

Han A®

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Han  
A

**Specifications**

DIN VDE 0627  
DIN VDE 0110

**Approvals**

**Inserts**

Number of contacts	3, 4, 10, 16, 32 (2 x 16) + PE
Working current	
Han 3 A	10 A max.
Han 4 A	10 A max.
Han 10 A + 16 A	16 A max.
(see current carrying capacity)	
Working voltage	
Han 3 A	230 / 400 V
Han 4 A	230 / 400 V
Han 10 A + 16 A	250 V
Test voltage $U_{rms}$	2 kV
Pollution degree	3 (C)
Insulation resistance	$\geq 10^{10} \Omega$
Material	Polycarbonate
Temperature range	- 40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	$\geq 500$
Working voltage acc. to UL/CSA (also Han 3 A / 4 A)	600 V

**Contacts**

Material	copper alloy
Surface	
- hard-silver plated	3 $\mu$ m Ag
- hard-gold plated	2 $\mu$ m Au over 3 $\mu$ m Ni
Contact resistance	$\leq 1 \text{ m}\Omega$
Crimp terminal	
- mm <sup>2</sup>	0.5 - 4.0 mm <sup>2</sup>
- AWG	20 - 12
Screw terminal	
- mm <sup>2</sup>	2.5 mm <sup>2</sup>
- AWG	14
- Tightening/test torque	0.5 Nm Han 10/16 A 0.25 Nm Han 3/ 4 A

**Hoods/Housings**

Material	die cast aluminium
Han 3 A / 4 A additional	thermoplastic resin
Flammability acc. to UL 94	V 0
Surface	powder-coated RAL 7037
Locking element	steel, zinc plated
Hoods/Housings sealing	NBR
Temperature range	- 40 °C ... +125 °C
Degree of protection acc. to DIN 40 050 for coupled connector	IP 65
Han 3 A / 4 A	IP 44 IP 65 with sealing screw
further selection of hoods/housings	chapter 30

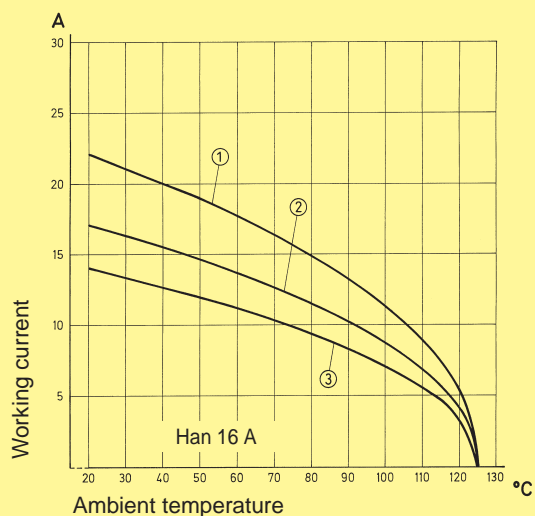
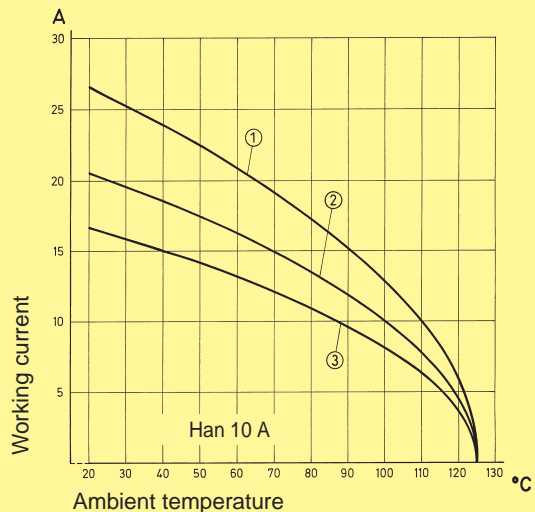
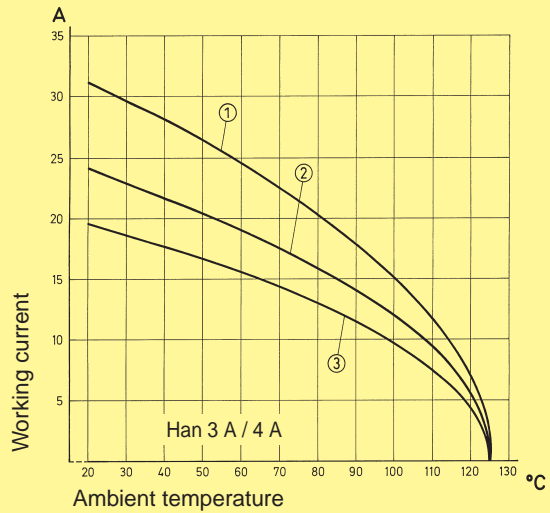
**Accessories**

Crimping tools	chapter 12
Cable clamps	chapter 40
sealing screw	chapter 40
Coding of Hoods/Housings	chapter 40
Label acc. to CSA-approval	chapter 40
Test connectors	chapter 20

**Current carrying capacity**

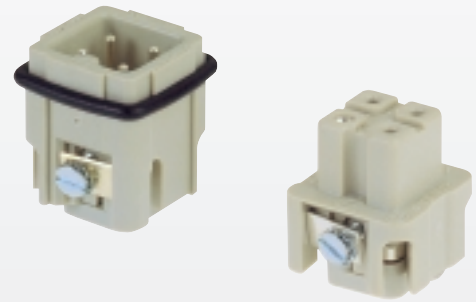
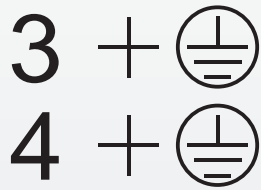
The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the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

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



- ① Wire gauge: 2.5 mm<sup>2</sup>
- ② Wire gauge: 1.5 mm<sup>2</sup>
- ③ Wire gauge: 1.0 mm<sup>2</sup>

Number of contacts


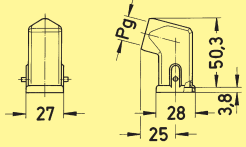

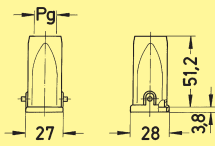
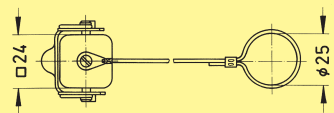

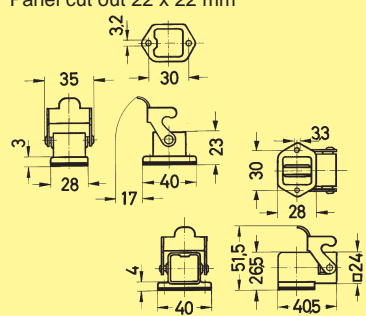


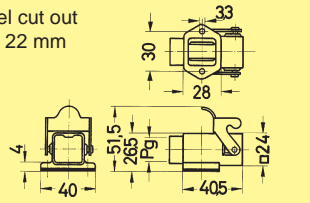

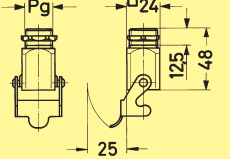

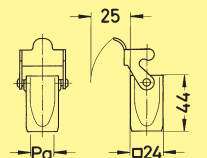
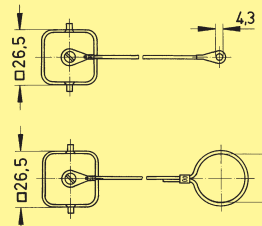
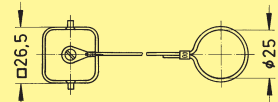


Inserts

Identification	Series	Part No.		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
Screw terminal	Han 3 A	<b>09 20 003 2611</b>		<p>Contact arrangement View from termination side</p>	
				<p>Female insert (F)</p>	
	Han 4 A	<b>09 20 004 2611</b>		<p>Male insert (M)</p>	
				<p>Female insert (F)</p>	
				<p>Mounting example</p>	

Han  
A

Han A

Identification		Standard	Part No.		Pg	Drawing	Dimensions in mm
			Han M	Han U			
Hoods	Hoods side-entry 	<b>09 20 003 1640</b>	<b>09 37 003 1640</b>	09 36 003 1640	11		
	Hoods top-entry 	<b>09 20 003 1440</b>	<b>09 37 003 1440</b>	<b>09 36 003 1440</b>	11		
	Protection covers for hoods	<b>09 20 003 5422<sup>1)</sup></b> <b>09 20 003 5421<sup>2)</sup></b>	09 37 003 5402 <sup>1)</sup> 09 37 003 5401 <sup>2)</sup>	09 36 003 5402 <sup>1)</sup> 09 36 003 5401 <sup>2)</sup>			
Housings	Housings bulkhead mounting 	<b>09 20 003 0301</b>	<b>09 37 003 0301</b>	<b>09 36 003 0301</b>	—		Panel cut out 22 x 22 mm
		<b>09 20 003 0801</b>	<b>09 37 003 0801</b>	09 36 003 0801	—		
	Housings surface mounting 1 side-entry 	<b>09 20 003 1250</b>	<b>09 37 003 1250</b>	<b>09 36 003 1250</b>	11		Panel cut out 22 x 22 mm
	bottom closed	09 20 003 1252					
	Housings screw mounting 	<b>09 20 003 0102</b>		09 36 003 0102	13,5		
	Hoods cable to cable 	<b>09 20 003 1750</b>	<b>09 37 003 1750</b>	09 36 003 1750	11		
	Protection covers for housings	<b>09 20 003 5426<sup>1)</sup></b> <b>09 20 003 5425<sup>2)</sup></b>	09 37 003 5406 <sup>1)</sup> 09 37 003 5405 <sup>2)</sup>	09 36 003 5406 <sup>1)</sup> 09 36 003 5405 <sup>2)</sup>			
for hoods cable to cable	09 20 003 5428 <sup>1)</sup> 09 20 003 5427 <sup>2)</sup>	09 37 003 5408 <sup>1)</sup> 09 37 003 5407 <sup>2)</sup>	09 36 003 5408 <sup>1)</sup> 09 36 003 5407 <sup>2)</sup>				

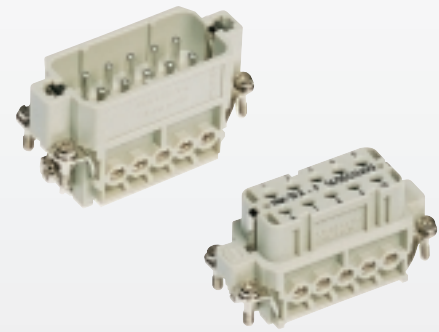
<sup>1)</sup> for mounted male insert    <sup>2)</sup> for mounted female insert

Identification		Part No.	Pg	Drawing	Dimensions in mm	
Hoods	Hoods side-entry	grey <b>09 20 003 0620</b>	11			
		black <b>09 20 003 0627</b>	11			
	Hoods top-entry	grey <b>09 20 003 0420</b>	11			
		black <b>09 20 003 0427</b>	11			
	Protection covers for hoods		<b>09 20 003 5442<sup>1)</sup></b> <b>09 20 003 5441<sup>2)</sup></b>			
	Housings	Housings bulkhead mounting		grey <b>09 20 003 0320</b>	—	
		black <b>09 20 003 0327</b>	—			
		grey <b>09 20 003 0820</b>	—			
		black <b>09 20 003 0827</b>	—			
Housings surface mounting		1 side-entry	grey <b>09 20 003 0220</b>	11		
			black <b>09 20 003 0227</b>	11		
Housings screw mounting		grey <b>09 20 003 0120</b>	13.5			
		black <b>09 20 003 0127</b>	13.5			
Hoods cable to cable		grey <b>09 20 003 0720</b>	11			
		black <b>09 20 003 0727</b>	11			
Protection covers for housings		A <b>09 20 003 5407<sup>1)3)</sup></b> <b>09 20 003 5408<sup>2)3)</sup></b>				
		B <b>09 20 003 5446<sup>1)</sup></b> <b>09 20 003 5445<sup>2)</sup></b>				
for hoods cable to cable		C <b>09 20 003 5448<sup>1)</sup></b>				

<sup>1)</sup> for mounted male insert  
<sup>2)</sup> for mounted female insert  
<sup>3)</sup> 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

Identification	Wire gauge (mm <sup>2</sup> )	Part No.		Drawing	Dimensions in mm																																		
		Male contacts	Female contacts																																				
Crimp contacts Power contacts silver plated 	0.5	<b>09 33 000 6121</b>	<b>09 33 000 6220</b>	<p>Operating contact Identification</p> <p>Crimp contact identification</p> <table border="1"> <thead> <tr> <th>Identification</th> <th>Wire gauge</th> <th>AWG</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>no groove</td> <td>0.5 mm<sup>2</sup></td> <td>AWG 20</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove*</td> <td>0.75 mm<sup>2</sup></td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove</td> <td>1 mm<sup>2</sup></td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>2 grooves</td> <td>1.5 mm<sup>2</sup></td> <td>AWG 16</td> <td>7.5 mm</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm<sup>2</sup></td> <td>AWG 14</td> <td>7.5 mm</td> </tr> <tr> <td>wide groove</td> <td>3.0 mm<sup>2</sup></td> <td>AWG 12</td> <td>7.5 mm</td> </tr> <tr> <td>no groove</td> <td>4 mm<sup>2</sup></td> <td>AWG 12</td> <td>7.5 mm</td> </tr> </tbody> </table> <p>* on the back crimp collar</p>	Identification	Wire gauge	AWG	Stripping length	no groove	0.5 mm <sup>2</sup>	AWG 20	7.5 mm	1 groove*	0.75 mm <sup>2</sup>	AWG 18	7.5 mm	1 groove	1 mm <sup>2</sup>	AWG 18	7.5 mm	2 grooves	1.5 mm <sup>2</sup>	AWG 16	7.5 mm	3 grooves	2.5 mm <sup>2</sup>	AWG 14	7.5 mm	wide groove	3.0 mm <sup>2</sup>	AWG 12	7.5 mm	no groove	4 mm <sup>2</sup>	AWG 12	7.5 mm	0.75	<b>09 33 000 6114</b>	<b>09 33 000 6214</b>
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		1.0	<b>09 33 000 6105</b>		<b>09 33 000 6205</b>																																		
	1.5	<b>09 33 000 6104</b>	<b>09 33 000 6204</b>																																				
	2.5	<b>09 33 000 6102</b>	<b>09 33 000 6202</b>																																				
	3	<b>09 33 000 6106</b>	<b>09 33 000 6206</b>																																				
	4	<b>09 33 000 6107</b>	<b>09 33 000 6207</b>																																				
gold plated 	0.5	<b>09 33 000 6122</b>	<b>09 33 000 6222</b>																																				
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	1.5	<b>09 33 000 6116</b>	<b>09 33 000 6216</b>																																				
	2.5	<b>09 33 000 6123</b>	<b>09 33 000 6223</b>																																				
	4.0	<b>09 33 000 6119</b>	<b>09 33 000 6221</b>																																				

Stock items in bold type

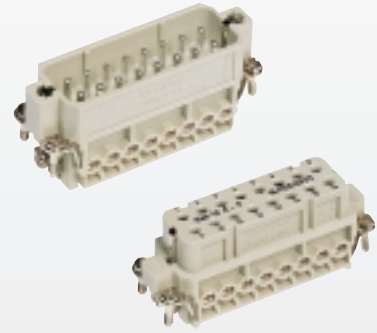
Identification	Part No.		Pg	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods	<b>Hoods side-entry</b> 	<b>09 20 010 1541</b>	16		63, 29,5, 61,5
		<b>09 20 010 0540</b> <b>09 20 010 0541</b>	16 21		63, 67,5, 36
	<b>Hoods top-entry</b> 	<b>09 20 010 1440</b>	13.5		63, 47, 29,5
		<b>09 20 010 0440</b> <b>09 20 010 0441</b>	16 21		63, 67,5, 36
<b>Protection covers for hoods</b> 	<b>09 20 010 5423</b>				76, 33, 28,5
Housings	<b>Housings bulkhead mounting</b> 	<b>09 20 010 0301</b>	—		70, 81, 4,5, 24, 57, 17,5, 26, 13, 22, 17,5, 29, 3,4
		with thermo-plastic cover <b>09 20 010 0321<sup>1)</sup></b>	—		70, 81, 4,5, 24, 57, 17,5, 26, 13, 22, 17,5, 29, 3,4, 59, 23
	<b>Housings surface mounting</b> 	<b>09 20 010 0251</b> <b>09 20 010 0252</b>	16 21		48, 63,5, 12, 40, 50, 4, 52, 4,5
		with thermo-plastic cover <b>09 20 010 0221<sup>1)</sup></b> <b>09 20 010 0222<sup>1)</sup></b>	16 21		48, 63,5, 12, 40, 50, 4, 52, 4,5
	<b>09 20 010 0291</b> with thermo-plastic cover <b>09 20 010 0296<sup>1)</sup></b>	16 16		48, 63,5, 12, 52, 40, 49, 50, 13, 4,5	
<b>Protection covers for housings</b> 	<b>09 20 010 5425</b>				63, 33, 5,3

Hand A

<sup>1)</sup> for female insert

Number of contacts

16 +




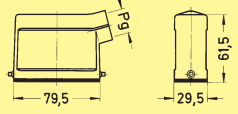
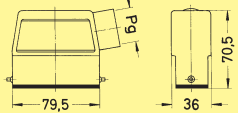

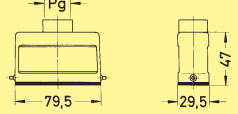
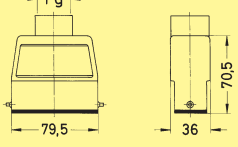

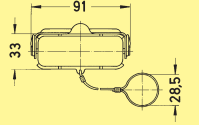

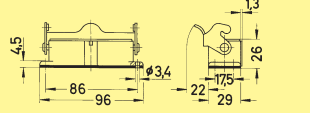
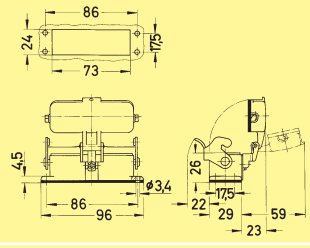

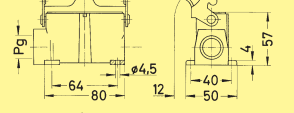
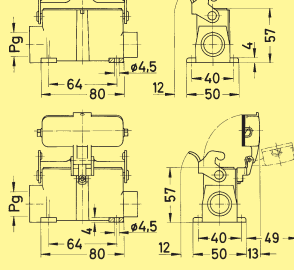

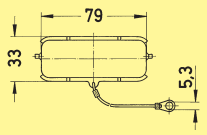
Inserts

Identification	Series	Part No.		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
Screw terminal 	Han A	<b>09 20 016 2612</b>	<b>09 20 016 2812</b>		Screw terminal Crimp terminal
Crimp terminal Order crimp contacts separately 	Han A	<b>09 20 016 3001</b>	<b>09 20 016 3101</b>		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 <sup>2</sup> )	Part No.		Drawing	Dimensions in mm																																		
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Crimp contacts Power contacts silver plated 	0.5	<b>09 33 000 6121</b>	<b>09 33 000 6220</b>	 Crimp contact identification <table border="1"> <thead> <tr> <th>Identification</th> <th>Wire gauge</th> <th>AWG</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>no groove</td> <td>0.5 mm<sup>2</sup></td> <td>AWG 20</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove*</td> <td>0.75 mm<sup>2</sup></td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove</td> <td>1 mm<sup>2</sup></td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>2 grooves</td> <td>1.5 mm<sup>2</sup></td> <td>AWG 16</td> <td>7.5 mm</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm<sup>2</sup></td> <td>AWG 14</td> <td>7.5 mm</td> </tr> <tr> <td>wide groove</td> <td>3.0 mm<sup>2</sup></td> <td>AWG 12</td> <td>7.5 mm</td> </tr> <tr> <td>no groove</td> <td>4 mm<sup>2</sup></td> <td>AWG 12</td> <td>7.5 mm</td> </tr> </tbody> </table>	Identification	Wire gauge	AWG	Stripping length	no groove	0.5 mm <sup>2</sup>	AWG 20	7.5 mm	1 groove*	0.75 mm <sup>2</sup>	AWG 18	7.5 mm	1 groove	1 mm <sup>2</sup>	AWG 18	7.5 mm	2 grooves	1.5 mm <sup>2</sup>	AWG 16	7.5 mm	3 grooves	2.5 mm <sup>2</sup>	AWG 14	7.5 mm	wide groove	3.0 mm <sup>2</sup>	AWG 12	7.5 mm	no groove	4 mm <sup>2</sup>	AWG 12	7.5 mm	0.75	<b>09 33 000 6114</b>	<b>09 33 000 6214</b>
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	1.5	<b>09 33 000 6116</b>	<b>09 33 000 6216</b>																																				
	2.5	<b>09 33 000 6123</b>	<b>09 33 000 6223</b>																																				
	4.0	<b>09 33 000 6119</b>	<b>09 33 000 6221</b>																																				

\* on the back crimp collar

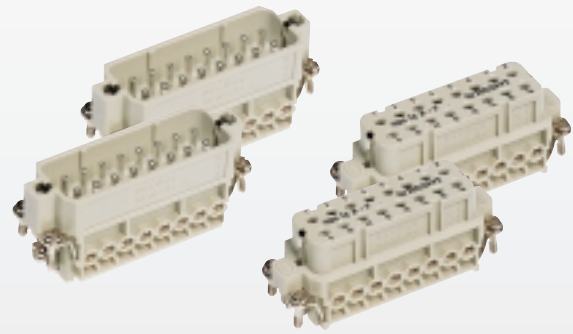


Identification	Part No.		Pg	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods	<b>Hoods side-entry</b> 	<b>09 20 016 1541</b>	16		
		<b>09 20 016 0540</b> <b>09 20 016 0541</b>	16 21		
	<b>Hoods top-entry</b> 	<b>09 20 016 1441</b>	16		
<b>Protection covers for hoods</b> 	<b>09 20 016 5423</b>				
Housings	<b>Housings bulkhead mounting</b> 	<b>09 20 016 0301</b>	—		
		with thermo-plastic cover <b>09 20 016 0321<sup>1)</sup></b>	—		
	<b>Housings surface mounting</b> 	<b>09 20 016 0251</b> <b>09 20 016 0252</b> with thermo-plastic cover <b>09 20 016 0221<sup>1)</sup></b> <b>09 20 016 0222<sup>1)</sup></b>	16 21	16 21	
		<b>09 20 016 0291</b> with thermo-plastic cover <b>09 20 016 0296<sup>1)</sup></b>	16 16	16 16	
<b>Protection covers for housings</b> 	<b>09 20 016 5425</b>				

<sup>1)</sup> for female insert

Number of contacts

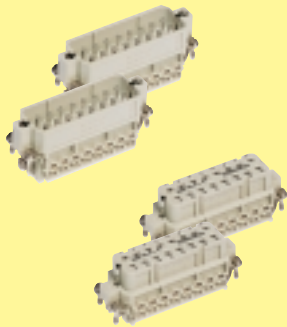
32 +



Inserts

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

Screw terminal



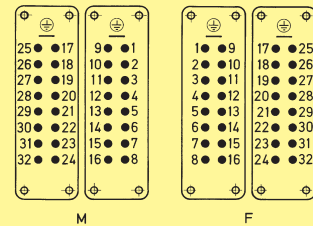
Han A  
1-16  
17-32

Male insert (M)  
09 20 016 2612  
09 20 016 2613

Female insert (F)  
09 20 016 2812  
09 20 016 2813

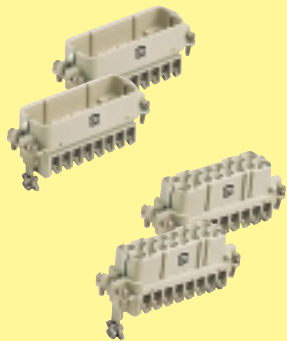
Dimensions for inserts see page 01.16

Contact arrangement View from termination side



Crimp terminal

Order crimp contacts separately

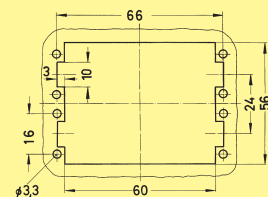


Han A  
1-16  
17-32

Male insert (M)  
09 20 016 3001  
09 20 016 3011

Female insert (F)  
09 20 016 3101  
09 20 016 3111

Panel cut out for inserts for use without hoods/housings



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

Crimp contacts  
Power contacts

silver plated

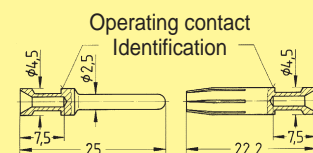


0.5	<b>09 33 000 6121</b>	<b>09 33 000 6220</b>
0.75	<b>09 33 000 6114</b>	<b>09 33 000 6214</b>
1.0	<b>09 33 000 6105</b>	<b>09 33 000 6205</b>
1.5	<b>09 33 000 6104</b>	<b>09 33 000 6204</b>
2.5	<b>09 33 000 6102</b>	<b>09 33 000 6202</b>
3	<b>09 33 000 6106</b>	<b>09 33 000 6206</b>
4	<b>09 33 000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

gold plated




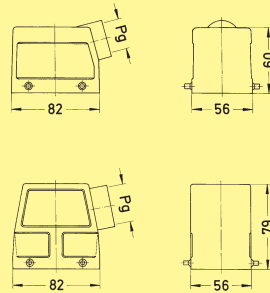

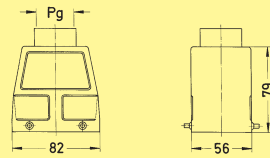

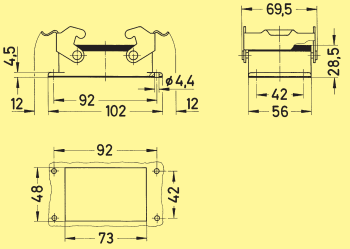

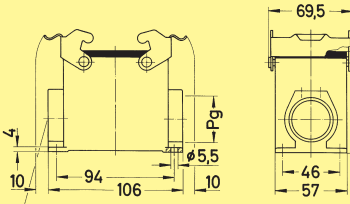

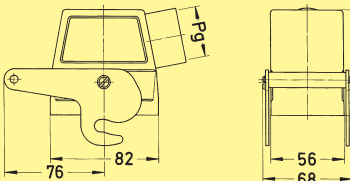

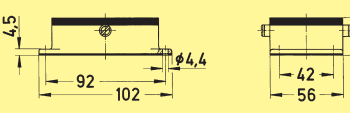
0.5	<b>09 33 000 6122</b>	<b>09 33 000 6222</b>
0.75	<b>09 33 000 6115</b>	<b>09 33 000 6215</b>
1.0	<b>09 33 000 6118</b>	<b>09 33 000 6218</b>
1.5	<b>09 33 000 6116</b>	<b>09 33 000 6216</b>
2.5	<b>09 33 000 6123</b>	<b>09 33 000 6223</b>
4.0	<b>09 33 000 6119</b>	<b>09 33 000 6221</b>



Crimp contact identification

Identification	Wire gauge		Stripping length
no groove	0.5 mm <sup>2</sup>	AWG 20	7.5 mm
1 groove*	0.75 mm <sup>2</sup>	AWG 18	7.5 mm
1 groove	1 mm <sup>2</sup>	AWG 18	7.5 mm
2 grooves	1.5 mm <sup>2</sup>	AWG 16	7.5 mm
3 grooves	2.5 mm <sup>2</sup>	AWG 14	7.5 mm
wide groove	3.0 mm <sup>2</sup>	AWG 12	7.5 mm
no groove	4 mm <sup>2</sup>	AWG 12	7.5 mm

\* on the back crimp collar

Identification	Part No.		Pg	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods	<b>Hoods side-entry</b> 	<b>09 20 032 1520</b>	21		
		<b>09 20 032 0520</b> <b>09 20 032 0521</b>	21 29		
	<b>Hoods top-entry</b> 	<b>09 20 032 0420</b> <b>09 20 032 0421</b>	21 29		
Housings	<b>Housing bulkhead mounting</b> 	<b>09 20 032 0301</b>	—		Panel cut out
	<b>Housings surface mounting</b> 	<b>09 20 032 0230</b> <b>09 20 032 0231</b>	21 29		Blind way for one cable entry
			<b>09 20 032 0270</b> <b>09 20 032 0271</b>		
<b>Hood with central locking lever side-entry</b> 	<b>09 20 032 0581</b>	29			
<b>Housing for central locking bulkhead mounting</b> 	<b>09 20 032 0381</b>	—			

Hand A

Han  
A

