

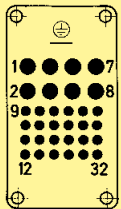
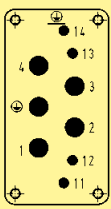
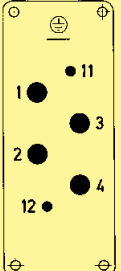
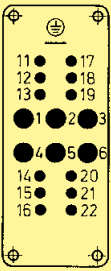
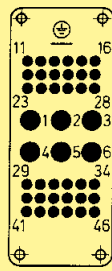
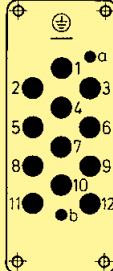
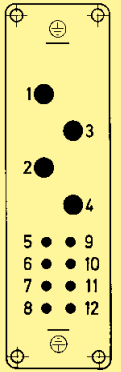
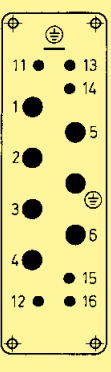
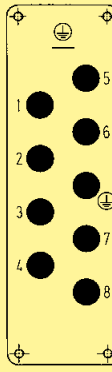
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Size	Description
10 B	  <p>Power area Signal area</p> <p>Han® K 8/24 16 A / 230/400 V 10 A / 160 V Page 05.04</p> <p>Han® K 4/4 63 A / 690 V 16 A / 230 V Page 05.06</p>
16 B	    <p>Power area Signal area</p> <p>Han® K 4/0, 4/2 80 A / 830 V 16 A / 400 V Page 05.08</p> <p>Han® K 6/12 40 A / 690 V 10 A / 230/400 V Page 05.10</p> <p>Han® K 6/36 40 A / 690 V 10 A / 160 V Page 05.12</p> <p>Han® K 12/2 40 A / 690 V 10 A / 250 V Page 05.14</p>
24 B	   <p>Power area Signal area</p> <p>Han® K 4/8 80 A / 400 V 16 A / 400 V Page 05.16</p> <p>Han® K 6/6 100 A / 690 V 16 A / 400 V Page 05.18</p> <p>Han® K 8/0 100 A / 690 V Page 05.20</p>
32 B	suitable for 2 inserts of size 16 B
48 B	suitable for 2 inserts of size 24 B

## Summary

Type	Technical characteristics								Suitable Hoods/ Housings
	Power area				Signal area				
	Number of contacts	A	V ~	Termination	Number of contacts	A	V ~	Termination	Size
Han® K 4/0	4+PE	80	830	screw	—	—	—	—	16 B, 32 B
Han® K 4/2	4+PE	80	830	screw	2	16	400	screw	16 B, 32 B
Han® K 4/4	4+PE	63	690	axial screw	4	16	250	cage clamp	10 B
Han® K 4/8	4+PE	80	400	screw	8	16	400	screw	24 B, 48 B
Han® K 6/6	6+PE	100	690	axial screw	6	16	400	screw	24 B, 48 B
Han® K 6/12	6+PE	40	690	axial screw	12	10	230/400	screw	16 B, 32 B
Han® K 6/36	6+PE	40	690	crimp	36	10	160	crimp	16 B, 32 B
Han® K 8/0	8+PE	100	690	axial screw	—	—	—	—	24 B, 48 B
Han® K 8/24	8+PE	16	230/400	crimp	24	10	160	crimp	10 B
Han® K 12/2	12+PE	40	690	crimp	2	10	250	crimp	16 B, 32 B

## Type identification

### Han® K 6/12

Han®	Industrial connectors Han®
K	Series Han® K / Han-Com®
6	Number of power contacts
12	Number of signal contacts

## Identification of contact position

Han® K connectors	from 1 to ... (power area)
from 11 to... (signal area)	
Exceptions	
Han® K 4/8 and Han® K 8/24	from 1 to ... (consecutively)
Han® K 12/2	from 1 to 12 (power area)
with „a“ and „b“ (signal area)	

## Comment for users

For the combination of several circuits in one cable and/or e.g. one connector the following standards are valid:  
VDE 0100-410/06.2007 § 411.1.3.2 and EN 60 204/06.2007 § 13.1.3

## Accessories

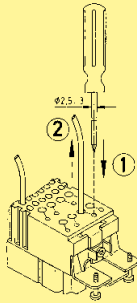
Crimping tools	chapter 99
Cable clamps	chapter 40
Coding of hoods/housings	chapter 40
Label acc. to CSA-approval	chapter 40
Han-Snap®	chapter 11
PCB adapter	chapter 40

## Features

- Combination of power and signal area in one connector
- Crimp termination for power and signal area
- Use of standard Han E® and Han D® contacts

### Removal of power contacts (Han E®)

- ① Push cross-slotted screw driver ( size 0 acc. to DIN 5260) in the relevant hole of the contact until it reaches the bottom
- ② Withdraw the crimped contact from the insert



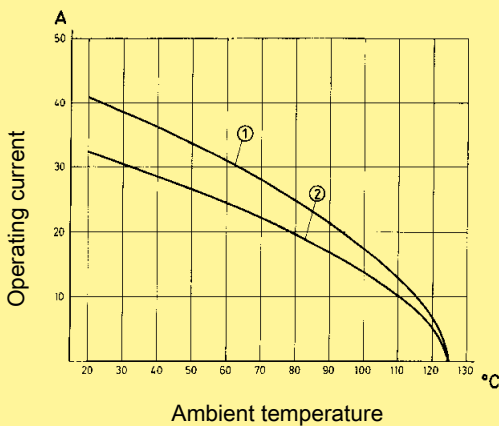
### Removal of signal contacts (Han D®)

Description see removal tool chapter 99

### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge:

- ① 4 mm<sup>2</sup>
- ② 2.5 mm<sup>2</sup>

## Technical characteristics

Specifications DIN EN 60 664-1  
DIN EN 61 984

Approvals

### Inserts

Number of contacts	8 / 24 + PE
Electrical data acc. to EN 61 984	
<b>Power area</b>	<b>16 A 230/400 V 4 kV 3</b>
Rated current	16 A
Rated voltage conductor - ground	230 V
Rated voltage conductor - conductor	400 V
Rated impulse voltage	4 kV
Pollution degree	3
Pollution degree 2 also	10 A 250 V 4 kV 2

<b>Signal area</b>	<b>10 A 160 V 2.5 kV 3</b>
Rated current	10 A
Rated voltage	160 V
Rated impulse voltage	2.5 kV
Pollution degree	3

Rated voltage acc. to UL/CSA	600 V / 300 V
Insulation resistance	≥ 10 <sup>10</sup> Ω
Material	Polyamide
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	HB
Mechanical working life - mating cycles	≥ 500

### Contacts

#### Power 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 <sup>2</sup>	0.5 ... 4 mm <sup>2</sup>
- AWG	20 ... 12

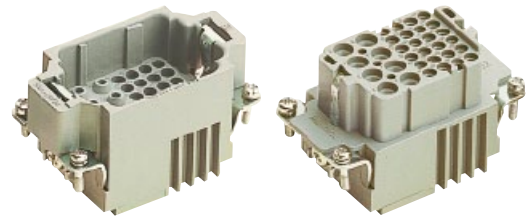
#### Signal contacts

Material	copper alloy
Surface	
- hard-silver plated	3 μm Ag
- hard-gold plated	2 μm Au over 3 μm Ni
Contact resistance	≤ 3 mΩ
Crimp terminal	
- mm <sup>2</sup>	0.14 ... 2.5 mm <sup>2</sup>
- AWG	25 ... 14

Hoods/Housings see chapter 30 / 31

Number of contacts

8/24 +



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Crimp terminal Order crimp contacts separately	<b>09 38 032 3001</b>	<b>09 38 032 3101</b>	<p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>	

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Identification	Wire gauge (mm <sup>2</sup> )	Part number		Drawing	Dimensions in mm																												
		Male contact	Female contact																														
Crimp contacts Power contacts silver plated 	0.5 0.75 1 1.5 2.5 4	<b>09 33 000 6121</b> <b>09 33 000 6114</b> <b>09 33 000 6105</b> <b>09 33 000 6104</b> <b>09 33 000 6102</b> <b>09 33 000 6107</b>	<b>09 33 000 6220</b> <b>09 33 000 6214</b> <b>09 33 000 6205</b> <b>09 33 000 6204</b> <b>09 33 000 6202</b> <b>09 33 000 6207</b>																														
gold plated 	0.5 0.75 1 1.5 2.5 4	<b>09 33 000 6122</b> <b>09 33 000 6115</b> <b>09 33 000 6118</b> <b>09 33 000 6116</b> <b>09 33 000 6123</b> <b>09 33 000 6119</b>	<b>09 33 000 6222</b> <b>09 33 000 6215</b> <b>09 33 000 6218</b> <b>09 33 000 6216</b> <b>09 33 000 6223</b> <b>09 33 000 6221</b>	<table border="1"> <thead> <tr> <th>Identification</th> <th colspan="2">Wire gauge</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>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		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	no groove	4 mm <sup>2</sup>	AWG 12	7.5 mm	
Identification	Wire gauge		Stripping length																														
no groove	0.5 mm <sup>2</sup>	AWG 20	7.5 mm																														
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3 grooves	2.5 mm <sup>2</sup>	AWG 14	7.5 mm																														
no groove	4 mm <sup>2</sup>	AWG 12	7.5 mm																														
Relay contacts silver plated 	0.75-1 1.5 2.5	<b>09 33 000 6109</b> <b>09 33 000 6110</b> <b>09 33 000 6111</b>																															
Signal contacts silver plated 	0.14-0.37 0.5 0.75 1 1.5 2.5	<b>09 15 000 6104</b> <b>09 15 000 6103</b> <b>09 15 000 6105</b> <b>09 15 000 6102</b> <b>09 15 000 6101</b> <b>09 15 000 6106</b>	<b>09 15 000 6204</b> <b>09 15 000 6203</b> <b>09 15 000 6205</b> <b>09 15 000 6202</b> <b>09 15 000 6201</b> <b>09 15 000 6206</b>	<table border="1"> <thead> <tr> <th colspan="2">Wire gauge</th> <th>∅</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm<sup>2</sup></td> <td>AWG 26-22</td> <td>0.9</td> <td>8 mm</td> </tr> <tr> <td>0.5 mm<sup>2</sup></td> <td>AWG 20</td> <td>1.1</td> <td>8 mm</td> </tr> <tr> <td>0.75 mm<sup>2</sup></td> <td>AWG 18</td> <td>1.3</td> <td>8 mm</td> </tr> <tr> <td>1 mm<sup>2</sup></td> <td>AWG 18</td> <td>1.45</td> <td>8 mm</td> </tr> <tr> <td>1.5 mm<sup>2</sup></td> <td>AWG 16</td> <td>1.75</td> <td>8 mm</td> </tr> <tr> <td>2.5 mm<sup>2</sup></td> <td>AWG 14</td> <td>2.25</td> <td>6 mm</td> </tr> </tbody> </table>	Wire gauge		∅	Stripping length	0.14-0.37 mm <sup>2</sup>	AWG 26-22	0.9	8 mm	0.5 mm <sup>2</sup>	AWG 20	1.1	8 mm	0.75 mm <sup>2</sup>	AWG 18	1.3	8 mm	1 mm <sup>2</sup>	AWG 18	1.45	8 mm	1.5 mm <sup>2</sup>	AWG 16	1.75	8 mm	2.5 mm <sup>2</sup>	AWG 14	2.25	6 mm	
Wire gauge		∅	Stripping length																														
0.14-0.37 mm <sup>2</sup>	AWG 26-22	0.9	8 mm																														
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1.5 mm <sup>2</sup>	AWG 16	1.75	8 mm																														
2.5 mm <sup>2</sup>	AWG 14	2.25	6 mm																														
gold plated 	0.14-0.37 0.5 0.75 1 1.5 2.5	<b>09 15 000 6124</b> <b>09 15 000 6123</b> <b>09 15 000 6125</b> <b>09 15 000 6122</b> <b>09 15 000 6121</b> <b>09 15 000 6126</b>	<b>09 15 000 6224</b> <b>09 15 000 6223</b> <b>09 15 000 6225</b> <b>09 15 000 6222</b> <b>09 15 000 6221</b> <b>09 15 000 6226</b>																														
F.O. contacts for 1 mm 		<b>20 10 001 3211</b>	<b>20 10 001 3221</b>																														

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Stock items in bold type

## Features

- Combination of power area and signal area in the same connector
- Axial screw termination for power area
- Cage clamp termination for signal area
- Finger safe
- Same range of wire gauge for PE contact and power contacts

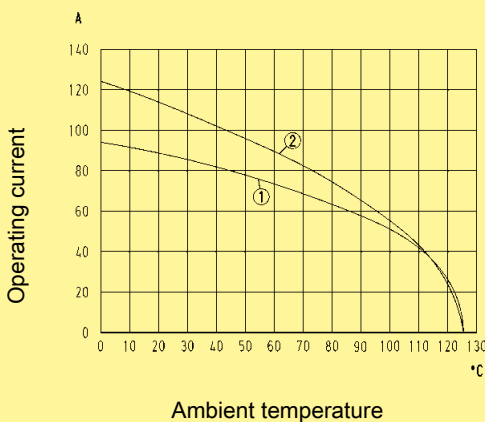
Assembly instructions see page 05.22

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## Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge:                      ① 16 mm<sup>2</sup>  
    ② 22 mm<sup>2</sup>

## Technical characteristics

Specifications                      DIN EN 60 664-1  
    DIN EN 61 984

Approvals                             

### Inserts

Number of contacts	4 / 4 + PE
Electrical data acc. to EN 61 984	
Power area	<b>63 A 690 V 8 kV 3</b>
Rated current	63 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
Signal area	<b>16 A 250 V 4 kV 3</b>
Rated current	16 A
Rated voltage	250 V
Rated impulse voltage	4 kV
Pollution degree	3
Rated voltage acc. to UL	600 V / 230 V
Insulation resistance	≥ 10 <sup>10</sup> Ω
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	≥ 500

### Contacts

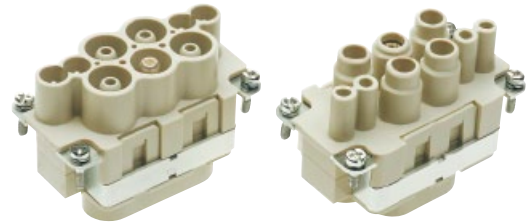
<u>Power contacts</u>											
Material	copper alloy										
Surface											
- hard-silver plated	3 µm Ag										
Contact resistance	≤ 0.5 mΩ										
Axial screw termination											
- geometric wire gauge	6 ... 22 mm <sup>2</sup>										
- AWG	8 ... 4										
Max. insulation diameter											
6 ... 16 mm <sup>2</sup>	8.9 mm										
22 mm <sup>2</sup>	11 mm										
Tightening torque											
	<table border="1"><tr><td>mm<sup>2</sup></td><td>6</td><td>10</td><td>16</td><td>22</td></tr><tr><td>Nm</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table>	mm <sup>2</sup>	6	10	16	22	Nm	2	3	4	5
mm <sup>2</sup>	6	10	16	22							
Nm	2	3	4	5							
Stripping length											
	<table border="1"><tr><td>mm<sup>2</sup></td><td>6</td><td>10</td><td>16</td><td>22</td></tr><tr><td>mm</td><td>11<sup>+1</sup></td><td>11<sup>+1</sup></td><td>11<sup>+1</sup></td><td>13<sup>+1</sup></td></tr></table>	mm <sup>2</sup>	6	10	16	22	mm	11 <sup>+1</sup>	11 <sup>+1</sup>	11 <sup>+1</sup>	13 <sup>+1</sup>
mm <sup>2</sup>	6	10	16	22							
mm	11 <sup>+1</sup>	11 <sup>+1</sup>	11 <sup>+1</sup>	13 <sup>+1</sup>							

<u>Signal contacts</u>	
Material	copper alloy
Surface	
- hard-silver plated	3 µm Ag
Contact resistance	≤ 3 mΩ
Cage clamp terminal	
- geometric wire gauge	0.14 ... 2.5 mm <sup>2</sup>
- AWG	26 ... 14
Stripping length	7 ... 9 mm

Hoods/Housings                      see chapter 30 / 31

Number of contacts

4/4 +



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Han® K 4/4 Axial screw terminal / Cage clamp terminal			<p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>	
finger safe 6 ... 16 mm <sup>2</sup>	<b>09 38 008 2601</b>	<b>09 38 008 2701</b>		
finger safe 10 ... 22 mm <sup>2</sup>	<b>09 38 008 2602</b>	<b>09 38 008 2702</b>		
not finger safe 6 ... 16 mm <sup>2</sup>	<b>09 38 008 2611</b>			
not finger safe 10 ... 22 mm <sup>2</sup>	<b>09 38 008 2612</b>			

Identification	Part number	Drawing	Dimensions in mm
Hex key SW 2.5 for axial setscrew			
adapter 1/4"	<b>09 99 000 0375</b>		



## Features

- Combination of power and signal area in one connector
- Screw termination for power and signal area
- Missing signal contacts for Han® K 4/0

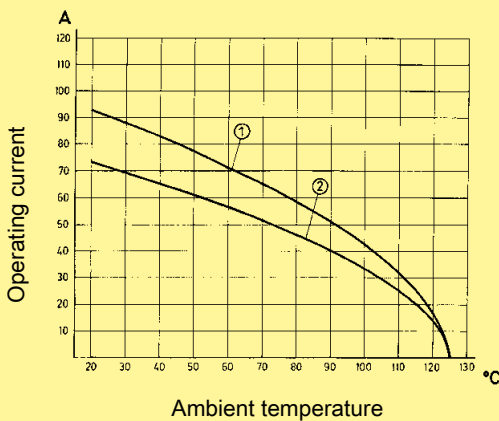
In accordance with the appropriate regulations a wire-end sleeve has to be used at clamps without wire protection (see „Screw terminal“, chapter 00).

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## Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge:                    ① 16 mm<sup>2</sup>  
                                      ② 10 mm<sup>2</sup>

## Technical characteristics

Specifications                    DIN EN 60 664-1  
                                      DIN EN 61 984

Approvals                       

### Inserts

Number of contacts             4 / 2 + PE  
Electrical data  
acc. to EN 61 984  
**Power area**                    **80 A 830 V 8 kV 3**  
Rated current                    80 A  
Rated voltage                    830 V  
Rated impulse voltage        8 kV  
Pollution degree                3  
Pollution degree 2 also      80 A 1000 V 8 kV 2

**Signal area**                    **16 A 400 V 6 kV 3**  
Rated current                    16 A  
Rated voltage                    400 V  
Rated impulse voltage        6 kV  
Pollution degree                3  
Pollution degree 2 also      16 A 400/690 V 6 kV 2

Rated voltage  
acc. to UL/CSA                600 V / 300 V  
Insulation resistance        ≥ 10<sup>10</sup> Ω  
Material                         polycarbonate  
Limiting temperatures        -40 °C ... +125 °C  
Flammability acc. to UL 94   V 0  
Mechanical working life  
- mating cycles                ≥ 500

### Contacts

**Power contacts**  
Material                         copper alloy  
Surface  
- hard-silver plated            3 µm Ag  
Contact resistance            ≤ 0.3 mΩ  
Screw terminal  
- geometric wire gauge        1.5 ... 16 mm<sup>2</sup>  
- AWG                             16 ... 6  
Tightening torque             

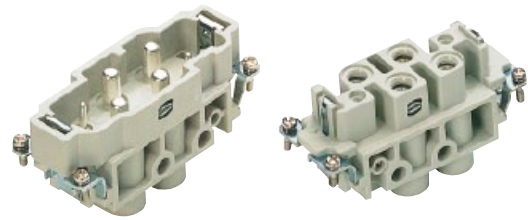
mm <sup>2</sup>	1.5	2.5	4	6	10	16
Nm	1.2	2	3	3	3	3

Stripping length                14 mm  
**Signal contacts**  
Material                         copper alloy  
Surface  
- hard-silver plated            3 µm Ag  
Contact resistance            ≤ 1 mΩ  
Screw terminal  
- geometric wire gauge        0.5 ... 2.5 mm<sup>2</sup>  
- AWG                             20 ... 14  
Tightening torque             0.5 Nm  
Stripping length                7.5 mm

Hoods/Housings                see chapter 30 / 31

Number of contacts

4/0, 4/2 +



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Han K 4/0, Han® K 4/2 Screw terminal				
Han® K 4/2	<b>09 38 006 2601</b>	<b>09 38 006 2701</b>		
Han® K 4/0	<b>09 38 006 2611</b>	<b>09 38 006 2711</b>		

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## Features

- Combination of power and signal area in one connector
- Axial screw termination for power area
- Screw termination for signal area

Assembly instructions see page 05.23

## Technical characteristics

Specifications DIN EN 60 664-1  
DIN EN 61 984

Approvals

### Inserts

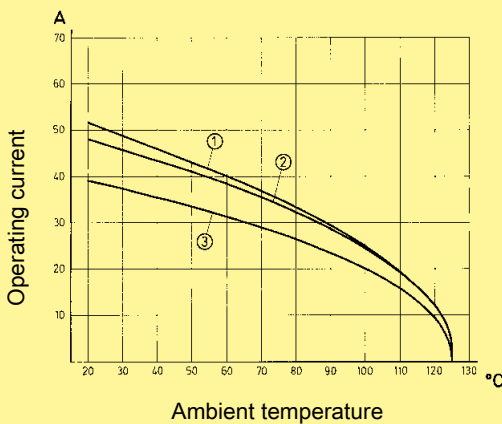
Number of contacts	6 / 12 + PE
Electrical data acc. to EN 61 984	
<b>Power area</b>	<b>40 A 690 V 8 kV 3</b>
Rated current	40 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
<b>Signal area</b>	<b>10 A 230/400 V 4 kV 3</b>
Rated current	10 A
Rated voltage conductor - ground	230 V
Rated voltage conductor - conductor	400 V
Rated impulse voltage	4 kV
Pollution degree	3
Rated voltage acc. to UL/CSA	600 V / 300 V
Insulation resistance	≥ 10 <sup>10</sup> Ω
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	≥ 500

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### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge:                   ① 10 mm<sup>2</sup>  
                                      ② 6 mm<sup>2</sup>  
                                      ③ 4 mm<sup>2</sup>

### Contacts

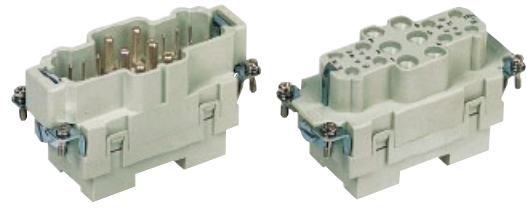
<u>Power contacts</u>											
Material	copper alloy										
Surface											
- hard-silver plated	3 µm Ag										
Contact resistance	≤ 0.5 mΩ										
Axial screw termination											
- geometric wire gauge	2.5 ... 10 mm <sup>2</sup>										
- AWG	14 ... 8										
Max. insulation diameter	6.1 mm										
Tightening torque	<table border="1"><tr><td>mm<sup>2</sup></td><td>2.5</td><td>4</td><td>6</td><td>10</td></tr><tr><td>Nm</td><td>1.5</td><td>1.5</td><td>2</td><td>2</td></tr></table>	mm <sup>2</sup>	2.5	4	6	10	Nm	1.5	1.5	2	2
mm <sup>2</sup>	2.5	4	6	10							
Nm	1.5	1.5	2	2							
Stripping length	<table border="1"><tr><td>mm<sup>2</sup></td><td>2.5</td><td>4</td><td>6</td><td>10</td></tr><tr><td>mm</td><td>5+1</td><td>5+1</td><td>8+1</td><td>8+1</td></tr></table>	mm <sup>2</sup>	2.5	4	6	10	mm	5+1	5+1	8+1	8+1
mm <sup>2</sup>	2.5	4	6	10							
mm	5+1	5+1	8+1	8+1							

<u>Signal contacts</u>	
Material	copper alloy
Surface	
- hard-silver plated	3 µm Ag
Contact resistance	≤ 3 mΩ
Screw terminal	
- geometric wire gauge	0.2 ... 2.5 mm <sup>2</sup>
- AWG	24 ... 14
Tightening torque	0.8 Nm
Stripping length	7.5 mm

Hoods/Housings see chapter 30 / 31

Number of contacts

6/12 +



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Han® K 6/12 Axial screw terminal / Screw terminal				
2.5 ... 8 mm <sup>2</sup>	<b>09 38 018 2601</b>	<b>09 38 018 2701</b>		
6 ... 10 mm <sup>2</sup>	<b>09 38 018 2602</b>	<b>09 38 018 2702</b>		

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Identification	Part number	Drawing	Dimensions in mm
Hex key SW 2 for axial setscrew			
adapter 1/4"	<b>09 99 000 0369</b>		



## Features

- Combination of power and signal area in one connector
- Crimp termination for power and signal area
- Use of standard Han® C and Han D® contacts

### Removal of power contacts (Han® C)

Description see removal tool chapter 99

### Removal of signal contacts (Han D®)

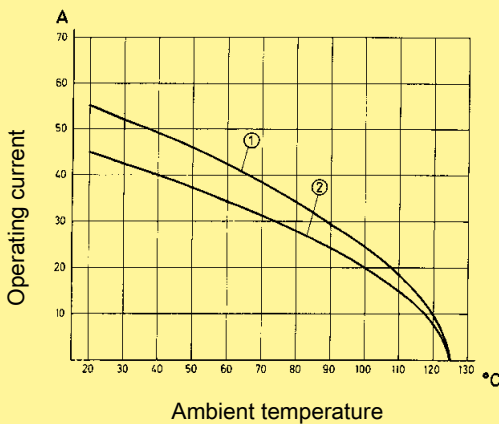
Description see removal tool chapter 99

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## Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge:                    ① 6 mm<sup>2</sup>  
                                       ② 4 mm<sup>2</sup>

## Technical characteristics

Specifications                    DIN EN 60 664-1  
     DIN EN 61 984

Approvals                        

### Inserts

Number of contacts                6 / 36 + PE  
 Electrical data  
 acc. to EN 61 984  
**Power area**                        **40 A 690 V 8 kV 3**  
 Rated current                      40 A  
 Rated voltage                      690 V  
 Rated impulse voltage            8 kV  
 Pollution degree                    3  
**Signal area**                        **10 A 160 V 2.5 kV 3**  
 Rated current                      10 A  
 Rated voltage                      160 V  
 Rated impulse voltage            2.5 kV  
 Pollution degree                    3  
 Pollution degree 2 also            10 A 250 V 4 kV 2

Rated voltage  
 acc. to UL/CSA                    600 V / 300 V  
 Insulation resistance              ≥ 10<sup>10</sup> Ω  
 Material                              polycarbonate  
 Limiting temperatures            -40 °C ... +125 °C  
 Flammability acc. to UL 94      V 0  
 Mechanical working life  
 - mating cycles                      ≥ 500

### Contacts

Power contacts  
 Material                              copper alloy  
 Surface  
 - hard-silver plated                3 µm Ag  
 - hard-gold plated                 2 µm Au over 3 µm Ni  
 Contact resistance                 ≤ 0.3 mΩ  
 Crimp terminal  
 - mm<sup>2</sup>                                 1.5 ... 6 mm<sup>2</sup>  
 - AWG                                 16 ... 10  
 Max. insulation diameter         5 mm  
Signal contacts  
 Material                              copper alloy  
 Surface  
 - hard-silver plated                3 µm Ag  
 - hard-gold plated                 2 µm Au over 3 µm Ni  
 Contact resistance                 ≤ 3 mΩ  
 Crimp terminal  
 - mm<sup>2</sup>                                 0.14 ... 2.5 mm<sup>2</sup>  
 - AWG                                 26 ... 14

Hoods/Housings                 see chapter 30 / 31



## Features

- Combination of power and signal area in one connector
- Crimp termination for power and signal area
- Use of standard Han® C and Han D® contacts

### Removal of power contacts (Han® C)

Description see removal tool chapter 99

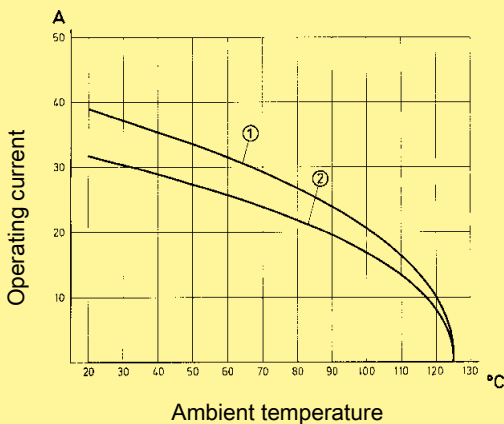
### Removal of signal contacts (Han D®)

Description see removal tool chapter 99

## Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge:                    ① 6 mm<sup>2</sup>  
    ② 4 mm<sup>2</sup>

## Technical characteristics

Specifications                    DIN EN 60 664-1  
    DIN EN 61 984

Approvals                        

### Inserts

Number of contacts	12 / 2 + PE
Electrical data acc. to EN 61 984	
<b>Power area</b>	<b>40 A 690 V 8 kV 3</b>
Rated current	40 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
<b>Signal area</b>	<b>10 A 250 V 4 kV 3</b>
Rated current	10 A
Rated voltage	250 V
Rated impulse voltage	4 kV
Pollution degree	3
Rated voltage acc. to UL/CSA	600 V / 300 V
Insulation resistance	≥ 10 <sup>10</sup> Ω
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	≥ 500

### Contacts

<u>Power contacts</u>	
Material	copper alloy
Surface	
- hard-silver plated	3 µm Ag
- hard-gold plated	2 µm Au over 3 µm Ni
Contact resistance	≤ 0.3 mΩ
Crimp terminal	
- mm <sup>2</sup>	1.5 ... 6 mm <sup>2</sup>
- AWG	16 ... 10
<u>Signal contacts</u>	
Material	copper alloy
Surface	
- hard-silver plated	3 µm Ag
- hard-gold plated	2 µm Au over 3 µm Ni
Contact resistance	≤ 3 mΩ
Crimp terminal	
- mm <sup>2</sup>	0.14 ... 2.5 mm <sup>2</sup>
- AWG	26 ... 14

Hoods/Housings                    see chapter 30 / 31



## Features

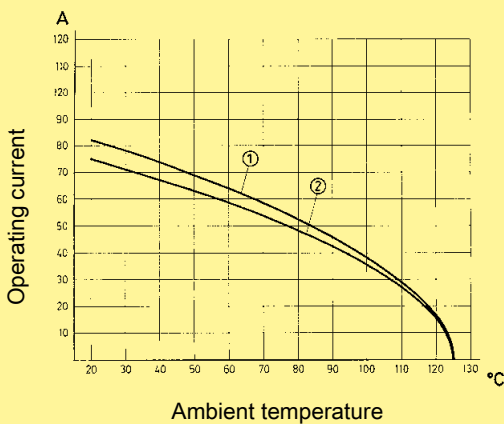
- Combination of power and signal area in one connector
- Screw termination for power and signal area

In accordance with the appropriate regulations a wire-end sleeve has to be used at clamps without wire protection (see „Screw terminal“, chapter 00).

## Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



- Wire gauge:                    ① 16 mm<sup>2</sup>  
                                       ② 10 mm<sup>2</sup>

## Technical characteristics

Specifications                    DIN EN 60 664-1  
     DIN EN 61 984

Approvals                        

### Inserts

Number of contacts                4 / 8 + PE  
 Electrical data  
 acc. to EN 61 984  
**Power area**                        **80 A 400 V 6 kV 3**  
 Rated current                      80 A  
 Rated voltage                      400 V  
 Rated impulse voltage            6 kV  
 Pollution degree                    3  
 Pollution degree 2 also            80 A 400/690 V 6 kV 2

**Signal area**                        **16 A 400 V 6 kV 3**  
 Rated current                      16 A  
 Rated voltage                      400 V  
 Rated impulse voltage            6 kV  
 Pollution degree                    3  
 Rated voltage  
 acc. to UL/CSA                    600 V / 600 V  
 Insulation resistance            ≥ 10<sup>10</sup> Ω  
 Material                              Polyamide  
 Limiting temperatures            -40 °C ... +125 °C  
 Flammability acc. to UL 94      HB  
 Mechanical working life  
 - mating cycles                      ≥ 500

### Contacts

#### Power contacts

Material                              copper alloy  
 Surface  
 - hard-silver plated                3 µm Ag  
 Contact resistance                ≤ 0.3 mΩ  
 Screw terminal  
 - geometric wire gauge            1.5 ... 16 mm<sup>2</sup>  
 - AWG                                16 ... 6  
 Tightening torque

mm <sup>2</sup>	1.5	2.5	4	6	10	16
Nm	1.2	2	3	3	3	3

Stripping length                    14 mm

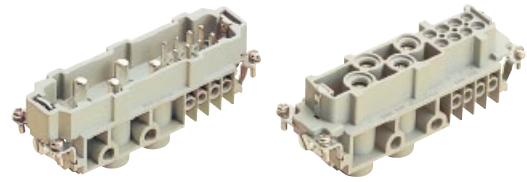
#### Signal contacts

Material                              copper alloy  
 Surface  
 - hard-silver plated                3 µm Ag  
 Contact resistance                ≤ 1 mΩ  
 Screw terminal  
 - geometric wire gauge            0.5 ... 2.5 mm<sup>2</sup>  
 - AWG                                20 ... 14  
 Tightening torque                0.5 Nm  
 Stripping length                    7.5 mm

Hoods/Housings                    see chapter 30 / 31

Number of contacts

4/8 +



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
<p>Han® K 4/8 Screw terminal</p> <p>1.5 ... 16 mm<sup>2</sup></p>	<p><b>09 38 012 2601</b></p>	<p><b>09 38 012 2701</b></p>	<p>1) Distance for contact max. 21 mm</p> <p>M F</p>	

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## Features

- Combination of power and signal area in one connector
- Axial screw termination for power area
- Screw termination for signal area

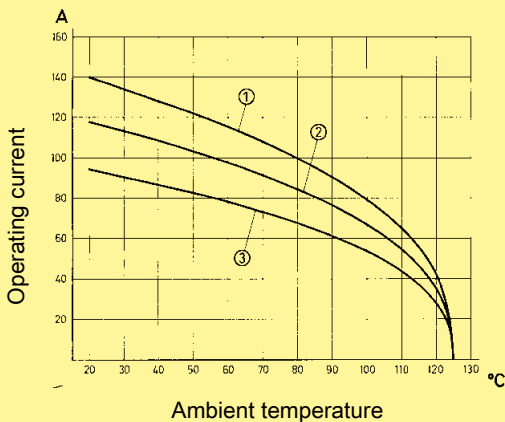
Assembly instructions see page 05.24

Hoods/Housings see chapter 30 / 31

## Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge:

①	35 mm <sup>2</sup>
②	25 mm <sup>2</sup>
③	16 mm <sup>2</sup>

## Technical characteristics

Specifications DIN EN 60 664-1  
DIN EN 61 984

Approvals

### Inserts

Number of contacts	6 / 6 + PE
Electrical data acc. to EN 61 984	
<b>Power area</b>	<b>100 A 690 V 8 kV 3</b>
Rated current	100 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
Pollution degree 2 also	100 A 1000 V 8 kV 2

<b>Signal area</b>	<b>16 A 400 V 6 kV 3</b>
Rated current	16 A
Rated voltage	400 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V / 300 V
Rated voltage acc. to CSA	600 V / 600 V
Rated current acc. to CSA	100 A / 15 A
Insulation resistance	≥ 10 <sup>10</sup> Ω
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	≥ 500

### Contacts

Power contacts

Material	copper alloy								
Surface									
- hard-silver plated	3 μm Ag								
Contact resistance	≤ 0.5 mΩ								
Axial screw termination									
- geometric wire gauge	16 ... 35 mm <sup>2</sup>								
- AWG	5 ... 2								
Max. insulation diameter	11.4 mm								
Tightening torque	<table border="1" style="display: inline-table;"> <tr> <td>mm<sup>2</sup></td> <td>16</td> <td>25</td> <td>35</td> </tr> <tr> <td>Nm</td> <td>6</td> <td>7</td> <td>8</td> </tr> </table>	mm <sup>2</sup>	16	25	35	Nm	6	7	8
mm <sup>2</sup>	16	25	35						
Nm	6	7	8						

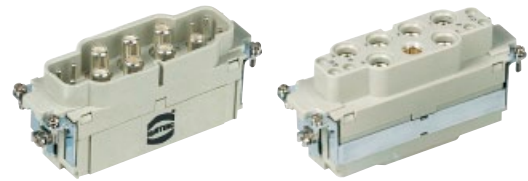
Stripping length 13±1 mm

Signal contacts

Material	copper alloy
Surface	
- hard-silver plated	3 μm Ag
Contact resistance	≤ 3 mΩ
Screw terminal	
- geometric wire gauge	0.2 ... 2.5 mm <sup>2</sup>
- AWG	24 ... 13
Tightening torque	0.8 Nm
Stripping length	7.5 mm

Number of contacts

6/6 +



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Han® K 6/6 Axial screw terminal / Screw terminal  16 ... 35 mm <sup>2</sup>	<b>09 38 012 2651</b>	<b>09 38 012 2751</b>	 <p>1) Distance for contact max. 21 mm</p> <p>11 13 14 14 1 1 2 2 3 3 4 4 12 15 15 16 16 12</p> <p>M F</p> <p>Contact arrangement view from termination side</p>	

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Identification	Part number	Drawing	Dimensions in mm
Hex key SW 4 for axial setscrew			
with grip	<b>09 99 000 0363</b>		
adapter 3/8"	<b>09 99 000 0370</b>		



## Features

- Axial screw termination for power area
- No signal contacts

Assembly instructions see page 05.25

## Technical characteristics

Specifications DIN EN 60 664-1  
DIN EN 61 984

Approvals

### Inserts

Number of contacts	8 + PE
Electrical data acc. to EN 61 984	
Power area	<b>100 A 690 V 8 kV 3</b>
Rated current	100 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
Pollution degree 2 also	100 A 1000 V 8 kV 2

Rated voltage acc. to UL	600 V
Rated current acc. to UL	82 A
Insulation resistance	≥ 10 <sup>10</sup> Ω
Material	polycarbonate
Limiting temperatures	-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								
Contact resistance	≤ 0.5 mΩ								
Axial screw termination									
- geometric wire gauge	10 ... 25 mm <sup>2</sup>								
- AWG	7 ... 3								
Max. insulation diameter	11.4 mm								
Tightening torque	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>mm<sup>2</sup></td> <td>10</td> <td>16</td> <td>25</td> </tr> <tr> <td>Nm</td> <td>6</td> <td>6</td> <td>7</td> </tr> </table>	mm <sup>2</sup>	10	16	25	Nm	6	6	7
mm <sup>2</sup>	10	16	25						
Nm	6	6	7						
Stripping length	13±1 mm								

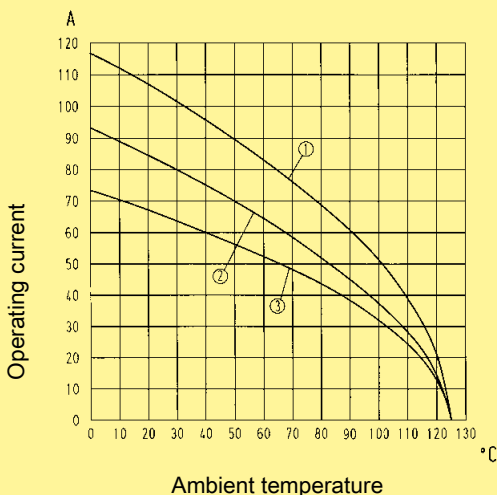
Hoods/Housings see chapter 30 / 31

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### Current carrying capacity

The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the connector evenly, without exceeding the allowed maximum temperature.

Measuring and testing techniques according to DIN EN 60 512-5



Wire gauge: ① 25 mm<sup>2</sup>  
② 16 mm<sup>2</sup>  
③ 10 mm<sup>2</sup>

Number of contacts

8/0 +



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Han® K 8/0 Axial screw terminal  10 ... 25 mm <sup>2</sup>	09 38 008 2653	09 38 008 2753	<p>1) Distance for contact max. 21 mm</p> <p>M F</p> <p>Contact arrangement view from termination side</p>	

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Identification	Part number	Drawing	Dimensions in mm
Hex key SW 4 for axial setscrew			
with grip	<b>09 99 000 0363</b>		
adapter 3/8"	<b>09 99 000 0370</b>		



## Description

## Depiction

## Dimensions in mm

### Step 1:

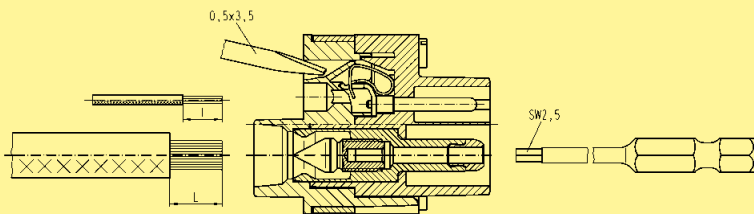
#### Signal contacts:

Push screwdriver (0.5 x 3.5) into rectangular chamber. Strip insulation from the wire with a length given on page 05.06 and insert the wire into the round contact chamber.

#### Power contacts:

Strip insulation from the wire with a length given on page 05.06 and insert the wire into the contact chamber until insulation is flush with contact.

Do not twist the strands of the wire.



I: Stripping length for signal contacts

L: Stripping length for power contacts

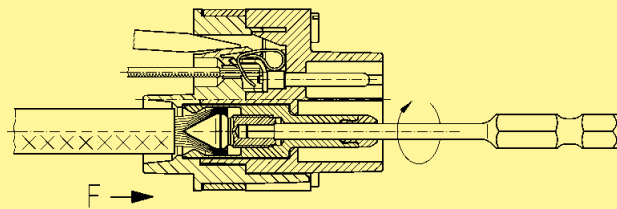
### Step 2:

#### Signal contacts:

Push screwdriver (0.5 x 3.5) out of rectangular chamber.

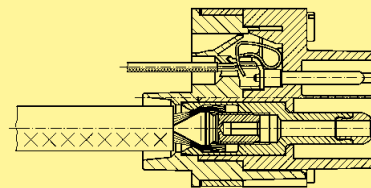
#### Power contacts:

Hold the wire in position and tighten by a hexagonal driver (SW 2.5) from the mating side with a tightening torque given on page 05.06.



### Step 3:

Complete connection



## Description

## Depiction

## Dimensions in mm

### Step 1:

#### Signal contacts:

Strip insulation from the wire with a length given on page 05.10 and insert the wire into the rectangular contact chamber.

#### Power contacts:

Strip insulation from the wire with a length given on page 05.10 and insert the wire into the contact chamber until insulation is flush with contact.  
Do not twist the strands of the wire.

### Step 2:

#### Signal contacts:

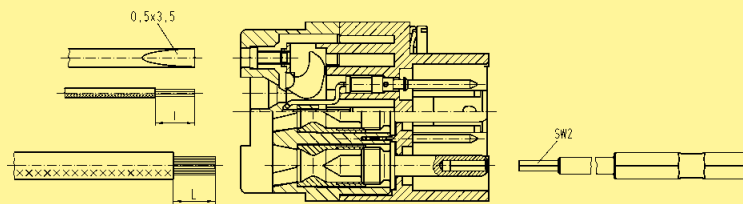
Tighten screw termination with screwdriver (0.5 x 3.5) with a tightening torque given on page 05.10.

#### Power contacts:

Hold the wire in position and tighten by a hexagonal driver (SW 2) from the mating side with a tightening torque given on page 05.10.

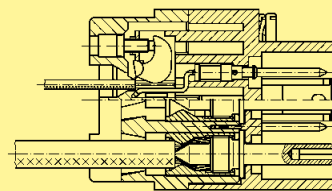
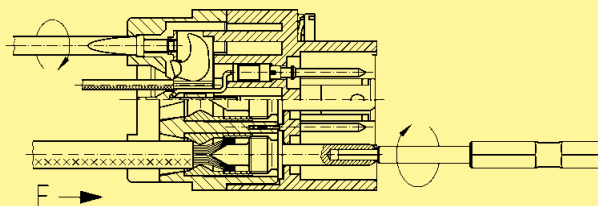
### Step 3:

Complete connection



I: Stripping length for signal contacts

L: Stripping length for power contacts



## Description

## Depiction

## Dimensions in mm

### Step 1:

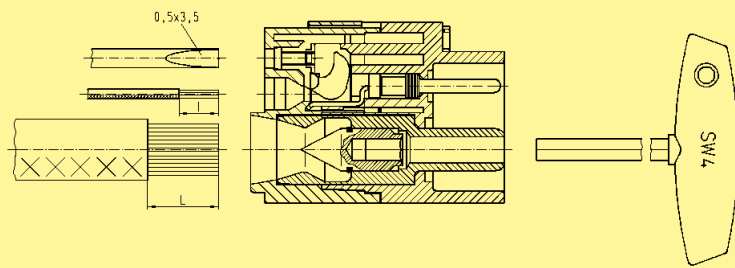
#### Signal contacts:

Strip insulation from the wire with a length given on page 05.18 and insert the wire into the rectangular contact chamber.

#### Power contacts:

Strip insulation from the wire with a length given on page 05.18 and insert the wire into the contact chamber until insulation is flush with contact.

Do not twist the strands of the wire.



I: Stripping length for signal contacts

L: Stripping length for power contacts

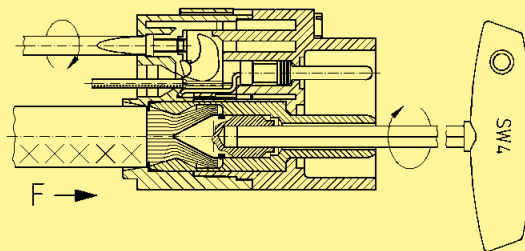
### Step 2:

#### Signal contacts:

Tighten screw termination with screwdriver (0.5 x 3.5) with a tightening torque given on page 05.18.

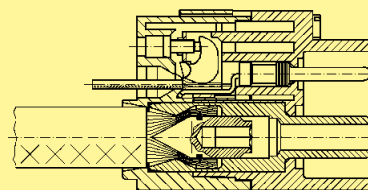
#### Power contacts:

Hold the wire in position and tighten by a hexagonal driver (SW 4) from the mating side with a tightening torque given on page 05.18.



### Step 3:

Complete connection



## Description

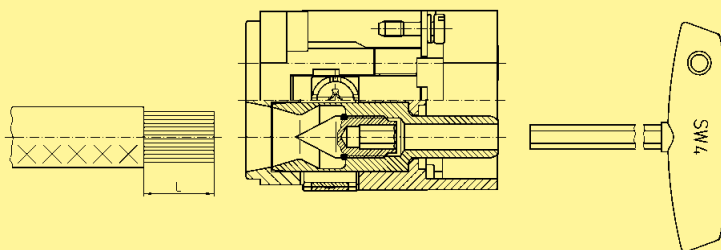
## Depiction

## Dimensions in mm

### Step 1:

Strip insulation from the wire with a length given on page 05.20 and insert the wire into the contact chamber until insulation is flush with contact.

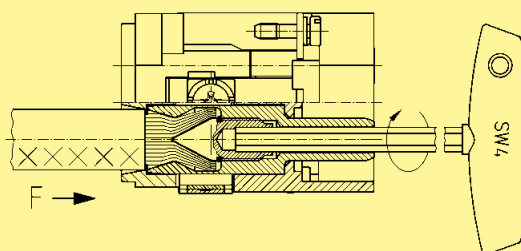
Do not twist the strands of the wire.



L: Stripping length for power contacts

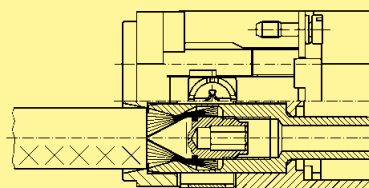
### Step 2:

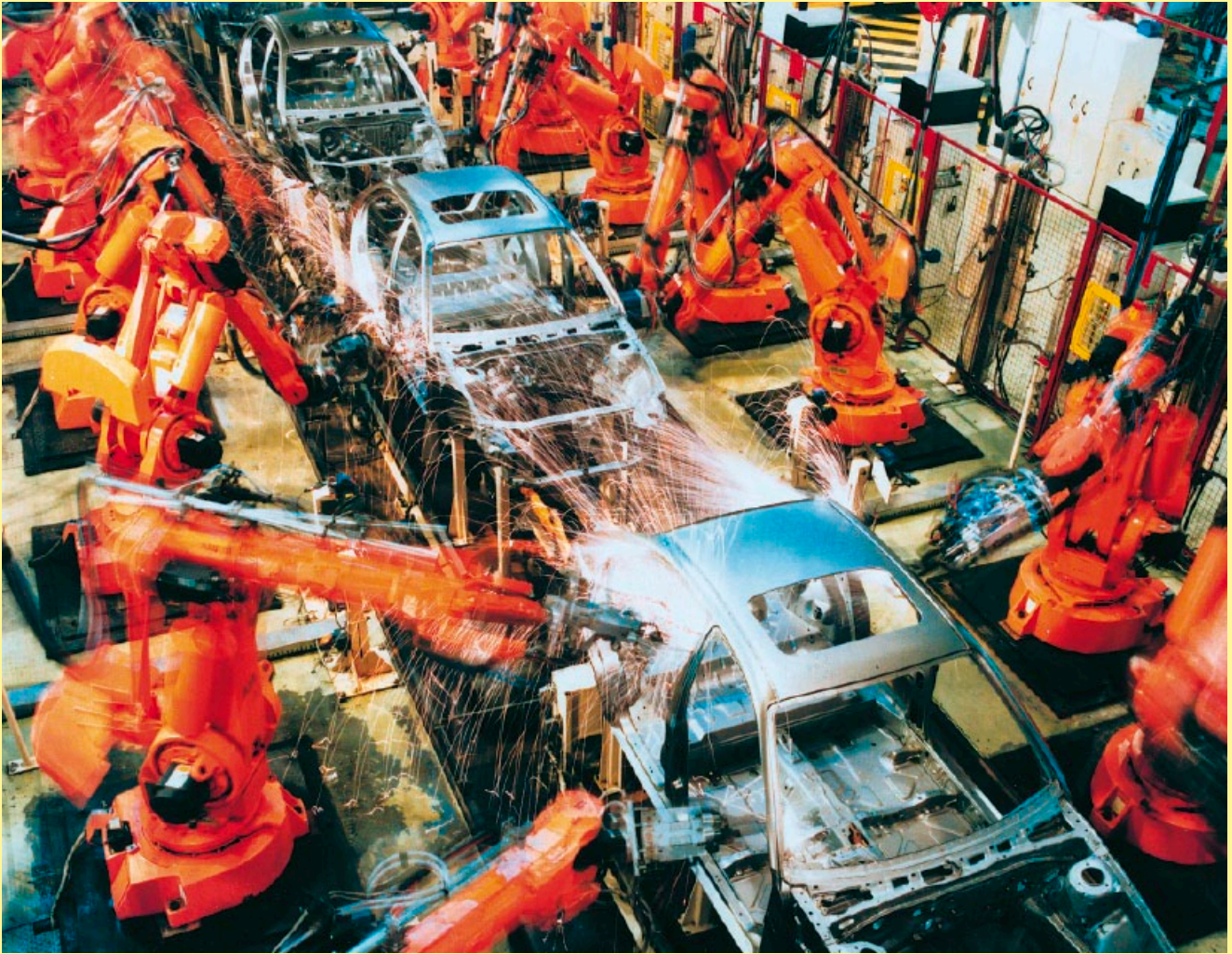
Hold the wire in position and tighten by a hexagonal driver (SW 4) from the mating side with a tightening torque given on page 05.20.



### Step 3:

Complete connection





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