed circuit boards

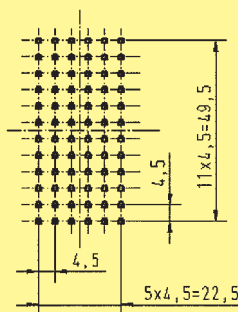
Han® 24 DD



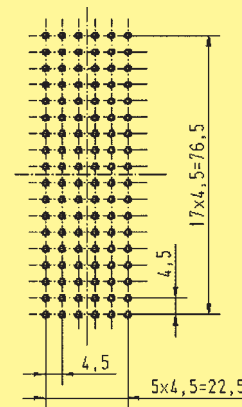
Han® 42 DD



Han® 72 DD

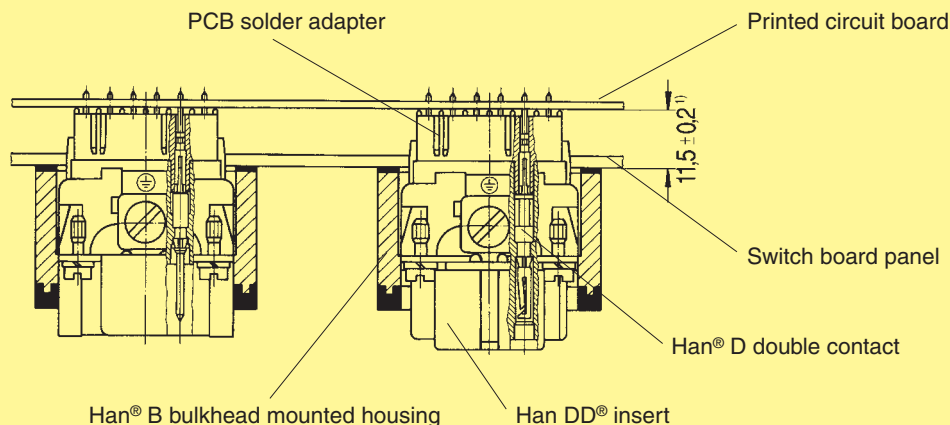


Han® 108 DD

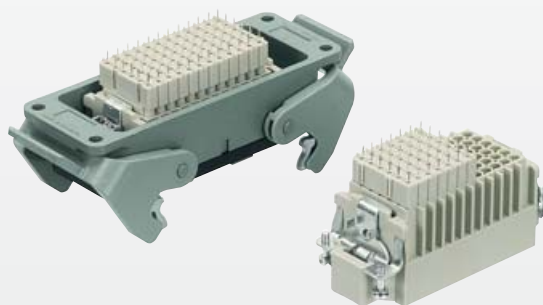


Recommended hole diameter: 0.8 mm

Assembly situation



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

Device sideCable sidePCB-Adapter20
-
03

Features

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

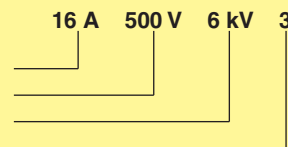
Technical characteristics

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

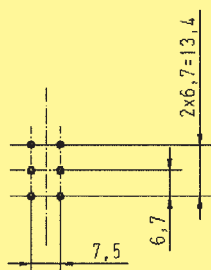


Insulation resistance
Material
Limiting temperatures
Flammability acc. to UL 94
Mechanical working life
- Mating cycles
Wire gauge

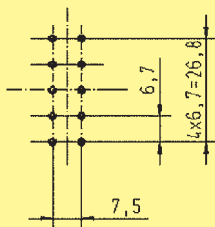
$\geq 10^{10} \Omega$
Polycarbonate
- 40 °C / +125 °C
V 0
 ≥ 500
0.5 - 4 mm²

Layout of printed circuit boards

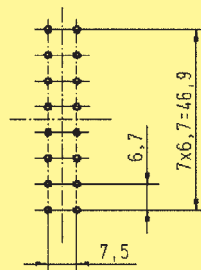
Han® 6 E



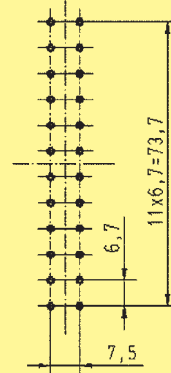
Han® 10 E



Han® 16 E



Han® 24 E



Recommended hole diameter: 1.8 mm

Assembly situation

PCB solder
adapter

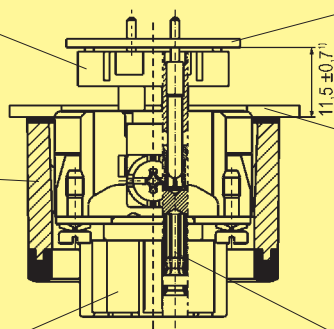
Printed
circuit board

Han® B housing
bulkhead mounting

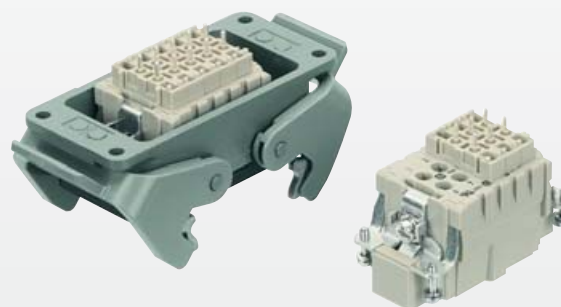
Switch cabinet
panel

Han E® Insert

Han E® double contact

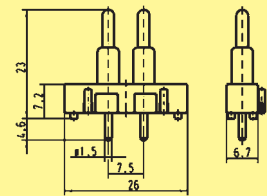


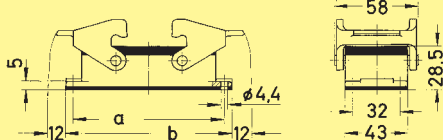
¹⁾ for Han® B EMC hoods/housings spacing of 12.5 ± 0.7 is necessary as no flange seal is used

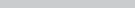


Inserts		Part No.		Drawing	Dimensions in mm															
Size	Male insert (M)	Female insert (F)																		
Order contacts separately					1) Distance for contact max. 21 mm															
Han® 6 E	6 B	09 33 006 2602	09 33 006 2702																	
Han® 10 E	10 B	09 33 010 2602	09 33 010 2702																	
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																	
					<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 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 solder 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	 <table border="1" data-bbox="925 1760 1337 1912"><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																					

Counter connector		
Crimp termination		See chapter 03
Screw termination		
Cage clamp termination		

Features

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

Technical characteristics

Approvals



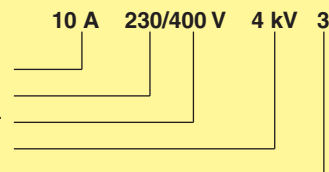
Inserts

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

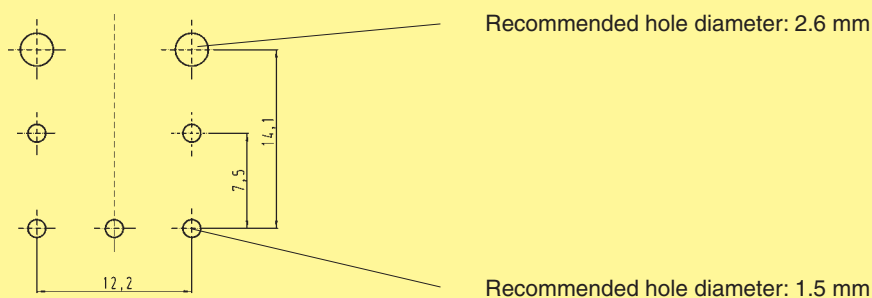


- pollution degree 2 also 10 A 320/500 V 4 kV 2

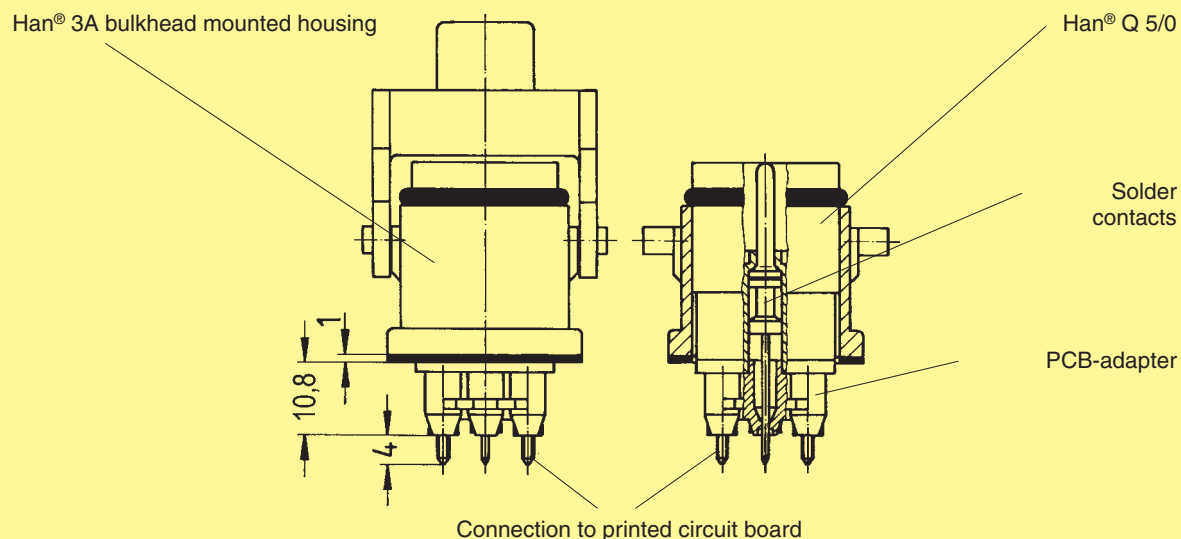
Working voltage
acc. to UL/CSA 400 V

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





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		
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	bulkead mounting	Part No.	Drawing	Dimensions in mm
		09 62 003 0304		
			Panel cut out 22 x 22 mm	

PCB-Adapter

Cable side

Counter connector			
Crimp termination			See chapter 13

Features

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

Technical characteristics

Approvals



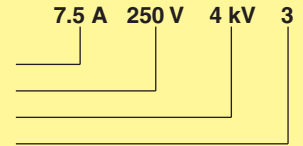
Inserts

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

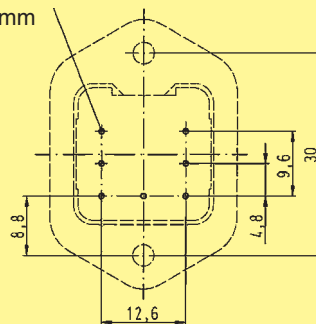


Insulation resistance $\geq 10^{10} \Omega$
Material Polycarbonate
Limiting temperatures $-40^{\circ}\text{C} \dots +125^{\circ}\text{C}$
Flammability acc. to UL 94 V 0
Mechanical working life
- Mating cycles ≥ 500

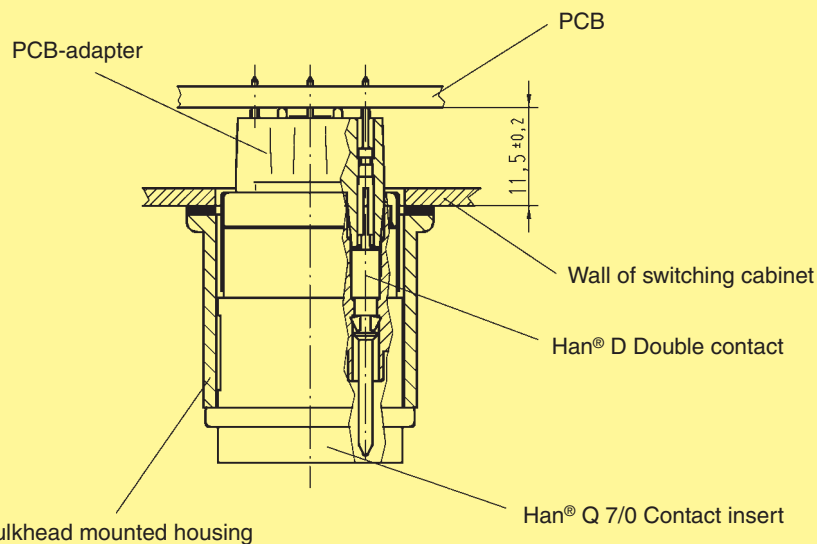
Layout of printed circuit boards

Recommended hole diameter: 0.8 mm

Dimensions in mm

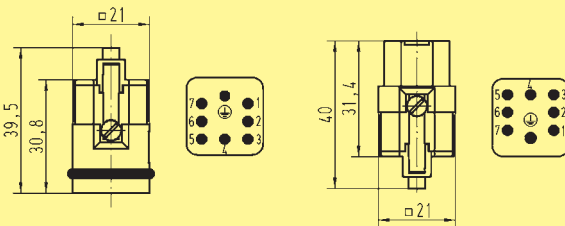


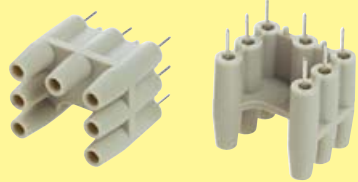
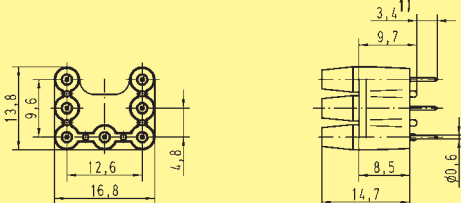
Assembly situation

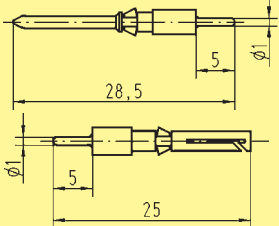


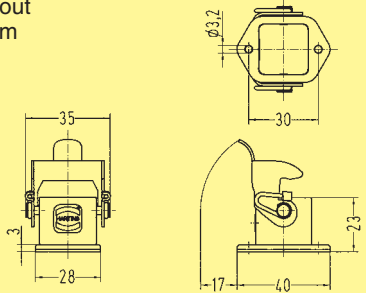


Device side

Insert	Part No.		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
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	bulkead mounting	Part No.	Drawing	Dimensions in mm
		09 20 003 0301		

PCB-Adapter

Cable side

Counter connector				
Crimp termination			See chapter 13	

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

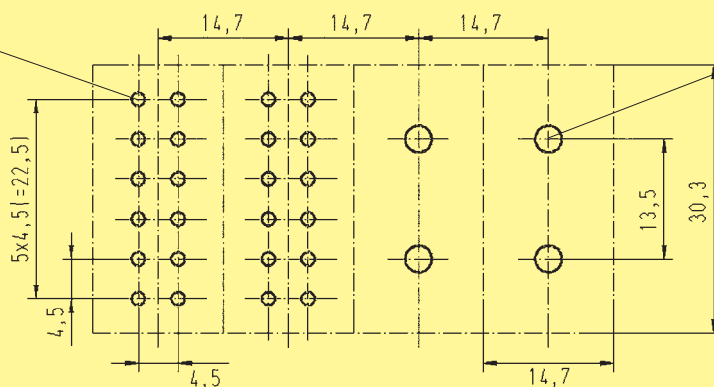
Number of contacts	2
Working current	40 A
Working voltage	500 V
Wire gauge	2.5 - 10 mm ²

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

Han DD® solder adapter

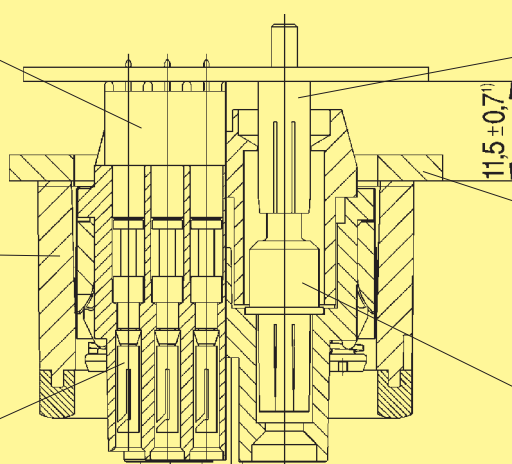
Solder contact

Han® B bulkhead
mounted housing

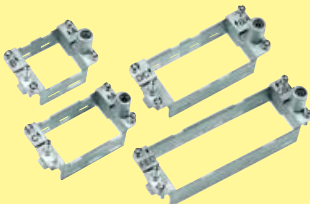
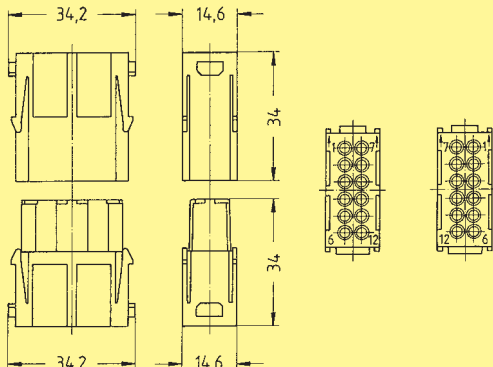
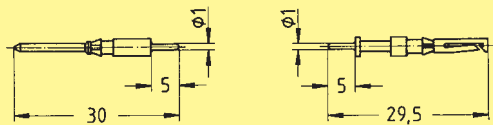
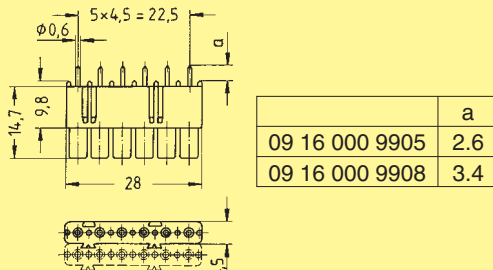
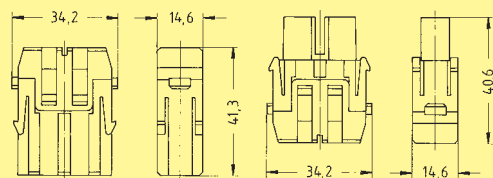
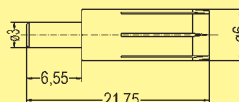
Switch cabinet panel

Han D® double contact

Module for connection
to printed circuit board



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

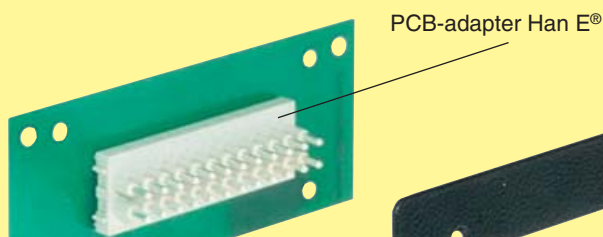
Hinged frame	No. of modules	Part No.		Size	Figure						
		Male insert (M)	Female insert (F)								
	1	09 14 000 0304	09 14 000 0304	10 A	Drawings and further details see chapter 06						
	2	09 14 006 0303	09 14 006 0313	6 B							
	3	09 14 010 0303	09 14 010 0313	10 B							
	4	09 14 016 0303	09 14 016 0313	16 B							
	6	09 14 024 0303	09 14 024 0313	24 B							
Identification		Male insert (M)	Female insert (F)	Drawing	Dimensions in mm						
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 solder adapter for PCBs up to 1.6 mm for PCBs up to 2.4 mm		09 16 000 9905 09 16 000 9908			<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										
Han® axial screw module		Male insert (M)	Female insert (F)	Drawing	Dimensions in mm						
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 / electronic 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