

Specifications

DIN VDE 0627
DIN VDE 0110
DIN EN 61 984

Approvals



Inserts

Number of contacts 3, 4, 10, 16, 32 (2 x 16) + PE

Electrical data acc. to DIN EN 61 984

Han® 3 A, 4 A	10 A	230/400 V	4 kV	3
Working current	[Graph showing current vs temperature]			
Working voltage conductor – ground	[Graph showing voltage vs temperature]			
Working voltage conductor – conductor	[Graph showing voltage vs temperature]			
Rated impulse voltage	[Graph showing voltage vs temperature]			
Pollution degree or	10 A	250 V	4 kV	3

Han® 10 A, 16 A	16 A	250 V	4 kV	3
Working current	[Graph showing current vs temperature]			
Working voltage	[Graph showing voltage vs temperature]			
Rated impulse voltage	[Graph showing voltage vs temperature]			
Pollution degree – Pollution degree 2 also	16 A	230/400 V	4 kV	2

Working 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 - hard-silver plated	3 µm Ag
- hard-gold plated	2 µm Au over 3 µm Ni
Contact resistance	≤ 1 mΩ
Crimp terminal - mm ²	0.5 - 4.0 mm ²
- AWG	20 - 12
Screw terminal	
- mm ²	2.5 mm ²
- AWG	14
- Tightening/test torque	0.5 Nm Han 10/16 A 0.25 Nm Han 3/ 4 A

Hoods/Housings thermoplastic Han® 3 A / 4 A

Material	Polycarbonate RAL 7032
Locking element	Polyamide RAL 7032
Flammability acc. to UL 94	V 0
Hoods/Housings seal	NBR
Temperature range	- 40 °C ... +125 °C
Degree of protection acc. to DIN EN 60 529 for coupled connector	IP 65 ¹⁾

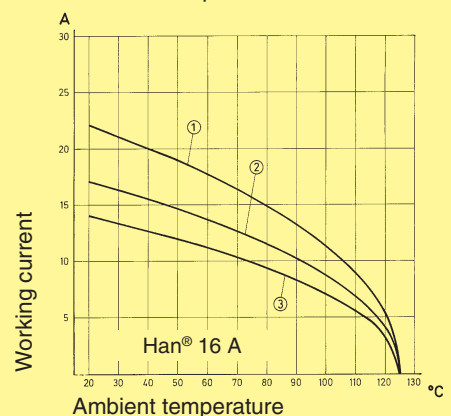
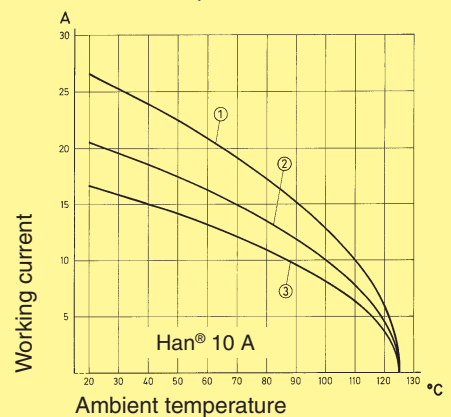
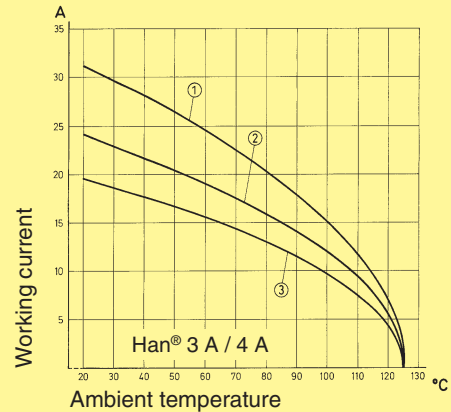
Hoods/Housings metal

Material Han® 3 A / 4 A	die cast zinc
Material Han® 10 A / 16 A	die cast aluminium
Locking element Han® 3 A / 4 A	steel, zinc plated
Locking element Han® 10 A / 16 A	Han-Easy Lock®
Hoods/Housings seal	NBR
Temperature range	- 40 °C ... +125 °C
Degree of protection acc. to DIN EN 60 529 for coupled connector	
Han® 3 A / 4 A	IP 44 IP 65 with sealing screw 09 20 000 9918
Han® 10 A / 16 A	IP 65
further selection of hoods/housings	chapter 30 / chapter 31

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.



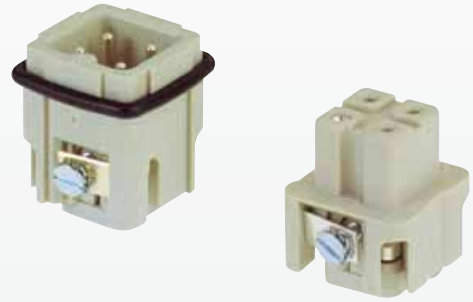
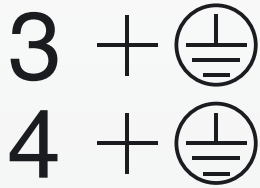
- ① Wire gauge: 2.5 mm²
- ② Wire gauge: 1.5 mm²
- ③ Wire gauge: 1.0 mm²

Accessories

Crimping tools	chapter 99
Cable clamps	chapter 40
sealing screw	chapter 40
Coding of Hoods/Housings	chapter 40
Label acc. to CSA-approval	chapter 40
Test connectors	chapter 40

¹⁾ without washer

Number of contacts



Inserts

Identification	Series	Part No.		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
Screw terminal	Han® 3 A	09 20 003 2611			<p>Contact arrangement View from termination side</p>
			09 20 003 2711		
with HARAX® Termination	Han® 3 A	09 20 003 0440			
			09 20 003 0445		
Hood cable to cable with HARAX® Termination	Han® 3 A				
			09 20 003 0745		
	Han® 4 A	09 20 004 2611			<p>Contact arrangement View from termination side</p>
			09 20 004 2711		


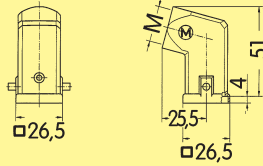

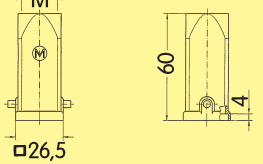
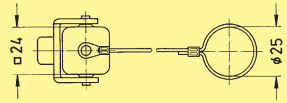

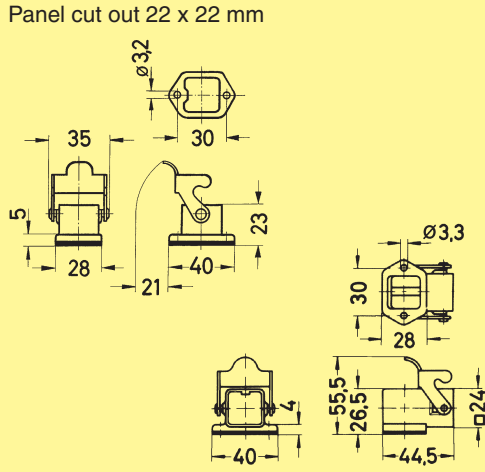


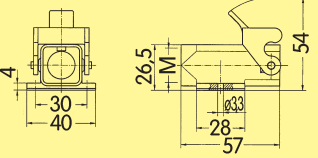

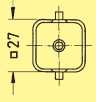
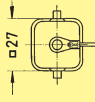
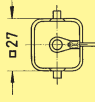


Stock items in bold type

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 5422¹⁾ 09 20 003 5421²⁾			
Housings	Housings bulkhead mounting	09 20 003 0301			Panel cut out 22 x 22 mm
		09 20 003 0801			
	Housing surface mounting	19 20 003 1250	20		Panel cut out 22 x 22 mm
	bottom closed	19 20 003 1252	20		
	Housing screw mounting	19 20 003 1150	20		
	Hood cable to cable	19 20 003 1750	20		
	Protection covers for housings	09 20 003 5426¹⁾ 09 20 003 5425²⁾			
	for hoods cable to cable	09 20 003 5428¹⁾ 09 20 003 5427²⁾			

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

Hand
A

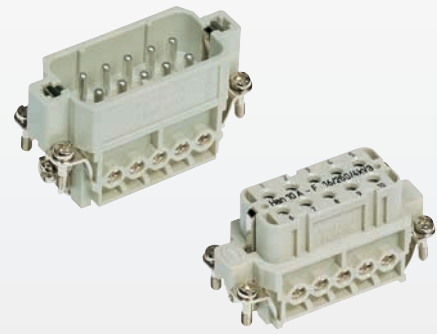
Han
A

Identification	Part No.	M	Drawing	Dimensions in mm	
Hoods	Hoods side-entry 	grey 19 20 003 0620	20		51 25,5 26,5
	black 19 20 003 0627	20			
	Hoods top-entry 	grey 19 20 003 0420	20		60 26,5
black 19 20 003 0427	20				
Protection covers for hoods	09 20 003 5442 ¹⁾ 09 20 003 5441 ²⁾				
Housings bulkhead mounting		grey 09 20 003 0320	—		Panel cut out 22 x 22 mm 35 30 5 28 21 40 23 30 28 30 55,5 26,5 44,5 4 24
		grey 09 20 003 0820	—		
Housings surface mounting	1 side-entry 	grey 19 20 003 0220	20		Panel cut out 22 x 22 mm 4 30 40 26,5 M 28 33 57 54
	Hoods cable to cable 	grey 19 20 003 0720	20		
Protection covers for housings	A 09 20 003 5407 ¹⁾³⁾ 09 20 003 5408 ²⁾³⁾				
Protection covers for hoods cable to cable	B 09 20 003 5446 ¹⁾ 09 20 003 5445 ²⁾				$\phi 4,3$
	C 09 20 003 5448 ¹⁾				$\phi 25$

¹⁾ for mounted male insert
²⁾ for mounted female insert
³⁾ for metal housings and cable to cable hoods also

Number of contacts

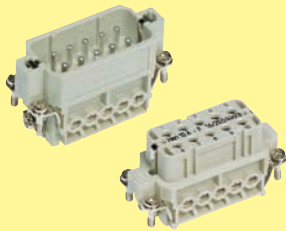
10 +



Inserts

Identification	Series	Part No.		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		

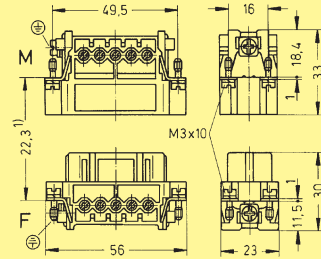
Screw terminal



Han A®

09 20 010 2612

09 20 010 2812



Screw terminal

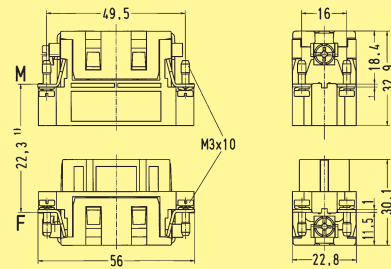
Crimp terminal
Order crimp contacts separately



Han A®

09 20 010 3001

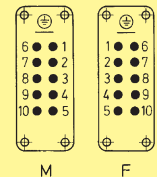
09 20 010 3101



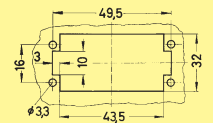
Crimp terminal

¹⁾ Distance for contact max. 24 mm

Contact arrangement
View from termination side



Panel cut out for inserts
for use without
hoods/housings



Identification	Wire gauge (mm ²)	Part No.		Drawing	Dimensions in mm
		Male contacts	Female contacts		

Crimp contacts
Power contacts

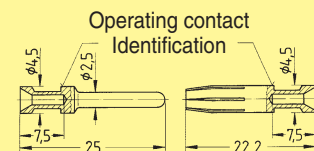
silver plated



0.5
0.75
1.0
1.5
2.5
3
4

09 33 000 6121
09 33 000 6114
09 33 000 6105
09 33 000 6104
09 33 000 6102
09 33 000 6106
09 33 000 6107

09 33 000 6220
09 33 000 6214
09 33 000 6205
09 33 000 6204
09 33 000 6202
09 33 000 6206
09 33 000 6207



Operating contact
Identification

gold plated



0.5
0.75
1.0
1.5
2.5
4.0

09 33 000 6122
09 33 000 6115
09 33 000 6118
09 33 000 6116
09 33 000 6123
09 33 000 6119

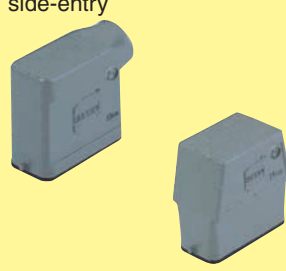
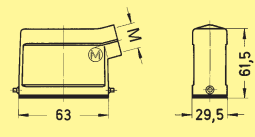
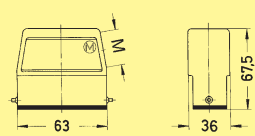

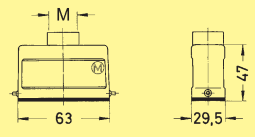
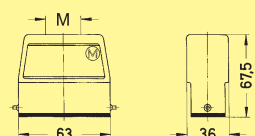

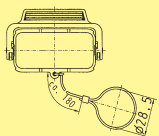

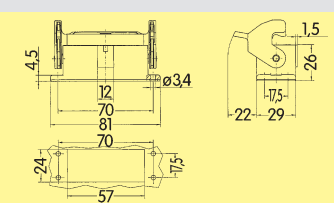
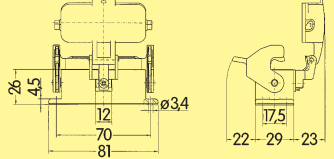

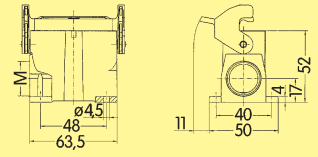
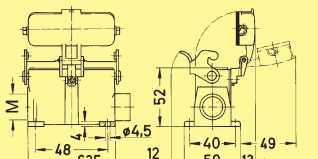

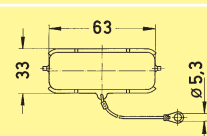
09 33 000 6222
09 33 000 6215
09 33 000 6218
09 33 000 6216
09 33 000 6223
09 33 000 6221

Crimp contact identification

Identification	Wire gauge	Stripping length
no groove	0.5 mm ²	7.5 mm
1 groove*	0.75 mm ²	7.5 mm
1 groove	1 mm ²	7.5 mm
2 grooves	1.5 mm ²	7.5 mm
3 grooves	2.5 mm ²	7.5 mm
wide groove	3.0 mm ²	7.5 mm
no groove	4 mm ²	7.5 mm

* on the back crimp collar

Han
A

Identification	Part No.		M	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods side-entry 	19 20 010 1540		20		63 29,5 61,5
		19 20 010 0546	25		63 36 67,5
Hoods top-entry 	19 20 010 1440		20		M 63 29,5 47
		19 20 010 0446	25		M 63 36 67,5
Protection covers for hoods 	09 20 010 5423				
Housings bulkhead mounting 	09 20 010 0301		—		4,5 12 70 81 24 70 57 17,5 26 4,5 12 70 81 22 29 17,5
	with thermo-plastic cover 09 20 010 0321¹⁾		—		26 4,5 12 70 81 22 29 23 17,5
Housings surface mounting 	1 side-entry 19 20 010 0251		1 x 25		M 4,5 48 63,5 11 40 50 17 52
	2 side-entries 19 20 010 0290		2 x 20		M 4,5 48 63,5 12 52 40 50 13 49
	with metal cover 19 20 010 0295		2 x 20		
Protection covers for housings 	09 20 010 5425				63 33 5,3

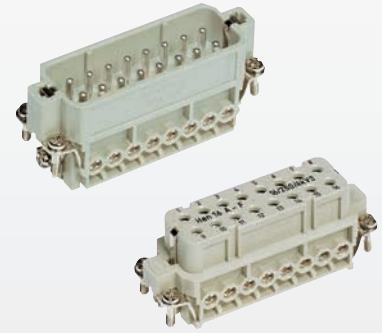
01
16

¹⁾ for female insert


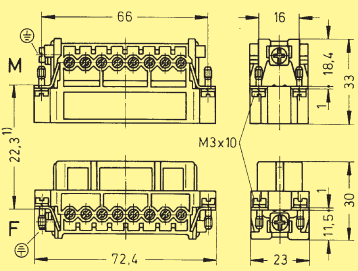
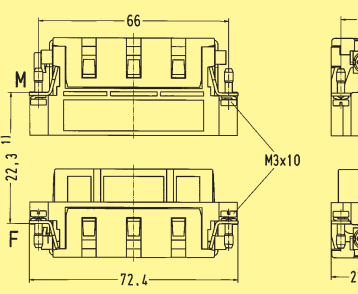

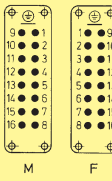
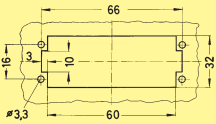
Stock items in bold type

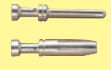
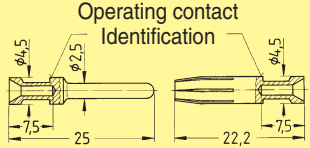
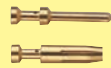
Number of contacts

16 +




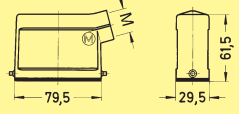
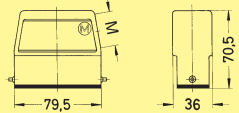

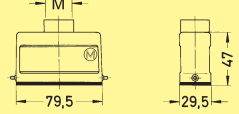
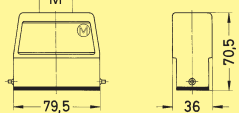

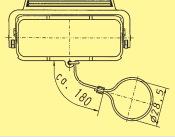

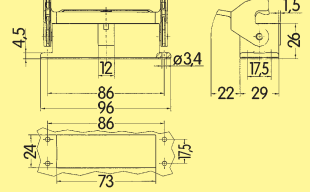
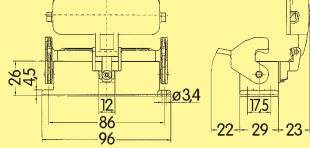

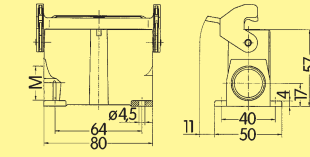
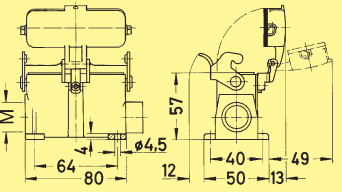

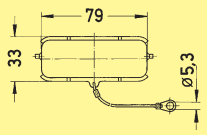
Inserts

Identification	Series	Part No.		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Screw terminal</p> 	Han A®	09 20 016 2612	09 20 016 2812	 <p>Screw terminal</p>	 <p>Crimp terminal</p>
<p>Crimp terminal Order crimp contacts separately</p> 	Han A®	09 20 016 3001	09 20 016 3101	<p>¹⁾ Distance for contact max. 24 mm</p> <p>Contact arrangement View from termination side</p> 	<p>Panel cut out for inserts for use without hoods/housings</p> 

Identification	Wire gauge (mm²)	Part No.		Drawing	Dimensions in mm																								
		Male contacts	Female contacts																										
<p>Crimp contacts</p> <p>Power contacts</p> <p>silver plated</p> 	0.5 0.75 1.0 1.5 2.5 3 4	09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	 <p>Operating contact Identification</p>																									
<p>gold plated</p> 	0.5 0.75 1.0 1.5 2.5 4.0	09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	<p>Crimp contact identification</p> <table border="1"> <thead> <tr> <th>Identification</th> <th>Wire gauge</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>no groove</td> <td>0.5 mm²</td> <td>AWG 20</td> </tr> <tr> <td>1 groove*</td> <td>0.75 mm²</td> <td>AWG 18</td> </tr> <tr> <td>1 groove</td> <td>1 mm²</td> <td>AWG 18</td> </tr> <tr> <td>2 grooves</td> <td>1.5 mm²</td> <td>AWG 16</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm²</td> <td>AWG 14</td> </tr> <tr> <td>wide groove</td> <td>3.0 mm²</td> <td>AWG 12</td> </tr> <tr> <td>no groove</td> <td>4 mm²</td> <td>AWG 12</td> </tr> </tbody> </table>	Identification	Wire gauge	Stripping length	no groove	0.5 mm²	AWG 20	1 groove*	0.75 mm²	AWG 18	1 groove	1 mm²	AWG 18	2 grooves	1.5 mm²	AWG 16	3 grooves	2.5 mm²	AWG 14	wide groove	3.0 mm²	AWG 12	no groove	4 mm²	AWG 12	
Identification	Wire gauge	Stripping length																											
no groove	0.5 mm²	AWG 20																											
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wide groove	3.0 mm²	AWG 12																											
no groove	4 mm²	AWG 12																											

* on the back crimp collar

Han
A

Identification	Part No.		M	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods side-entry 	19 20 016 1540		20		61,5 79,5 29,5
		19 20 016 0546	25		70,5 79,5 36
Hoods top-entry 	19 20 016 1440		20		47 79,5 29,5
		19 20 016 0446	25		70,5 79,5 36
Protection covers for hoods 	09 20 016 5423				
Housings bulkhead mounting 	09 20 016 0301		—		1,5 26 17,5 22-29 4,5 12 86 96 24 73 17,5
	with thermo-plastic cover 09 20 016 0321¹⁾		—		1,5 23 17,5 22-29 4,5 12 86 96 26
Housings surface mounting 	1 side-entry 19 20 016 0251		1 x 25		57 17 4 40 50 11 64 80 4,5
	2 side-entries 19 20 016 0290		2 x 20		49 13 50 40 12 57 64 80 4,5
	with metal cover 19 20 010 0295		2 x 20		
Protection covers for housings 	09 20 016 5425				79 33 13 5,3

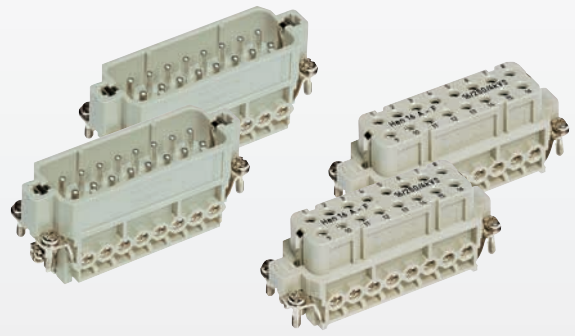
01
18

¹⁾ for female insert

Stock items in bold type

Number of contacts

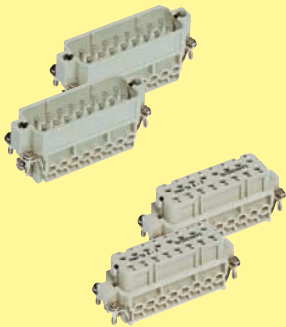
32 +



Inserts

Identification	Series	Part No.		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		

Screw terminal

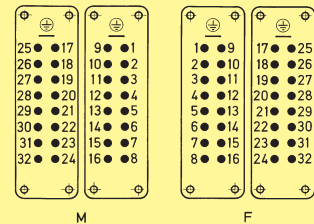


Han A®
1-16
17-32

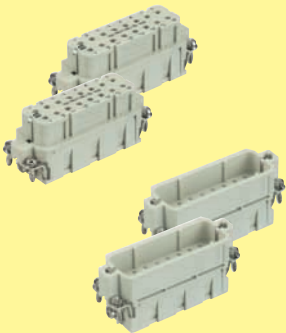
Male insert (M)	Female insert (F)
09 20 016 2612	09 20 016 2812
09 20 016 2613	09 20 016 2813

Dimensions for inserts see page 01.16

Contact arrangement View from termination side



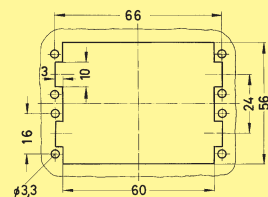
Crimp terminal
Order crimp contacts separately



Han A®
1-16
17-32

Male insert (M)	Female insert (F)
09 20 016 3001	09 20 016 3101
09 20 016 3011	09 20 016 3111

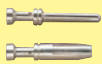
Panel cut out for inserts
for use without hoods/housings



Identification	Wire gauge (mm²)	Part No.		Drawing	Dimensions in mm
		Male contacts	Female contacts		

Crimp contacts
Power contacts

silver plated

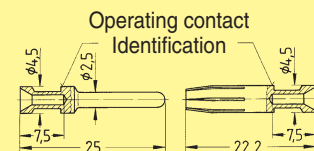


0.5	09 33 000 6121	09 33 000 6220
0.75	09 33 000 6114	09 33 000 6214
1.0	09 33 000 6105	09 33 000 6205
1.5	09 33 000 6104	09 33 000 6204
2.5	09 33 000 6102	09 33 000 6202
3	09 33 000 6106	09 33 000 6206
4	09 33 000 6107	09 33 000 6207

gold plated



0.5	09 33 000 6122	09 33 000 6222
0.75	09 33 000 6115	09 33 000 6215
1.0	09 33 000 6118	09 33 000 6218
1.5	09 33 000 6116	09 33 000 6216
2.5	09 33 000 6123	09 33 000 6223
4.0	09 33 000 6119	09 33 000 6221




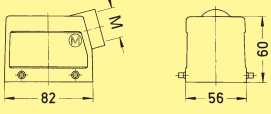
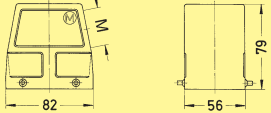

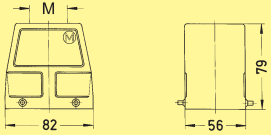



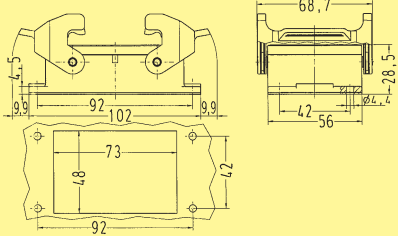

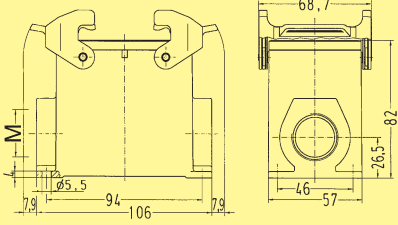


Crimp contact identification

Identification	Wire gauge	Stripping length
no groove	0.5 mm²	7.5 mm
1 groove*	0.75 mm²	7.5 mm
1 groove	1 mm²	7.5 mm
2 grooves	1.5 mm²	7.5 mm
3 grooves	2.5 mm²	7.5 mm
wide groove	3.0 mm²	7.5 mm
no groove	4 mm²	7.5 mm

* on the back crimp collar

Han A

Han
A

Identification	Part No.			Drawing	Dimensions in mm
	Low construction	High construction	M		
Hoods side-entry 	19 20 032 1521	19 20 032 0527	25		
			32		
Hoods top-entry 		19 20 032 0427	32		
Protection cover 		09 20 032 5401	—		
Housing bulkhead mounting 	09 20 032 0301		—	 Panel cut out	
Housings surface mounting 		19 20 032 0231 19 20 032 0232 19 20 032 0272	1 x 25	 Blind way for one cable entry	
			1 x 32		
Protection cover 		09 20 032 5405	2 x 32		

01
20

Stock items in bold type