

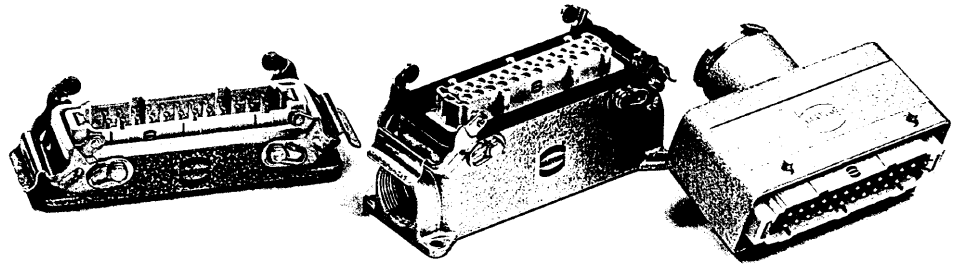
151-843

Han 24 E · Han 24 ES · Han 24 X

380 V~ max. 16 A
450 V- max. 16 A



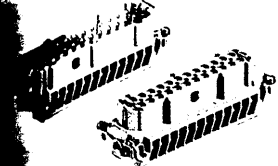
Number of contacts
24 +



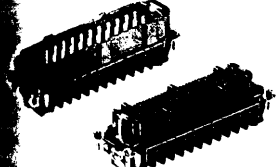
Inserts

Identification

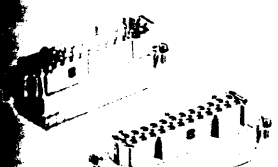
Screw terminal
with wire protection



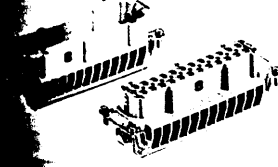
Screw terminal
without wire protection



Cage-clamp terminal



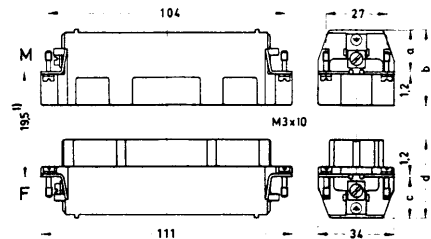
Crimp terminal
Order contacts
separately



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

Han E

09 33 024 2601 09 33 024 2701



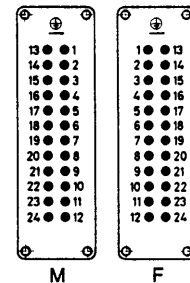
1) Distance for guaranteed contact max. 21 mm

	a	b	c	d
Han E	20	35	21	37
Han ES	21	36	19	35
Han X	17,2	32,5	17	33,2

Han X

09 35 024 2610 09 35 024 2710

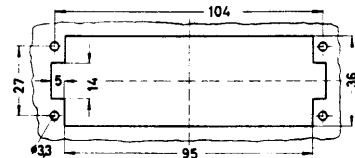
Contact arrangement View from termination side



Han ES

09 33 024 2616 09 33 024 2716

Panel cut out for inserts
without housings



Han E

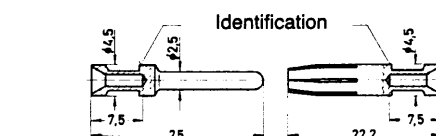
09 33 024 2602 09 33 024 2702

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

0,5
0,75-1
1,5
2,5
4

0,5
0,75-1
1,5
2,5
4,0

Wire gauge (mm²)	Male contacts	Female contacts
0,5	09 33 000 6121	09 33 000 6220
0,75-1	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
4	09 33 000 6107	09 33 000 6207
0,5	09 33 000 6122	09 33 000 6222
0,75-1	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
4,0	09 33 000 6119	09 33 000 6221



Crimp contact identification

Identifi- cation	Wire gauge	Stripping length
no groove	0,5 mm²	7,5 mm
1 groove	0,75-1 mm²	7,5 mm
2 grooves	1,5 mm²	7,5 mm
3 grooves	2,5 mm²	7,5 mm
no groove	4 mm²	7,5 mm

Han 24 E
Han 24 ES
Han 24 X

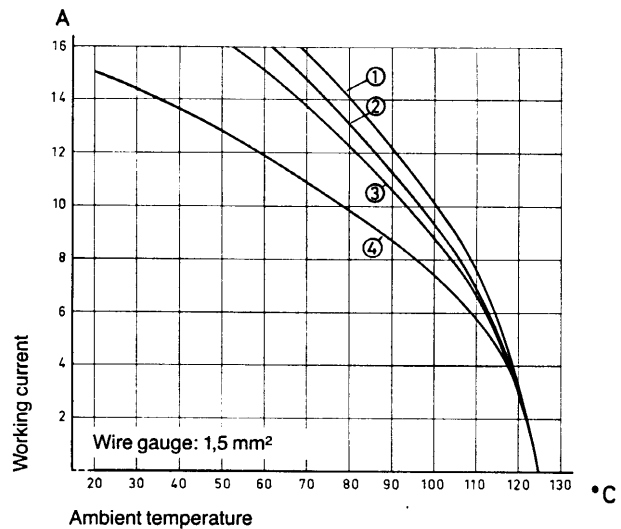


Specifications	see page 4
Approvals	
Han E · Han ES	UL, CSA, SEV DNV, BVS, CERCHAR, SABS
Han X	UL
Number of contacts	6, 10, 16, 24, 32 (2 x 16), 48 (2 x 24) + ground ⊕
Working current	16 A max.
see current carrying capacity chart	
Working voltage	380 V ~ / 450 V – insulation group C according to VDE 0110
	600 V ~ according to UL/CSA for Han E · Han ES
Clearance and creepage	Han E and Han ES may be used at 440 V ~ / 525 V – insulation group C according to VDE 0110
Test voltage $U_{r.m.s.}$	3 kV
Contact resistance	≲ 1 mΩ
Insulation resistance	≳ 10 ¹⁰ Ω
Temperature range	– 40 °C + 125 °C
The higher temperature limit includes the local ambient and heating effect of the contacts under load	
Degree of protection	IP 65
according to DIN 40050	for coupled connector
Electrical termination	
Screw terminal	2,5 mm ²
Cage-clamp terminal	0,14–2,5 mm ²
Crimp terminal	0,5–4 mm ²
Materials	
Inserts	thermoplastic resin, glass-fibre filled (UL-listed)
Contacts	Copper alloy
Contact surface	hard-silver plated hard-gold plated
Hoods/Housings	light alloy see page 12
Accessories	
Crimping tools	page 153
Covers	page 154
Cabling options	page 156
Special insert fixing screws	page 157
CSA label	page 157
Cable entry protection	page 158
Special connectors	page 163

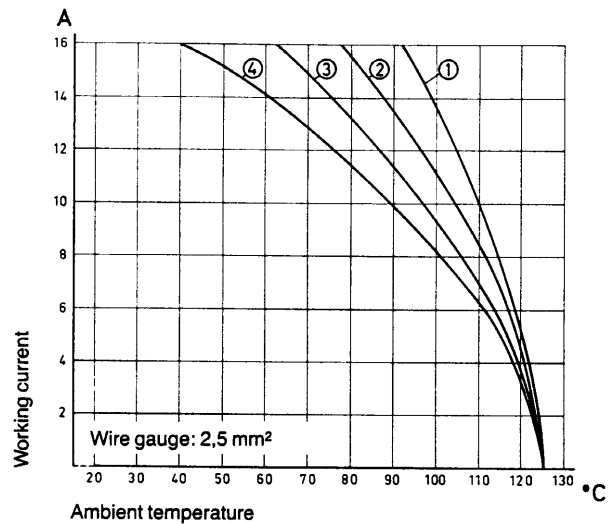
Current carrying capacity

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

Control and test procedures according to DIN 41 640, part 3.



Han E
Han ES
Han X



- ① Han 6 E, Han 6 ES, Han 6 X
- ② Han 10 E, Han 10 ES, Han 10 X
- ③ Han 16 E, Han 16 ES, Han 16 X
- ④ Han 24 E, Han 24 ES, Han 24 X

Terminations



Screw terminal

Screw terminals meet VDE 0609. Dimensions and twisting moments for testing are shown opposite.

The relevant regulations state that in the case of

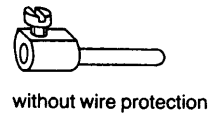
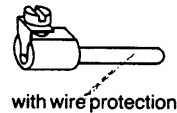
- Terminals with wire protection.
No special preparation of the conductor is required – except for the stripping of the insulation.

Series Han E, Han HsB, Han Hv E

- Terminals without wire protection.
The insulation is first stripped and then a wire ferrule must be used.

Series Han X, Han A, Staf

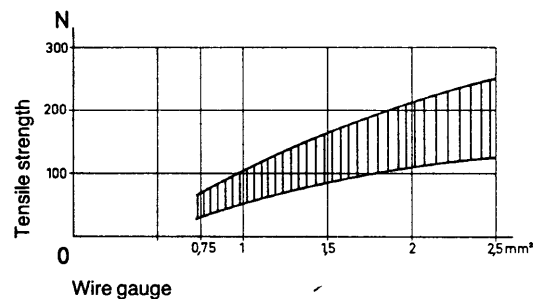
Wire gauge (mm ²)	1	1,5	2,5	4	6	10
Screw thread	M 2,6	M 3	M 3	M 3,5	M 4	M 4
Test moment of torque (Ncm)	40	50	50	80	120	120



Tensile strength of conductors

The diagram opposite shows the curve for tensile strength of screw terminations when wire protection is utilised.

Screw thread : M 3
Twisting moment for testing : 50 Ncm

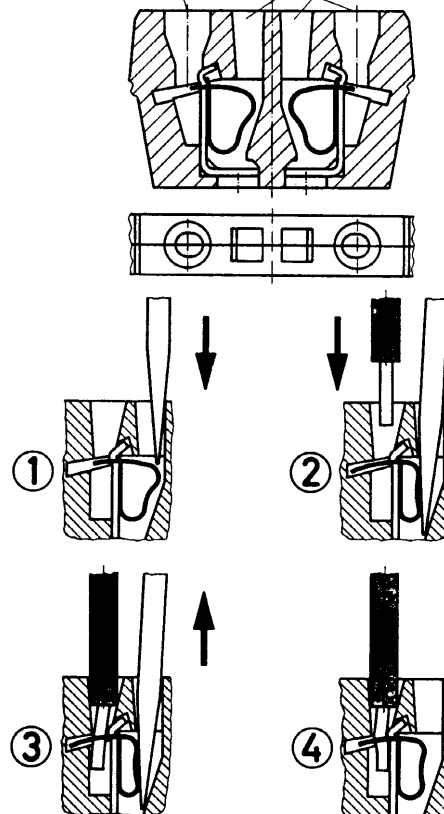


Cage-clamp terminal

This termination method requires very little preparation of the wire and no special tools, leading to a low installed cost and a high degree of mechanical security.

- For all stranded and solid wires with a cross section 0.14 to 2.5 mm².
- Ease of termination. Conductor and screwdriver are in same plane.
- No special preparation of stripped conductor.
- The larger the conductor the higher the clamping force.
- Testing is possible in the screwdriver aperture.
- The termination is vibration-proof.
- Guaranteed constant low resistance connection.
- The cage-clamping system is internationally approved. VDE, SEV, CSA, UL, SEMKO, LCIE (France), Germanischer Lloyd, DET Norske Veritas.

One conductor per termination Slot for screwdriver



Screwdriver width: 3.5 x 0.5 mm