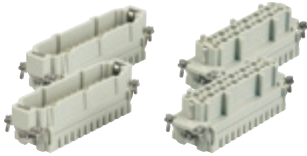
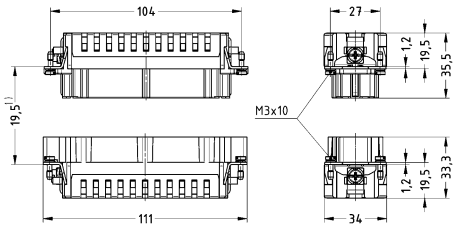
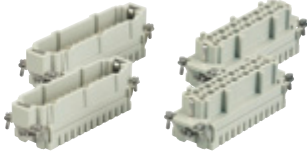
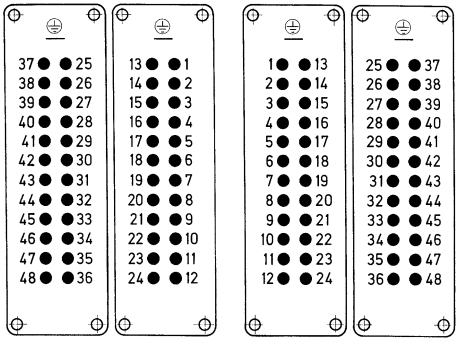
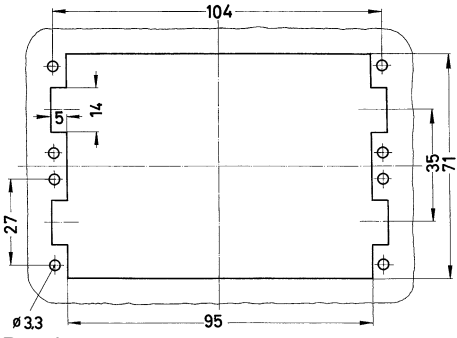


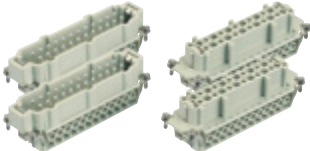
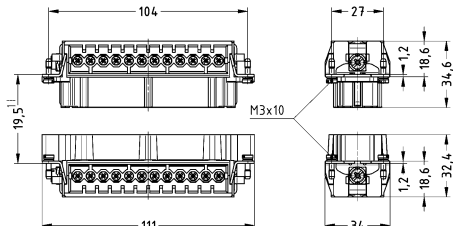
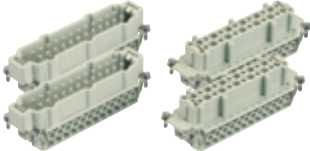
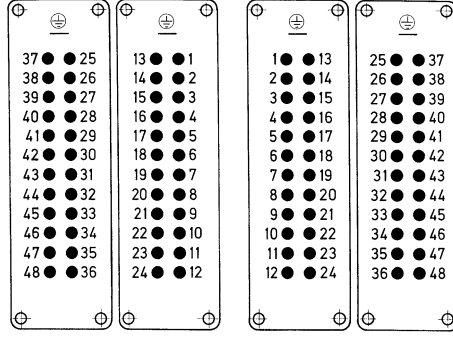
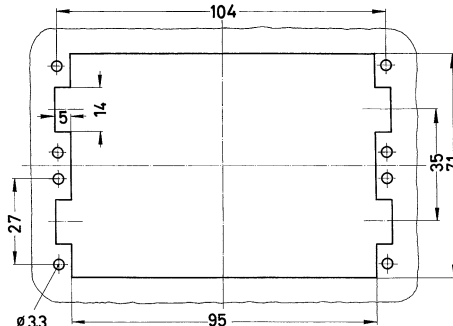
Number of contacts

48+

16 A 500 V 6 kV 3

Han E/
EE

Identification	Conductor cross-section (mm ²)	Part number		Drawing (dimensions in mm)
		Male	Female	
<p>Han E®, Crimp termination, 1 ... 24</p>  <p>Please order crimp contacts separately. You need two inserts for a complete assembly!</p>	0.14 ... 4	09 33 024 2602	09 33 024 2702	 <p>1) distance for contact max. 21 mm</p>
<p>Han E®, Continuing marking, Crimp termination, 25 ... 48</p>  <p>Please order crimp contacts separately. You need two inserts for a complete assembly!</p>	0.14 ... 4	09 33 024 2612	09 33 024 2712	 <p>M F</p> <p>Contact arrangement (view from termination side)</p>  <p>Panel cut out</p>

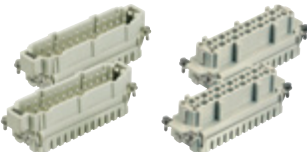
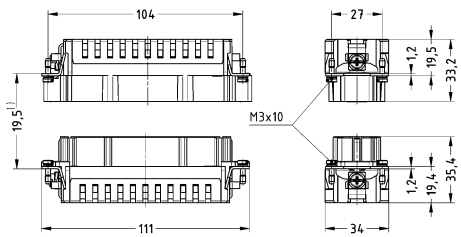
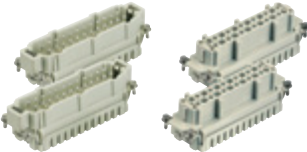
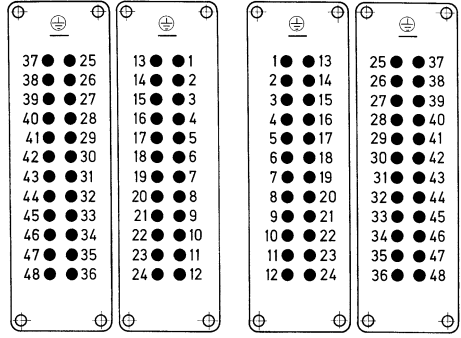
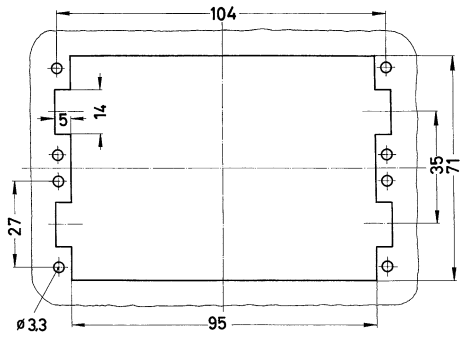
Identification	Conductor cross-section (mm ²)	Part number		Drawing (dimensions in mm)
		Male	Female	
<p>Han E®, Screw termination, With wire protection, 1 ... 24 Contact surface: Silver plated</p>  <p>You need two inserts for a complete assembly!</p>	0.75 ... 2.5	09 33 024 2601	09 33 024 2701	 <p>1) distance for contact max. 21 mm</p>
<p>Han E®, Continuing marking, Screw termination, With wire protection, 25 ... 48 Contact surface: Silver plated</p>  <p>You need two inserts for a complete assembly!</p>	0.75 ... 2.5	09 33 024 2611	09 33 024 2711	 <p>1 13 25 26 37 2 14 26 38 3 15 27 39 4 16 28 40 5 17 29 41 6 18 30 42 7 19 31 43 8 20 32 44 9 21 33 45 10 22 34 46 11 23 35 47 12 24 36 48</p> <p>M F</p> <p>Contact arrangement (view from termination side)</p>  <p>Panel cut out</p>

Number of contacts

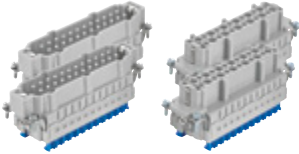
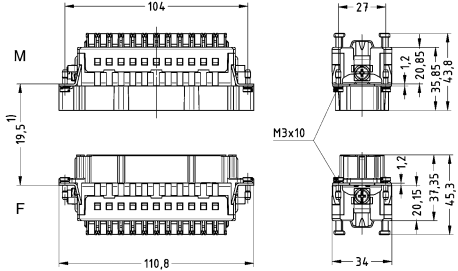
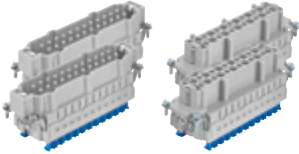
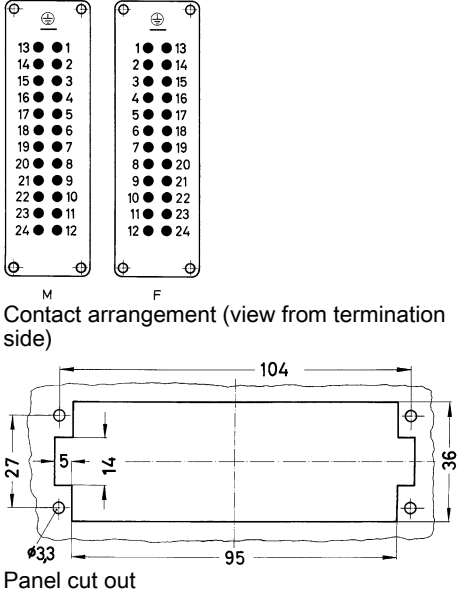
48+

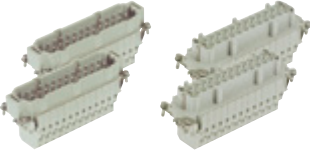
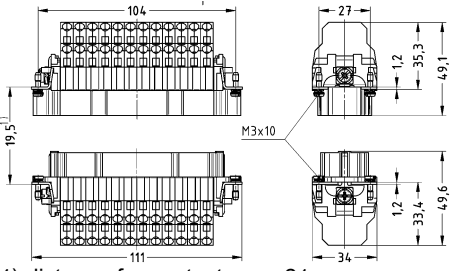
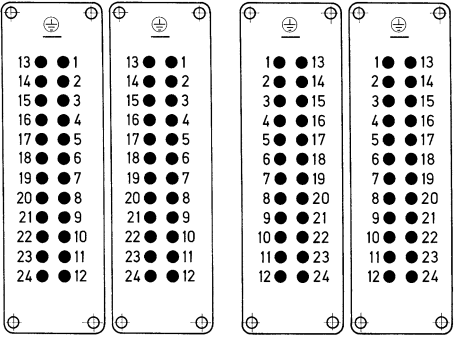
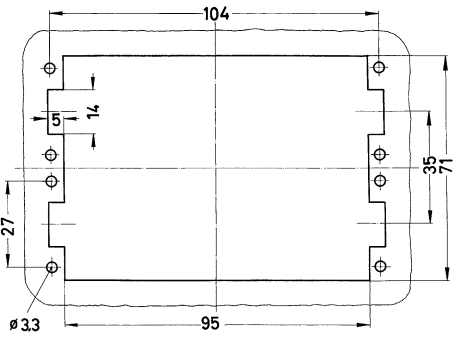
16 A 500 V 6 kV 3

Han E/EE

Identification	Conductor cross-section (mm ²)	Part number		Drawing (dimensions in mm)
		Male	Female	
<p>Han® ES, Cage-clamp termination, 1 ... 24</p> <p>Contact surface: Silver plated</p>  <p>You need two inserts for a complete assembly!</p>	0.14 ... 2.5	09 33 024 2616	09 33 024 2716	 <p>1) distance for contact max. 21 mm</p>
<p>Han® ES, Continuing marking, Cage-clamp termination, 25 ... 48</p> <p>Contact surface: Silver plated</p>  <p>You need two inserts for a complete assembly!</p>	0.14 ... 2.5	09 33 024 2626	09 33 024 2726	 <p>Contact arrangement (view from termination side)</p>  <p>Panel cut out</p>

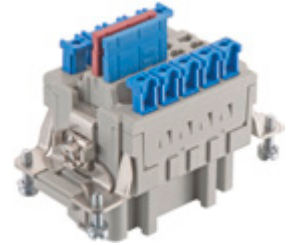
Han E/EE

Identification	Conductor cross-section (mm ²)	Part number		Drawing (dimensions in mm)
		Male	Female	
<p>Han® ES Press, Cage-clamp termination, 1 ... 24</p> <p>Contact surface: Silver plated</p>  <p>Blue slide for hoods/housings high construction only You need two inserts for a complete assembly!</p>	0.14 ... 2.5	09 33 024 2648	09 33 024 2748	 <p>Distance for contact max. 21 mm</p>
<p>Han® ES Press, Continuing marking, Cage-clamp termination, 25 ... 48</p> <p>Contact surface: Silver plated</p>  <p>Blue slide for hoods/housings high construction only You need two inserts for a complete assembly!</p>	0.14 ... 2.5	09 33 024 2688	09 33 024 2788	 <p>Contact arrangement (view from termination side)</p> <p>Panel cut out</p>

Identification	Conductor cross-section (mm ²)	Part number		Drawing (dimensions in mm)
		Male	Female	
<p>Han® ESS, Cage-clamp termination, 1 ... 24</p> <p>Contact surface: Silver plated</p>  <p>two terminations per contact for hoods/housings high construction only You need two inserts for a complete assembly!</p>	0.14 ... 2.5	09 33 024 2672	09 33 024 2772	 <p>1) distance for contact max. 21 mm</p>  <p>M F</p> <p>Contact arrangement (view from termination side)</p>  <p>Panel cut out</p>

16 A 500 V 6 kV 3

Han E/
EE



Technical characteristics







Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	$\geq 10^{10} \Omega$
Contact resistance	$\leq 1 \text{ m}\Omega$
Limiting temperature	-40 ... +125 °C
Mating cycles	≥ 5
Material (contacts)	Copper alloy
Material (accessories)	Polyamide

Technical characteristics

Colour (accessories)	RAL 3018 (strawberry red), RAL 5012 (light blue), RAL 5004 (black blue)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Details

When using plug-in jumpers within Han® ES Press hoods of high construction must be used.

Identification		Part number	Drawing (dimensions in mm)	
Han® ES Press, Plug-in jumper, 2 x 1, Transverse, Contact surface: Tin plated		Black Blue Red	09 33 000 9822 09 33 000 9821 09 33 000 9820	
Han® ES Press, Plug-in jumper, 1 x 2, Longitudinal, Contact surface: Tin plated		Black Blue Red	09 33 000 9852 09 33 000 9841 09 33 000 9830	
Han® ES Press, Plug-in jumper, 1 x 3, Longitudinal, Contact surface: Tin plated		Black Blue Red	09 33 000 9853 09 33 000 9842 09 33 000 9831	

Identification	Color	Part number	Drawing (dimensions in mm)
Han® ES Press, Plug-in jumper, 1 x 4, Longitudinal, Contact surface: Tin plated	Black Blue Red	09 33 000 9854 09 33 000 9843 09 33 000 9832	
Han® ES Press, Plug-in jumper, 1 x 5, Longitudinal, Contact surface: Tin plated	Black Blue Red	09 33 000 9855 09 33 000 9844 09 33 000 9833	
Han® ES Press, Plug-in jumper, 1 x 8, Longitudinal, Contact surface: Tin plated	Black Blue Red	09 33 000 9858 09 33 000 9847 09 33 000 9836	
Han® ES Press, Plug-in jumper, 1 x 12, Longitudinal, Contact surface: Tin plated	Black Blue Red	09 33 000 9862 09 33 000 9851 09 33 000 9840	

Technical characteristics

Contact resistance	≤1 mΩ
Material (contacts)	Copper alloy
Material (accessories)	Thermoplastic
RoHS	compliant with exemption, compliant
RoHS exemptions	6c: Copper alloy containing up to 4 % lead by weight

Specifications and approvals

EN 60664-1
IEC 61984

Details


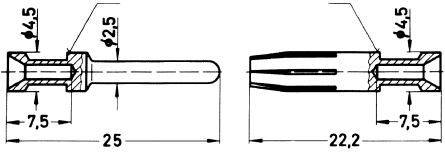

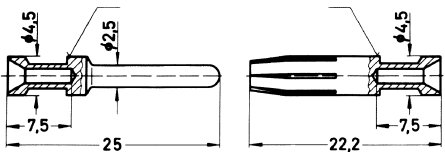
Crimping tools see chapter 90

Remarks on the crimp technique

The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Coding pin

Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

Identification	Conductor cross-section (mm ²)	Part number		Drawing (dimensions in mm)																										
		Male	Female																											
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37	09 33 000 6127	09 33 000 6227	 <table border="1"> <thead> <tr> <th>Conductor cross-section</th> <th>Identification</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>no groove</td> </tr> <tr> <td>0.5 mm²</td> <td>AWG 20</td> <td>no groove</td> </tr> <tr> <td>0.75 mm²</td> <td>AWG 18</td> <td>1 groove*</td> </tr> <tr> <td>1 mm²</td> <td>AWG 18</td> <td>1 groove</td> </tr> <tr> <td>1.5 mm²</td> <td>AWG 16</td> <td>2 grooves</td> </tr> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>3 grooves</td> </tr> <tr> <td>3 mm²</td> <td>AWG 12</td> <td>wide groove</td> </tr> <tr> <td>4 mm²</td> <td>AWG 12</td> <td>no groove</td> </tr> </tbody> </table> <p>* on the back crimp collar Stripping length 7.5 mm</p>	Conductor cross-section	Identification	0.14-0.37 mm ²	AWG 26-22	no groove	0.5 mm ²	AWG 20	no groove	0.75 mm ²	AWG 18	1 groove*	1 mm ²	AWG 18	1 groove	1.5 mm ²	AWG 16	2 grooves	2.5 mm ²	AWG 14	3 grooves	3 mm ²	AWG 12	wide groove	4 mm ²	AWG 12	no groove
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	0.75 mm ²	AWG 18	1 groove*																											
	1 mm ²	AWG 18	1 groove																											
	1.5 mm ²	AWG 16	2 grooves																											
	2.5 mm ²	AWG 14	3 grooves																											
	3 mm ²	AWG 12	wide groove																											
	4 mm ²	AWG 12	no groove																											
0.5	09 33 000 6121	09 33 000 6220																												
0.75	09 33 000 6114	09 33 000 6214																												
1	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																												
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37	09 33 000 6117	09 33 000 6217	 <table border="1"> <thead> <tr> <th>Conductor cross-section</th> <th>Identification</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>no groove</td> </tr> <tr> <td>0.5 mm²</td> <td>AWG 20</td> <td>no groove</td> </tr> <tr> <td>0.75 mm²</td> <td>AWG 18</td> <td>1 groove*</td> </tr> <tr> <td>1 mm²</td> <td>AWG 18</td> <td>1 groove</td> </tr> <tr> <td>1.5 mm²</td> <td>AWG 16</td> <td>2 grooves</td> </tr> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>3 grooves</td> </tr> <tr> <td>3 mm²</td> <td>AWG 12</td> <td>wide groove</td> </tr> <tr> <td>4 mm²</td> <td>AWG 12</td> <td>no groove</td> </tr> </tbody> </table> <p>* on the back crimp collar Stripping length 7.5 mm</p>	Conductor cross-section	Identification	0.14-0.37 mm ²	AWG 26-22	no groove	0.5 mm ²	AWG 20	no groove	0.75 mm ²	AWG 18	1 groove*	1 mm ²	AWG 18	1 groove	1.5 mm ²	AWG 16	2 grooves	2.5 mm ²	AWG 14	3 grooves	3 mm ²	AWG 12	wide groove	4 mm ²	AWG 12	no groove
	Conductor cross-section	Identification																												
	0.14-0.37 mm ²	AWG 26-22	no groove																											
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	1 mm ²	AWG 18	1 groove																											
	1.5 mm ²	AWG 16	2 grooves																											
	2.5 mm ²	AWG 14	3 grooves																											
	3 mm ²	AWG 12	wide groove																											
	4 mm ²	AWG 12	no groove																											
0.5	09 33 000 6122	09 33 000 6222																												
0.75	09 33 000 6115	09 33 000 6215																												
1	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	09 33 000 6119	09 33 000 6221																												

Identification	Conductor cross-section (mm ²)	Part number		Drawing (dimensions in mm)
		Male	Female	
Han E®, Crimp contact, Relay contact, Contact surface: Silver plated	0.75 ... 1 1.5 2.5	09 33 000 6109 09 33 000 6110 09 33 000 6111		
FO contact, for 1 mm plastic fibre		20 10 001 3311	20 10 001 3321	
Han E® Han® EE Han® EEE, Coding pin			09 33 000 9954	
for crimp inserts only With loss of one contact				

Features

- Covers a wide range of cross-sections
- Screw termination with wire protection

Technical characteristics

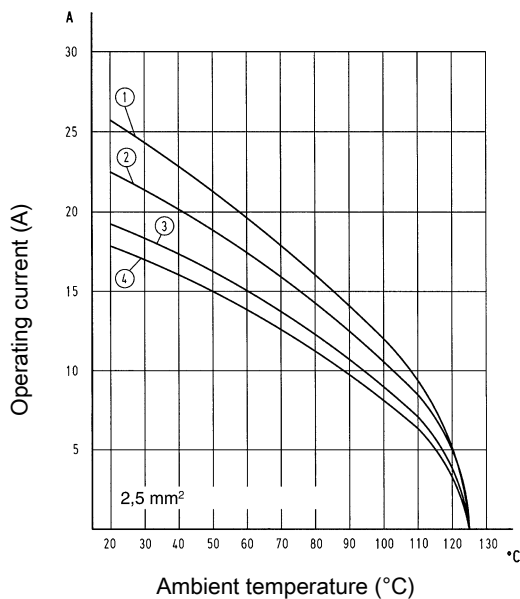
Number of contacts	6, 10, 16, 24, 32, 48
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Rated voltage acc. to CSA	600 V
Insulation resistance	≥10 ¹⁰ Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption
RoHS exemptions	6c: Copper alloy containing up to 4 % lead by weight

Derating

Current carrying capacity

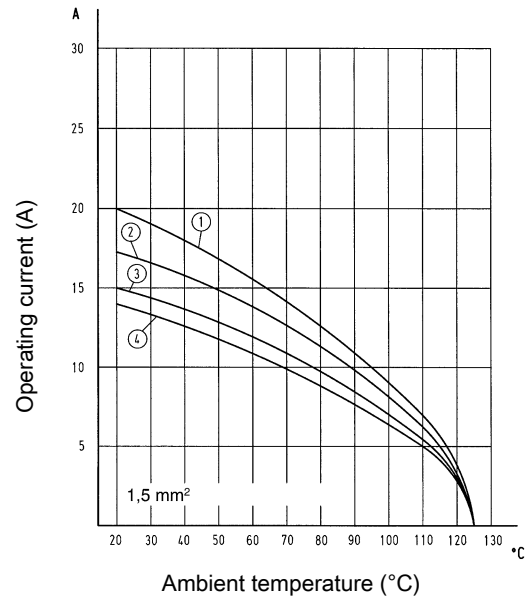
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the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

Measuring and testing techniques acc. to IEC 60512-5-2



- ① Han® 6 E
- ② Han® 10 E
- ③ Han® 16 E Han® 32 E
- ④ Han® 24 E Han® 48 E

Derating



- ① Han® 6 E
- ② Han® 10 E
- ③ Han® 16 E Han® 32 E
- ④ Han® 24 E Han® 48 E

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

Details

Internal use in the switch cabinet in conjunction with Han-Snap® (see chapter 11)

Suitable for hoods/housings of series Han® B, Han® M, Han® EMC, Han® HPR, Han® Easy Hood (see chapter 31)

Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm

Features

- Rapid termination technology without tools for a time saving assembly and for optimal processreliability
- Vibration-proved
- Han® ES Press: Easy bridging functionality of contacts by means of plug-in jumpers directly on the connector
- Han® ES Press: Fast realisation of potential multiplication as well as star and delta bridges
- Han® ESS: two termination points per contact

Technical characteristics

Number of contacts	6, 10, 16, 24, 32, 48
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Rated voltage acc. to CSA	600 V
Insulation resistance	$\geq 10^{10} \Omega$
Contact resistance	$\leq 3 \text{ m}\Omega$
Limiting temperature	-40 ... +125 °C
Mating cycles	≥ 500
Material (insert)	Polycarbonate
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption, compliant
RoHS exemptions	6c: Copper alloy containing up to 4 % lead by weight

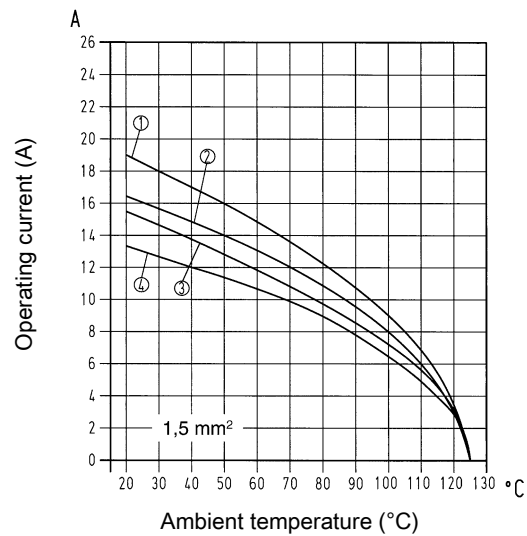
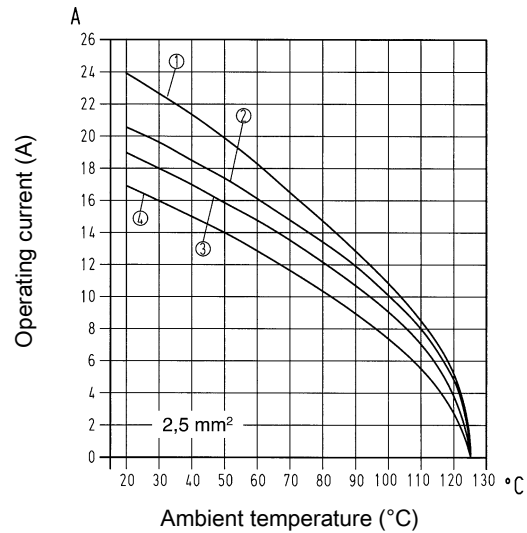
Derating

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 acc. to IEC 60512-5-2

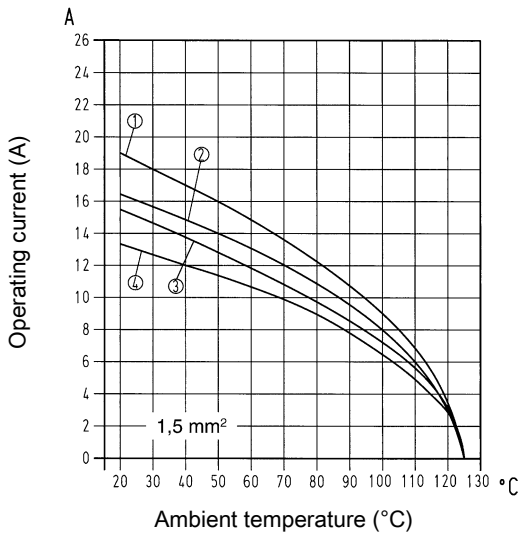
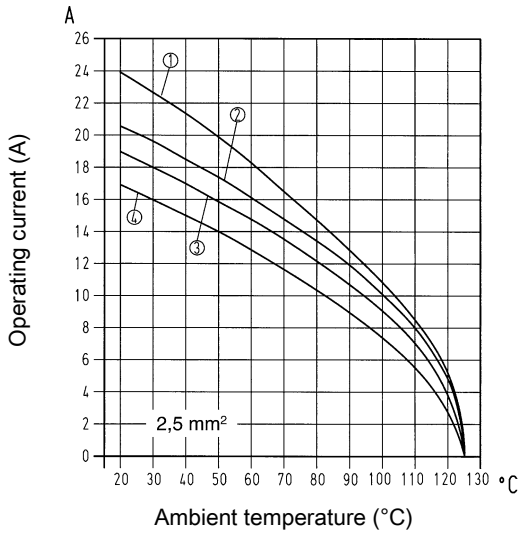
Han® ES



- ① Han® 6 ES
- ② Han® 10 ES
- ③ Han® 16 ES Han® 32 ES
- ④ Han® 24 ES Han® 48 ES

Derating

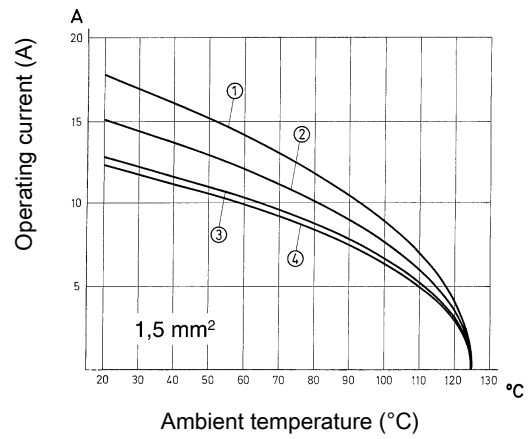
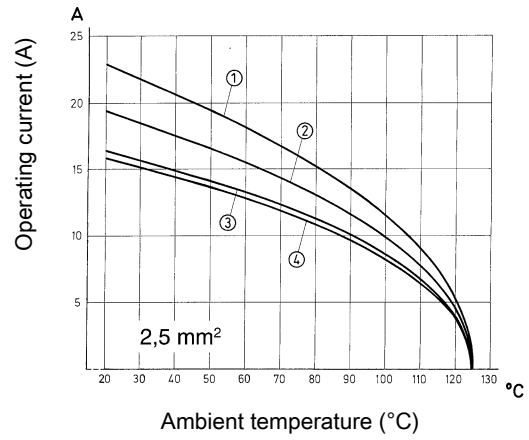
Han® ES Press



- ① Han® 6 ES Press
- ② Han® 10 ES Press
- ③ Han® 16 ES Press Han® 32 ES Press
- ④ Han® 24 ES Press Han® 48 ES Press

Derating

Han® ESS



- ① Han® 6 ESS
- ② Han® 10 ESS
- ③ Han® 16 ESS Han® 32 ESS
- ④ Han® 24 ESS Han® 48 ESS

Specifications and approvals

EN 60664-1
 IEC 61984
 UL 1977 ECBT2.E235076
 UL 2237 PVVA2.E318390
 CSA-C22.2 No. 182.3 PVVA8.E318390
 DNV GL
 CSA-C22.2 No. 182.3 ECBT8.E235076

Details

Internal use in the switch cabinet in conjunction with Han-Snap® (see chapter 11)

Suitable for hoods/housings of series Han® B, Han® M, Han® EMC, Han® HPR, Han® Easy Hood (see chapter 31)

Tightening torque 0.5 Nm

Tightening torque PE screw 1.2 Nm