

Han Hv E® / Han® Hv ES



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Han
Hv E

Difference: Han Hv E® to standard hoods/housings



Standard Hoods/Housings Han® B

Suitable for
Han® Hv ES cage-clamp terminal
and Han Hv E® crimp terminal

Coding bar



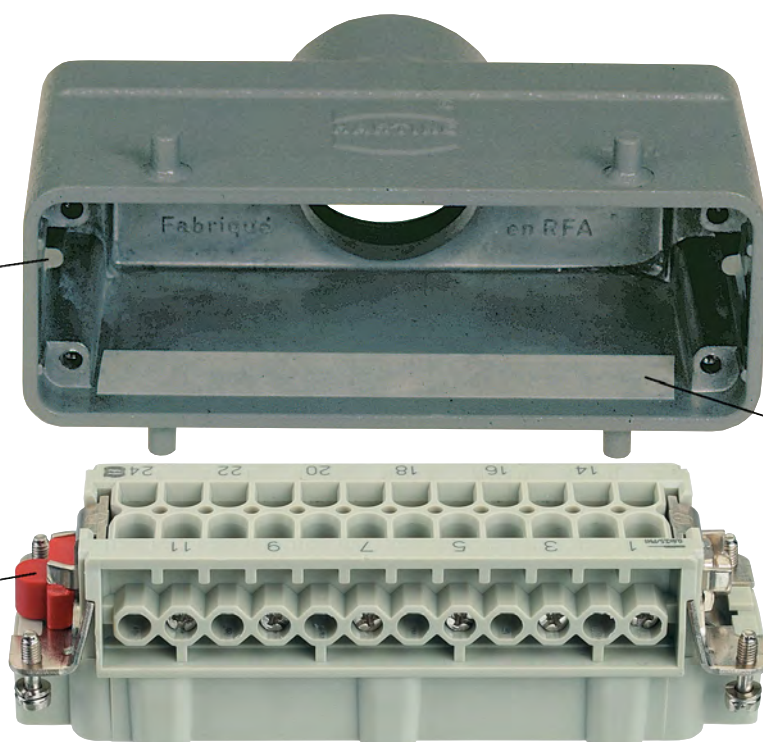
Special hood/housing Han Hv E®

Suitable for
Han Hv E® screw terminal

Milled
coding bar

Insulation tape

Coding pin



Features

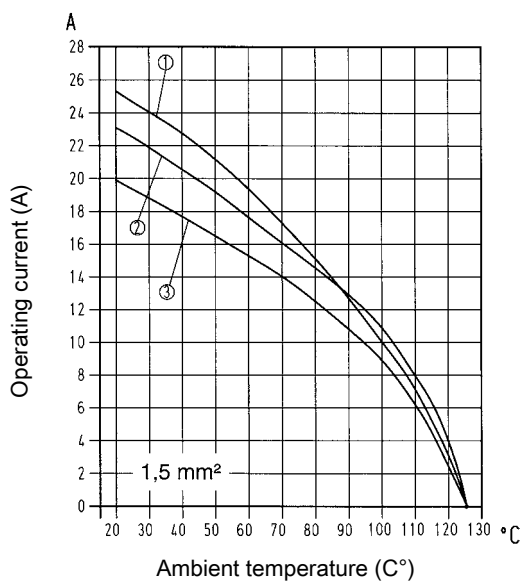
- Designed for application up to 830 V
- Available in several termination techniques

Derating

Current carrying capacity

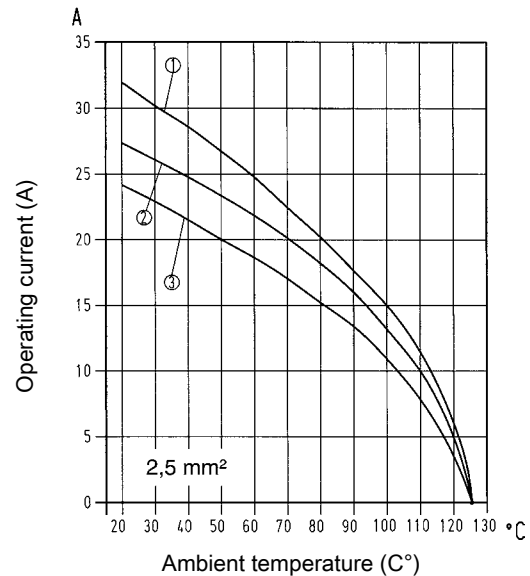
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the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

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



- ① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

Derating



- ① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

Technical characteristics

Contacts	3, 6, 10, 12, 20
Electrical data acc. to IEC 61984	16 A 830 V 8 kV 3
Rated current	16 A
Rated voltage	830 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Rated voltage acc. to CSA	600 V
Insulation resistance	$\geq 10^{10}$ Ohm
Limiting temperatures	-40 °C ... 125 °C
Flammability (insert) acc. to UL 94	V 0
Mating cycles	≥ 500
Tightening torque	0.5 Nm
Material (insert)	polycarbonate
Colour (insert)	RAL 7032 (light grey)
Material (contact)	copper alloy

Specifications and approvals

IEC 61984
IEC 60664-1



Details

Han Hv E® screw requires special Han Hv E® housings

Han® 3 Hv E

Size 10 B



Number of contacts

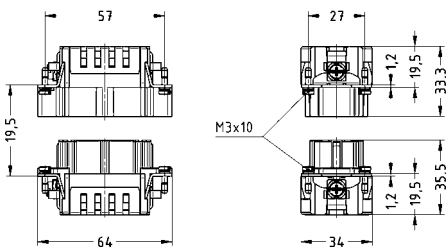
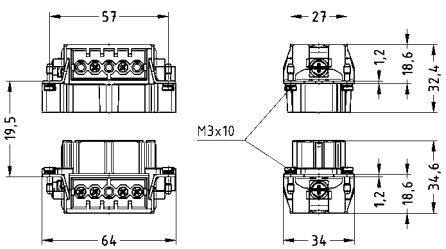
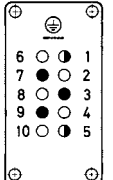
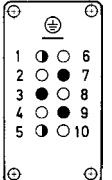
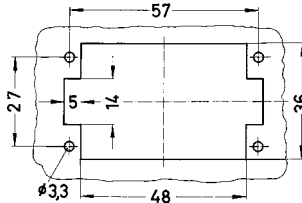
3+

830 V

16 A

+ 2 additional contacts for safe high voltage connections

Han
Hv E

Identification	Wire cross section (mm²)	Part number		Drawing Dimensions in mm
		male	female	
Han Hv E®, Crimp terminal  Please order crimp contacts separately.		09 34 003 2602	09 34 003 2702	
Han Hv E®, Screw terminal, silver plated contacts, contact resistance ≤1 mOhm 	0.75–2.5	09 34 003 2601	09 34 003 2701	  M  F Contact arrangement (view from termination side) Han® 3 Hv E ♦ Working contact ● Relay contact ○ Without contact  Panel cut out for inserts for use without hoods/housings

Han® 6 Hv E

Size 16 B



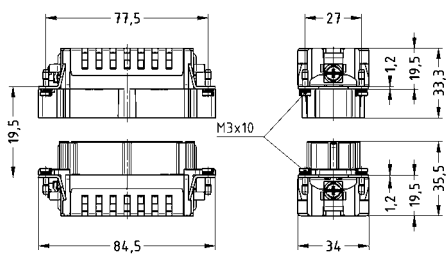
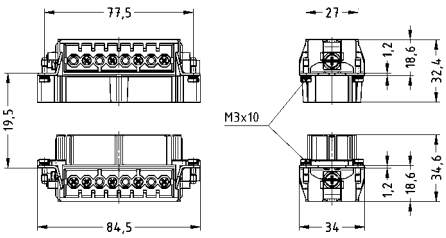
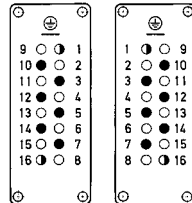
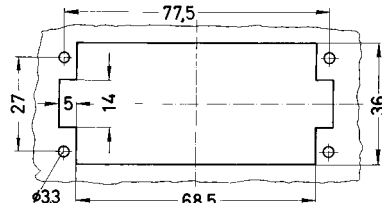
Number of contacts

6+

830 V

16 A

+ 2 additional contacts for safe high voltage connections

Identification	Wire cross section (mm²)	Part number male female		Drawing Dimensions in mm
Han Hv E®, Crimp terminal  Please order crimp contacts separately.		09 34 006 2602	09 34 006 2702	
Han Hv E®, Screw terminal, silver plated contacts, contact resistance ≤1 mOhm 	0.75–2.5	09 34 006 2601	09 34 006 2701	  Contact arrangement (view from termination side) Han® 6 Hv E ♦ Working contact ● Relay contact ○ Without contact  Panel cut out for inserts for use without hoods/housings

Han
Hv E

Han® 10 Hv E

Size 24 B



Number of contacts

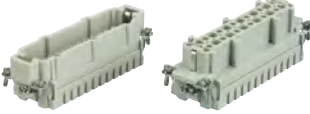
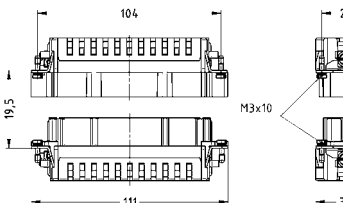
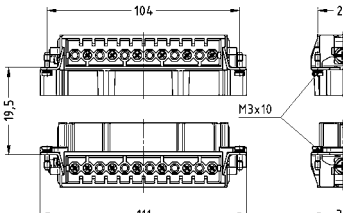
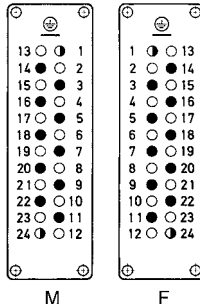
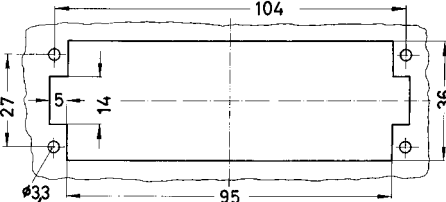
10+

830 V

16 A

+ 2 additional contacts for safe high voltage connections

Han
Hv E

Identification	Wire cross section (mm²)	Part number		Drawing
		male	female	Dimensions in mm
Han Hv E®, Crimp terminal  Please order crimp contacts separately.		09 34 010 2602	09 34 010 2702	
Han Hv E®, Screw terminal, silver plated contacts, contact resistance ≤1 mOhm 	0.75–2.5	09 34 010 2601	09 34 010 2701	  Contact arrangement (view from termination side) Han® 10 Hv E ♦ Working contact ● Relay contact ○ Without contact  Panel cut out for inserts for use without hoods/housings

Han® 12 Hv E

Size 32 B



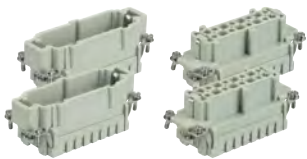
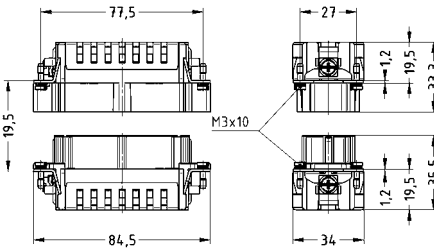
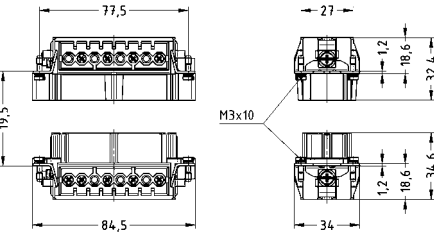
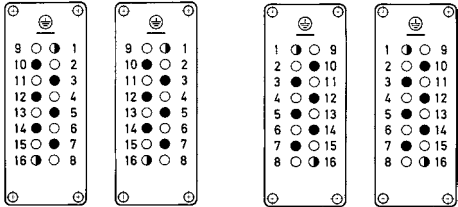
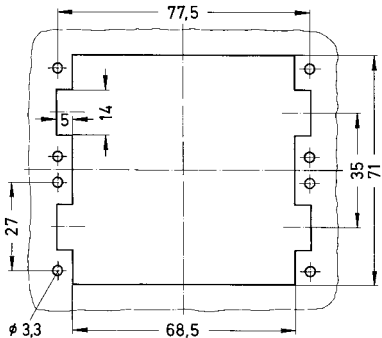
Number of contacts

12+

830 V

16 A

+ 4 additional contacts for safe high voltage connections

Identification	Wire cross section (mm²)	Part number male female		Drawing Dimensions in mm
Han Hv E®, Crimp terminal  Please order crimp contacts separately. Please order two inserts for a complete assembly!		09 34 006 2602	09 34 006 2702	
Han Hv E®, Screw terminal, silver plated contacts, contact resistance ≤1 mOhm  Please order two inserts for a complete assembly!	0.75–2.5	09 34 006 2601	09 34 006 2701	  M F Contact arrangement (view from termination side) Han® 12 Hv E ♦ Working contact ● Relay contact ○ Without contact
 Panel cut out for inserts for use without hoods/housings				

Han
Hv E

Han® 20 Hv E

Size 48 B



Number of contacts

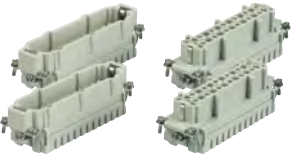
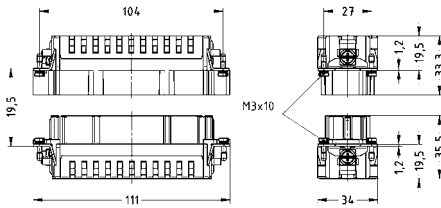
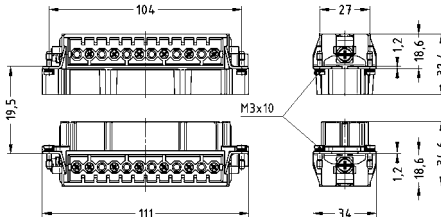
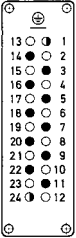
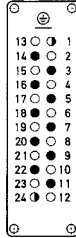
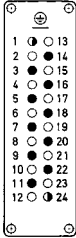
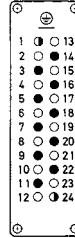
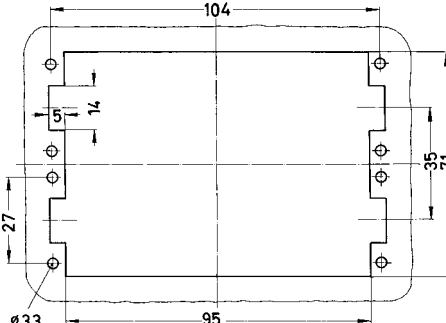
20+

830 V

16 A

+ 4 additional contacts for safe high voltage connections

Han
Hv E

Identification	Wire cross section (mm²)	Part number		Drawing
		male	female	Dimensions in mm
Han Hv E®, Crimp terminal  Please order crimp contacts separately. Please order two inserts for a complete assembly!		09 34 010 2602	09 34 010 2702	
Han Hv E®, Screw terminal, silver plated contacts, contact resistance ≤1 mOhm  Please order two inserts for a complete assembly!	0.75–2.5	09 34 010 2601	09 34 010 2701	     M F Contact arrangement (view from termination side) Han® 20 Hv E ◆ Working contact ● Relay contact ○ Without contact 

Han® 16 / 32 Hv E



Features

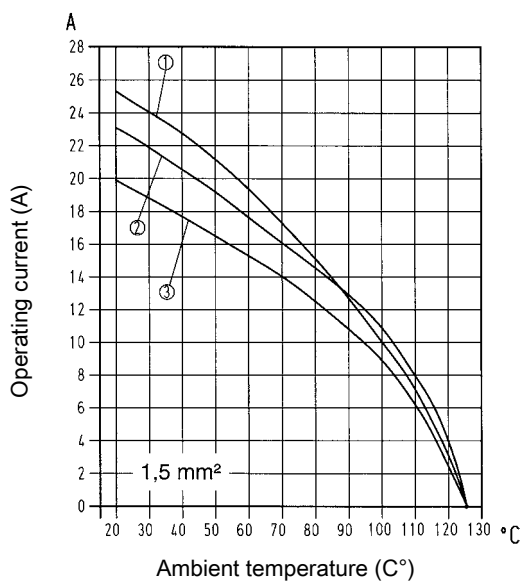
- Designed for application up to 690 V
- No special tools required

Derating

Current carrying capacity

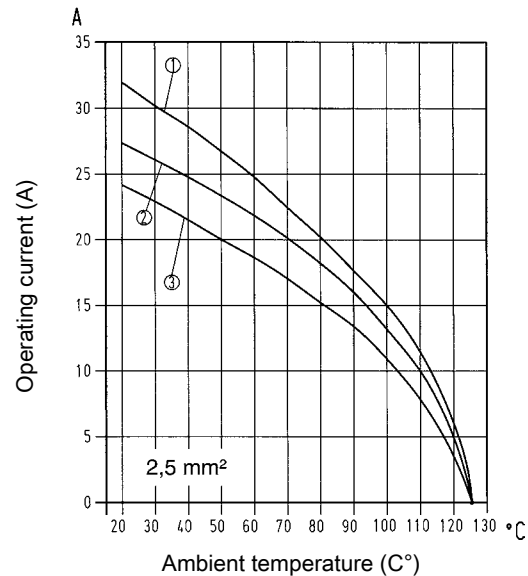
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the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

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



- ① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

Derating



- ① Han® 3 Hv E
② Han® 6 / 12 Hv E
③ Han® 10 / 16 / 20 / 32 Hv E

Technical characteristics

Contacts	16, 32
Electrical data acc. to IEC 61984	16 A 400/690 V 6 kV 3
Rated current	16 A
Rated voltage conductor - ground	400 V
Rated voltage conductor - conductor	690 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	$\geq 10^{10}$ Ohm
Limiting temperatures	-40 °C ... 125 °C
Flammability (insert) acc. to UL 94	V 0
Mating cycles	≥ 500
Tightening torque	0.5 Nm
Material (insert)	polycarbonate
Colour (insert)	RAL 7032 (light grey)
Material (contact)	copper alloy

Specifications and approvals

IEC 60664-1
IEC 61984



Details

Han Hv E® screw requires special Han Hv E® housings

Han
Hv E

Han[®] 16 Hv E

Size 24 B



Number of contacts

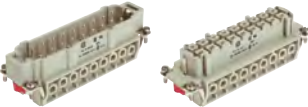
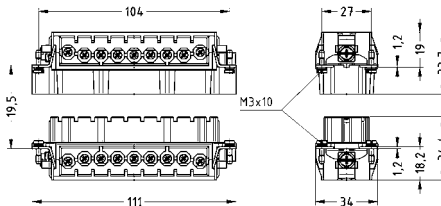
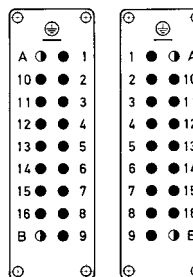
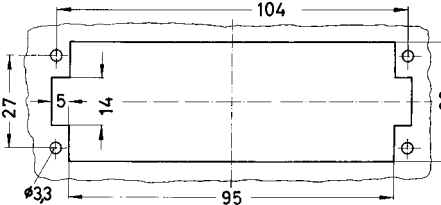
16+ 

400/690 V

16 A

+ 2 additional contacts for safe high voltage connections

Han
Hv E

Identification	Wire cross section (mm²)	Part number male	Part number female	Drawing Dimensions in mm
Han Hv E®, Screw terminal, silver plated contacts, contact resistance ≤1 mOhm 	0.75–2.5	09 34 016 2601	09 34 016 2701	  M F Contact arrangement (view from termination side) Han® 16 Hv E • Working contact • Relay contact ○ Without contact  Panel cut out for inserts for use without hoods/housings

Han® 32 Hv E

Size 48 B



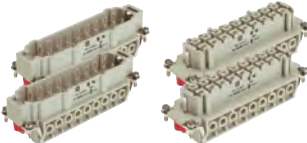
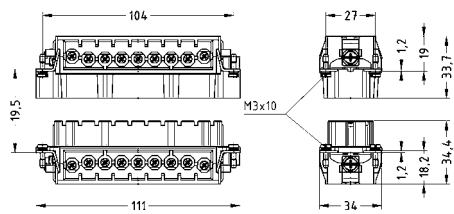
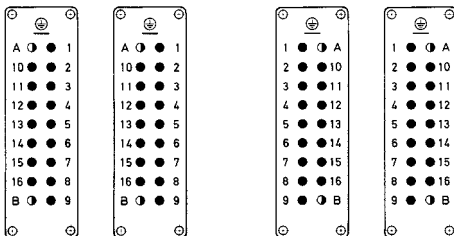
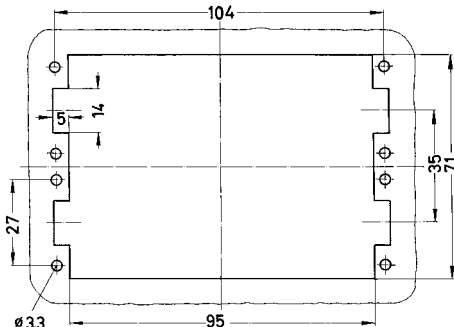
Number of contacts

32+

400/690 V

16 A

+ 4 additional contacts for safe high voltage connections

Identification	Wire cross section (mm²)	Part number male female		Drawing Dimensions in mm	Han Hv E
Han Hv E®, Screw terminal, silver plated contacts, contact resistance ≤1 mOhm  Please order two inserts for a complete assembly!	0.75–2.5	09 34 016 2601	09 34 016 2701	  M F Contact arrangement (view from termination side) Han® 32 Hv E • Working contact • Relay contact ○ Without contact  Panel cut out for inserts for use without hoods/housings	

Han® Hv ES



Features

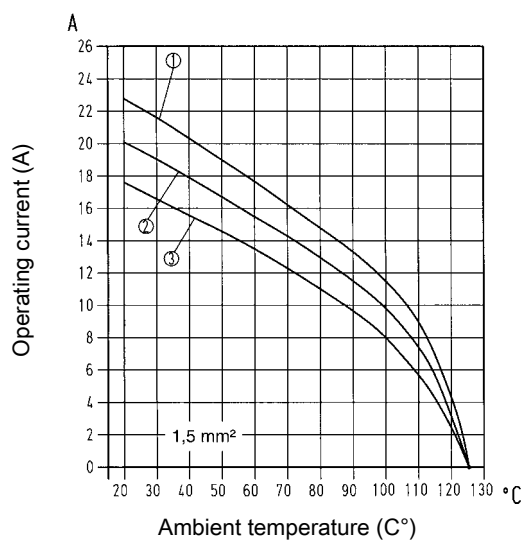
- Designed for application up to 830 V
- Reliable cage clamp termination
- No special tools required
- Vibration proofed

Derating

Current carrying capacity

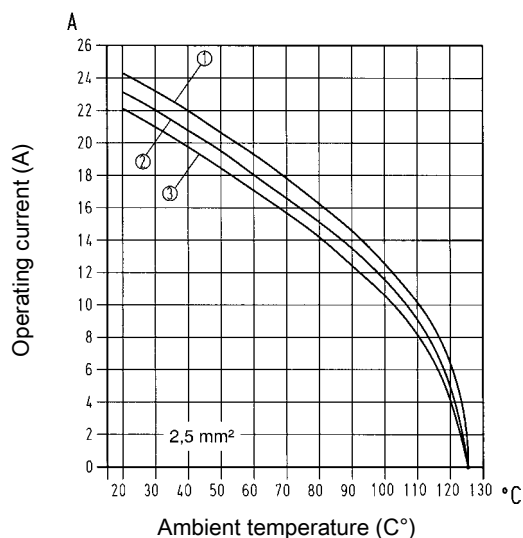
The current carrying capacity of the connectors is limited by the thermal load capability of the contact element material including the connections and the insulating parts. The derating curve is therefore valid for currents which flow constantly (non-intermittent) through each contact element of the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

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



- ① Han® 3 Hv ES
② Han® 6 Hv ES / Han® 12 Hv ES
③ Han® 10 Hv ES / Han® 20 Hv ES

Derating



- ① Han® 3 Hv ES
② Han® 6 Hv ES / Han® 12 Hv ES
③ Han® 10 Hv ES / Han® 20 Hv ES

Technical characteristics

Contacts	3, 6, 10, 12, 20
Electrical data acc. to IEC 61984	16 A 830 V 8 kV 3
Rated current	16 A
Rated voltage	830 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Rated voltage acc. to CSA	600 V
Insulation resistance	$\geq 10^{10}$ Ohm
Limiting temperatures	-40 °C ... 125 °C
Flammability (insert) acc. to UL 94	V 0
Mating cycles	≥ 500
Tightening torque	0.5 Nm
Material (insert)	polycarbonate
Colour (insert)	RAL 7032 (light grey)
Material (contact)	copper alloy

Specifications and approvals

IEC 61984
IEC 60664-1



Details

Not plug compatible to Han Hv E® screw/crimp terminal

Han® 3 Hv ES

Size 10 B



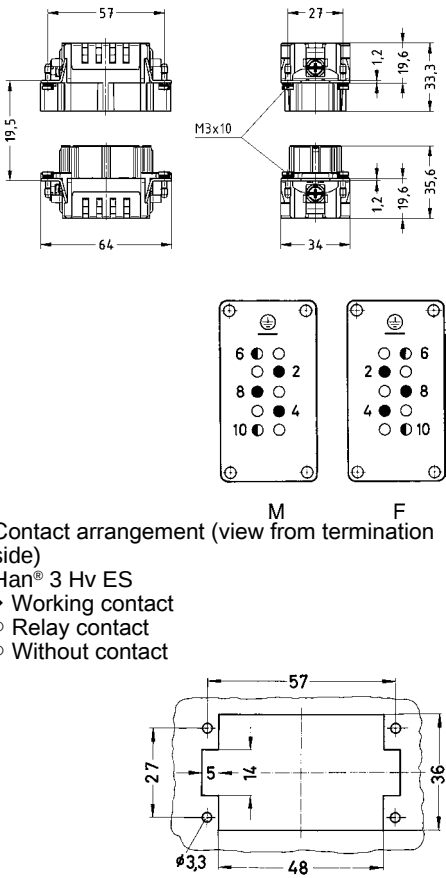
Number of contacts

3+

830 V

16 A

+ 2 additional contacts for safe high voltage connections

Identification	Wire cross section (mm²)	Part number		Drawing Dimensions in mm	Han Hv E
Han® Hv ES, Cage-clamp terminal, silver plated contacts, contact resistance ≤3 mOhm  not plug compatible to Han Hv E® screw/crimp terminal	0.14–2.5	09 34 003 2616 09 34 003 2716		 Contact arrangement (view from termination side) Han® 3 Hv ES ♦ Working contact ● Relay contact ○ Without contact Panel cut out for inserts for use without hoods/housings	

Han® 6 Hv ES

Size 16 B



Number of contacts

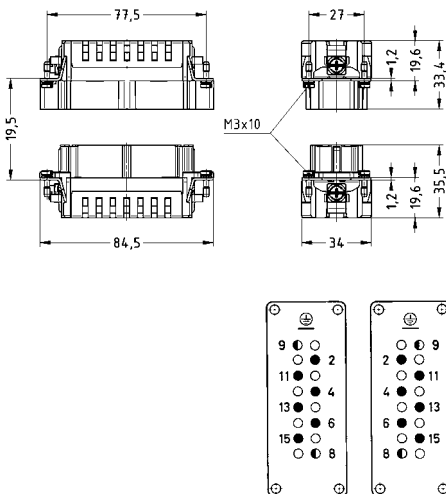
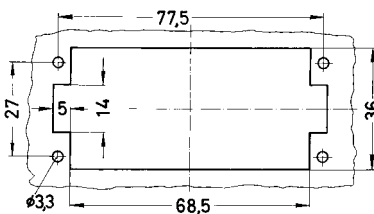
6+

830 V

16 A

+ 2 additional contacts for safe high voltage connections

Han
Hv E

Identification	Wire cross section (mm²)	Part number		Drawing
		male	female	Dimensions in mm
Han® Hv ES, Cage-clamp terminal, silver plated contacts, contact resistance ≤3 mOhm  not plug compatible to Han Hv E® screw/crimp terminal	0.14–2.5	09 34 006 2616	09 34 006 2716	 Contact arrangement (view from termination side) Han® 6 Hv ES ♦ Working contact ● Relay contact ○ Without contact 

Han® 10 Hv ES

Size 24 B



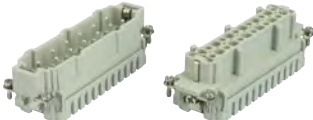
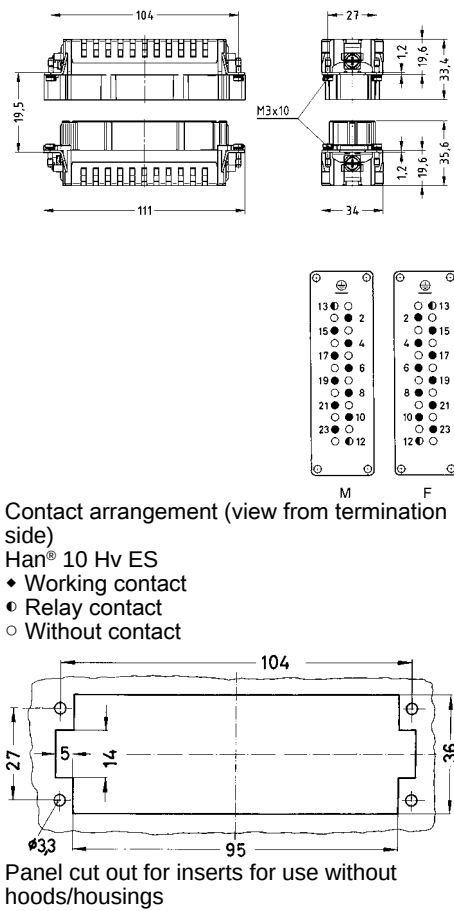
Number of contacts

10+

830 V

16 A

+ 2 additional contacts for safe high voltage connections

Identification	Wire cross section (mm²)	Part number male female		Drawing Dimensions in mm	Han Hv E
Han® Hv ES, Cage-clamp terminal, silver plated contacts, contact resistance ≤3 mOhm  not plug compatible to Han Hv E® screw/crimp terminal	0.14–2.5	09 34 010 2616 09 34 010 2716		 Contact arrangement (view from termination side) Han® 10 Hv ES ◆ Working contact ● Relay contact ○ Without contact Panel cut out for inserts for use without hoods/housings	Han Hv E

Han® 12 Hv ES

Size 32 B



Number of contacts

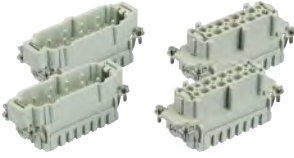
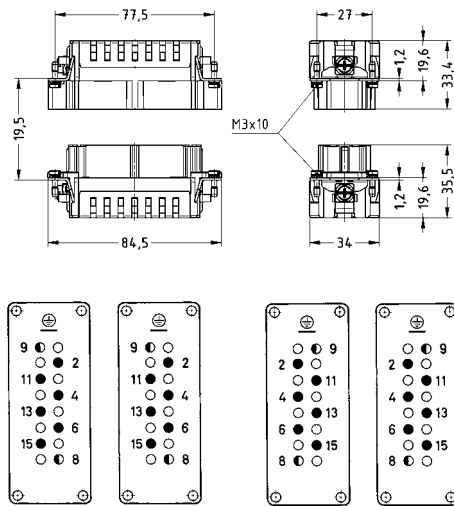
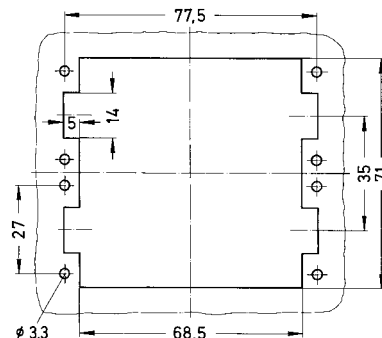
12+

830 V

16 A

+ 4 additional contacts for safe high voltage connections

Han
Hv E

Identification	Wire cross section (mm²)	Part number		Drawing
		male	female	Dimensions in mm
Han® Hv ES, Cage-clamp terminal, silver plated contacts, contact resistance ≤3 mOhm  not plug compatible to Han Hv E® screw/crimp terminal Please order two inserts for a complete assembly!	0.14–2.5	09 34 006 2616	09 34 006 2716	 M F Contact arrangement (view from termination side) Han® 12 Hv ES  Panel cut out for inserts for use without hoods/housings

Han® 20 Hv ES

Size 48 B



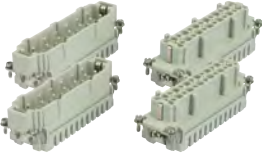
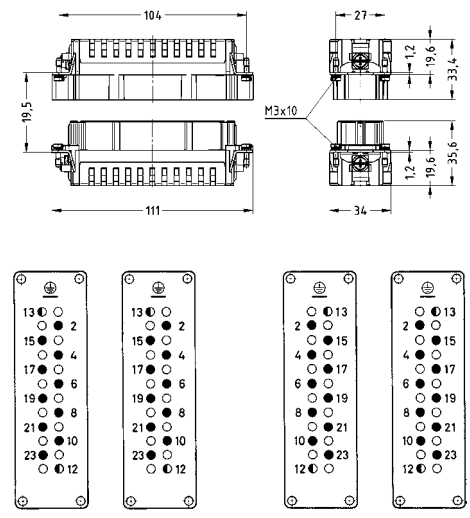
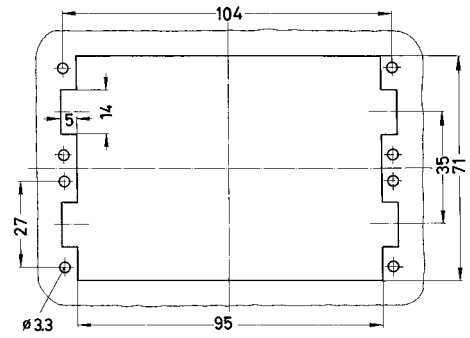
Number of contacts

20+

830 V

16 A

+ 4 additional contacts for safe high voltage connections

Identification	Wire cross section (mm²)	Part number male female		Drawing Dimensions in mm	Han Hv E
Han® Hv ES, Cage-clamp terminal, silver plated contacts, contact resistance ≤3 mOhm  not plug compatible to Han Hv E® screw/crimp terminal Please order two inserts for a complete assembly!	0.14–2.5	09 34 010 2616	09 34 010 2716	 M F Contact arrangement (view from termination side) Han® 20 Hv ES  Panel cut out for inserts for use without hoods/housings	

Contacts



Technical characteristics

Material (contact) copper alloy

Specifications and approvals

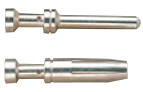
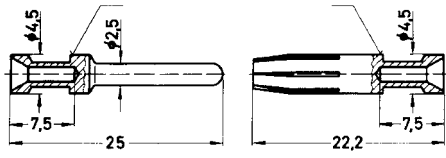
IEC 60664-1
IEC 61984

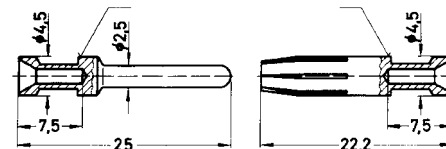
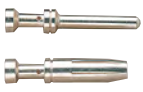
Details

Crimping tools see chapter 90

Remarks on the crimp technique

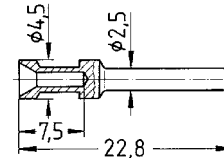
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Identification	Wire cross section (mm²)	Part number		Drawing Dimensions in mm
		male	female	
Han E®, Crimp contact, silver plated contacts, contact resistance ≤1 mOhm 	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®, Relay contact, silver plated contacts, contact resistance ≤1 mOhm 	0.75–1	09 33 000 6109	
1.5		09 33 000 6110		
2.5		09 33 000 6111		



Identification	Wire gauge		Stripping length
no groove	0.14-0.37 mm²	AWG 26-22	7.5 mm
no groove	0.5 mm²	AWG 20	7.5 mm
1 groove*	0.75 mm²	AWG 18	7.5 mm
1 groove	1 mm²	AWG 18	7.5 mm
2 grooves	1.5 mm²	AWG 16	7.5 mm
3 grooves	2.5 mm²	AWG 14	7.5 mm
wide groove	3 mm²	AWG 12	7.5 mm
no groove	4 mm²	AWG 12	7.5 mm

* on the back crimp collar



Stripping length 7.5 mm

Hoods/Housings



Technical characteristics

Limiting temperatures	-40 °C ... 125 °C
Flammability (locking lever) acc. to UL 94	V 0
Degree of protection acc. to IEC 60529	IP65
Material (hoods/housings)	aluminium
Surface (hoods/housings)	powder-coated
Colour (hoods/housings)	RAL 7037 (grey)
Material (locking lever)	polycarbonate + stainless steel
Material (seal)	NBR

Specifications and approvals

NEMA 4/4x/12



Details

Standard hoods/housings see chapter 31

Han
Hv E

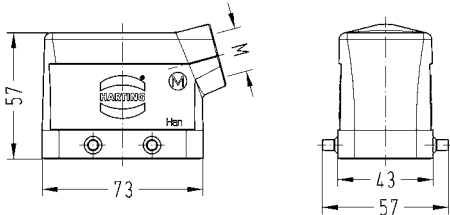
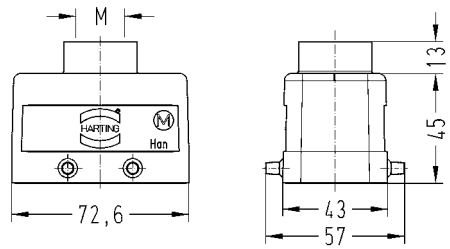
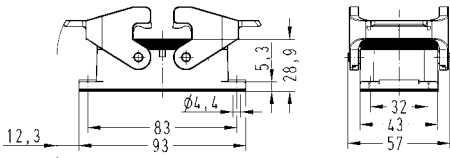
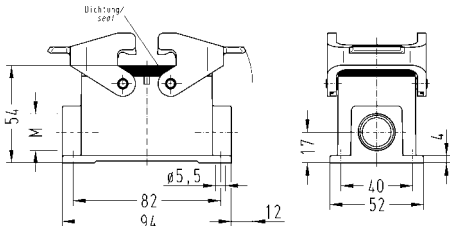
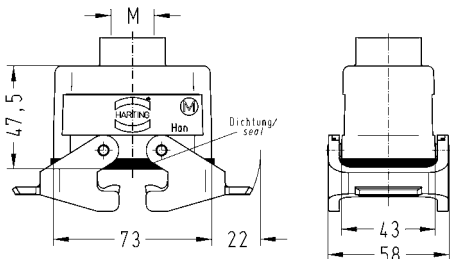
Hoods/Housings

Size 10 B



Special hood/housing for Han Hv E® screw terminal double locking lever

Han Hv E

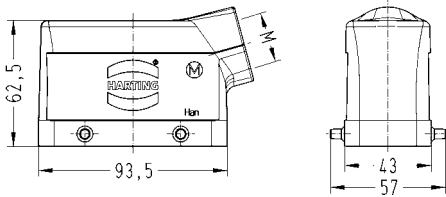
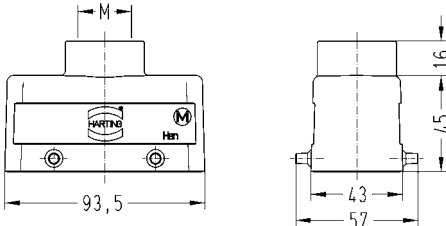
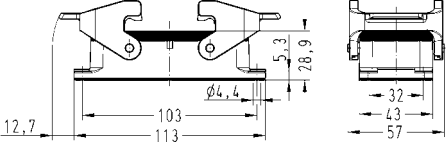
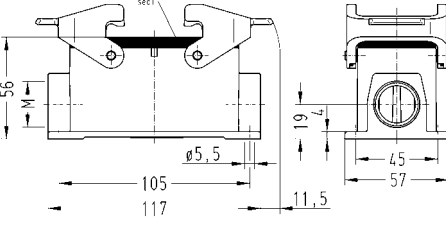
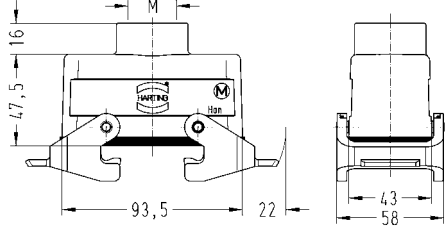
Identification	Cable entry	Part number	Drawing Dimensions in mm
Han Hv E®, Hoods, side entry 	1xM20	19 34 003 0520	
Han Hv E®, Hoods, top entry 	1xM20 1xM25	19 34 003 0420 19 34 003 0421	
Han Hv E®, Bulkhead mounted housings, Han-Easy Lock® 		09 34 003 0301	 Panel cut out 60 x 35 mm
Han Hv E®, Surface mounted housings, side entry, Han-Easy Lock® 	2xM20	19 34 003 0270	
Han Hv E®, Cable to cable housings, top entry, Han-Easy Lock® 	1xM20 1xM25	19 34 003 0730 19 34 003 0731	

Hoods/Housings

Size 16 B



Special hood/housing for Han Hv E® screw terminal double locking lever

Identification	Cable entry	Part number	Drawing Dimensions in mm
Han Hv E®, Hoods, side entry 	1xM25	19 34 006 0521	
Han Hv E®, Hoods, top entry 	1xM25	19 34 006 0421	
Han Hv E®, Bulkhead mounted housings, Han-Easy Lock® 		09 34 006 0301	 Panel cut out 82 x 35mm
Han Hv E®, Surface mounted housings, side entry, Han-Easy Lock® 	2xM25	19 34 006 0271	
Han Hv E®, Cable to cable housings, top entry, Han-Easy Lock® 	1xM25 1xM32	19 34 006 0731 19 34 006 0732	

Han
Hv E

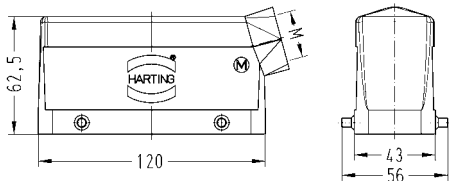
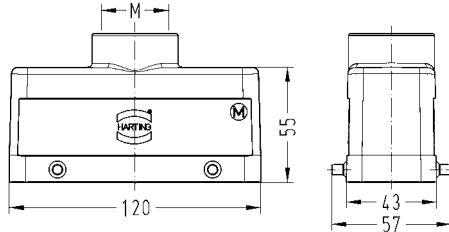
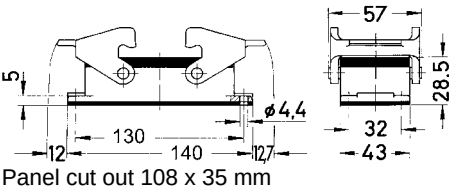
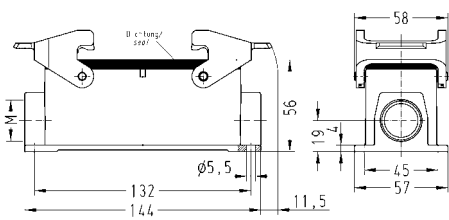
Hoods/Housings

Size 24 B



Special hood/housing for Han Hv E® screw terminal double locking lever

Han Hv E

Identification	Cable entry	Part number	Drawing Dimensions in mm
Han Hv E®, Hoods, side entry 	1xM25	19 34 010 0521	
Han Hv E®, Hoods, top entry 	1xM32	19 34 010 0422	
Han Hv E®, Bulkhead mounted housings, Han-Easy Lock® 		09 34 010 0301	 Panel cut out 108 x 35 mm
Han Hv E®, Surface mounted housings, side entry, Han-Easy Lock® 	2xM25	19 34 010 0271	 Panel cut out 108 x 35 mm
Han Hv E®, Cable to cable housings, top entry, Han-Easy Lock® 	1xM32	19 34 010 0732	