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Description of the Han-Modular® system

The Han-Modular® series is designed for combining different transmission media in one connector. The multifaceted system of inserts, contacts, frames, hoods and housings as well as accessories fulfils individual customer requirements. The customer can choose between more than 100 different modules. These are suitable for different transmission media and cover various termination techniques. The patented Han-Modular® hinged frame enables the configuration of all modules in the well-accepted Han® hoods and housings.

Further additional solutions are available, e.g. suitable docking frames for drawer units. Individual customer requirements can be realised by means of the Han-Modular® series. Combining various transmission media in one single connector results in lower expenditures in installation time and production downtime. Space savings and cost savings are further benefits. The easy extension possibilities secure the ideal solution for an actual as well as future safe design.

Highlights

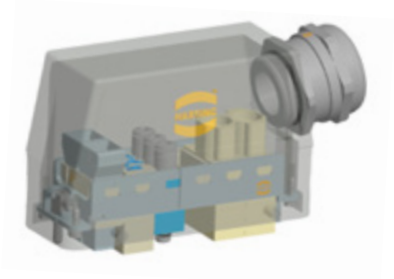
- **Combination of different connectors to one unit**
- **Shorter installation times**
- **Important space saving**
- **Save money for components as well as for the whole industrial site**
- **Future safe design due to easy extensions**

Configuration of the Han-Modular® connectors

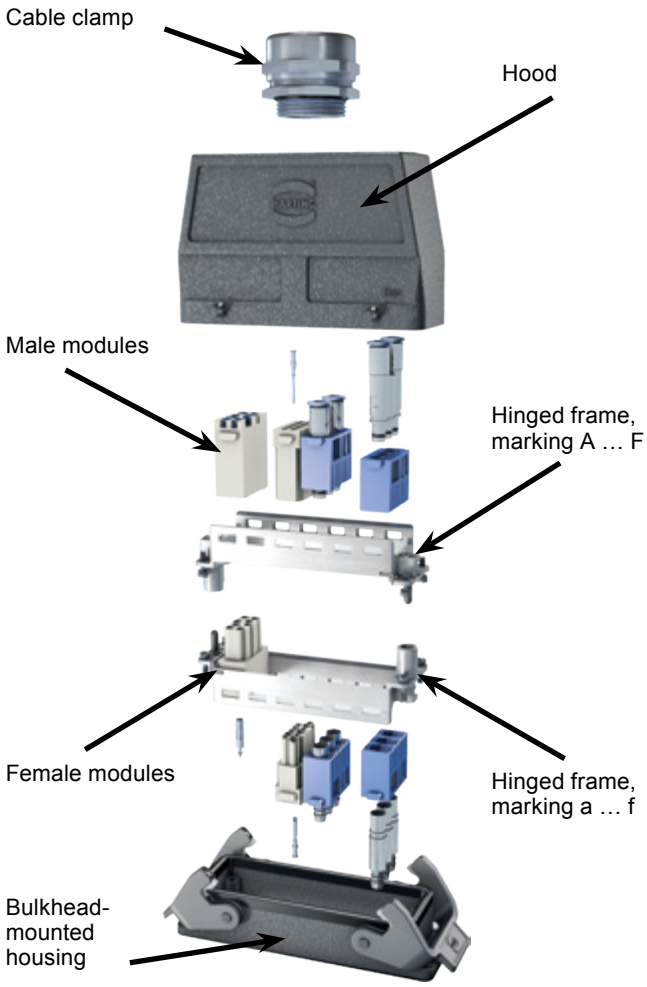
Use the Han® Online Configurator and quickly and easily assemble your
Han-Modular® interface and benefit from the advantages.

- Ensure the compatibility of the components with each other
- Selection always in view through interactive 3D visualization
- Documentation via download package for the complete interface
- Working in a team using the save, load and share function

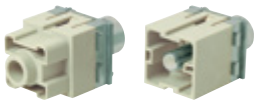
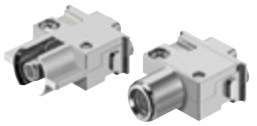
You can find the Han® configurator at:
www.harting.com/configurator

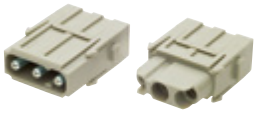


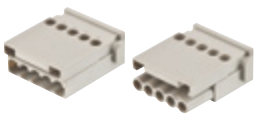
System description

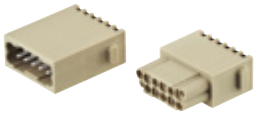
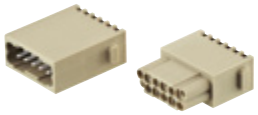


Summary

		Han® 200 A Axial Module	Han® 200 A PE Module	Han® 100 A Axial Module	Han® PE Module
100 - 200 A					
	Number of contacts Electrical data Termination type	1* 200 A / 1000 V Axial screw termination	1 x PE* 200 A Axial screw termination	1* 100 A / 1000 V Axial screw termination	1 x PE 100 A Axial screw termination
	Cross-section	40 … 70 mm²	40 … 70 mm²	16 … 35 mm²	16 … 35 mm²
	Male module (M)	09 14 001 2662	09 14 001 2667	09 14 002 2651	09 14 001 2633
	Female module (F)	09 14 001 2762	09 14 001 2767	09 14 002 2751	09 14 001 2733
	Cross-section	25 … 40 mm²	25 … 40 mm²	10 … 25 mm²	10 … 25 mm²
	Male module (M)	09 14 001 2663	09 14 001 2668	09 14 002 2653	09 14 001 2632
	Female module (F)	09 14 001 2763	09 14 002 2768	09 14 002 2753	09 14 001 2732

		Han® 70 A Axial module	Han® 70 A Hybrid module	Han® 40 A Axial module	Han® C Axial module
40 - 70 A					
	Number of contacts Electrical data Termination type	2 70 A / 1000 V Axial screw termination	1 + (4 x Han E®) 70 A / 1000 V Axial screw termination	2 40 A / 1000 V Axial screw termination	3 40 A / 690 V Axial screw termination
	Cross-section	14 … 22 mm²	14 … 22 mm²	6 … 10 mm²	6 … 10 mm²
	Male module (M)	09 14 002 2647	09 14 005 2647	09 14 002 2602	09 14 003 2602
	Female module (F)	09 14 002 2742	09 14 005 2742	09 14 002 2702	09 14 003 2702
	Cross-section	6 … 16 mm²	6 … 16 mm²	2.5 … 8 mm²	2.5 … 8 mm²
	Male module (M)	09 14 002 2646	09 14 005 2646	09 14 002 2601	09 14 003 2601
	Female module (F)	09 14 002 2741	09 14 005 2741	09 14 002 2701	09 14 003 2701

		Han E® Quick Lock module	Han® EE Quick Lock module	Han® ES module	Han E® screw module
16 A					
	Number of contacts Electrical data Termination type Cross-section	6 16 A / 500 V Quick Lock termination 0.5 … 2.5 mm²	8 16 A / 400 V Quick Lock termination 0.5 … 2.5 mm²	5 16 A / 400 V Cage clamp termination 0.14 … 2.5 mm²	5 16 A / 230/400 V Screw termination 0.5 … 2.5 mm²
	Male module (M)	09 14 006 2633	09 14 008 2633	09 14 005 2616	09 14 005 2601
	Female module (F)	09 14 006 2733	09 14 008 2733	09 14 005 2716	09 14 005 2701

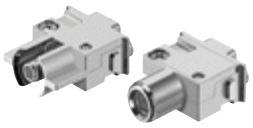
		Han DD® Quick Lock module	Han DD® Quick Lock module		
≤ 10 A					
	Number of contacts Electrical data Termination type Cross-section	12, silver plated 10 A / 250 V Quick Lock termination 0.25 … 1.5 mm²	12, gold plated 10 A / 250 V Quick Lock termination 0.25 … 1.5 mm²		
	Male module (M)	09 14 012 2632	09 14 012 2634		
	Female module (F)	09 14 012 2732	09 14 012 2734		

	Hexagonal drivers	with grip	Bit 1/4''	Adapter 3/8''	Hexagonal torque set
Axial screw termination					
	2 mm (40 A)	09 99 000 0313	09 99 000 0369		09 99 000 0834
	2.5 mm (70 A)		09 99 000 0375		09 99 000 0834
	4 mm (100 A)	09 99 000 0363		09 99 000 0370	09 99 000 0833
	5 mm (200 A)	09 99 000 0364		09 99 000 0371	09 99 000 0833

* Double module, requires two places in the frame

Summary

PE

	Han® PE module (Including crimp contact for earthing)			
Number of contacts Cross-section Termination type	1 x PE 35 mm² Crimp termination, Han® HC	1 x PE 25 mm² Crimp termination, Han® HC	1 x PE 16 mm² Crimp termination, Han® HC	
Male module (M)	09 14 001 3074	09 14 001 3073	09 14 001 3072	
Female module (F)	09 14 001 3174	09 14 001 3173	09 14 001 3172	

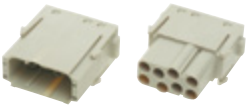
70 - 200 A

	Han® 200 A Crimp module	Han® 100 A Crimp module	Han® 100 A Single module	Han® 70 A Crimp module
				
Number of contacts Electrical data Cross-section Termination type	1* 200 A / 1000 V 25 … 70 mm² Crimp termination, Han® HC	2* 100 A / 1000 V 10 … 35 mm² Crimp termination, Han® HC	1 100 A / 830 V 10 … 35 mm² Crimp termination, Han® HC	2 70 A / 1000 V 6 … 25 mm² Crimp termination, Han® HC
Male module (M)	09 14 001 3003	09 14 002 3051	09 14 001 3031	09 14 002 3041
Female module (F)	09 14 001 3103	09 14 002 3151	09 14 001 3131	09 14 002 3141

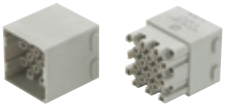
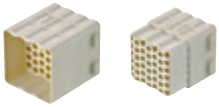
40 A

	Han® 40 A Crimp module	Han® C module	Han® CC module	Han® CD module
				
Number of contacts Electrical data Cross-section Termination type	2 40 A / 1000 V 1.5 … 10 mm² Crimp termination, Han® C	3 40 A / 690 V 1.5 … 6 mm² Crimp termination, Han® C	4 40 A / 830 V 1.5 … 6 mm² Crimp termination, Han® C	3 + 4 40 A + 10 A / 830 V 0.14 … 6 mm² Crimp, Han® C + Han D®
Male module (M)	09 14 002 3002	09 14 003 3001	09 14 004 3041	09 14 007 3001
Female module (F)	09 14 002 3102	09 14 003 3101	09 14 004 3141	09 14 007 3101

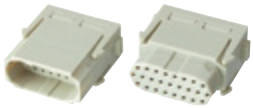
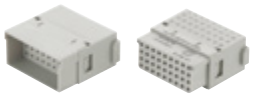
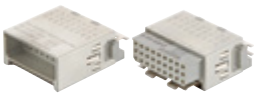
16 A

	Han E® module	Han® EE module	Han® EEE module	Han E® Protected module
				
Number of contacts Electrical data Cross-section Termination type	6 16 A / 500 V 0.14 … 4 mm² Crimp termination, Han E®	8 16 A / 400 V 0.14 … 4 mm² Crimp termination, Han E®	20* 16 A / 500 V 0.14 … 4 mm² Crimp termination, Han E®	6 16 A / 830 V 0.14 … 4 mm² Crimp termination, Han E®
Male module (M)	09 14 006 3001	09 14 008 3001	09 14 020 3001	09 14 006 3041
Female module (F)	09 14 006 3101	09 14 008 3101	09 14 020 3101	09 14 006 3141

≤ 10 A

	Han DD® module	Han® DDD module	Han DD® double module	Han DD® Quad module
				
Number of contacts Electrical data Cross-section Termination type	12 10 A / 250 V 0.14 … 2.5 mm² Crimp termination, Han D®	17 10 A / 150 V 0.14 … 2.5 mm² Crimp termination, Han D®	36* 10 A / 400 V 0.14 … 2.5 mm² Crimp termination, Han D®	42* 10 A / 150 V 0.14 … 2.5 mm² Crimp termination, Han D®
Male module (M)	09 14 012 3002	09 14 017 3001	09 14 036 3002	09 14 042 3001
Female module (F)	09 14 012 3102	09 14 017 3101	09 14 036 3102	09 14 042 3101

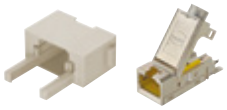
Signal + Shielded

	Han® High Density module	Han® Full High Density module	Han® Shielded module Basic	Han® Shielded Power module
				
Number of contacts Electrical data Cross-section Termination type	25 4 A / 50 V 0.08 … 0.52 mm² Crimp termination, D-Sub	36 4 A / 32 V 0.14 … 0,5 mm² Crimp termination, D-Sub	27 + shielding 4 A / 32 V 0.09 … 0.5 mm² Crimp termination, D-Sub	4 + 2 + shielding 16 A / 400 V 0.14 … 4 mm² Crimp, Han E® + Han D®
Male module (M)	09 14 025 3001	09 14 036 3001	09 14 027 3022	09 14 006 3021
Female module (F)	09 14 025 3101	09 14 036 3101	09 14 027 3122	09 14 006 3121

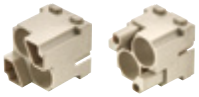
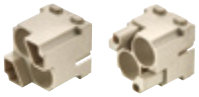
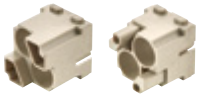
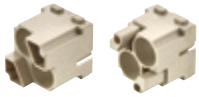
* Double module, requires two places in the frame

Summary

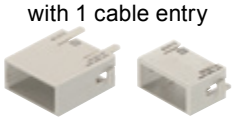
Han® RJ45 module

Han® RJ45 module	for patch cable	for IDC	for patch cable	for IDC and preLink
- 8 contacts - cat. 6_A - 10 Gbit/s				
Part numbers	Male module (M) 09 14 001 4623	Male module (M) 09 14 001 4623	Female module (F) 09 14 001 4721	Female module (F) 09 14 001 4722
	Adapter for patch cable: 09 14 000 9966	RJ Industrial IDC: 09 45 400 1560		RJ45 female IDC: 09 14 545 1561
	Patch cable cat. 6: 09 47 474 71xx			RJ45 female preLink: 09 14 008 4720

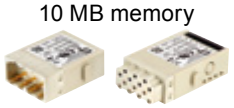
Han-Quintax® Modules

	Han-Quintax®	Han® High Density Quintax	Han D® Coax	Han E® Coax
Quintax modul				
Number of contacts	2 x 4*	2 x 8*	2 x Coax*	2 x Coax*
Male module (M)	09 14 002 3004	09 14 002 3004	09 14 002 3004	09 14 002 3004
Female module (F)	09 14 002 3104	09 14 002 3104	09 14 002 3104	09 14 002 3104
Insert (Cable Ø ≤ 9.5 mm)				
Data rate	100 Mbit/s (cat. 5e)	100 Mbit/s (cat. 5e)	≤ 500 Mhz / 75 Ω	≤ 500 Mhz / 50 Ω
Electrical data	10 A / 50 V	5 A / 50 V	10 A / 50 V	16 A / 50 V
Cross-section	0.14 … 2.5 mm²	0.09 … 0.52 mm²	0.14 … 2.5 mm²	0.14 … 4 mm²
Termination type	Crimp termination, Han D®	Crimp termination, D-Sub	Crimp termination, Han D®	Crimp termination, Han E®
Male insert (M)	09 15 004 3013	09 15 008 3013	09 15 001 3013	09 15 001 3023
Female insert (F)	09 15 004 3113	09 15 008 3113	09 15 001 3113	09 15 001 3123
PE shielding termination	*Optional shielding termination to the hinged frame with the aid of Han-Quintax® metal adapter 09 14 000 9915*			

Han® GigaBit – Han® MegaBit Modules

	Han® GigaBit module	Han® MegaBit module	Han® MegaBit module	Han® Shielded Module
Adapter Module		with 2 cable entries 	with 1 cable entry 	
Male module (M)	09 14 001 3011	09 14 001 3011	09 14 001 3011	09 14 001 3011
Female module (F)	09 14 001 3111	09 14 001 3111	09 14 001 3111	09 14 001 3111
Insert (Cable Ø ≤ 14 mm)				
Number of contacts	8	2 x 4	8	20
Data rate	10 Gbit/s (cat. 6_A)**	2 x 100 Mbit/s (cat. 5e)	1 Gbit/s (cat. 5e)	
Electrical data	5 A / 50 V	10 A / 50 V	10 A / 50 V	4 A / 32 V
Cross-section	0.09 … 0.52 mm²	0.14 … 2.5 mm²	0.14 … 2.5 mm²	0.09 … 0.52 mm²
Termination type	Crimp termination, D-Sub	Crimp termination, Han D®	Crimp termination, Han D®	Crimp termination, D-Sub
Shielding termination	Crimp flange	2 x crimp flange	Crimp flange	Crimp flange
Male insert (M)	09 14 008 3011	09 14 008 3016	09 14 008 3021	09 14 020 3013
Female insert (F)	09 14 008 3111	09 14 008 3116	09 14 008 3121	09 14 020 3113
	with PE shielding termination	with PE shielding termination	with PE shielding termination	
Male insert (M)	09 14 008 3012	09 14 008 3017	09 14 008 3022	
Female insert (F)	09 14 008 3112	09 14 008 3117	09 14 008 3122	

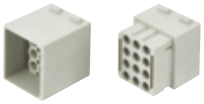
Serial Bus Modules

	Han D-Sub module	Han® USB module	Han® FireWire module	Han® ID CAN module
				10 MB memory 
Number of contacts	9 + shielding	8	6	7
Data rate	12 Mbit/s (Profibus)	5 Gbit/s (USB 3.0)	400 Mbit/s (IEEE 1394a)	1 Mbit/s (CAN bus)
Electrical data	5 A / 50 V	1 A / 50 V	1 A / 50 V	24 V
Cross-section	0.09 … 0.52 mm²			0.13 … 1.5 mm²
Termination type	Crimp termination, D-Sub	USB patch cable	FireWire patch cable	Cage clamp termination
Male module (M)	09 14 009 3001	09 14 001 4601	09 14 001 4611	09 80 015 0100
Female module (F)	09 14 009 3101	09 14 001 4703	09 14 001 4711	09 80 115 0200

* Double module, requires two places in the frame ** Cat 7_A version also available

Summary

Coaxial Modules

	Han® Multi Module (for D-Sub coaxial contacts)		Han® Multi Module (for DIN 41626 coaxial contacts)	
				
Number of contacts	4	4	12*	12*
Male module (M)	09 14 004 4501	09 14 004 4501	09 14 012 4501	09 14 012 4501
Female module (F)	09 14 004 4513	09 14 004 4513	09 14 012 4512	09 14 012 4512
Coaxial contacts (≤ 2 GHz)				
Impedance Coaxial cable Termination type	75 Ω RG179, RG187 Crimp /crimp termination	50 Ω RG174, RG188, RG316 Crimp /crimp termination	75 Ω RG179, RG187 Solder /crimp termination	50 Ω RG174, RG188, RG316 Solder /crimp termination
Male contact	09 69 282 5230	09 69 282 5140	09 14 000 6221	09 14 000 6211
Female contact	09 69 182 5230	09 69 182 5140	09 14 000 6121	09 14 000 6111

Optical Modules

	Han® LC module	Han® SC module	Han® Multi module	Han® Multi module
				
Number of contacts	6	4	4	12*
Male module (M)	09 14 006 4701	09 14 004 4701	09 14 004 4501	09 14 012 4501
Female module (F)	09 14 006 4711	09 14 004 4711	09 14 004 4512	09 14 012 4512
Contacts				
1 mm POF		20 10 001 5211	Male: 20 10 001 4211 Female: 20 10 001 4221	Male: 20 10 001 4211 Female: 20 10 001 4221
1 mm POF Fast assembly termination		20 10 001 5217		
SI-Fibre 200 / 230 µm Multi-Mode		20 10 230 5211	Male: 20 10 230 4211 Female: 20 10 230 4221	Male: 20 10 230 4211 Female: 20 10 230 4221
GI-Fibre 50-62,5 / 125 µm Multi-Mode	20 10 125 8211	20 10 125 5211	Male: 20 10 125 4212 Female: 20 10 125 4222	Male: 20 10 125 4212 Female: 20 10 125 4222
GI-Fibre 9 / 125 µm Single-Mode	20 10 125 8220	20 10 125 5220		

Pneumatic Modules

	Pneumatic contacts (max. 10 bar)			Pneumatic module
For tube outer diameter				Number of contacts: 3 (order separately) 
Tube-Ø	6 mm OD	4 mm OD	3 mm OD	
Male contact	09 14 000 6356	09 14 000 6354	09 14 000 6353	
Female without shut-off	09 14 000 6456	09 14 000 6454	09 14 000 6453	
Female with shut-off	09 14 000 6466	09 14 000 6464	09 14 000 6463	
For tube inner diameter				
Tube-Ø	6 mm ID	4 mm ID	3 mm ID	male module (M) 09 14 003 3501
Male contact	09 14 000 6306	09 14 000 6304	09 14 000 6303	
Female without shut-off	09 14 000 6406	09 14 000 6404	09 14 000 6403	Female module (F) 09 14 003 3501
Female with shut-off	09 14 000 6416	09 14 000 6414	09 14 000 6413	

Further Modules

	Han® HV module 40A	Han® HV Single module	Han-Eco® PE module	Han® Dummy module
			for Han-Eco® hoods/housings only 	to fill-up empty module places 
Number of contacts Electrical data Cross-section Termination type	2* 40 A / 2900 / 5000 V 1.5 … 10 mm² Crimp termination, Han C®	2 16 A / 2500 V 0.14 … 4 mm² Crimp termination, Han E®	1 x PE 1.5 … 16 mm² Screw termination	
Male module (M)	09 14 002 3023	09 14 002 3025	19 41 001 2600	09 14 000 9950
Female module (F)	09 14 002 3123	09 14 002 3125	19 41 001 2700	

* Double module, requires two places in the frame

Han-Modular® hinged frames

Features

- Suitable for more than 100 different modules
- Quick and easy assembly supported by an audible “Click”
- Very robust mechanical characteristics
- Modules can be assembled/removed without tools
- Two leading PE contacts

Technical characteristics

Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (frames)	Zinc die-cast, Stainless steel
RoHS	compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

Both different markings must be used for one connector!

Conductor cross-section PE (power side) 4 ... 10 mm²

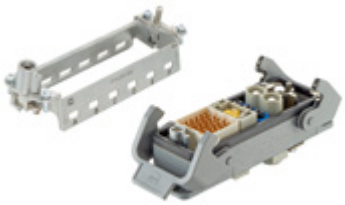
Conductor cross-section 10 mm² only with ferrule crimping tool 09 99 000 0374

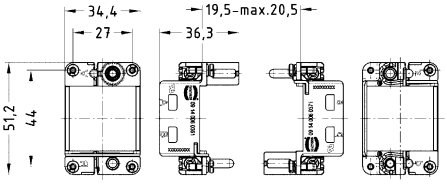
Conductor cross-section PE (signal side) 1 ... 2.5 mm²

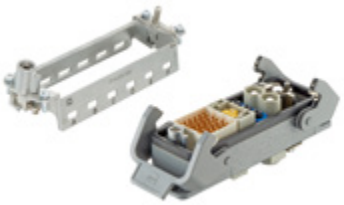
Locking element 09 14 000 9960 see accessories in chapter Han 06

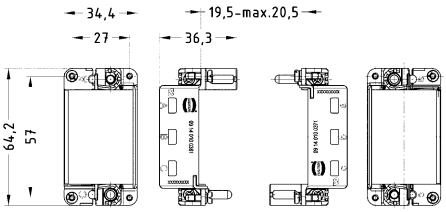
Han-Modular® hinged frames

Size 6 B



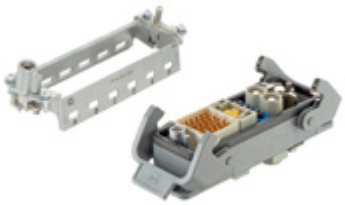
Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Hinged frame plus, for 2 modules, A ... B 	09 14 006 0361	
Han-Modular®, Hinged frame plus, for 2 modules, a ... b 	09 14 006 0371	

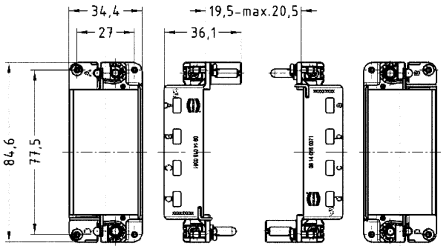


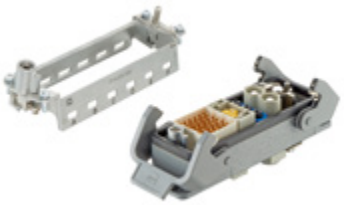
Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Hinged frame plus, for 3 modules, A ... C 	09 14 010 0361	
Han-Modular®, Hinged frame plus, for 3 modules, a ... c 	09 14 010 0371	

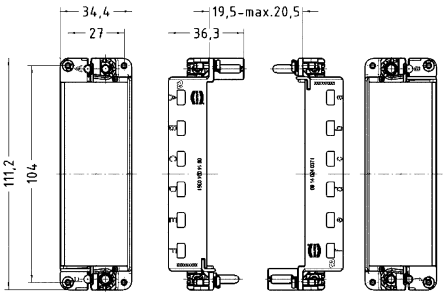
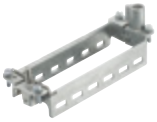
Han-Modular® hinged frames

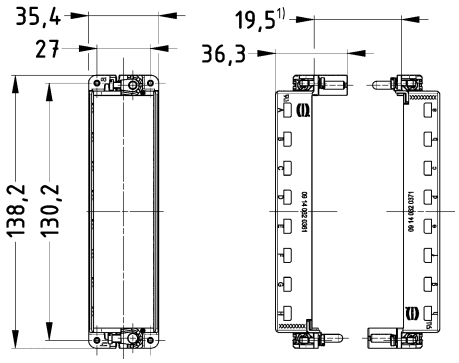
Size 16 B



Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Hinged frame plus, for 4 modules, A ... D 	09 14 016 0361	
Han-Modular®, Hinged frame plus, for 4 modules, a ... d 	09 14 016 0371	



Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Hinged frame plus, for 6 modules, A ... F 	09 14 024 0361	
Han-Modular®, Hinged frame plus, for 6 modules, a ... f 	09 14 024 0371	

Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Hinged frame plus, for 8 modules, A … H 	09 14 032 0361	 1) distance for contact max. 20.5 mm
Han-Modular®, Hinged frame plus, for 8 modules, a … h 	09 14 032 0371	

Han® PE module

Number of contacts

1

Features

- PE module to connect large cable diameters within the Han-Modular® hinged frames
- Electrically conductive connection of the PE contact to the hinged frames and the hoods and housings acc. to EN 61984
- Pre-leading and robust 100 A PE contact
- Suitable for the connection of standard power cables even with large cross-sections (no special cables with reduced PE necessary)
- Crimp- and axial module are compatible modules

Technical characteristics

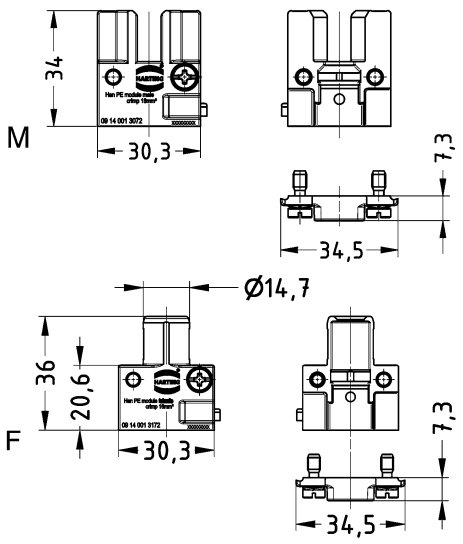
Number of contacts	1
Contact resistance	≤0.3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Zinc die-cast, nickel-plated
Material (contacts)	Copper alloy
RoHS	compliant with exemption

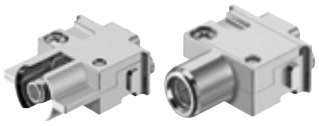
Specifications and approvals

IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Details

Short-time withstand current: 1920 A for 1 second (acc. to IEC 60947-7-2)

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® PE module, Crimp termination, Pack contents: 2 PE module halves, 1 contact pressure plate, 1 crimp contact Contact surface: Silver plated	10 16 25 35	09 14 001 3071 09 14 001 3072 09 14 001 3073 09 14 001 3074	09 14 001 3171 09 14 001 3172 09 14 001 3173 09 14 001 3174	



Stripping length

mm²	10	16	25	35
mm	19	19	19	16

Han® PE module

Number of contacts

1

Features

- PE module to connect large cable diameters within the Han-Modular® hinged frames
- Electrically conductive connection of the PE contact to the hinged frames and the hoods and housings acc. to EN 61984
- Pre-leading and robust 100 A PE contact
- Suitable for the connection of standard power cables even with large cross-sections (no special cables with reduced PE necessary)
- Crimp- and axial module are compatible modules

Technical characteristics

Number of contacts	1
Contact resistance	≤0.3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Zinc die-cast, nickel-plated
Material (contacts)	Copper alloy
RoHS	compliant with exemption

Specifications and approvals

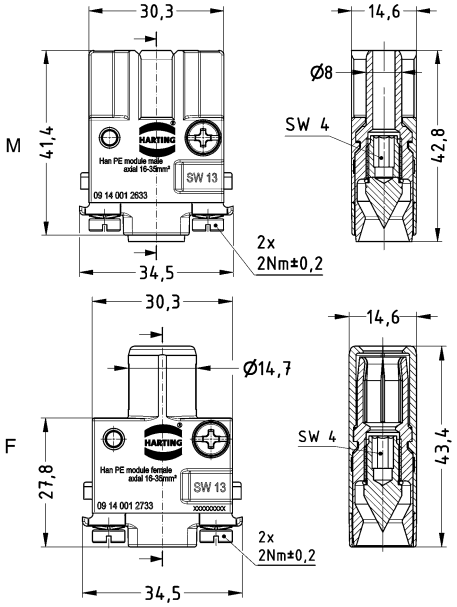
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Details

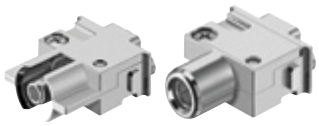
Remarks on the axial screw technique

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

Short-time withstand current: 1920 A for 1 second (acc. to IEC 60947-7-2)

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® PE module, Axial screw termination, Pack contents: PE module with pre-assembled axial screw contact Contact surface: Silver plated	10 ... 25 16 ... 35 22 ... 38	09 14 001 2632 09 14 001 2633 09 14 001 2634	09 14 001 2732 09 14 001 2733 09 14 001 2734	 Stripping length 13 mm Tightening torque

mm²	10	16	25	35
Nm	6	6	7	8



Han® 300 A module

Features

- Power module for big wire gauges up to 120 mm²
- High rated voltage up to 1300 V
- IP20 protection for female and male module (by using male contacts with protective cap)
- Compatible to the Han® 200 A crimp module
- Short and space saving contacts
- Easy removal of the contacts

Technical characteristics

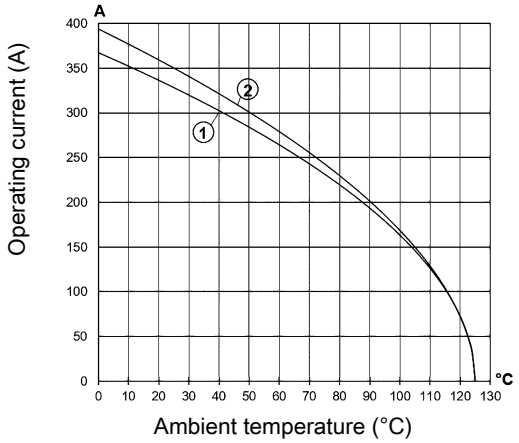
Number of contacts	1
Rated current	300 A
Rated voltage	1000 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage	1000 V AC, 1300 V DC
Insulation resistance	>10^{10} Ω
Contact resistance	≤0.3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0

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 24 B hoods/housings with 3 modules Conductor cross-section 95 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 120 mm²

Specifications and approvals

EN 50124-1
EN 60664-1
IEC 61984

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

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

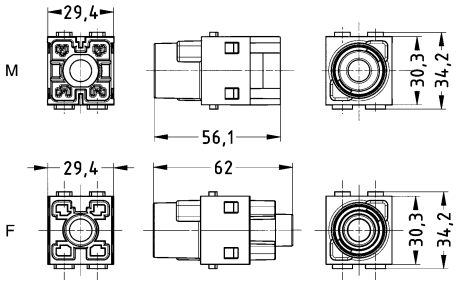
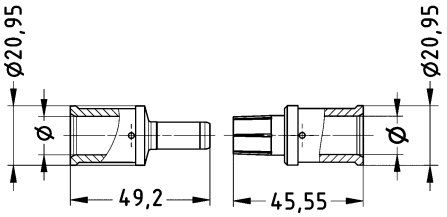
Han® 300 A module

Modu-
lar

Number of contacts

1

300 A 1.000 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 300 A module, Crimp termination  Please order crimp contacts separately.	95 ... 120	09 14 001 3004	09 14 001 3104	
Crimp contact, Contact surface: Silver plated 	95 120	09 11 000 7536 09 11 000 7537	09 11 000 6636 09 11 000 6637	

Wire gauge	ø	Stripping length
95 mm²	13.55 mm	22.5 mm
120 mm²	15.55 mm	22.5 mm

Han® 200 A module

Number of contacts

1

200 A 1.000 V 8 kV 3

Features

- Power module for big cross-sections up to 70 mm²
- High rated voltage up to 1300 V
- IP20 protection for female and male module (by using male contacts with protective cap)
- Compatible to the Han® 300 A module
- Easy removal of the contacts

Technical characteristics

Number of contacts	1
Rated current	200 A
Rated voltage	1000 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage	1000 V AC, 1300 V DC
Insulation resistance	>10^{10} Ω
Contact resistance	≤0.3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

Specifications and approvals

EN 50124-1
EN 60664-1
IEC 61984
DNV GL

Details

Attention

The TC 200 screw contacts are intended for connection to busbars and, due to their design, are not touch-protected in the connection area.

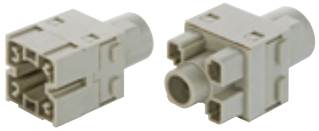
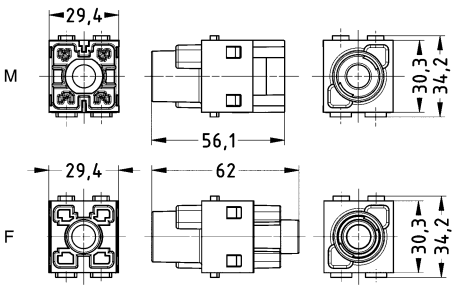
The user must ensure that the clearance and creepage distances of the TC 200 screw contacts are maintained.

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

Crimping tools see chapter Han 90

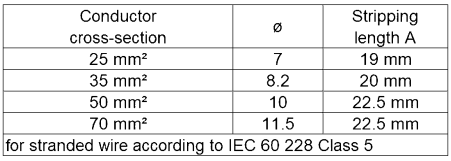
Remarks on the crimp technique

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

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 200 A module, Crimp termination  Please order crimp contacts separately.	16 ... 70	09 14 001 3003	09 14 001 3103	
TC 200, Crimp contact, Contact surface: Silver plated 	16 25 35 50 70	09 11 000 6150 09 11 000 6120 09 11 000 6121 09 11 000 6122 09 11 000 6123	09 11 000 6250 09 11 000 6220 09 11 000 6221 09 11 000 6222 09 11 000 6223	

Conductor cross-section	ø	Stripping length A
25 mm²	7	19 mm
35 mm²	8.2	20 mm
50 mm²	10	22.5 mm
70 mm²	11.5	22.5 mm
for stranded wire according to IEC 60 228 Class 5		

Han® 200 A module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
TC 200, Crimp contact, With protective insert, Contact surface: Silver plated 	25 35 50 70	09 11 000 7120 09 11 000 7121 09 11 000 7122 09 11 000 7123		
TC 200, Screw contact, M8, Contact surface: Silver plated 	70	09 11 000 6124	09 11 000 6224	

Conductor cross-section	ø	Stripping length A
25 mm²	7	19 mm
35 mm²	8.2	20 mm
50 mm²	10	22.5 mm
70 mm²	11.5	22.5 mm
for stranded wire according to IEC 60 228 Class 5		

Han® 200 A module

Number of contacts

1

200 A 1.000 V 8 kV 3

Features

- No special tools required for axial-screw termination
- Power module for big cross-sections up to 70 mm²
- Can be used e.g. as 3 + PE connector in the Han® 32 B housing.
- Not compatible to the Han® 200 A crimp module

Technical characteristics

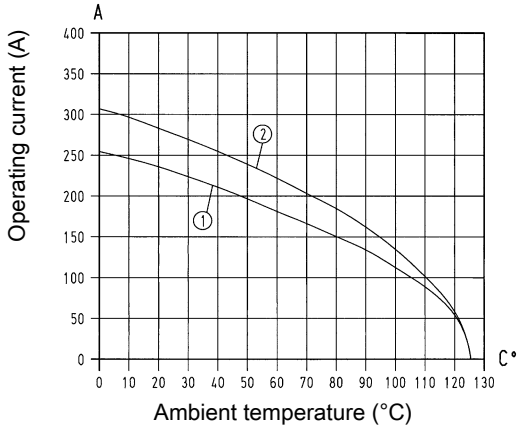
Number of contacts	1
Rated current	200 A
Rated voltage	1000 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤0.2 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

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 24 B hoods/housings with 3 modules Conductor cross-section 50 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 70 mm²

Specifications and approvals

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

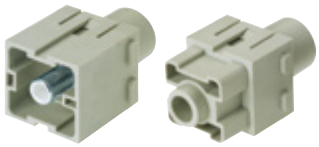
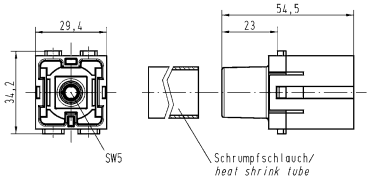
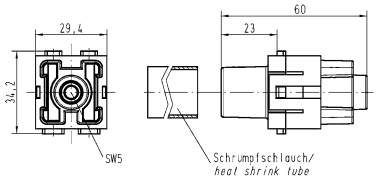
Details

Remarks on the axial screw technique

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

Contact resistance axial screw contact: ≤ 0.2 mOhm

Han® 200 A module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 200 A module, Axial screw termination, Contact surface: Silver plated 	25 ... 40 40 ... 70	09 14 001 2663 09 14 001 2662	09 14 001 2763 09 14 001 2762	M  F  Stripping length 16 mm Tightening torque 8 Nm @ 25 ... 40 mm², 9 Nm @ 40 mm², 10 Nm @ 70 mm²

Han® 200 A PE module

Technical characteristics

Number of contacts	1
Insulation resistance	>10^{10} Ω
Contact resistance	≤0.2 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

Specifications and approvals

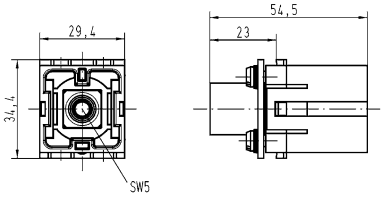
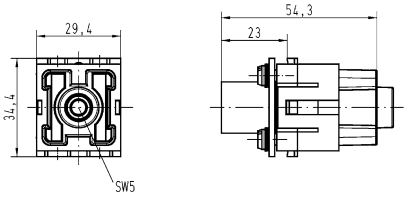
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390

Han® 200 A PE module

Modu-
lar

Number of contacts

1

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 200 A PE module, Axial screw termination, Contact surface: Silver plated 	25 ... 40 40 ... 70	09 14 001 2668 09 14 001 2667	09 14 001 2768 09 14 001 2767	M  F  Hex key with grip 09 99 000 0364 Adapter 3/8” 09 99 000 0371 See chapter Han 90 Stripping length 16 mm Tightening torque 8 Nm @ 25 ... 40 mm², 9 Nm @ 40 mm², 10 Nm @ 70 mm²

Features

- Crimp- and axial module are compatible modules
- Contacts can be unlocked from the mating side

Technical characteristics

Number of contacts	2
Rated current	100 A
Rated voltage	1000 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤0.3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

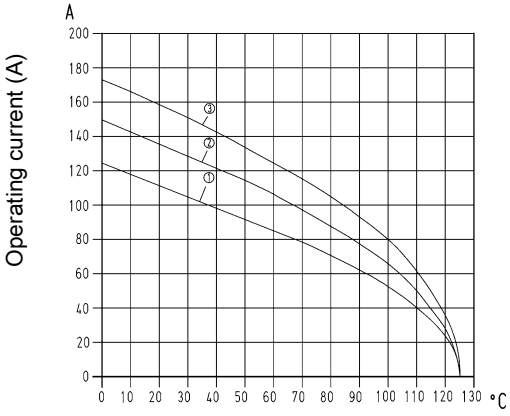
Derating

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

Crimp termination

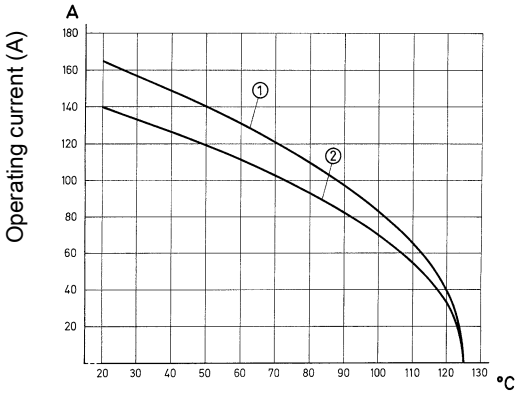


Ambient temperature (°C)

① 24 B hoods/housings with 3 modules Conductor cross-section 16 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 25 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 35 mm²

Derating

Axial screw termination



Ambient temperature (°C)

① 24 B hoods/housings with 3 modules Conductor cross-section 35 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 25 mm²

Specifications and approvals

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

Details

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

Crimping tools see chapter Han 90

Remarks on the crimp technique

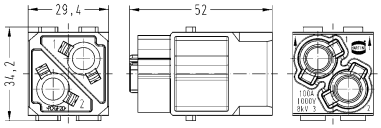
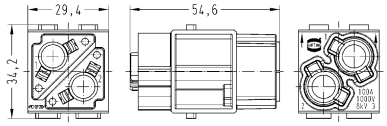
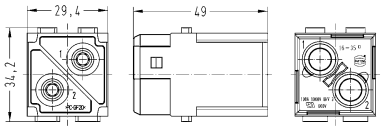
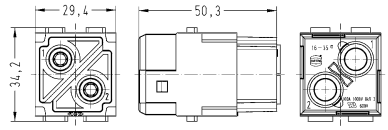
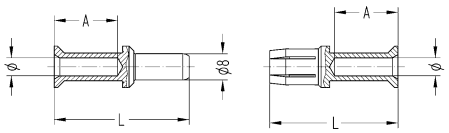
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® 100 A module

Number of contacts

2

100 A 1.000 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 100 A module, Crimp termination  Please order crimp contacts separately.	10 ... 35	09 14 002 3051	09 14 002 3151	M  F 
Han-Modular®, Han® 100 A module, Axial screw termination, Contact surface: Silver plated 	10 ... 25 16 ... 35 22 ... 38	09 14 002 2653 09 14 002 2651 09 14 002 2650	09 14 002 2753 09 14 002 2751 09 14 002 2750	M  F  Stripping length 12 ... 14 mm Tightening torque 6 Nm @ 10 ... 16 mm², 7 Nm @ 25 mm², 8 Nm @ 35 ... 38 mm²
TC 100, Crimp contact, Contact surface: Silver plated 	10 16 25 35	09 11 000 6114 09 11 000 6116 09 11 000 6125 09 11 000 6135	09 11 000 6214 09 11 000 6216 09 11 000 6225 09 11 000 6235	 Conductor cross-section / ø / Stripping length 10 mm² / 4.3 / 19 mm 16 mm² / 5.5 / 19 mm 25 mm² / 7 / 19 mm 35 mm² / 8.2 / 16 mm for stranded wire according to IEC 60 228 Class 5

Features

- Crimp or axial screw termination available
- Unlock of contacts with a screw driver from mating side
- Separate axial screw contacts can be terminated without any special tools directly to the wire

Technical characteristics

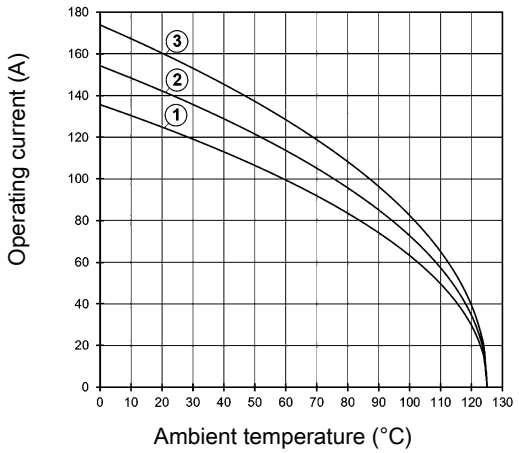
Number of contacts	1
Rated current	100 A
Rated voltage	830 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤0.3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 Conductor cross-section 16 mm²
② Conductor cross-section 25 mm²
③ Conductor cross-section 35 mm²

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

Hex key (A/F 4) see chapter Han 90

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

Remarks on the axial screw technique

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

Crimping tools see chapter Han 90

Remarks on the crimp technique

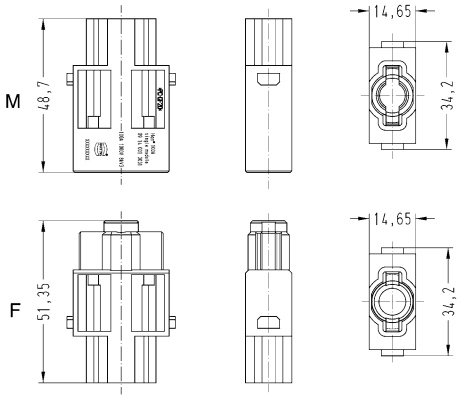
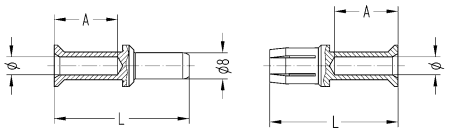
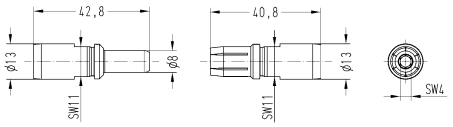
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® 100 A Single module

Number of contacts

1

100 A 830 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 100 A module, Single module  Please order contacts separately.	10 ... 35	09 14 001 3031	09 14 001 3131	
TC 100, Crimp contact, Contact surface: Silver plated 	10 16 25 35	09 11 000 6114 09 11 000 6116 09 11 000 6125 09 11 000 6135	09 11 000 6214 09 11 000 6216 09 11 000 6225 09 11 000 6235	 Conductor cross-section / ø / Stripping length 10 mm² / 4.3 / 19 mm 16 mm² / 5.5 / 19 mm 25 mm² / 7 / 19 mm 35 mm² / 8.2 / 16 mm for stranded wire according to IEC 60 228 Class 5
TC 100, Axial screw contact, Contact surface: Silver plated 	10 ... 25 16 ... 35	09 11 000 6112 09 11 000 6113	09 11 000 6212 09 11 000 6213	 Stripping length 13 mm Tightening torque mm² / 10 / 16 / 25 / 35 Nm / 6 / 6 / 7 / 8

Features

- for power circuits
- Male inserts with protection collar
- Polarisation of module

Technical characteristics

Number of contacts	2
Rated current	70 A
Rated voltage	1000 V
Rated impulse voltage	8 kV
Pollution degree	3
Insulation resistance	>10^{10} Ω
Contact resistance	≤0.5 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

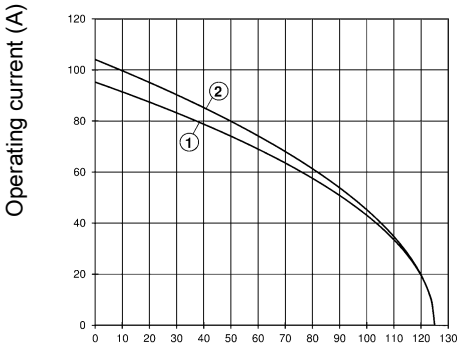
Derating

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

Crimp termination

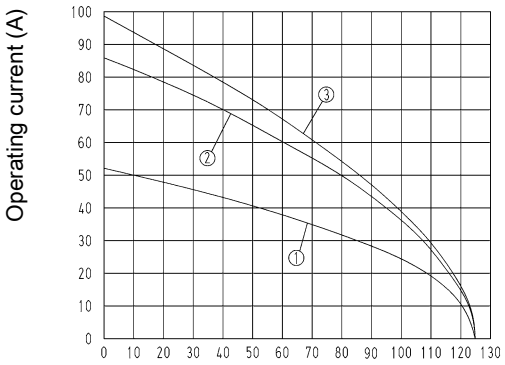


Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 16 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 25 mm²

Derating

Axial screw termination



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 16 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 22 mm²

Specifications and approvals

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

Details

Remarks on the axial screw technique

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

Hex key (A/F 2.5) see chapter Han 90

For more technical details (i.e. number of crimping operations or crimping position) see eCatalogue

Crimping tools see chapter Han 90

Remarks on the crimp technique

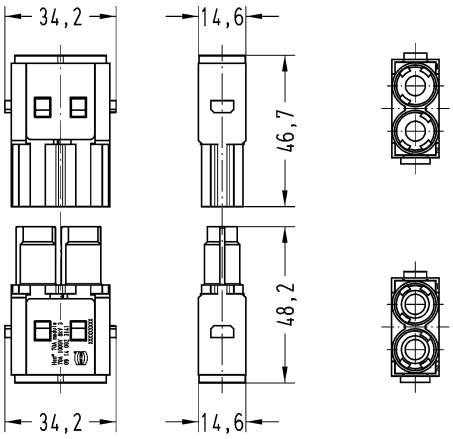
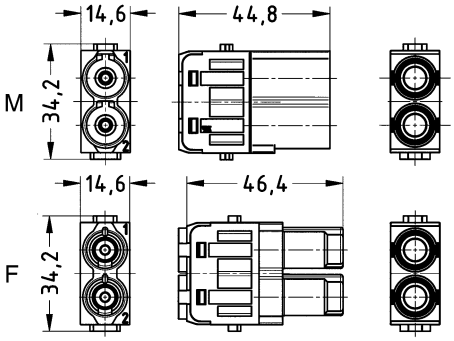
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® 70 A module

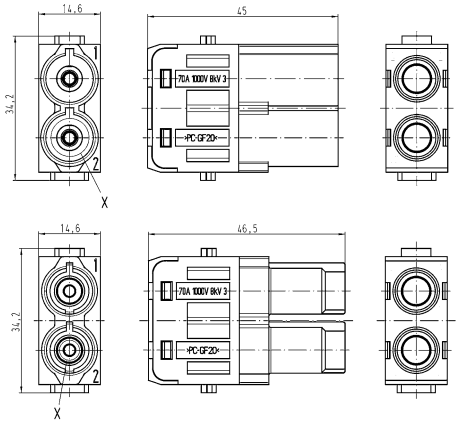
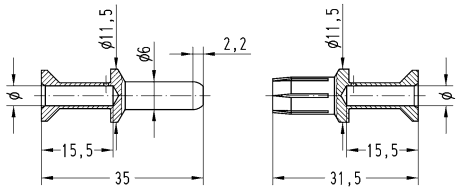
Number of contacts

2

70 A 1.000 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 70 A module, Crimp termination  Please order crimp contacts separately.	10 ... 25	09 14 002 3041	09 14 002 3141	
Han-Modular®, Han® 70 A module, Axial screw termination, Contact surface: Silver plated  Finger safe	6 ... 16 14 ... 22	09 14 002 2641 09 14 002 2642		

Han® 70 A module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 70 A module, Axial screw termination, Contact surface: Silver plated 	6 ... 16 14 ... 22	09 14 002 2646 09 14 002 2647	09 14 002 2741 09 14 002 2742	 6 ... 16 mm²: Stripping length 11 ... 12 mm 14 ... 22 mm²: Stripping length 12,5 ... 13.5 mm Tightening torque 2 Nm @ 6 mm², 3 Nm @ 10 mm², 4 Nm @ 14 mm², 4 Nm @ 16 mm², 4 Nm @ 22 mm²
TC 70, Crimp contact, Contact surface: Silver plated 	10 16 25	09 11 000 6131 09 11 000 6132 09 11 000 6133	09 11 000 6231 09 11 000 6232 09 11 000 6233	 Conductor cross-section / ø / Stripping length 10 mm² / 4.3 / 15.5 mm 16 mm² / 5.5 / 15.5 mm 25 mm² / 7 / 15.5 mm for stranded wire according to IEC 60 228 Class 5

Han® 70 A Hybrid module

Features

- Axial screw termination
- for power circuits
- Male inserts with protection collar
- Polarisation of module

Technical characteristics

Number of contacts	1
Additional contacts	+ 4 additional signal contacts
Rated current	70 A
Rated voltage	1000 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated current (signal)	16 A
Rated voltage (signal)	400 V
Rated impulse voltage (signal)	6 kV
Pollution degree (signal)	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤0.5 mΩ, ≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

Hex key (A/F 2.5) see chapter Han 90

Remarks on the axial screw technique
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Contact resistance axial screw contact: ≤ 0.5 mOhm

Contact resistance Han E® crimp contact: ≤ 1 mOhm

Crimping tools see chapter Han 90

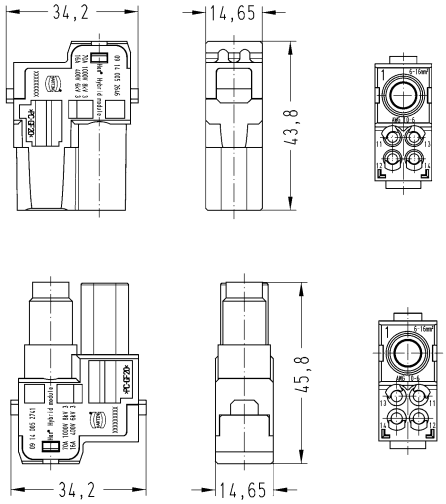
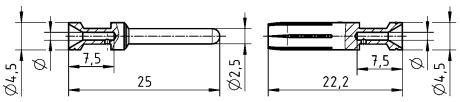
Remarks on the crimp technique
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® 70 A Hybrid module

Number of contacts

1

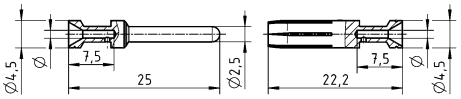
70 A 1.000 V 8 kV 3
16 A 400 V 6 kV 3
+ 4 additional signal contacts

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 70 A Hybrid module, Axial screw termination / crimp termination  Please order signal contacts separately.	6 ... 16 14 ... 22	09 14 005 2646 09 14 005 2647	09 14 005 2741 09 14 005 2742	 6 ... 16 mm²: Stripping length 11 ... 12 mm 14 ... 22 mm²: Stripping length 12,5 ... 13.5 mm Tightening torque 2 Nm @ 6 mm², 3 Nm @ 10 mm², 4 Nm @ 14 mm², 4 Nm @ 16 mm², 4 Nm @ 22 mm²
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

Han® 70 A Hybrid module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

Han® 40 A module

Features

- Crimp or axial screw termination available
- No special tools required for axial-screw termination

Technical characteristics

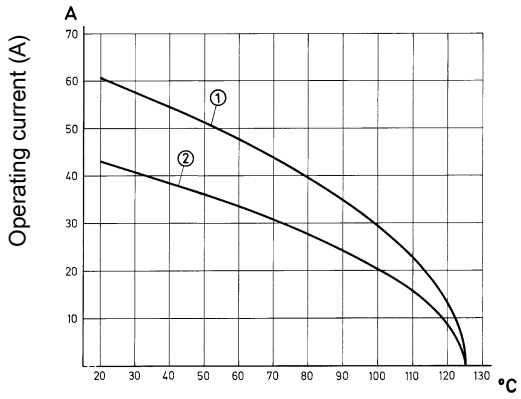
Number of contacts	2
Rated current	40 A
Rated voltage	1000 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤0.3 mΩ, ≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 10 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

Specifications and approvals

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

Details

Contact resistance Han® C crimp contact: ≤ 1 mOhm

Remarks on the axial screw technique
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Contact resistance axial screw contact: ≤ 0.3 mOhm

Hex key (A/F 2) see chapter Han 90

Crimping tools see chapter Han 90

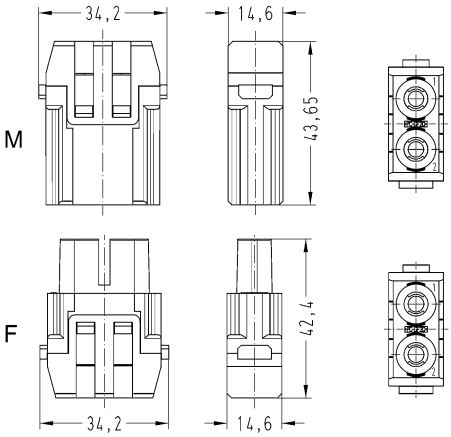
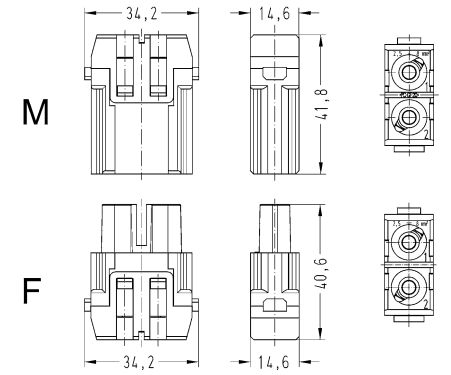
Remarks on the crimp technique
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

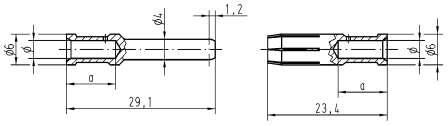
Han® 40 A module

Number of contacts

2

40 A 1.000 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® 40 A module, Crimp termination, UL: 600 V  Please order crimp contacts separately.	1.5 ... 10	09 14 002 3002	09 14 002 3102	 Contact arrangement (view from termination side)
Han-Modular®, Han® 40 A module, Axial screw termination, Contact surface: Silver plated 	2.5 ... 8 6 ... 10	09 14 002 2601 09 14 002 2602	09 14 002 2701 09 14 002 2702	 Contact arrangement (view from termination side) Stripping length mm² 2,5 4 6 10 mm 5^{+1} 5^{+1} 8^{+1} 11^{+1} Tightening torque mm² 2,5 4 6 10 Nm 1,5 1,5 2 2

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han® C, Crimp contact, Contact surface: Silver plated 	1.5 2.5 4 6 10	09 32 000 6104 09 32 000 6105 09 32 000 6107 09 32 000 6108 09 32 000 6109	09 32 000 6204 09 32 000 6205 09 32 000 6207 09 32 000 6208 09 32 000 6209	

Conductor cross-section		ø	Stripping length
1.5 mm²	AWG 16	1.75 mm	9.5 mm
2.5 mm²	AWG 14	2.25 mm	9.5 mm
4 mm²	AWG 12	2.85 mm	9.5 mm
6 mm²	AWG 10	3.5 mm	9.5 mm
10 mm²	AWG 8	4.3 mm	12 mm

Features

- Standard module for power up to 40 A
- No special tools required for axial-screw termination

Technical characteristics

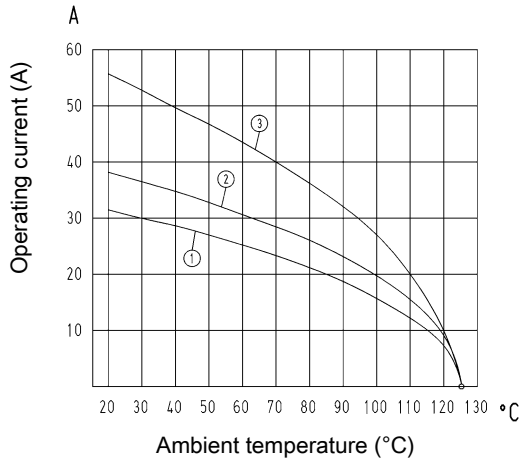
Number of contacts	3
Rated current	40 A
Rated voltage	690 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated current acc. to UL	40 A
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤0.3 mΩ, ≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

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 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 10 mm²

Specifications and approvals

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

Details

Contact resistance Han® C crimp contact: ≤ 1 mOhm

Remarks on the axial screw technique
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Contact resistance axial screw contact: ≤ 0.3 mOhm

Hex key (A/F 2) see chapter Han 90

Crimping tools see chapter Han 90

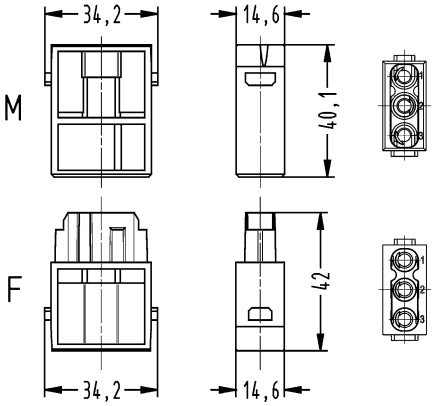
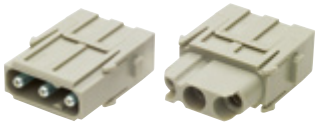
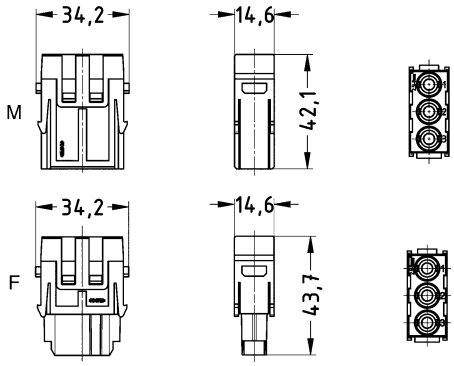
Remarks on the crimp technique
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® C module

Number of contacts

3

40 A 690 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® C module, Crimp termination  Please order crimp contacts separately.	1.5 ... 6	09 14 003 3001	09 14 003 3101	 Contact arrangement (view from termination side)
Han-Modular®, Han® C module, Axial screw termination, Contact surface: Silver plated 	2.5 ... 8 6 ... 10	09 14 003 2601 09 14 003 2602	09 14 003 2701 09 14 003 2702	 Contact arrangement (view from termination side)

Stripping length

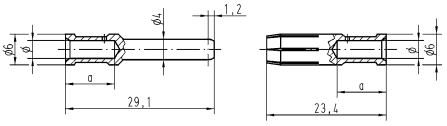
mm²	2,5	4	6	10
mm	5^{+1}	5^{+1}	8^{+1}	11^{+1}

Tightening torque

mm²	2,5	4	6	10
Nm	1,5	1,5	2	2

Han® C module

Modu-
lar

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han® C, Crimp contact, Contact surface: Silver plated 	1.5 2.5 4 6	09 32 000 6104 09 32 000 6105 09 32 000 6107 09 32 000 6108	09 32 000 6204 09 32 000 6205 09 32 000 6207 09 32 000 6208	

Conductor cross-section		ø	Stripping length
1.5 mm²	AWG 16	1.75 mm	9.5 mm
2.5 mm²	AWG 14	2.25 mm	9.5 mm
4 mm²	AWG 12	2.85 mm	9.5 mm
6 mm²	AWG 10	3.5 mm	9.5 mm
10 mm²	AWG 8	4.3 mm	12 mm

Han® CC Protected module

Features

- Suitable for Han® C crimp contacts
- Designed for a high working voltage up to 830 V
- Finger safe male and female contacts
- High density of contacts

Technical characteristics

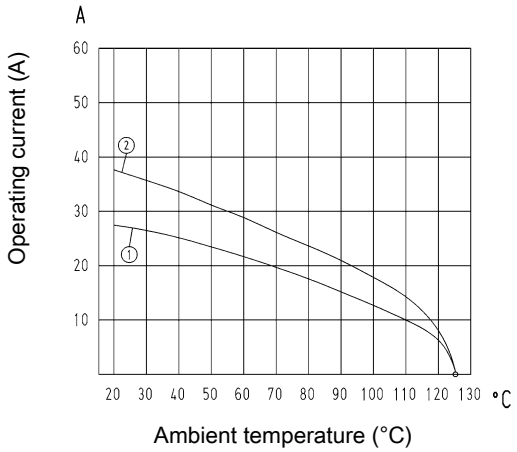
Number of contacts	4
Rated current	40 A
Rated voltage	830 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

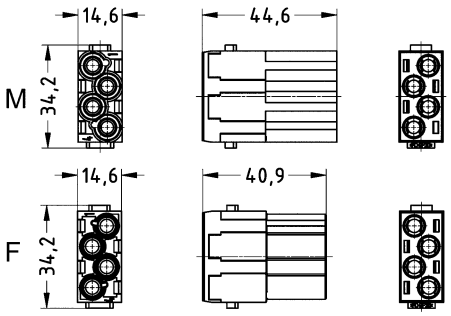
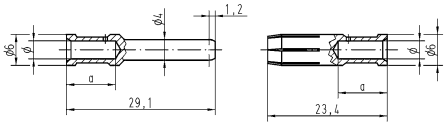
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® CC Protected module

Number of contacts

4

40 A 830 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® CC Protected module, Crimp termination  Please order crimp contacts separately.	1.5 ... 6	09 14 004 3041	09 14 004 3141	 Contact arrangement (view from termination side)
Han® C, Crimp contact, Contact surface: Silver plated 	1.5 2.5 4 6	09 32 000 6104 09 32 000 6105 09 32 000 6107 09 32 000 6108	09 32 000 6204 09 32 000 6205 09 32 000 6207 09 32 000 6208	

Conductor cross-section		ø	Stripping length
1.5 mm²	AWG 16	1.75 mm	9.5 mm
2.5 mm²	AWG 14	2.25 mm	9.5 mm
4 mm²	AWG 12	2.85 mm	9.5 mm
6 mm²	AWG 10	3.5 mm	9.5 mm
10 mm²	AWG 8	4.3 mm	12 mm

Han® CD module

Features

- 3 contacts (40 A) for power circuits and 4 contacts (10 A) for signal circuits
- Ideal as motor drive connector
- Finger safe male and female contacts

Technical characteristics

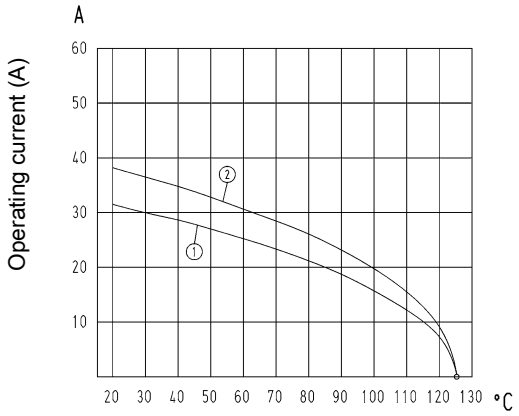
Number of contacts	3
Additional contacts	+ 4 additional signal contacts
Rated current	40 A
Rated voltage	830 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated current (signal)	10 A
Rated voltage (signal)	830 V
Rated impulse voltage (signal)	8 kV
Pollution degree (signal)	3
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤1 mΩ, ≤3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Wire outer diameter	≤5 mm
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 6 mm²

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han® C crimp contact: ≤ 1 mOhm

Crimping tools see chapter Han 90

Remarks on the crimp technique

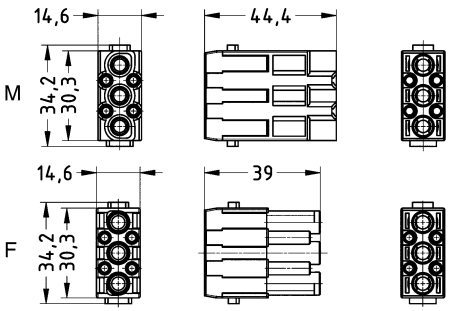
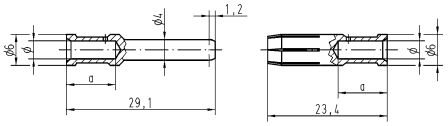
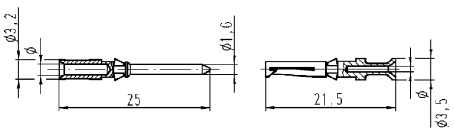
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® CD module

Number of contacts

3

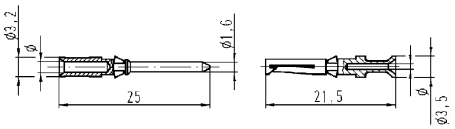
40 A 830 V 8 kV 3
10 A 830 V 8 kV 3
+ 4 additional signal contacts

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® CD module, Crimp termination  Please order crimp contacts separately.	0.14 ... 6	09 14 007 3001	09 14 007 3101	 Contact arrangement (view from termination side)
Han® C, Crimp contact, Contact surface: Silver plated 	1.5 2.5 4 6	09 32 000 6104 09 32 000 6105 09 32 000 6107 09 32 000 6108	09 32 000 6204 09 32 000 6205 09 32 000 6207 09 32 000 6208	
Han D®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	

Conductor cross-section		ø	Stripping length
1.5 mm²	AWG 16	1.75 mm	9.5 mm
2.5 mm²	AWG 14	2.25 mm	9.5 mm
4 mm²	AWG 12	2.85 mm	9.5 mm
6 mm²	AWG 10	3.5 mm	9.5 mm
10 mm²	AWG 8	4.3 mm	12 mm

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Han® CD module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Han® Guiding Dummy module

Features

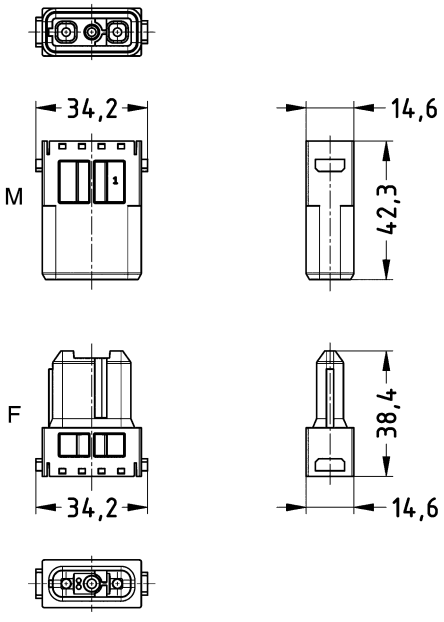
- Affordable module without contacts
- Centring function with a very large inlet cone of +/- 4 mm
- Significantly better handling compared to conventional guide pins/sockets
- Ideal add-on when dealing with many mating cycles or inaccessible connectors

Technical characteristics

Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Lock-in range	±4 mm
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 9005 (jet black)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

EN 60664-1
IEC 61984

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Guiding module, Dummy module 	09 14 003 3050	09 14 003 3150	

Han® Guiding Relay module

Number of contacts

3

16 A 500 V 6 kV 3

Features

- 2 contacts with relay function (last mate - first break)
- Enables other power contacts to be switched off via a relay and thus offers greater safety in the event of a fault (when used as intended, the connector must not be plugged in or disconnected under voltage / load)

Technical characteristics

Number of contacts	3
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Insulation resistance	>10^{10} Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Lock-in range	±4 mm
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

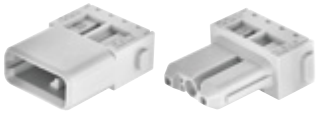
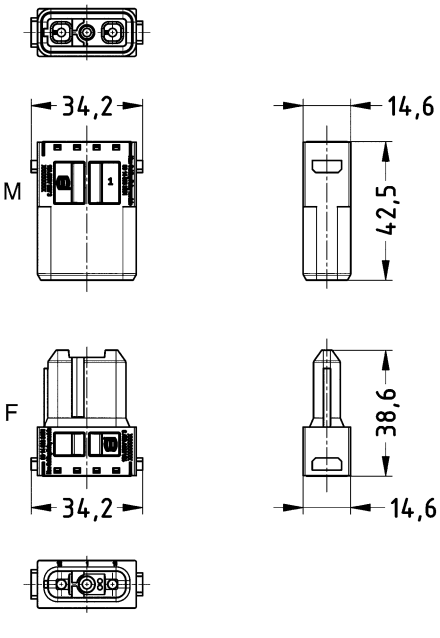
EN 60664-1
IEC 61984

Details

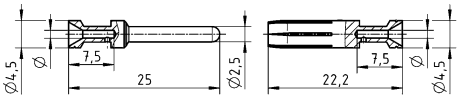
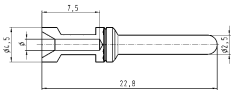
Crimping tools see chapter Han 90

Remarks on the crimp technique

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

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Guiding module, Relay module, Crimp termination  Please order crimp contacts separately.	0.14 ... 4	09 14 003 3051	09 14 003 3151	

Han® Guiding Relay module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4		09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	
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		

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

Conductor cross-section		ø	Stripping length
0.75-1 mm²	AWG 18	1.45 mm	7.5 mm
1.5 mm²	AWG 16	1.75 mm	7.5 mm
2.5 mm²	AWG 14	2.25 mm	7.5 mm

Han® Guiding PE module

Number of contacts

2+ ⏚

16 A 500 V 6 kV 3

Features

- PE connection with a Han E® crimp contact
- Only for use in the Han-Eco® Modular plastic housings
- Centring function with a very large inlet cone of +/- 4 mm

Technical characteristics

Number of contacts	2
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Insulation resistance	>10^{10} Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Lock-in range	±4 mm
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

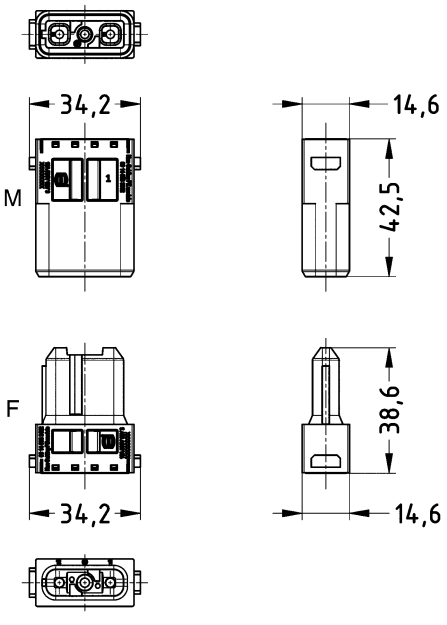
EN 60664-1
IEC 61984

Details

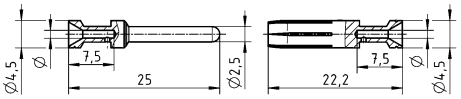
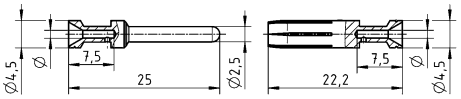
Crimping tools see chapter Han 90

Remarks on the crimp technique

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

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Guiding module, PE module, Crimp termination  Please order crimp contacts separately. Not for Han-Modular® hinged frames!	0.14 ... 4	09 14 003 3052	09 14 003 3152	

Han® Guiding PE module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm

Features

- Standard module for power up to 16 A
- Han-Quick Lock® or crimp termination available

Technical characteristics

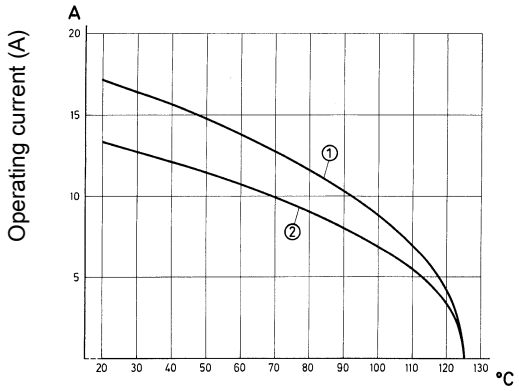
Number of contacts	6
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

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



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

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

Crimping tools see chapter Han 90

Remarks on the crimp technique

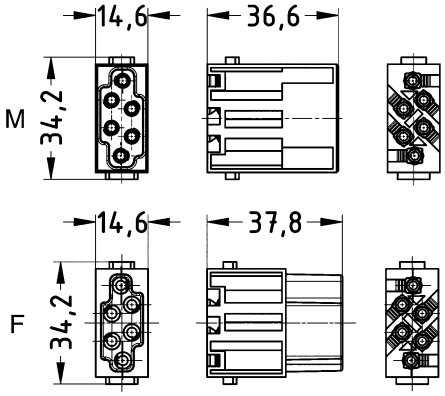
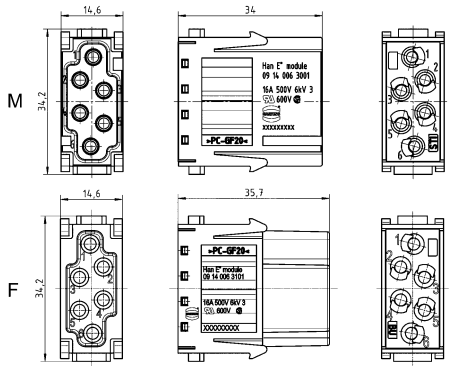
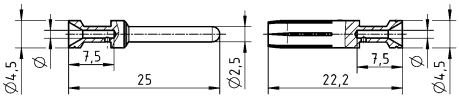
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han E® module

Number of contacts

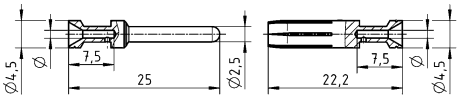
6

16 A 500 V 6 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han E® module, Han-Quick Lock® termination, Contact surface: Silver plated 	0.5 ... 2.5	09 14 006 2633	09 14 006 2733	
Han-Modular®, Han E® module, Crimp termination  Please order crimp contacts separately.	0.14 ... 4	09 14 006 3001	09 14 006 3101	 Contact arrangement (view from termination side)
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

Number of contacts

5

16 A 230/400 V 4 kV 3

Features

- Screw connection, suitable for all users around the world
- No special tools required
- for flexible and solid conductors from 0.5 to 2.5 mm²
- Additional protection against voltage and accidental contact by a sliding insulation cover which closes automatically during mating.

Technical characteristics

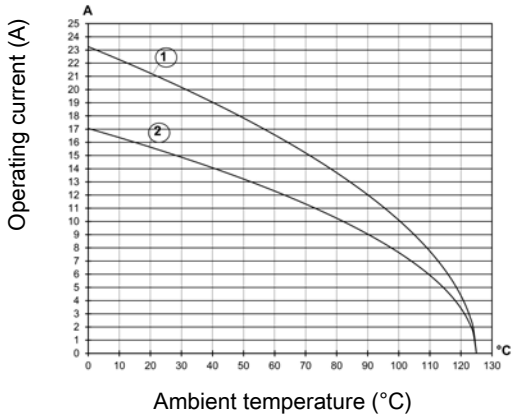
Number of contacts	5
Rated current	16 A
Rated voltage conductor-earth	230 V
Rated voltage conductor-conductor	400 V
Rated impulse voltage	4 kV
Pollution degree	3
Insulation resistance	>10^{10} Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

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

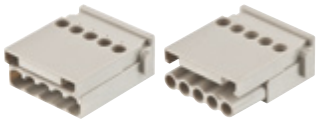
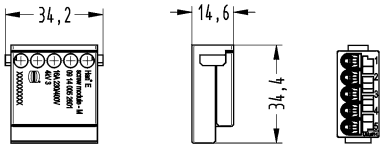
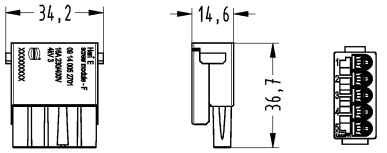


① Conductor cross-section 2.5 mm²
② Conductor cross-section 1.5 mm²

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

Han E® Screw module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han E® module, Screw termination, Contact surface: Silver plated 	0.5 ... 2.5	09 14 005 2601	09 14 005 2701	M  F  Stripping length 7.5 mm Tightening torque 0.5 Nm

Features

- Suitable for Han E® crimp contacts
- Designed for a high working voltage up to 830 V
- Finger safe male and female contacts

Technical characteristics

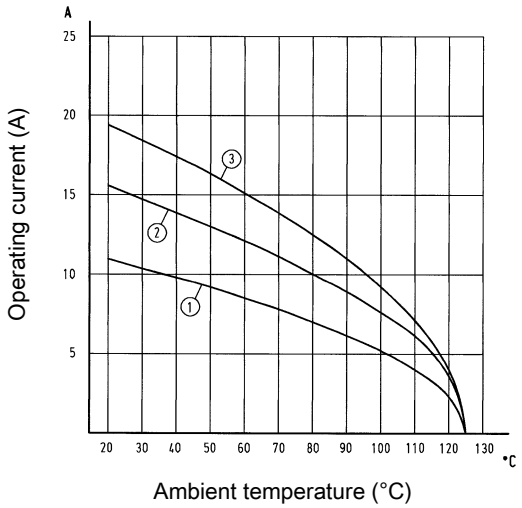
Number of contacts	6
Rated current	16 A
Rated voltage	830 V
Rated impulse voltage	8 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
③ 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²

Specifications and approvals

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

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

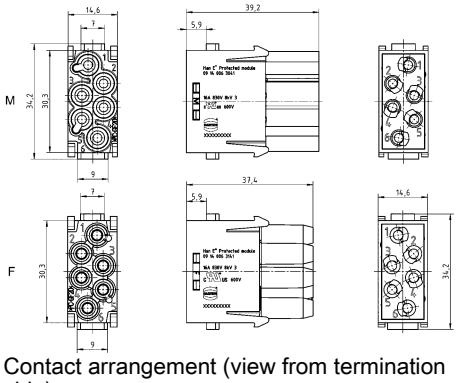
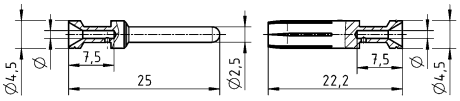
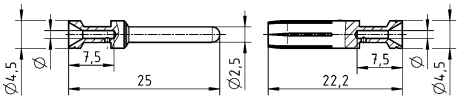
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han E® Protected module

Number of contacts

6

16 A 830 V 8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han E® Protected module, Crimp termination  Please order crimp contacts separately.	0.14 ... 4	09 14 006 3041	09 14 006 3141	 Contact arrangement (view from termination side)
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm

Features

- Han-Quick Lock® or crimp termination available
- High packing density

Technical characteristics

Number of contacts	8
Rated current	16 A
Rated voltage	400 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption, compliant

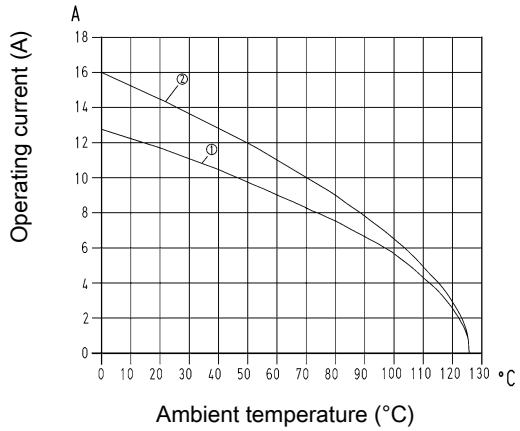
Derating

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-Quick Lock® termination

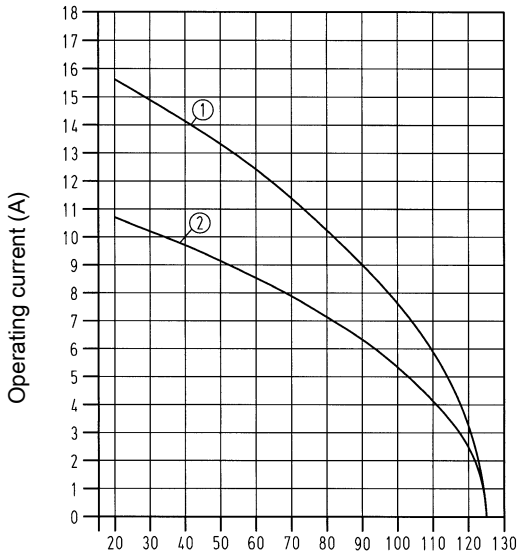


Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²

Derating

Crimp termination



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

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

Crimping tools see chapter Han 90

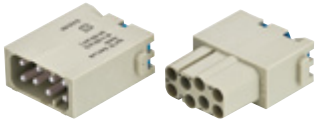
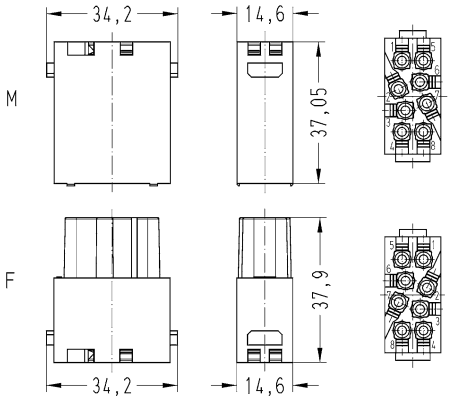
Remarks on the crimp technique

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

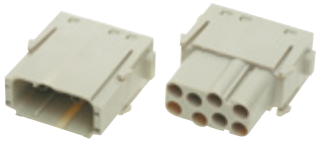
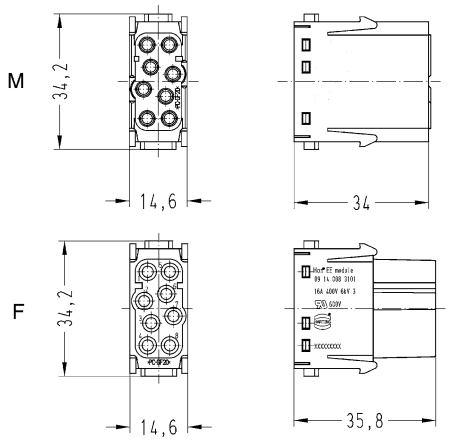
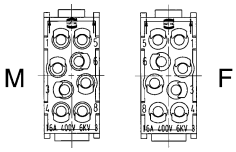
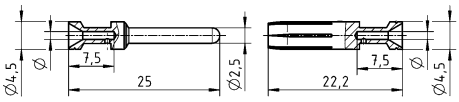
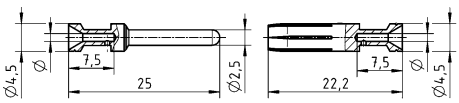
Number of contacts

8

16 A 400 V 6 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® EE module, Han-Quick Lock® termination, Contact surface: Silver plated  Blue slide	0.5 ... 2.5	09 14 008 2633	09 14 008 2733	 Contact arrangement (view from termination side) Stripping length 10 mm
Han-Modular®, Han® EE module, Han-Quick Lock® termination, Contact surface: Silver plated  Black slide	0.25 ... 1.5	09 14 008 2634	09 14 008 2734	

Han® EE module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® EE module, Crimp termination  Please order crimp contacts separately.	0.14 ... 4	09 14 008 3001	09 14 008 3101	  Contact arrangement (view from termination side) Stripping length 7.5 mm
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm

Han® EEE module

Features

- Suitable for Han E® crimp contacts
- Higher density of crimping contacts
- Standard module for power up to 16 A
- Also suitable as a reliable signal connector

Technical characteristics

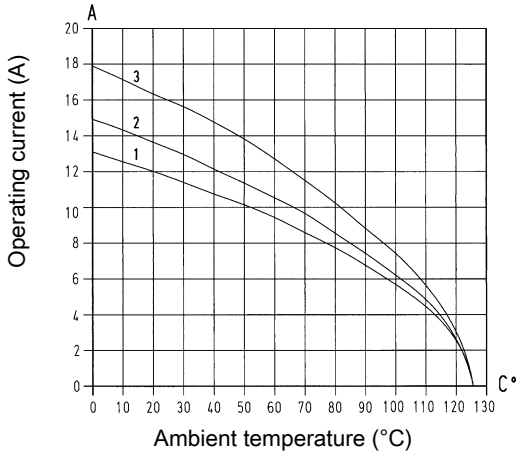
Number of contacts	20
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 2.5 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 4 mm²

Specifications and approvals

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

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

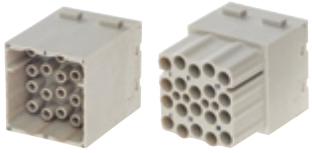
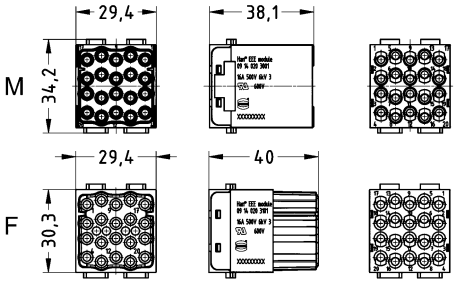
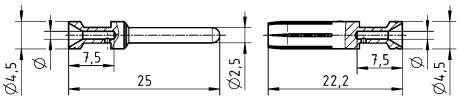
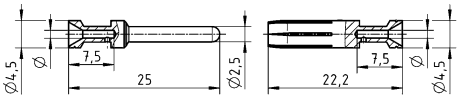
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® EEE module

Number of contacts

20

16 A 500 V 6 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® EEE module, Crimp termination  Please order crimp contacts separately.	0.14 ... 4	09 14 020 3001	09 14 020 3101	 Contact arrangement (view from termination side)
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	 Conductor cross-section / Identification 0.14-0.37 mm² AWG 26-22 — no groove 0.5 mm² AWG 20 — no groove 0.75 mm² AWG 18 — 1 groove* 1 mm² AWG 18 — 1 groove 1.5 mm² AWG 16 — 2 groove 2.5 mm² AWG 14 — 3 groove 3 mm² AWG 12 — wide groove 4 mm² AWG 12 — no groove * on the back crimp collar Stripping length 7.5 mm

Features

- Reliable cage clamp termination
- No special tools required

Technical characteristics

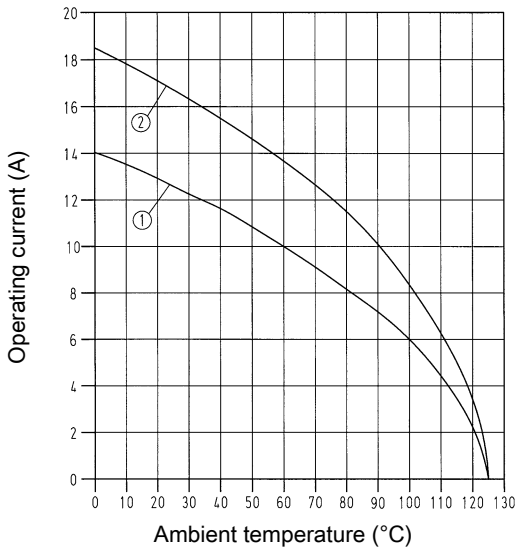
Number of contacts	5
Rated current	16 A
Rated voltage	400 V
Rated impulse voltage	6 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption, compliant

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 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 2.5 mm²

Specifications and approvals

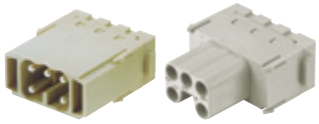
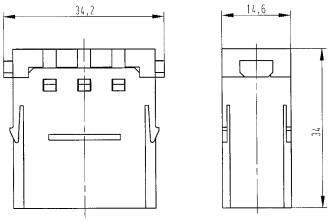
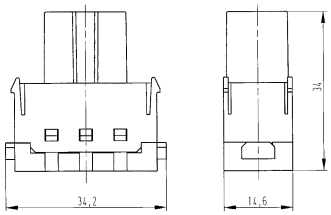
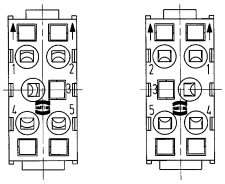
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
UL 2237 PVVA2.E318390
CSA-C22.2 No. 182.3 PVVA8.E318390
DNV GL

Han® ES module

Number of contacts

5

16 A 400 V 6 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® ES module, Cage-clamp termination, Contact surface: Silver plated 	0.14 ... 2.5	09 14 005 2616	09 14 005 2716	M  F 
Han-Modular®, Han® ES module, Cage-clamp termination, Contact surface: Gold plated	0.14 ... 2.5	09 14 005 2617	09 14 005 2717	M  F Contact arrangement (view from termination side)

Han® Shielded power module

Features

- Interface for typical motor applications such as frequency-controlled drives
- 4 power contacts (pin 4 is pre-leading to be used as a PE)
- 2 signal contacts for temperature monitoring or breaks
- EMC compatible connection of the cable screen with a large-area shielding plate
- Shielded power cables can now be connectorised in combination with other cables

Technical characteristics

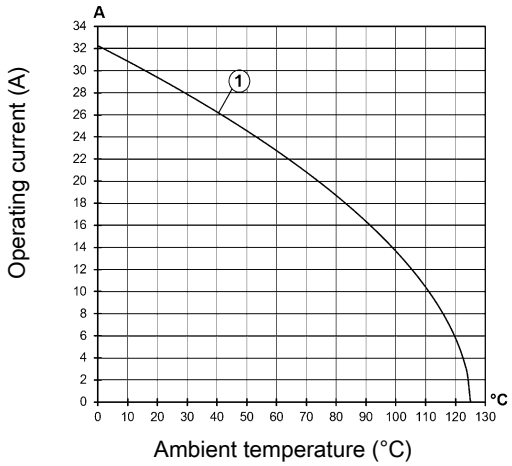
Number of contacts	4
Additional contacts	+ 2 additional signal contacts, + shielding
Rated current	16 A
Rated voltage	400 V
Rated impulse voltage	4 kV
Pollution degree	3
Rated current (signal)	10 A
Rated voltage (signal)	400 V
Rated impulse voltage (signal)	4 kV
Pollution degree (signal)	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤3 mΩ, ≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

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 24 B hoods/housings with 6 modules Conductor cross-section 4 mm²

Specifications and approvals

EN 60664-1
IEC 61984

Details

Contact resistance Han D® crimp contact: ≤ 3 mOhm

Contact resistance Han E® crimp contact: ≤ 1 mOhm

Crimping tools see chapter Han 90

Remarks on the crimp technique

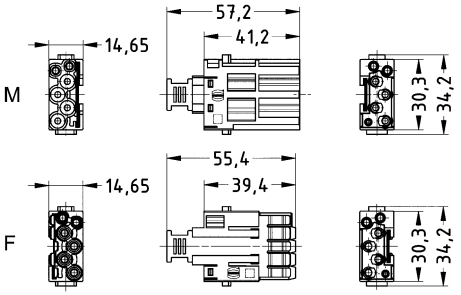
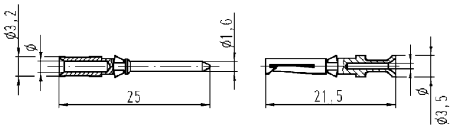
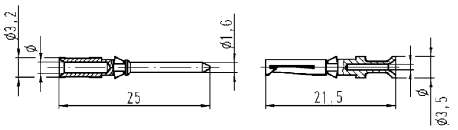
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® Shielded power module

Number of contacts

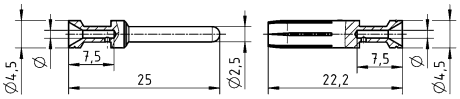
4

16 A 400 V 4 kV 3
10 A 400 V 4 kV 3
+ 2 additional signal contacts + shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Shielded power module, With shielding plate, Crimp termination  Please order crimp contacts separately. 4x Han E® 2x Han D®	0.14 ... 4	09 14 006 3021	09 14 006 3121	 Contact arrangement (view from termination side)
Han D®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

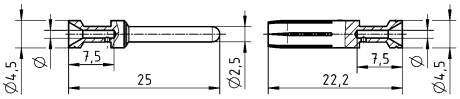
Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han E®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 3 4	09 33 000 6127 09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6227 09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

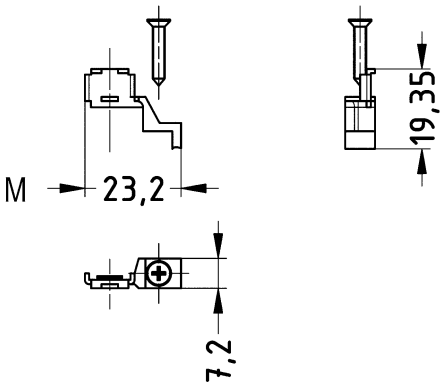
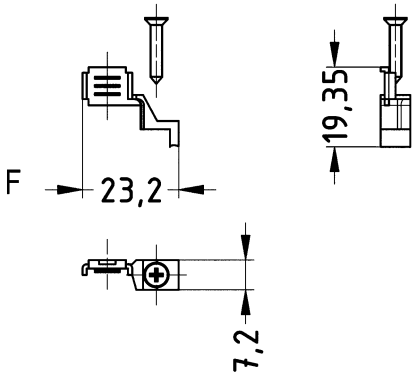
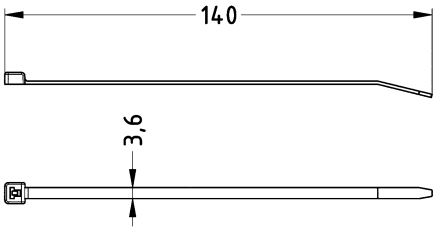
Han® Shielded power module

Features

- Optional Shielding termination to the hinged frames with the GND adapter

Technical characteristics

Material (accessories)	Metal, Polyamide (PA)
Colour (accessories)	Black

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han® Shielded power module, GND Adapter 	09 14 000 9807	09 14 000 9808	 
Cable tie, With metal latch 	09 14 000 9809	09 14 000 9809	

Features

- Available in two versions: for Han® C or Han E® crimp contacts
- 2 contacts up to 5000 V
- Insulator out of a voltage resistant teflon material
- Combination with all other modules (pneumatic, signal etc.)

Technical characteristics

Number of contacts	2
Rated current	40 A, 16 A
Rated voltage conductor-earth	2900 V
Rated voltage conductor-conductor	5000 V
Rated impulse voltage	15 kV
Pollution degree	3
Rated current acc. to UL	31 A, 16 A
Rated voltage acc. to UL	5000 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate / Teflon (PTFE)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

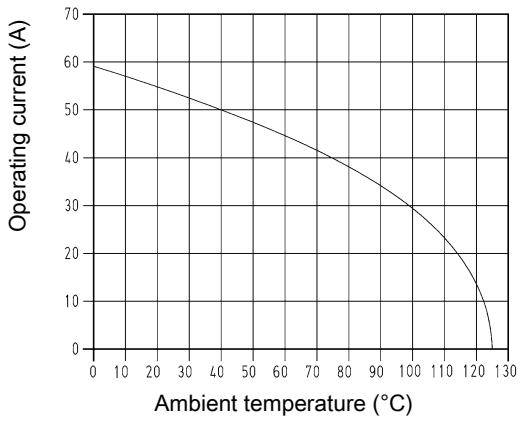
Derating

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

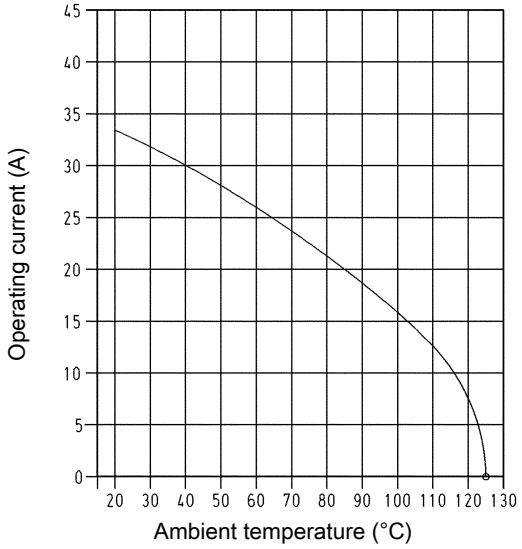
Han® C crimp contacts



① 24 B hoods/housings with 3 modules Conductor cross-section 6 mm²

Derating

Han E® crimp contacts



① Housing Han® 16 B with 1 Han® HV module Conductor cross-section 2.5 mm²

Specifications and approvals

EN 60664-1
IEC 61984
EN 50124-1
IEC 60352-4
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

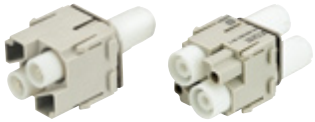
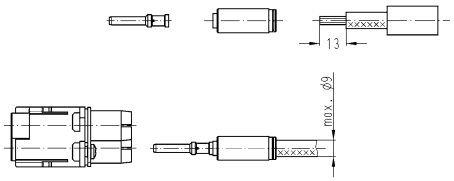
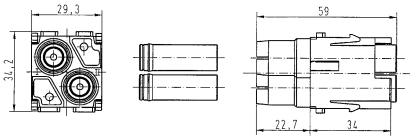
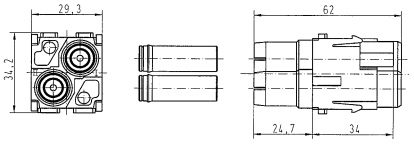
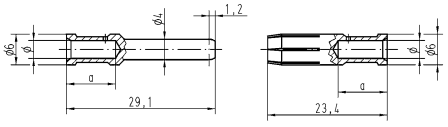
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® HV module

Number of contacts

2

40 A 2.900/5.000 V 15 kV 3

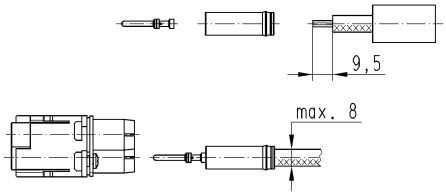
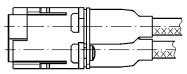
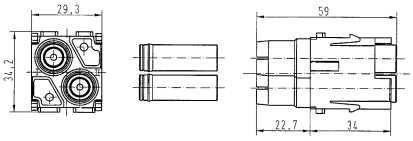
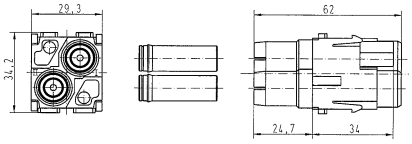
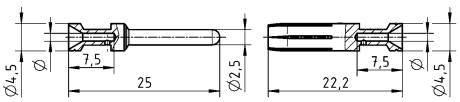
Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® HV module, for Han® C crimp contacts, Crimp termination, Pack contents: 1 module, 2 locking sleeves, 2 heat shrink tubes  Please order crimp contacts separately.	1.5 ... 10	09 14 002 3023	09 14 002 3123	Assembly instructions  **ATTENTION!** Stripping length 13 mm Crimp with tool 09 99 000 0888, 09 99 000 0110 or 09 99 000 0377 Snap crimped cable in the insert. Shrink the heat shrink tube over the rear of contact. M  F 
Han® C, Crimp contact, Contact surface: Silver plated 	1.5 2.5 4 6 10	09 32 000 6104 09 32 000 6105 09 32 000 6107 09 32 000 6108 09 32 000 6109	09 32 000 6204 09 32 000 6205 09 32 000 6207 09 32 000 6208 09 32 000 6209	

Han® HV module

Number of contacts

2

16 A 2.900/5.000 V 15 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® HV module, for Han E® crimp contacts, Crimp termination, Pack contents: 1 module, 2 locking sleeves, 2 heat shrink tubes  Please order crimp contacts separately.	0.5 ... 4	09 14 002 3021	09 14 002 3121	Assembly instructions   **ATTENTION!** Stripping length 9.5 mm Crimp with crimping tool 09 99 000 0888 Snap crimped cable in the insert. Shrink the heat shrink tube over the rear of contact. M  F 
Han E®, Crimp contact, Contact surface: Silver plated 	0.5 0.75 1 1.5 2.5 3 4	09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	

Features

- Suitable for Han E® crimp contacts
- 2 contacts up to 2500 V
- Insulator out of a voltage resistant teflon material
- Combination with all other modules (pneumatic, signal etc.)

Technical characteristics

Number of contacts	2
Rated current	16 A
Rated voltage	2500 V
Rated impulse voltage	15 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤1 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate / Teflon (PTFE)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

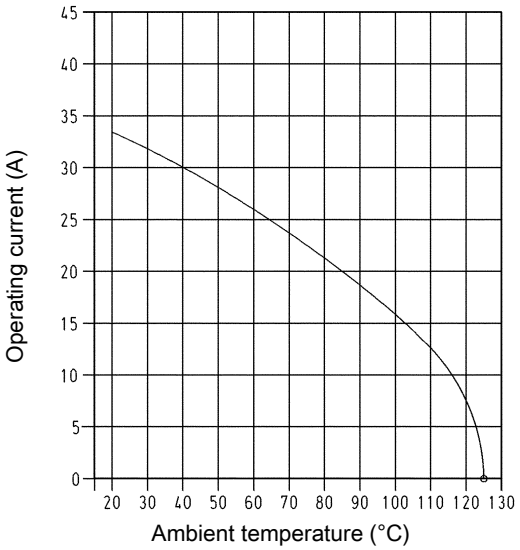
Derating

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 E® crimp contacts



① Housing Han® 16 B with 1 Han® HV module Conductor cross-section 2.5 mm²

Specifications and approvals

EN 60664-1
IEC 61984
EN 50124-1
DNV GL

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

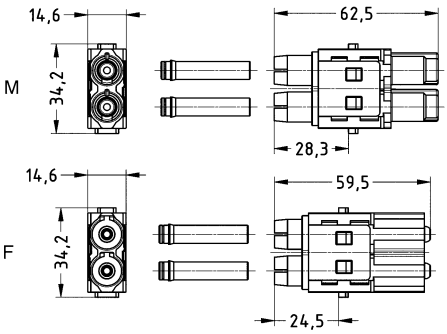
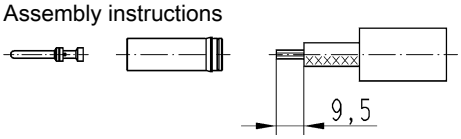
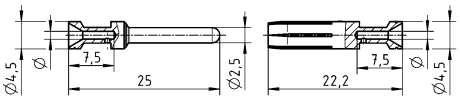
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han® HV Single module

Number of contacts

2

16 A 2.500 V 15 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® HV module, Single module, Crimp termination, Pack contents: 1 module, 2 locking sleeves, 2 heat shrink tubes  Please order crimp contacts separately.	0.5 ... 4	09 14 002 3025	09 14 002 3125	 Assembly instructions  **ATTENTION!** Stripping length 9.5 mm Crimp with crimping tool 09 99 000 0888 Snap crimped cable in the insert. Shrink the heat shrink tube over the rear of contact.
Han E®, Crimp contact, Contact surface: Silver plated 	0.5 0.75 1 1.5 2.5 3 4	09 33 000 6121 09 33 000 6114 09 33 000 6105 09 33 000 6104 09 33 000 6102 09 33 000 6106 09 33 000 6107	09 33 000 6220 09 33 000 6214 09 33 000 6205 09 33 000 6204 09 33 000 6202 09 33 000 6206 09 33 000 6207	

Features

- Han-Quick Lock® or crimp termination available
- Standard module for signal up to 10 A

Technical characteristics

Number of contacts	12
Rated current	10 A
Rated voltage	250 V
Rated impulse voltage	4 kV
Pollution degree	3
Rated voltage acc. to UL	600 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption, compliant

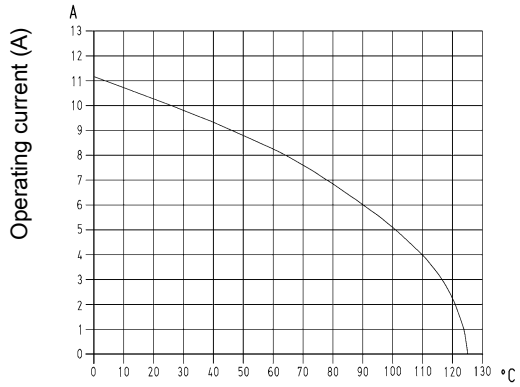
Derating

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-Quick Lock® termination

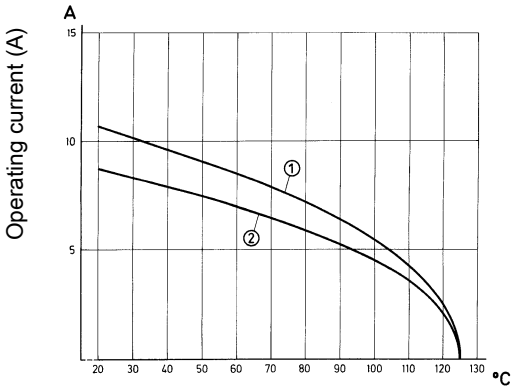


Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²

Derating

Crimp termination



Ambient temperature (°C)

① 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1 mm²

Specifications and approvals

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

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

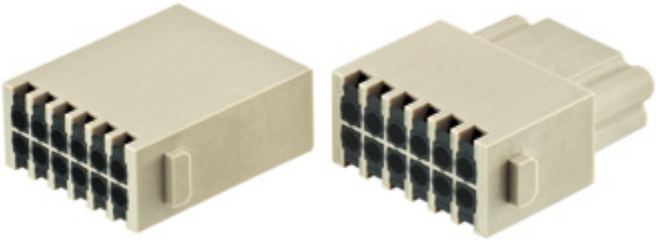
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

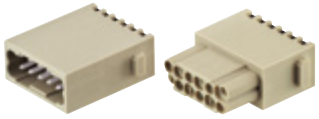
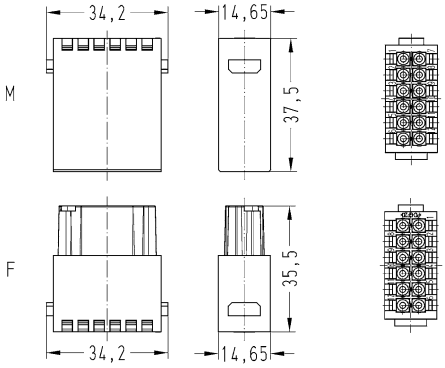
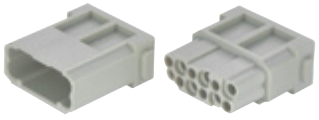
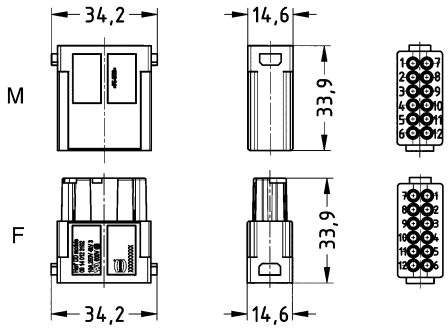
Han DD® module

Number of contacts

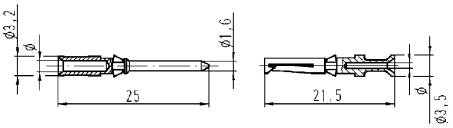
12

10 A 250 V 4 kV 3

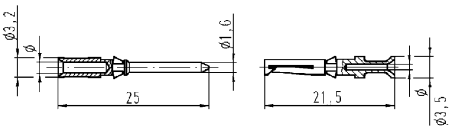


Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han DD® module, Han-Quick Lock® termination, Contact surface: Silver plated  Black slide	0.25 ... 1.5	09 14 012 2632	09 14 012 2732	 Contact arrangement (view from termination side) Stripping length 10 mm
Han-Modular®, Han DD® module, Han-Quick Lock® termination, Contact surface: Gold plated Black slide	0.25 ... 1.5	09 14 012 2634	09 14 012 2734	
Han-Modular®, Han DD® module, Crimp termination  Please order crimp contacts separately.	0.14 ... 2.5	09 14 012 3002	09 14 012 3102	 Contact arrangement (view from termination side)

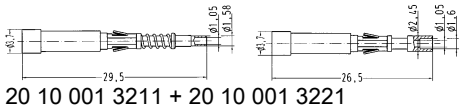
Han DD® module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han D®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
FO contact, for 1 mm plastic fibre 		20 10 001 3211	20 10 001 3221	 20 10 001 3211 + 20 10 001 3221

Han DD® double module

Features

- 36 Han D® contacts up to 400 V
- Suitable for transmitting power (10 A) and signals in one module
- e.g. for three phase AC motors including feedback for all six axes of a robot

Technical characteristics

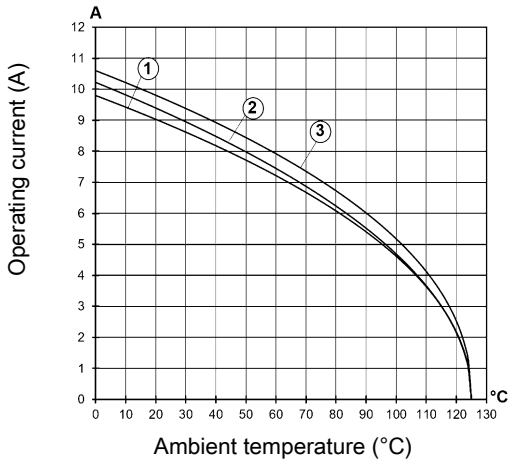
Number of contacts	36
Rated current	10 A
Rated voltage	400 V
Rated impulse voltage	6 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

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 24 B hoods/housings with 3 modules Conductor cross-section 1 mm²
② 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²
③ 24 B hoods/housings with 3 modules Conductor cross-section 2.5 mm²

Specifications and approvals

EN 60664-1
IEC 61984

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

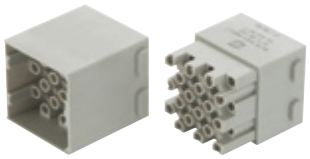
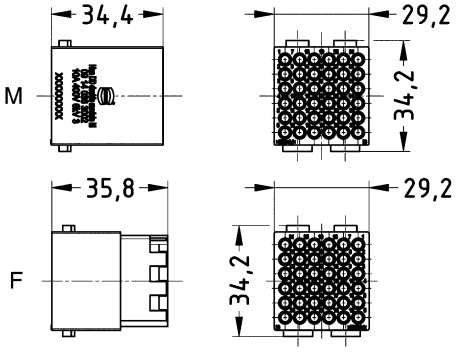
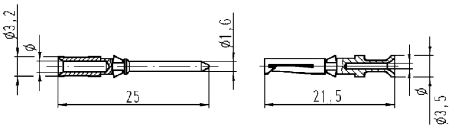
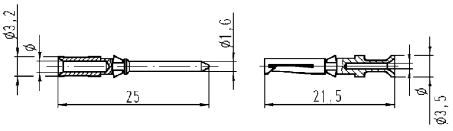
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

Han DD® double module

Number of contacts

36

10 A 400 V 6 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han DD® module, Crimp termination  Please order crimp contacts separately.	0.14 ... 2.5	09 14 036 3002	09 14 036 3102	 Contact arrangement (view from termination side)
Han D®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Technical characteristics

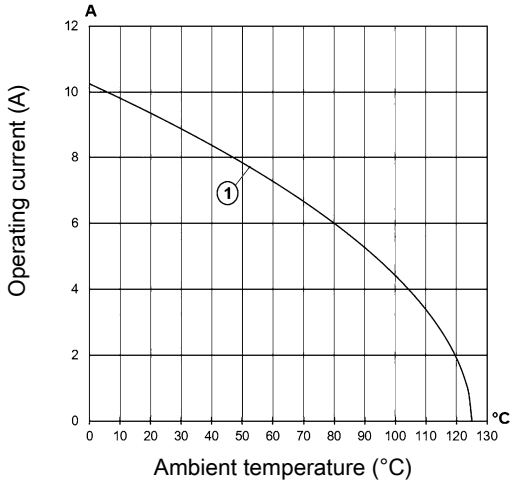
Number of contacts	42
Rated current	10 A
Rated voltage	150 V
Rated impulse voltage	2.5 kV
Pollution degree	3
Rated voltage acc. to UL	250 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Liquid crystal polymer (LCP)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 24 B hoods/housings with 3 modules Conductor cross-section 1.5 mm²

Specifications and approvals

UL 1977 ECBT2.E235076
EN 60664-1
IEC 61984

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

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

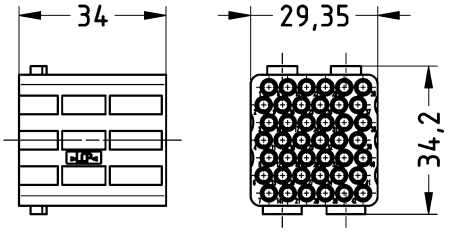
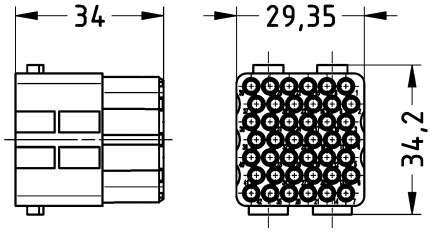
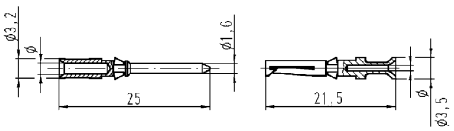
Han DD® Quad module

Modu-
lar

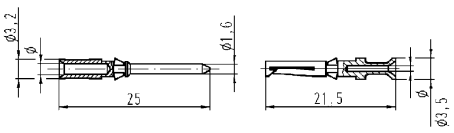
Number of contacts

42

10 A 150 V 2.5 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han DD® Quad module, Crimp termination  Please order crimp contacts separately.	0.14 ... 2.5	09 14 042 3001	09 14 042 3101	 
Han D®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Features

- Suitable for Han D® crimp contacts
- High packing density

Technical characteristics

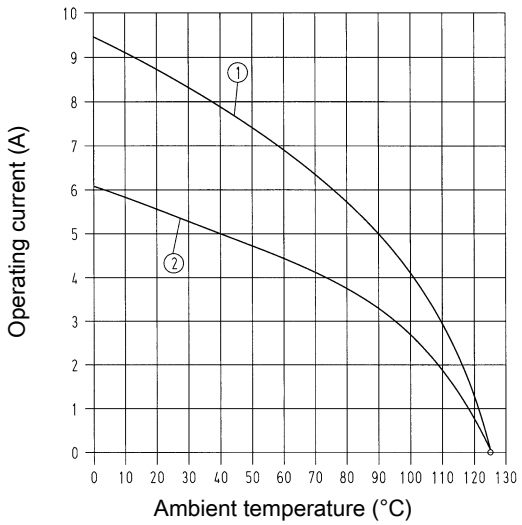
Number of contacts	17
Rated current	10 A
Rated voltage	160 V
Rated impulse voltage	2.5 kV
Pollution degree	3
Rated voltage acc. to UL	250 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤3 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 24 B hoods/housings with 6 modules Conductor cross-section 1.5 mm²
② 24 B hoods/housings with 6 modules Conductor cross-section 1 mm²

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

Crimping tools see chapter Han 90

Remarks on the crimp technique

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

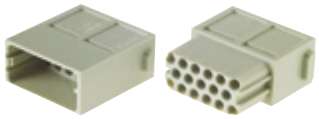
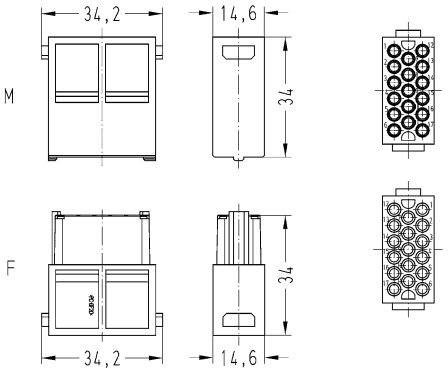
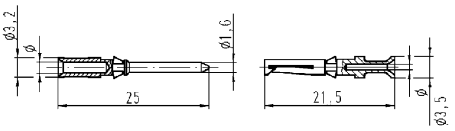
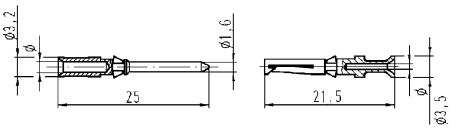
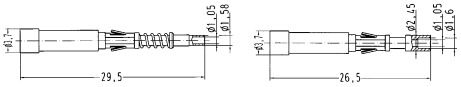
Han® DDD module

Number of contacts

17

10 A 160 V 2.5 kV 3

Modu-
lar

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® DDD module, Crimp termination  Please order crimp contacts separately.	0.14 ... 2.5	09 14 017 3001	09 14 017 3101	 Contact arrangement (view from termination side)
Han D®, Crimp contact, Contact surface: Silver plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6104 09 15 000 6103 09 15 000 6105 09 15 000 6102 09 15 000 6101 09 15 000 6106	09 15 000 6204 09 15 000 6203 09 15 000 6205 09 15 000 6202 09 15 000 6201 09 15 000 6206	
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	
FO contact, for 1 mm plastic fibre 		20 10 001 3211	20 10 001 3221	 20 10 001 3211 + 20 10 001 3221

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Features

- Suitable for standard D-Sub crimp contacts
- High packing density

Technical characteristics

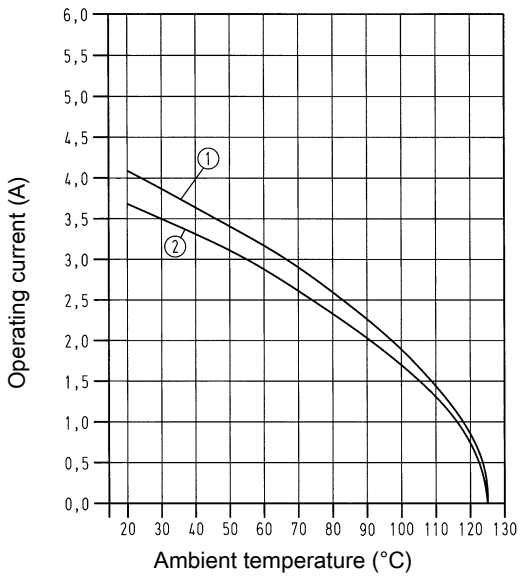
Number of contacts	25
Rated current	4 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Rated voltage acc. to UL	30 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤10 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 24 B hoods/housings with 6 modules; turned contacts Conductor cross-section 0.5 mm²
② 24 B hoods/housings with 6 modules; stamped contacts Conductor cross-section 0.5 mm²

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076

Details

Guide pins and bushes are recommended (see chapter Han 80).

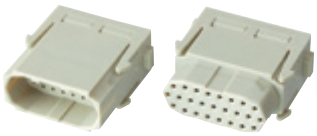
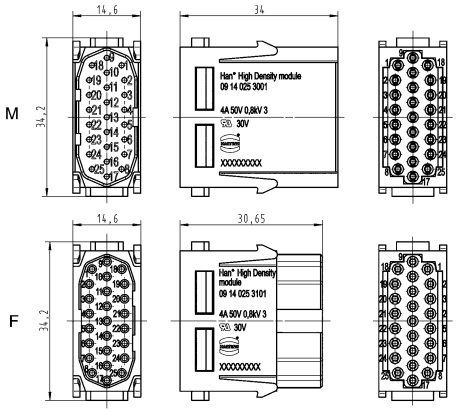
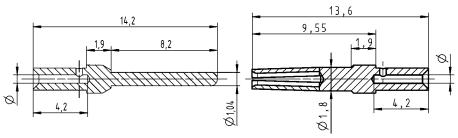
Han® High Density module

Modu-
lar

Number of contacts

25

4 A 50 V 0.8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® High Density module, Crimp termination  Please order crimp contacts separately.	0.09 ... 0.52	09 14 025 3001	09 14 025 3101	 Contact arrangement (view from termination side)
D-Sub, Standard, Crimp contact 	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	

Conductor cross-section	ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm
for stranded wire according IEC 60228 Class 5		

Han® Full High Density module

Features

- Suitable for standard D-Sub crimp contacts
- 44 % higher density

Technical characteristics

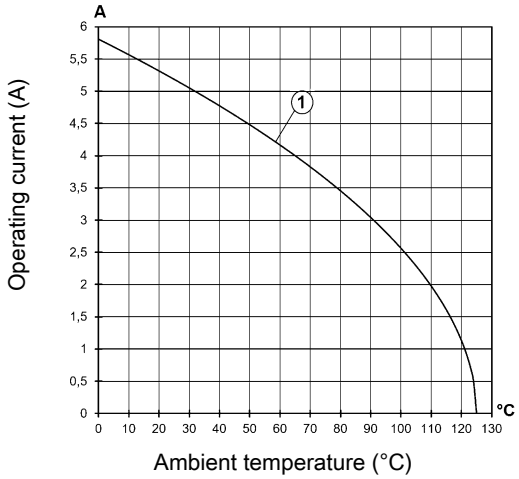
Number of contacts	36
Rated current	4 A
Rated voltage	32 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤10 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

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 6 B hoods/housings with 2 modules Conductor cross-section 0.5 mm²

Specifications and approvals

EN 60664-1
IEC 61984

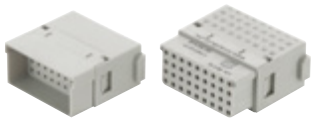
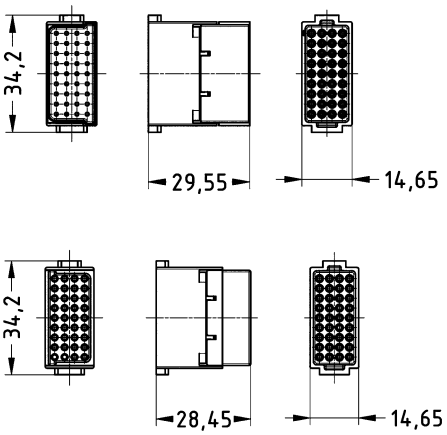
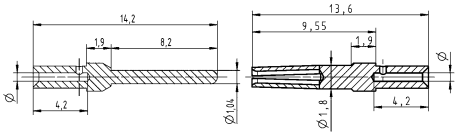
Han® Full High Density module

Modu-
lar

Number of contacts

36

4 A 32 V 0.8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Full High Density module, Crimp termination  Please order crimp contacts separately.	0.09 ... 0.52	09 14 036 3001	09 14 036 3101	
D-Sub, Standard, Crimp contact 	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	

Conductor cross-section	ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm
for stranded wire according IEC 60228 Class 5		

Han® Shielded module basic

Features

- EMC compatible connection of the cable screen with a large-area shielding plate
- High contact density up to 27 shielded contacts
- Suitable for turned or stamped D-Sub contacts
- Applicable as cost effective shielding connection

Technical characteristics

Number of contacts	27
Additional contacts	+ shielding
Rated current	4 A
Rated voltage	32 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤10 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material (accessories)	Polyamide (PA), Metal
Colour (accessories)	Black
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

Specifications and approvals

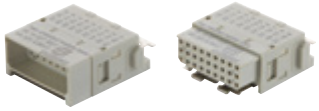
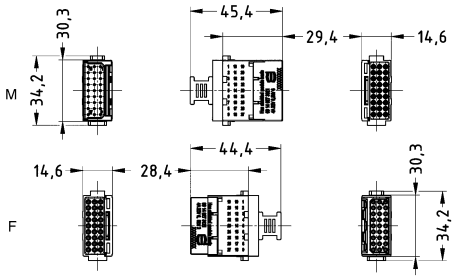
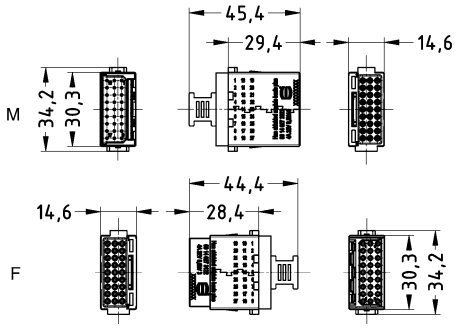
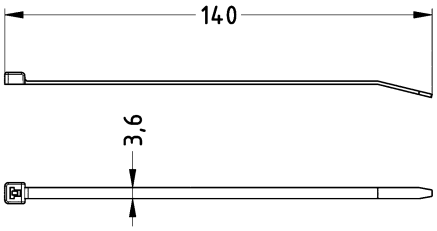
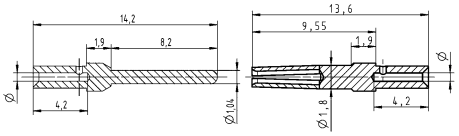
EN 60664-1
IEC 61984

Han® Shielded module basic

Number of contacts

27

4 A 32 V 0.8 kV 3
+ shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Shielded module basic, With 180° shielding element, Crimp termination  Please order crimp contacts separately.	0.09 ... 0.52	09 14 027 3021	09 14 027 3121	
Han-Modular®, Han® Shielded module basic plus, With 360° shielding element, Crimp termination  With additional shield connection to the hinged frame Please order crimp contacts separately.	0.09 ... 0.52	09 14 027 3022	09 14 027 3122	
Cable tie, With metal latch 		09 14 000 9809	09 14 000 9809	
D-Sub, Standard, Crimp contact 	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	

Conductor cross-section	ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm
for stranded wire according IEC 60228 Class 5		

Han® D-Sub module

Features

- D-Sub 1 (9-pin) in the Han-Modular® system
- Suitable for the transmission of sensitive signals
- Compatible to crimp, solder or IDC termination

Technical characteristics

Number of contacts	9
Rated current	5 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Rated voltage acc. to UL	30 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤10 mΩ
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC), Zinc die-cast
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

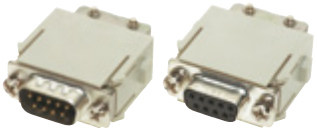
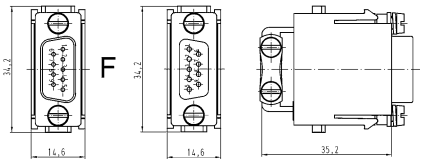
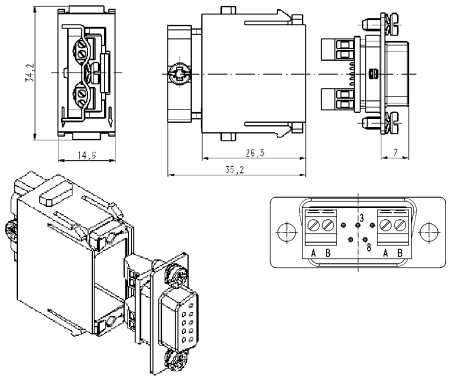
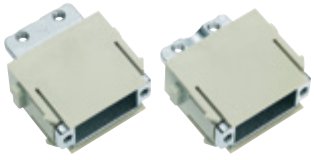
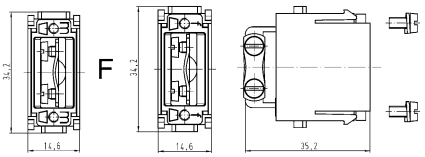
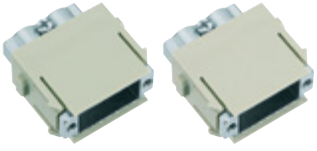
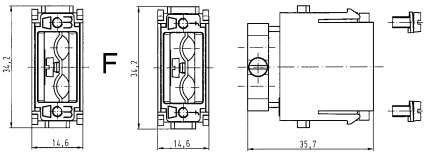
Guide pins and bushes are recommended (see chapter Han 80).

Modu-
lar

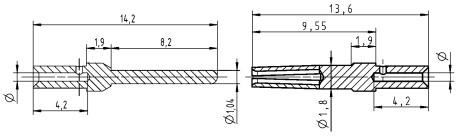
Number of contacts

9

5 A 50 V 0.8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® D-Sub module, Crimp termination  Please order crimp contacts separately.	0.08 ... 0.52	09 14 009 3001	09 14 009 3101	M F 
Han-Modular®, Han® D-Sub module, Screw termination  for RS 485-based bus systems with T-functionality	0.08 ... 0.52		09 14 009 3151	 Contact arrangement (view from termination side) Signal A: Contact no. 8 Signal B: Contact no. 3
Han-Modular®, Adapter module, for D-Sub 1 (9-pin)  for one cable		09 14 000 9930	09 14 000 9931	M F 
Han-Modular®, Adapter module, for D-Sub 1 (9-pin)  for two cables		09 14 000 9932	09 14 000 9933	M F 

Han® D-Sub module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
D-Sub, Standard, Crimp contact 	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	

Conductor cross-section	ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm
for stranded wire according IEC 60228 Class 5		

Han® USB module

Modu-
lar

Features

- According to USB 2.0 / USB 3.0 specification
- Simple and cost effective termination by plug in patch cable
- Cable tie strain relief

Technical characteristics

Number of contacts	4, 8
Rated current	1 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Rated voltage acc. to UL	30 V
Insulation resistance	$>10^{10}$ Ω
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

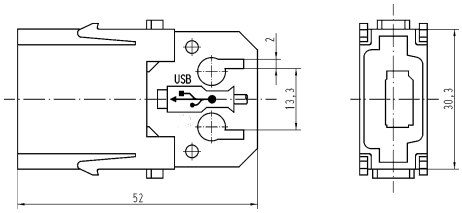
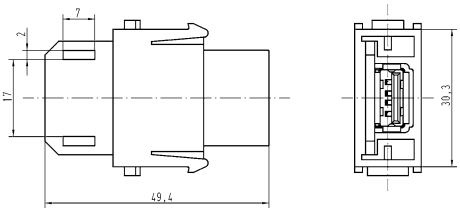
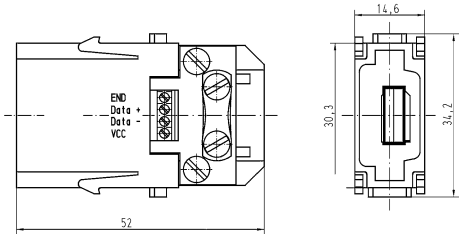
EN 60664-1
IEC 60352-4
UL 1977 ECBT2.E235076
DNV GL

Han® USB module

Number of contacts

4

1 A 50 V 0.8 kV 3

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® USB module, for patch cable  USB 2.0		09 14 001 4601	09 14 001 4701	 
Han-Modular®, Han® USB module, for patch cable  USB 3.0			09 14 001 4703	
Han-Modular®, Han® USB module, for screw termination, Screw termination  USB 2.0	0.14 ... 0.5	09 14 001 4651		 Stripping length 4.5 mm Tightening torque 0.12 Nm

Han® FireWire module

1 A 50 V 0.8 kV 3

Features

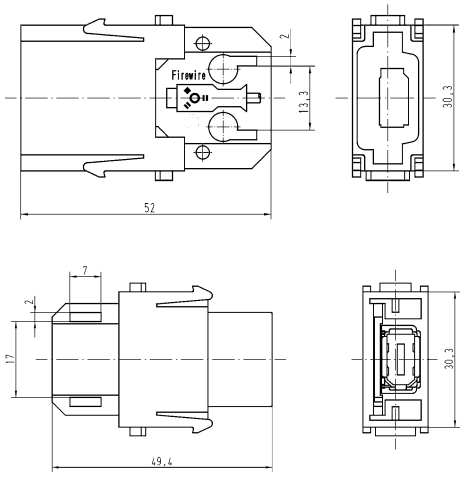
- Compatibel to IEEE 1394
- Simple and cost effective termination by plug in patch cable
- Cable tie strain relief

Technical characteristics

Number of contacts	6
Rated current	1 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® FireWire module, for patch cable 	09 14 001 4611	09 14 001 4711	

Han® RJ45 module, female

Number of contacts

8

Features

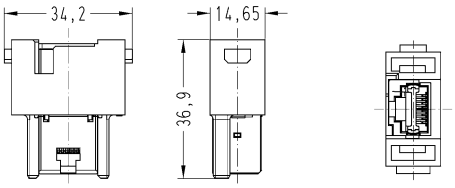
- Single module with standard shielded RJ45 plug and jack
- Cat. 6 for all data pairs (8-pin)
- Patch cables are assembled/removed without tools

Technical characteristics

Number of contacts	8, 4
Rated current	1 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Rated voltage acc. to UL	30 V
Insulation resistance	>10^{10} Ω
Limiting temperature	-40 ... +70 °C
Mating cycles	≥500
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz, Cat. 5, Class D up to 100 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s
Material (insert)	Polyamide (PA), Polycarbonate (PC), Zinc die-cast, nickel-plated
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
UL 1977 ECBT2.E235076

Identification	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® RJ45 module, Gender changer, for patch cable, 8-pins, Cat. 6_A 	09 14 001 4721	
Han-Modular®, Han® RJ45 module, Single module 	09 14 001 4722	
Please order insert separately.		

Han® RJ45 module, female

Identification		Part number Female	Drawing (dimensions in mm)
Data connectors, Han® RJ45 cable jack, preLink® IDC insulation displacement termination, 8-pins, Cat. 6_A 	AWG 23 ... AWG 22	09 14 008 4720	
Data connectors, Han® RJ45 cable jack, IDC termination, 4-pin, Cat. 5 	AWG 24 ... AWG 22	09 14 545 1120	
Data connectors, Han® RJ45 cable jack, IDC termination, 8-pins, Cat. 6_A 	AWG 24 ... AWG 22 AWG 28 ... AWG 24	09 14 545 1562 09 14 545 1561	

Han® RJ45 module, male

Features

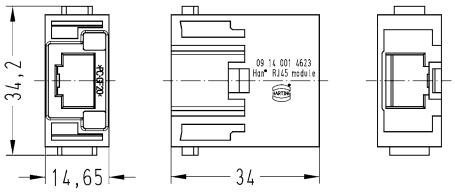
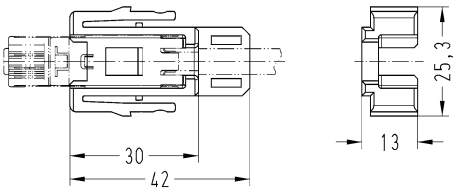
- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- 360° shielded contact
- Field assembly without tools possible by means of *HARAX*® rapid termination in IDC technology
- Suitable for termination of massive and flexible wires

Technical characteristics

Number of contacts	4
Insulation resistance	>10^{10} Ω
Limiting temperature	-40 ... +70 °C
Mating cycles	≥500
Wire outer diameter	≤1.6 mm
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Data rate	10 Mbit/s, 100 Mbit/s
Material (insert)	Polycarbonate (PC), Polyamide (PA)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
IEC 60603-7
DIN EN 45545-2 R26: HL1, HL2, HL3

Identification		Part number Male	Drawing (dimensions in mm)
Han-Modular®, Han® RJ45 module, Single module 		09 14 001 4623	
Data connectors, RJ Industrial RJ45 connector set, Shielded 	AWG 24 ... AWG 22 AWG 26	09 45 400 1100 09 45 400 1109	 Wire outer diameter ≤ 1.6 mm

Han® RJ45 module, male

Number of contacts

8

Modu-
lar

Features

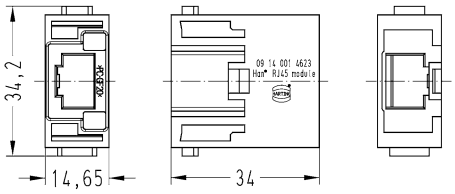
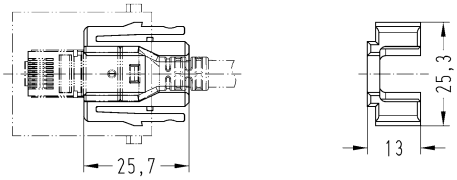
- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- 360° shielded contact
- Field assembly without tools possible by means of *HARAX*® rapid termination in IDC technology
- Gigalink: Field assembly by means of piercing contacts (Assembly tool 09 45 800 0520)
- Suitable for termination of massive and flexible wires
- Gigalink: Suitable for termination of flexible wires

Technical characteristics

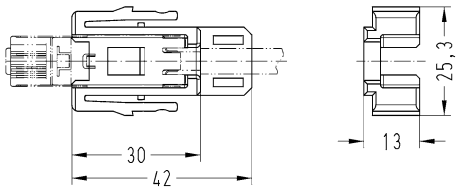
Number of contacts	8
Insulation resistance	>10^{10} Ω
Limiting temperature	-40 ... +70 °C
Mating cycles	≥500
Wire outer diameter	≤1.05 mm, ≤1.5 mm
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz, Cat. 6, Class E up to 250 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s
Material (insert)	Polycarbonate (PC), Polyamide (PA)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

EN 60664-1
IEC 61984
IEC 60603-7
DIN EN 45545-2 R22: HL1, HL2, HL3
DIN EN 45545-2 R23: HL1, HL2, HL3
UL 1977 ECBT2.E102079
CSA-C22.2 No. 182.3 ECBT8.E102079
DNV GL

Identification		Part number Male	Drawing (dimensions in mm)
Han-Modular®, Han® RJ45 module, Single module 		09 14 001 4623	
Data connectors, RJ Industrial RJ45 Gigalink connector set, Piercing termination, Fully shielded, 360° shielding contact, Cat. 6_A 	AWG 28 ... AWG 24	09 45 400 1520	 Wire outer diameter ≤ 1.05 mm

Han® RJ45 module, male

Identification		Part number Male	Drawing (dimensions in mm)
Data connectors, RJ Industrial RJ45 connector set, Shielded, Cat. 6 	AWG 27 ... AWG 22	09 45 400 1560	 Wire outer diameter ≤ 1.5 mm

Features

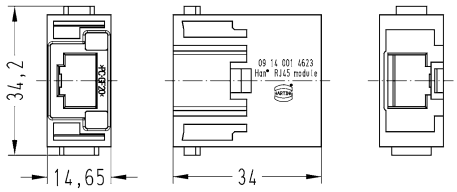
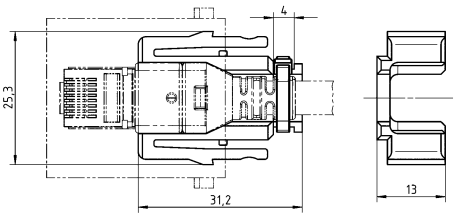
- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- Patch cables are assembled/removed without tools

Technical characteristics

Insulation resistance	$>10^{10}$ Ω
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

EN 60664-1
IEC 61984
DNV GL

Identification	Part number Male	Drawing (dimensions in mm)
Han-Modular®, Han® RJ45 module, Single module 	09 14 001 4623	
Han-Modular®, Han® RJ45 module, Adapter, for patch cable 	09 14 000 9966	

RJ45 patch cable

4x 2 Twisted Pair
HARTING RJ Industrial®
HARTING RJ Industrial®

Features

- Locking lever protection for RJ45 connector latch
- Very short plug design in combination with robust bend protection
- Fully EMC screened (aluminium-clad foil and braid)

Technical characteristics

Number of cores	8
Core structure	4x 2 Twisted Pair
Connector 1	HARTING RJ Industrial®
Connector 2	HARTING RJ Industrial®
Limiting temperature	-30 ... +75 °C unmoved, -5 ... +50 °C moved
Degree of protection acc. to IEC 60529	IP20
Transmission characteristics	Cat. 5e, Class D up to 100 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s
Material (cable)	PUR (polyurethane)
Colour (cable)	Yellow
RoHS	compliant

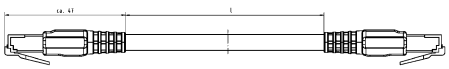
Specifications and approvals

IEC 11801
IEC 24702
IEC 61935-2

CE

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
RJ45, Copper cable (round), Halogen-free, Oil resistant, Cable assemblies, Pre-assembled on both sides, IP20	0.2 m 0.3 m 0.4 m 0.5 m 0.6 m 0.7 m 0.8 m 0.9 m 1 m 1.5 m 2 m 2.5 m 3 m 3.5 m 4 m 5 m 6 m 7 m 7.5 m 8 m 9 m 10 m 12 m 15 m 20 m 25 m 30 m 35 m 40 m 50 m	09 47 474 7001 09 47 474 7002 09 47 474 7003 09 47 474 7004 09 47 474 7005 09 47 474 7006 09 47 474 7007 09 47 474 7008 09 47 474 7009 09 47 474 7010 09 47 474 7011 09 47 474 7012 09 47 474 7013 09 47 474 7024 09 47 474 7014 09 47 474 7015 09 47 474 7016 09 47 474 7017 09 47 474 7018 09 47 474 7019 09 47 474 7020 09 47 474 7021 09 47 474 7035 09 47 474 7022 09 47 474 7023 09 47 474 7025 09 47 474 7027 09 47 474 7026 09 47 474 7028 09 47 474 7029	

RJ45 patch cable

4x 2 Twisted Pair
HARTING RJ Industrial®
HARTING RJ Industrial®

Modu-
lar

Features

- Locking lever protection for RJ45 connector latch
- Very short plug design in combination with robust bend protection
- Fully EMC screened (aluminium-clad foil and braid)

Technical characteristics

Number of cores	8
Core structure	4x 2 Twisted Pair
Connector 1	HARTING RJ Industrial®
Connector 2	HARTING RJ Industrial®
Limiting temperature	-30 ... +75 °C unmoved, -5 ... +50 °C moved
Degree of protection acc. to IEC 60529	IP20
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 2.5 Gbit/s, 5 Gbit/s, 10 Gbit/s
Material (cable)	PUR (polyurethane)
Colour (cable)	Yellow
RoHS	compliant

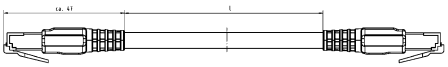
Specifications and approvals

IEC 11801
IEC 61156-6
IEC 24702

CE

Details

Other cable lengths on request!

Identification	Cable length	Part number	Drawing (dimensions in mm)
RJ45, Copper cable (round), Wiring 1:1, Halogen-free, Oil resistant, Cable assemblies, Pre-assembled on both sides, IP20	0.2 m 0.3 m 0.4 m 0.5 m 0.6 m 0.7 m 0.8 m 0.9 m 1 m 1.5 m 2 m 2.5 m 3 m 4 m 5 m 6 m 7 m 7.5 m 8 m 9 m 10 m 15 m 16 m 20 m 25 m 30 m 100 m	09 47 474 7101 09 47 474 7102 09 47 474 7103 09 47 474 7104 09 47 474 7105 09 47 474 7106 09 47 474 7107 09 47 474 7108 09 47 474 7109 09 47 474 7110 09 47 474 7111 09 47 474 7112 09 47 474 7113 09 47 474 7114 09 47 474 7115 09 47 474 7116 09 47 474 7117 09 47 474 7118 09 47 474 7119 09 47 474 7120 09 47 474 7121 09 47 474 7122 09 47 474 7124 09 47 474 7123 09 47 474 7126 09 47 474 7125 09 47 474 7199	

Han® Gigabit module

Features

- Shielding bus separate from housing potential
- Suitable for the transmission of sensitive signals (e.g. bus signals)
- Usable for Gigabit Ethernet cat. 6_A
- Suitable for PoE++

Technical characteristics

Number of contacts	8
Additional contacts	+ shielding
Rated current	5 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Rated voltage	50 V AC, 60 V DC
Rated voltage acc. to UL	30 V
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤10 mΩ
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz, Cat. 7_A, Class F_A up to 1,000 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s, 10 Gbit/s
Material (insert)	Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

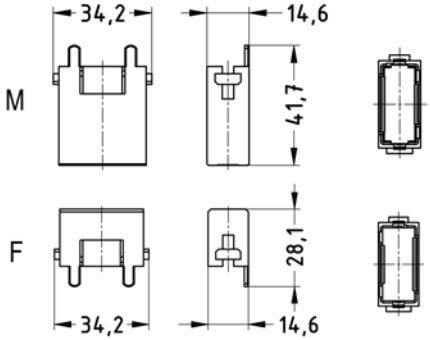
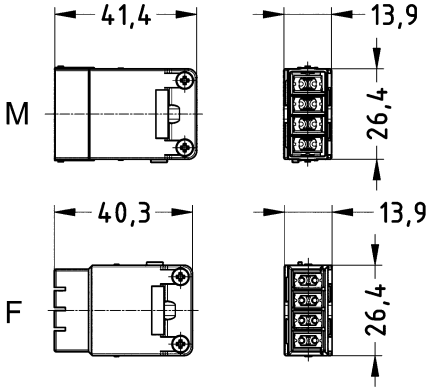
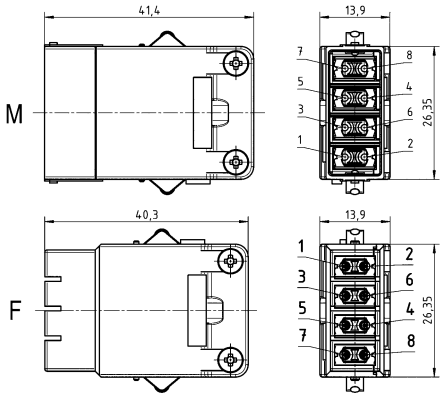
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Han® Gigabit module

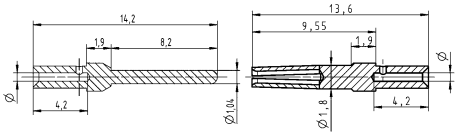
Number of contacts

8

5 A 50 V 0.8 kV 3
+ shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Adapter module, Han® Gigabit module, Han® Shielded module, Han® Megabit module 		09 14 001 3011	09 14 001 3111	
Han® Gigabit insert, Crimp termination, Cat. 6A  Please order crimp contacts separately. Please order adapter module separately. Please order cable clamp or crimp flange separately.	0.09 ... 0.52	09 14 008 3011	09 14 008 3111	 Cable outer diameter ≤ 14 mm
Han® Gigabit insert, Crimp termination, Cat. 6A  With additional shield connection to the hinged frame Please order crimp contacts separately. Please order adapter module separately.	0.09 ... 0.52	09 14 008 3012	09 14 008 3112	 Cable outer diameter ≤ 14 mm

Han® Gigabit module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
D-Sub, Standard, Crimp contact	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	

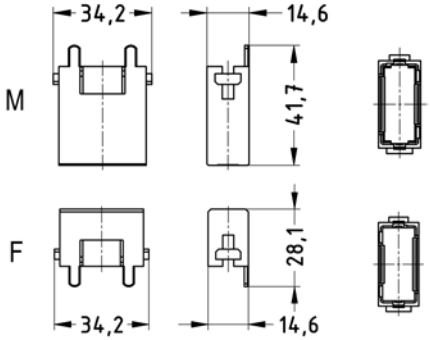
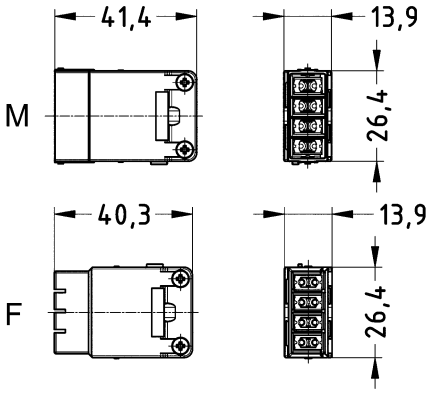
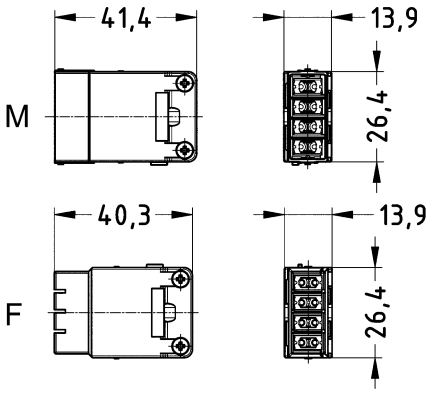
Conductor cross-section	ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm
for stranded wire according IEC 60228 Class 5		

Han® Gigabit module

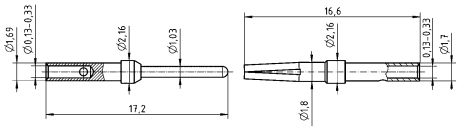
Number of contacts

8

5 A 50 V 0.8 kV 3
+ shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Adapter module, Han® Gigabit module, Han® Shielded module, Han® Megabit module 		09 14 001 3011	09 14 001 3111	
Han® Gigabit insert, Crimp termination, Cat. 7_A  Please order crimp contacts separately. Please order adapter module separately.	0.09 ... 0.52	09 14 008 3031	09 14 008 3131	 Cable outer diameter ≤ 14 mm
Han® Gigabit insert, Crimp termination, Cat. 7_A  With additional shield connection to the hinged frame Please order crimp contacts separately. Please order adapter module separately.	0.09 ... 0.52	09 14 008 3032	09 14 008 3132	 Cable outer diameter ≤ 14 mm

Han® Gigabit module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
D-Sub, Crimp contact, Cat. 7_A 	0.13 ... 0.33	09 93 000 5576	09 93 000 5476	

Han® Shielded module

Modu-
lar

Features

- Shielding bus separate from housing potential
- Suitable for the transmission of sensitive signals (e.g. bus signals)

Technical characteristics

Number of contacts	20
Additional contacts	+ shielding
Rated current	4 A
Rated voltage	32 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤10 mΩ
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Liquid crystal polymer (LCP), Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

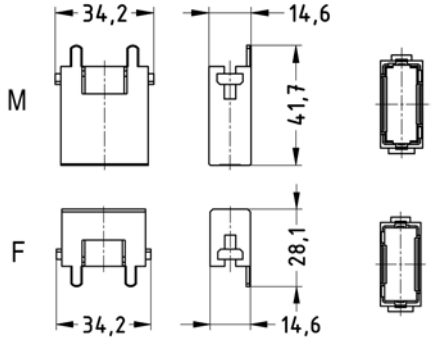
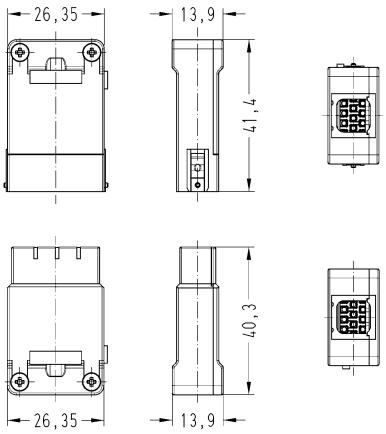
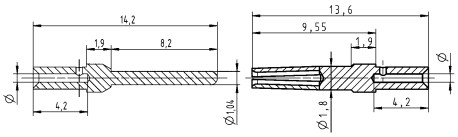
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Han® Shielded module

Number of contacts

20

4 A 32 V 0.8 kV 3
+ shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Adapter module, Han® Gigabit module, Han® Shielded module, Han® Megabit module 		09 14 001 3011	09 14 001 3111	
Han® Shielded Module insert, Crimp termination  Please order crimp contacts separately.	0.09 ... 0.52	09 14 020 3013	09 14 020 3113	
D-Sub, Standard, Crimp contact 	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	

Conductor cross-section	ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm
for stranded wire according IEC 60228 Class 5		

Han® High density shielded module

Modu-
lar

Features

- Transmission of shielding separately from the hood’s ground
- Suitable for the transmission of sensitive signals (e.g. bus signals)
- Higher density of crimping contacts

Technical characteristics

Number of contacts	27
Additional contacts	+ shielding
Rated current	2 A
Rated voltage	16 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Liquid crystal polymer (LCP), Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

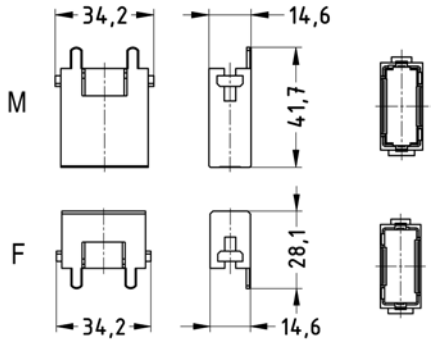
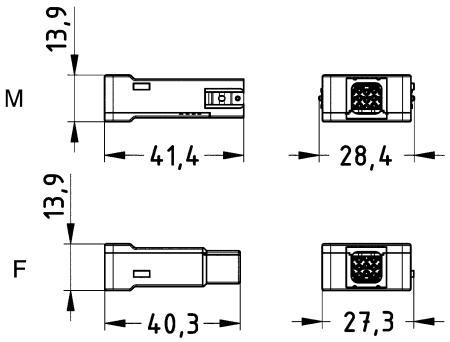
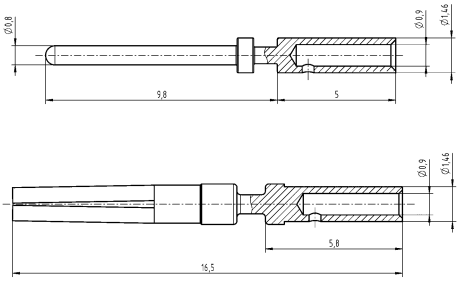
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Han® High density shielded module

Number of contacts

27

2 A 16 V 0.8 kV 3
+ shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Adapter module, Han® Gigabit module, Han® Shielded module, Han® Megabit module 		09 14 001 3011	09 14 001 3111	
Han-Modular®, Han® High density shielded module, Crimp termination  Please order crimp contacts separately.	0.13 ... 0.33	09 14 027 3013	09 14 027 3113	
Circular connectors M12, Crimp contact, Contact surface: Gold plated 	0.13 ... 0.33	21 01 100 9020	21 01 100 9025	

Han® Megabit module

Features

- Shielding bus separate from housing potential
- Usable for Megabit Ethernet cat. 5e
- Suitable for Han® B, Han® M, Han® EMC and Han® HPR hoods/housings, high construction

Technical characteristics

Number of contacts	8
Additional contacts	+ shielding
Rated current	10 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤3 mΩ
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Data rate	10 Mbit/s, 100 Mbit/s
Material (insert)	Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

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

Details

Not suitable for hoods/housings low construction as well as Han-Modular® Eco, Han-Modular® Compact and Han-Modular® Twin.

Crimping tools see chapter Han 90

Remarks on the crimp technique

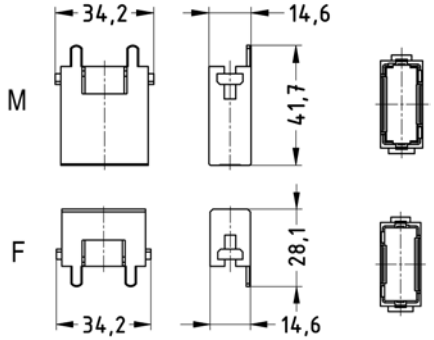
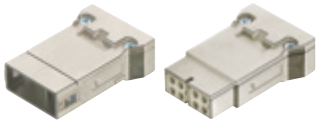
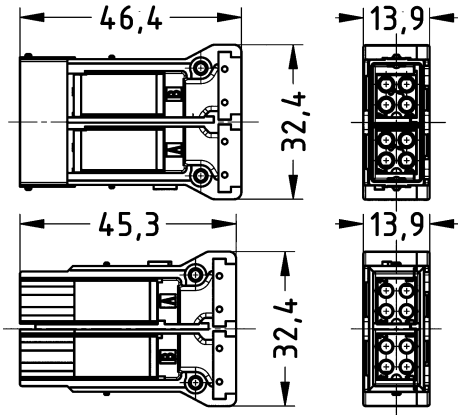
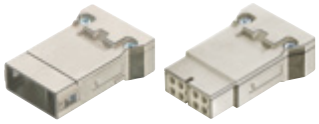
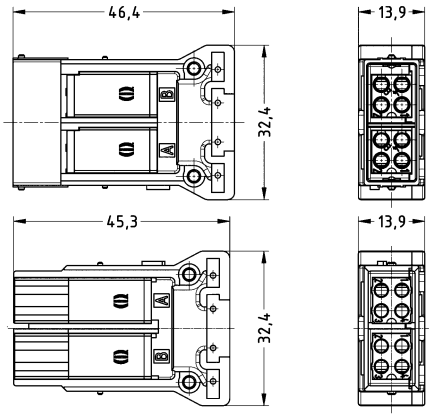
The wire gauges mentioned in the catalogue refer to geometric wire gauges of cables.

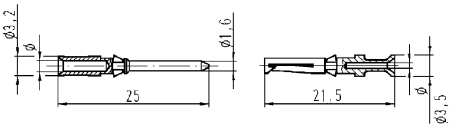
Han® Megabit module

Number of contacts

8

10 A 50 V 0.8 kV 3
+ shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Adapter module, Han® Gigabit module, Han® Shielded module, Han® Megabit module 		09 14 001 3011	09 14 001 3111	
Han® Megabit insert, 2x 4 contacts, 2 cable entries, Crimp termination  Please order crimp contacts separately. Please order adapter module separately.	0.14 ... 2.5	09 14 008 3016	09 14 008 3116	
Han® Megabit insert, 2x 4 contacts, One entry, Crimp termination  Please order crimp contacts separately. Please order adapter module separately.	0.14 ... 2.5	09 14 008 3021	09 14 008 3121	

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

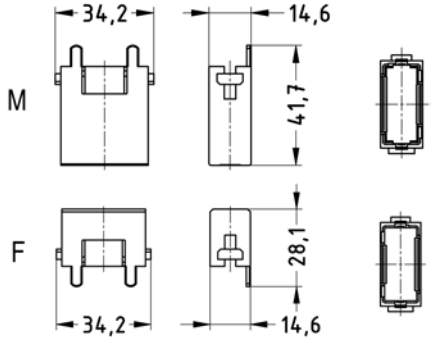
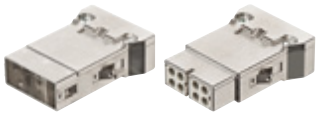
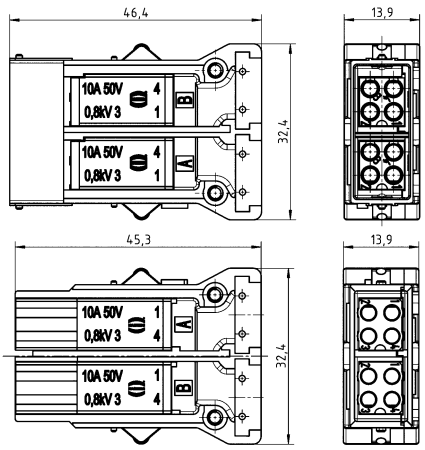
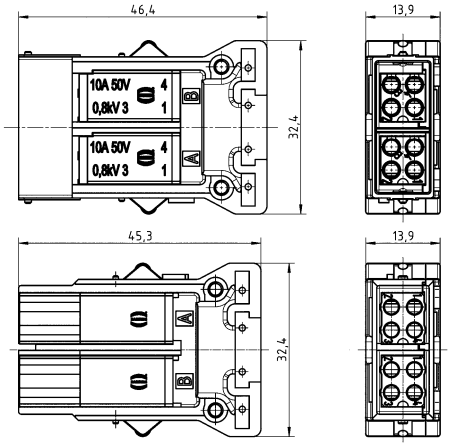
Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Han® Megabit module

Number of contacts

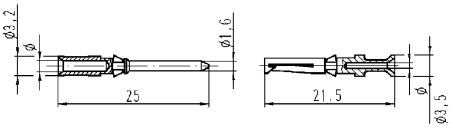
8

10 A 50 V 0.8 kV 3
+ shielding

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Adapter module, Han® Gigabit module, Han® Shielded module, Han® Megabit module 		09 14 001 3011	09 14 001 3111	
Han® Megabit insert, 2x 4 contacts, 2 cable entries, Crimp termination  With additional shield connection to the hinged frame Please order crimp contacts separately. Please order adapter module separately.	0.14 ... 2.5	09 14 008 3017	09 14 008 3117	
Han® Megabit insert, 2x 4 contacts, One entry, Crimp termination  With additional shield connection to the hinged frame Please order crimp contacts separately. Please order adapter module separately.	0.14 ... 2.5	09 14 008 3022	09 14 008 3122	

Han® Megabit module

Modu-
lar

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

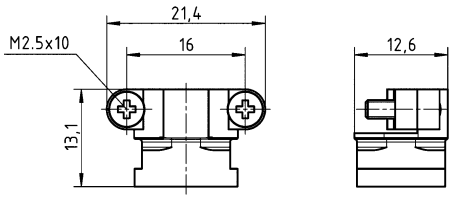
Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Technical characteristics

Material (accessories)	Zinc die-cast
RoHS	compliant, compliant with exemption

Details

09 14 000 9983, 61 03 000 0143 and 61 03 000 0148 only for modules with one cable entry!

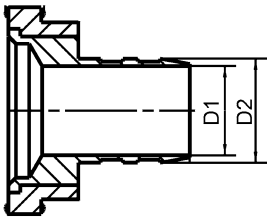
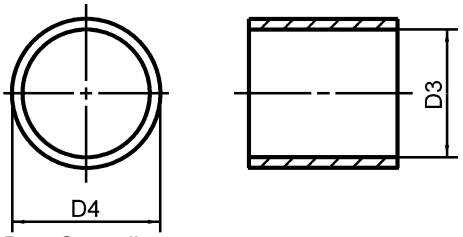
Identification	Cable diameter (mm)	Part number	Drawing (dimensions in mm)
Cable clamp 	6 ... 10	09 14 000 9983	
Cable clamp, D-Sub 1 ... 4 	5 ... 7 7 ... 10 9 ... 12 11 ... 14	61 03 000 0141 61 03 000 0044 61 03 000 0143 61 03 000 0148	

Technical characteristics

RoHS	compliant

Details

HARTING offers to test and define the best crimp flange and ferrule combination for customer specific cables.

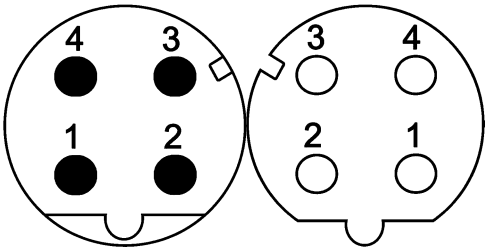
Identification	Inner diameter	Outer diameter	Part number	Drawing (dimensions in mm)
D-Sub, Crimp flange, D-Sub 1 ... 4 	3 mm	4 mm	61 03 000 0062	 D1 = Inner diameter D2 = Outer diameter
	3.5 mm	4.5 mm	61 03 000 0063	
	4 mm	5 mm	61 03 000 0064	
	4.5 mm	5.5 mm	61 03 000 0065	
	5 mm	6 mm	61 03 000 0066	
	5.5 mm	6.5 mm	61 03 000 0166	
	6 mm	7 mm	61 03 000 0067	
	6.5 mm	7.5 mm	61 03 000 0068	
	7 mm	8 mm	61 03 000 0069	
	7.5 mm	8.5 mm	61 03 000 0070	
	8 mm	9 mm	61 03 000 0071	
	8.5 mm	9.5 mm	61 03 000 0165	
	9 mm	10 mm	61 03 000 0072	
D-Sub, Crimp ferrule 	5 mm	6 mm	61 03 000 0045	 D4 = Outer diameter D3 = Inner diameter
	5.5 mm	6.5 mm	61 03 000 0046	
	6 mm	7 mm	61 03 000 0047	
	6.5 mm	7.5 mm	61 03 000 0048	
	7 mm	8 mm	61 03 000 0049	
	7.5 mm	8.5 mm	61 03 000 0050	
	8 mm	9 mm	61 03 000 0051	
	8.5 mm	9.5 mm	61 03 000 0052	
	9 mm	10 mm	61 03 000 0053	
	9.5 mm	10.5 mm	61 03 000 0054	
	10 mm	11 mm	61 03 000 0055	
	10.5 mm	11.5 mm	61 03 000 0056	
	11 mm	12 mm	61 03 000 0057	
	11.5 mm	12.5 mm	61 03 000 0058	
	12 mm	13 mm	61 03 000 0142	
	12.5 mm	13.5 mm	61 03 000 0059	
	13 mm	14 mm	61 03 000 0127	
	13.7 mm	15 mm	61 03 000 0060	
	14 mm	15 mm	61 03 000 0061	

Han® M12 module

Number of contacts

4

4 A 32 V 0.8 kV 3
+ shielding



Technical characteristics

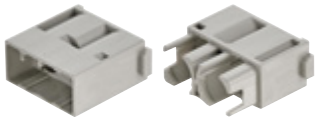
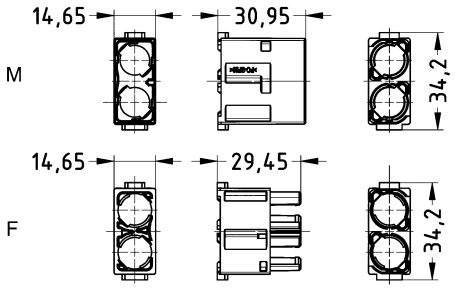
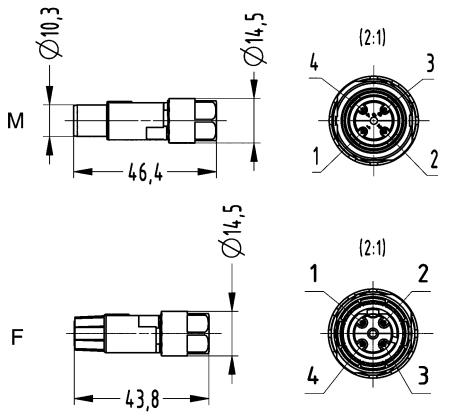
Number of contacts	4
Additional contacts	+ shielding
Rated current	4 A
Rated voltage	32 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	>10^8 Ω
Contact resistance	≤10 mΩ
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Wire outer diameter	≤2.3 mm
Transmission characteristics	Cat. 5, Class D up to 100 MHz

Technical characteristics

Material (insert)	Liquid crystal polymer (LCP), Polycarbonate (PC)
Material (shielding)	Copper alloy, nickel plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® M12 module 		09 14 002 3061	09 14 002 3161	
Han-Modular®, D-coding, Crimp termination  Please order crimp contacts separately.	0.13 ... 0.82	09 14 881 1405	09 14 881 2405	 Cable diameter 5.7 ... 8.8 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
D-Sub, Standard, Crimp contact 	0.13 ... 0.33 0.25 ... 0.52 0.33 ... 0.82	09 67 000 5576 09 67 000 8576 09 67 000 3576	09 67 000 5476 09 67 000 8476 09 67 000 3476	

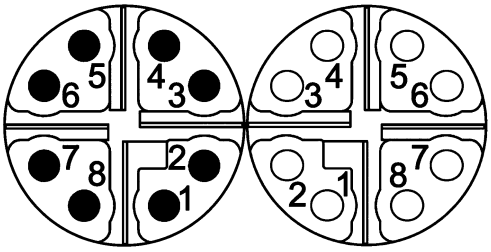
Conductor cross-section	ø	Stripping length
0.09-0.25 mm²	0.64 mm	4 mm
0.13-0.33 mm²	0.88 mm	4 mm
0.25-0.52 mm²	1.13 mm	4 mm
0.33-0.82 mm²	1.34 mm	4 mm
for stranded wire according IEC 60228 Class 5		

Han® M12 module

Number of contacts

8

0.5 A 32 V 0.8 kV 3
+ shielding



Technical characteristics

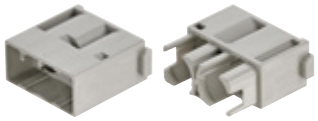
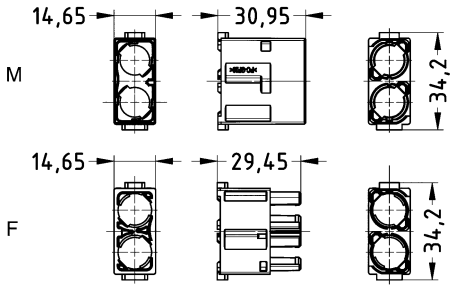
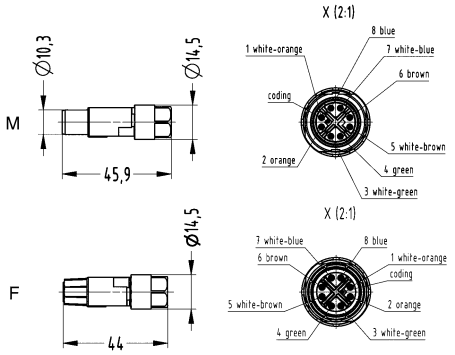
Number of contacts	8
Additional contacts	+ shielding
Rated current	0.5 A
Rated voltage	32 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	>10^8 Ω
Contact resistance	≤10 mΩ
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Wire outer diameter	≤1.4 mm
Transmission characteristics	Cat. 6_A, Class E_A up to 500 MHz

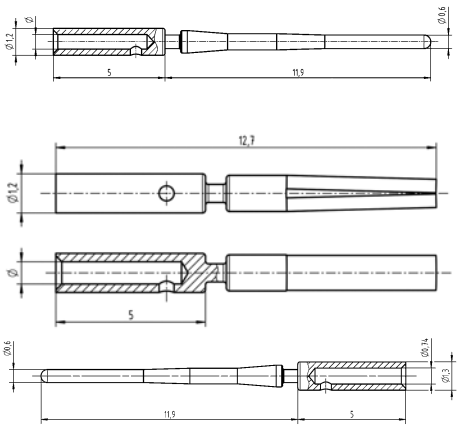
Technical characteristics

Material (insert)	Liquid crystal polymer (LCP), Polycarbonate (PC)
Material (shielding)	Copper alloy, nickel plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® M12 module 		09 14 002 3061	09 14 002 3161	
Han-Modular®, X-coding, Crimp termination  Please order crimp contacts separately.	0.08 ... 0.25	09 14 881 1805	09 14 881 2805	 Cable diameter 5.7 ... 8.8 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
har-speed, Crimp contact, Contact surface: Gold plated 	0.08 ... 0.22 0.13 ... 0.25	21 01 100 9014 21 01 100 9019	21 01 100 9023 21 01 100 9021	

Han-Quintax® module

Features

- Shielding bus separate from housing potential
- Suitable for the transmission of sensitive signals (e.g. bus signals)
- The four pole Han® Quintax contact is suitable for Ethernet cat. 5 and PROFIBUS when diagonally wiring of the data pairs.

Technical characteristics

Number of contacts	4
Additional contacts	+ shielding
Rated current	10 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤3 mΩ
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material (accessories)	Metal
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption, compliant

Specifications and approvals

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

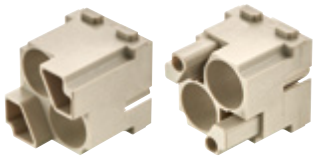
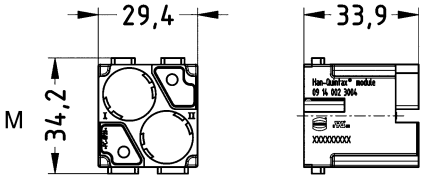
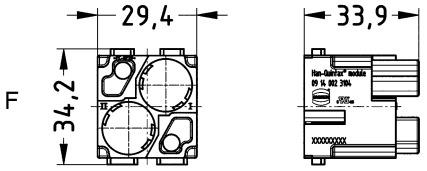
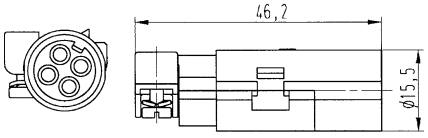
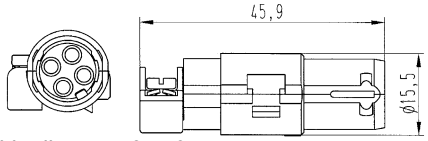
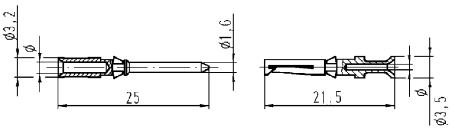
Details

Crimping tools see chapter Han 90

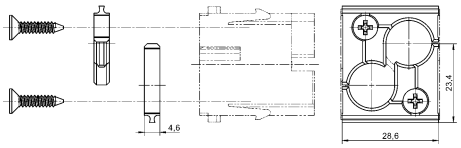
Remarks on the crimp technique

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

Han-Quintax® module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Quintax® module, Crimp termination 		09 14 002 3004	09 14 002 3104	M  F 
Han-Quintax®, for Han D® crimp contacts  Please order crimp contacts separately.	0.14 ... 2.5	09 15 004 3013	09 15 004 3113	M  F  Cable diameter 3 ... 9.5 mm
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Quintax®, Adapter, Metal  Optional		09 14 000 9915	09 14 000 9915	

Technical characteristics

Number of contacts	8
Additional contacts	+ shielding
Rated current	5 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤10 mΩ
Contact resistance, shielding	≤100 mΩ
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy

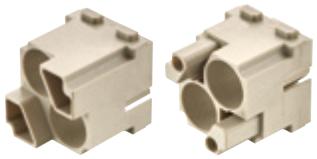
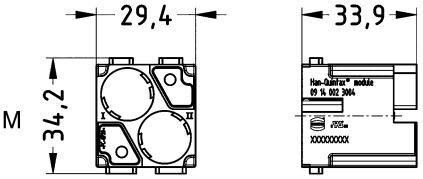
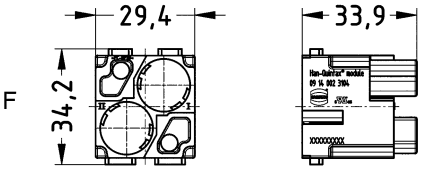
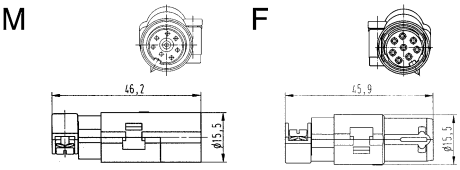
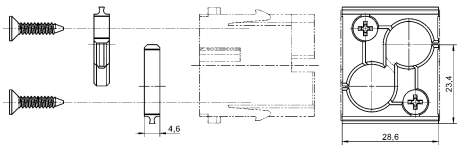
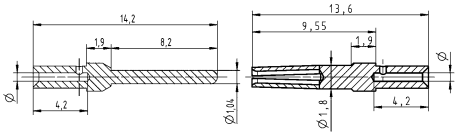
Technical characteristics

Material (accessories)	Metal
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL
UL 1977 ECBT2.E102079
CSA-C22.2 No. 182.3 ECBT8.E102079

Han-Quintax® High Density module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Quintax® module, Crimp termination 		09 14 002 3004	09 14 002 3104	M  F 
Han-Quintax® High Density, for Han® D-Sub crimp contacts  Please order crimp contacts separately.	0.09 ... 0.52	09 15 008 3013	09 15 008 3113	M F  Cable diameter 3 ... 9.5 mm
Han-Quintax®, Adapter, Metal  Optional		09 14 000 9915	09 14 000 9915	
D-Sub, Standard, Crimp contact 	0.09 ... 0.25 0.13 ... 0.33 0.25 ... 0.52	09 67 000 7576 09 67 000 5576 09 67 000 8576	09 67 000 7476 09 67 000 5476 09 67 000 8476	 Conductor cross-section / ø / Stripping length 0.09-0.25 mm² / 0.64 mm / 4 mm 0.13-0.33 mm² / 0.88 mm / 4 mm 0.25-0.52 mm² / 1.13 mm / 4 mm 0.33-0.82 mm² / 1.34 mm / 4 mm for stranded wire according IEC 60228 Class 5

Technical characteristics

Number of contacts	1
Additional contacts	+ shielding
Rated current	10 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤3 mΩ
Contact resistance, shielding	≤100 mΩ
Impedance	75 Ω
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0

Technical characteristics

RoHS	compliant, compliant with exemption

Specifications and approvals

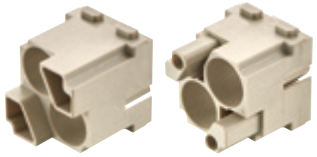
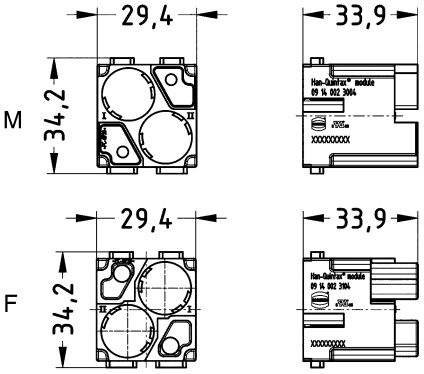
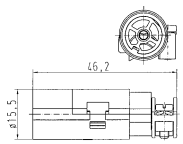
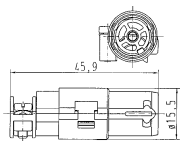
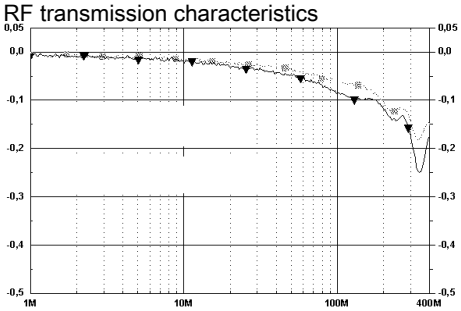
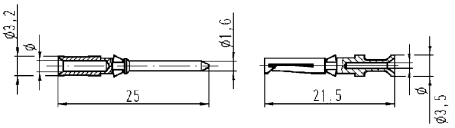
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

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

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Quintax® module, Crimp termination 		09 14 002 3004	09 14 002 3104	
Han® D Coax, Crimp termination, for Han D® crimp contacts  Please order crimp contacts separately.	0.14 ... 2.5	09 15 001 3013	09 15 001 3113	M  F  RF transmission characteristics  ▩ 75 Ohm Cable ▾ 75 Ohm Cable with Han D® Coax
Han D®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5	09 15 000 6124 09 15 000 6123 09 15 000 6125 09 15 000 6122 09 15 000 6121 09 15 000 6126	09 15 000 6224 09 15 000 6223 09 15 000 6225 09 15 000 6222 09 15 000 6221 09 15 000 6226	

Conductor cross-section		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.9 mm	8 mm
0.5 mm²	AWG 20	1.1 mm	8 mm
0.75 mm²	AWG 18	1.3 mm	8 mm
1 mm²	AWG 18	1.45 mm	8 mm
1.5 mm²	AWG 16	1.75 mm	8 mm
2.5 mm²	AWG 14	2.25 mm	6 mm

Technical characteristics

Number of contacts	1
Additional contacts	+ shielding
Rated current	16 A
Rated voltage	50 V
Rated impulse voltage	0.8 kV
Pollution degree	3
Insulation resistance	$>10^{10}$ Ω
Contact resistance	≤1 mΩ
Contact resistance, shielding	≤100 mΩ
Impedance	50 Ω
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Material (shielding)	Zinc die-cast, nickel-plated
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0

Technical characteristics

RoHS	compliant, compliant with exemption

Specifications and approvals

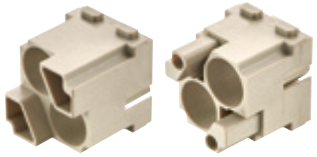
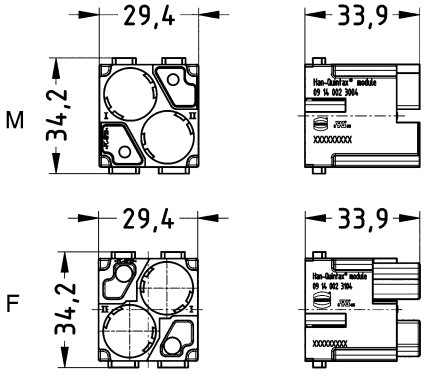
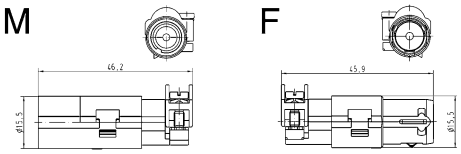
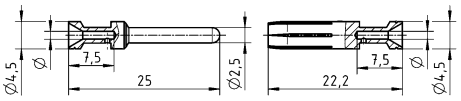
EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076
DNV GL

Details

Crimping tools see chapter Han 90

Remarks on the crimp technique

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

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Quintax® module, Crimp termination 		09 14 002 3004	09 14 002 3104	
Han® E Coax, Crimp termination, for Han E® crimp contacts  Please order crimp contacts separately.	0.14 ... 4	09 15 001 3023	09 15 001 3123	M F  Han E® Coax with RG 213 cable (2.5 mm²) / 200 MHz / 500 MHz / 1.0 GHz / 1.2 GHz / 1.5 GHz / 2.0 GHz / 2.5 GHz Return loss [db] / 23.8 / 21.1 / >18.7 / >17.7 / >16.4 / >14.1 / >12.0 Attenuation [db] / 0:07 / 0.11 / 0.17 / 0.2 / <0.23 / <0.53 / <2.0
Han E®, Crimp contact, Contact surface: Gold plated 	0.14 ... 0.37 0.5 0.75 1 1.5 2.5 4	09 33 000 6117 09 33 000 6122 09 33 000 6115 09 33 000 6118 09 33 000 6116 09 33 000 6123 09 33 000 6119	09 33 000 6217 09 33 000 6222 09 33 000 6215 09 33 000 6218 09 33 000 6216 09 33 000 6223 09 33 000 6221	

Conductor cross-section		Identification
0.14-0.37 mm²	AWG 26-22	no groove
0.5 mm²	AWG 20	no groove
0.75 mm²	AWG 18	1 groove*
1 mm²	AWG 18	1 groove
1.5 mm²	AWG 16	2 groove
2.5 mm²	AWG 14	3 groove
3 mm²	AWG 12	wide groove
4 mm²	AWG 12	no groove
* on the back crimp collar		

Stripping length 7.5 mm

Han® Multi module

Number of contacts

4

1.5 A 50 V

Features

- Suitable for FOC and coaxial contacts acc. to EN 41626

Technical characteristics

Number of contacts	4
Rated current	1.5 A
Rated voltage	50 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤10 mΩ
Impedance	50 Ω, 75 Ω
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

ATTENTION when using coaxial contacts:

Male module 09 14 004 4501 with contacts 09 14 000 62xx or 09 69 28x 5xxx

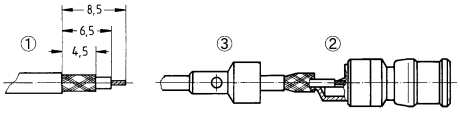
Female module 09 14 004 4513 with contacts 09 14 000 61xx or 09 69 18x 5xxx

When removing the contacts, the two-piece module can be opened using a 7mm screwdriver. This destroys the module.

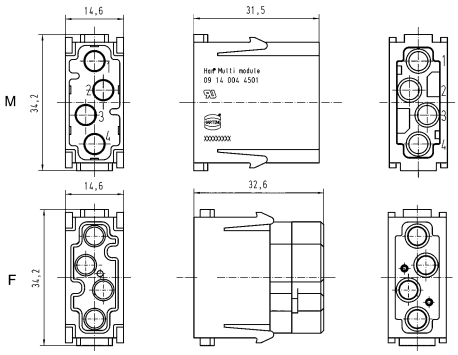
ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

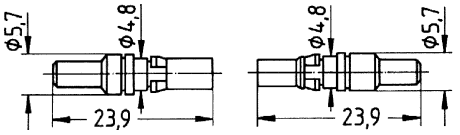
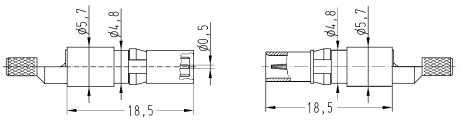
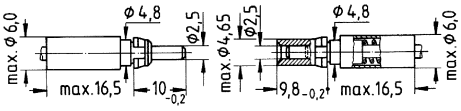
Assembly instructions

for coaxial contact



① Stripping length
② Solder termination (during soldering max. +300 °C for 2 s)
③ Crimp ferrule

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Multi module  Please order contacts separately.	09 14 004 4501	09 14 004 4512	 Contact arrangement (view from termination side)

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
DIN 41626, Coaxial contact, Solder/crimp termination, for cables RG 174 U, 188 AU, 316 U, 50 Ohm, Contact surface: Gold plated 	09 14 000 6211	09 14 000 6111	
DIN 41626, Coaxial contact, Solder/crimp termination, for cables RG 179 BU, 187 AU, 75 Ohm, Contact surface: Gold plated 	09 14 000 6221	09 14 000 6121	 Wires / Shell ∅ mm / Internal wire ∅ mm / Dämpfung db/100 m bei 100MHz, 200MHz, 800MHz 50 Ω RG 174 / U — 2.5 — 0.48 — 84 RG 188 A / U — 2.6 — 0.54 — 29 — 40 RG 316 / U — 2.5 — 0.54 — 40 75 Ω RG 179 B / U — 2.55 — 0.3 — 41 RG 187 A / U — 2.7 — 0.3 — 41
DIN 41626, FO contact, for 1 mm plastic fibre 	20 10 001 4211	20 10 001 4221	
DIN 41626, FO contact, for SI fibre (HCS®) 200/230 µm 	20 10 230 4211	20 10 230 4221	
DIN 41626, FO contact, for GI fibre 50/125 µm, for ceramic ferrule 62.5/125 µm 	20 10 125 4212	20 10 125 4222	

Han® Multi module

Number of contacts

4

1.5 A 50 V

Features

- Suitable for FOC and coaxial contacts acc. to D-Sub

Technical characteristics

Number of contacts	4
Rated current	1.5 A
Rated voltage	50 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤10 mΩ
Impedance	50 Ω, 75 Ω
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (locking)	Copper alloy
Material (contacts)	Copper alloy, PBFE / PBTP / PI
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

ATTENTION when using coaxial contacts:

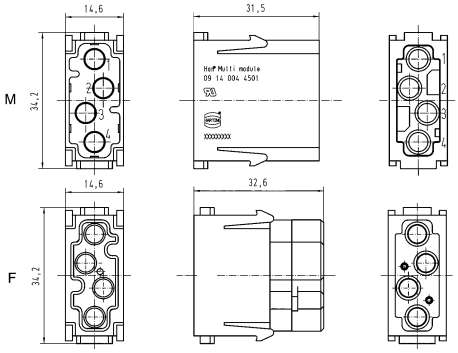
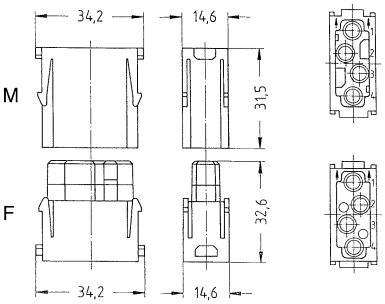
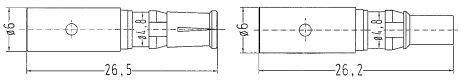
Male module 09 14 004 4501 with contacts 09 14 000 62xx or 09 69 28x 5xxx

Female module 09 14 004 4513 with contacts 09 14 000 61xx or 09 69 18x 5xxx

When removing the contacts, the two-piece module can be opened using a 7mm screwdriver. This destroys the module.

ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

Han® Multi module

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Multi module  Please order contacts separately.	09 14 004 4501	09 14 004 4513	 Contact arrangement (view from termination side)  Contact arrangement (view from termination side)
D-Sub, Coaxial contact, Solder / solder termination, for cables RG 58, 50 Ohm, Contact surface: Gold plated 	09 14 000 6215	09 14 000 6115	
D-Sub, Mixed, Coaxial contact, Crimp/crimp termination, Straight, for cables RG 174 U, 188 AU, 316 U, 50 Ohm, Contact surface: Gold plated 	09 69 282 5140	09 69 182 5140	
D-Sub, Mixed, Coaxial contact, Crimp/crimp termination, Straight, for cables RG 179 BU, 187 AU, 75 Ohm, Contact surface: Gold plated 	09 69 282 5230	09 69 182 5230	

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
D-Sub, Mixed, Coaxial contact, Solder/crimp termination, Straight, for cables RG 174 U, 188 AU, 316 U, 50 Ohm, Contact surface: Gold plated 	09 69 281 5140	09 69 181 5140	
D-Sub, Mixed, Coaxial contact, Solder/crimp termination, Straight, for cables RG 178 BU, 196 AU, 404 U, 50 Ohm, Contact surface: Gold plated 	09 69 281 5141	09 69 181 5141	
D-Sub, Mixed, Coaxial contact, Solder/crimp termination, Straight, for cables RG 58 CU, 141 AU, 50 Ohm, Contact surface: Gold plated 	09 69 281 5143	09 69 181 5143	
D-Sub, Mixed, Coaxial contact, Solder/crimp termination, Straight, for cables RG 179 BU, 187 AU, 75 Ohm, Contact surface: Gold plated 	09 69 281 5230	09 69 181 5230	

Han® Multi module

Number of contacts

12

1.5 A 50 V

Features

- Suitable for FOC and coaxial contacts acc. to EN 41626

Technical characteristics

Number of contacts	12
Rated current	1.5 A
Rated voltage	50 V
Insulation resistance	>10^{10} Ω
Contact resistance	≤10 mΩ
Impedance	50 Ω, 75 Ω
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
UL 1977 ECBT2.E235076
DNV GL

Details

ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

ATTENTION when using coaxial contacts:

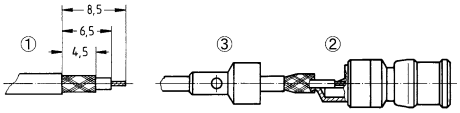
Male module 09 14 004 4501 with contacts 09 14 000 62xx

Female module 09 14 004 4512 with contacts 09 14 000 61xx

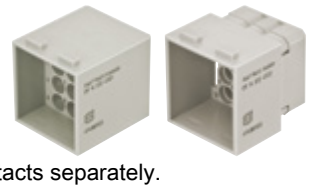
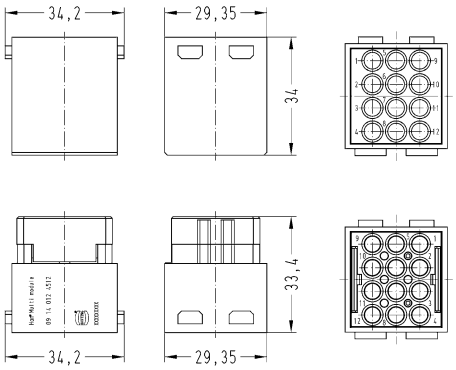
Due to the closed entry design of female insert the upper part has to be removed by screw driver before extracting the contacts.

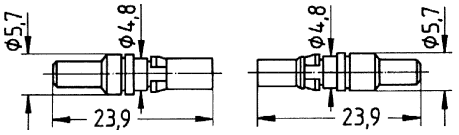
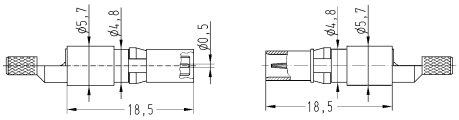
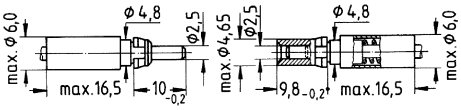
Assembly instructions

for coaxial contact



① Stripping length
② Solder termination (during soldering max. +300 °C for 2 s)
③ Crimp ferrule

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Multi module, acc. to DIN 41626  Please order contacts separately.	09 14 012 4501	09 14 012 4512	 Contact arrangement (view from termination side)

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
DIN 41626, Coaxial contact, Solder/crimp termination, for cables RG 174 U, 188 AU, 316 U, 50 Ohm, Contact surface: Gold plated 	09 14 000 6211	09 14 000 6111	
DIN 41626, Coaxial contact, Solder/crimp termination, for cables RG 179 BU, 187 AU, 75 Ohm, Contact surface: Gold plated 	09 14 000 6221	09 14 000 6121	 Wires / Shell ∅ mm / Internal wire ∅ mm / Dämpfung db/100 m bei 100MHz, 200MHz, 800MHz 50 Ω RG 174 / U: 2.5 / 0.48 / 84 RG 188 A / U: 2.6 / 0.54 / 29 / 40 RG 316 / U: 2.5 / 0.54 / 40 75 Ω RG 179 B / U: 2.55 / 0.3 / 41 RG 187 A / U: 2.7 / 0.3 / 41
DIN 41626, FO contact, for 1 mm plastic fibre 	20 10 001 4211	20 10 001 4221	
DIN 41626, FO contact, for SI fibre (HCS®) 200/230 µm 	20 10 230 4211	20 10 230 4221	
DIN 41626, FO contact, for GI fibre 50/125 µm, for ceramic ferrule 62.5/125 µm 	20 10 125 4212	20 10 125 4222	

Han® Pneumatic module

Number of contacts

3

Features

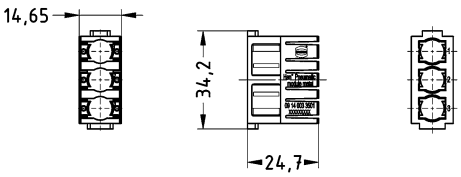
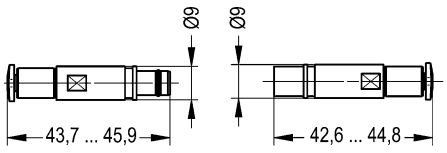
- for the transmission of clean and dry compressed air
- Female contacts with / without shut-off
- The Han® Pneumatic contacts without shut-off are suitable for the use inside a vacuum. (Limit: 100 mbar = 100 hPa ≈ approx 90% vacuum)

Technical characteristics

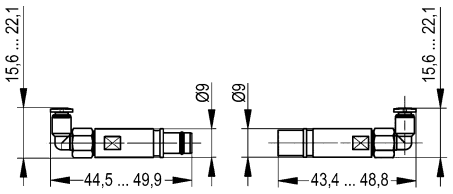
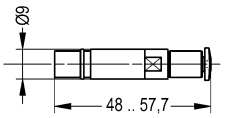
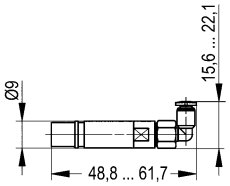
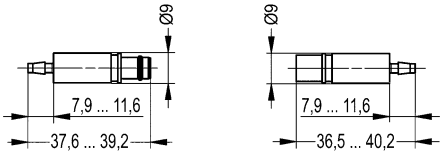
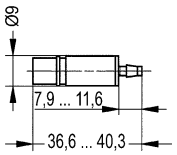
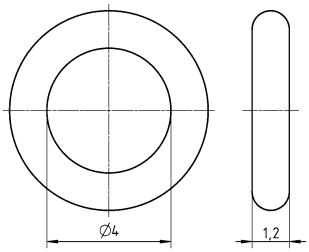
Number of contacts	3
Limiting temperature	-40 ... +85 °C, -20 ... +85 °C Tube outer diameter
Operating pressure	≤10 bar
Mating cycles	≥10000
Tube inner diameter	3 mm, 4 mm, 6 mm
Tube outer diameter	3 mm, 4 mm, 6 mm
Material (insert)	Polycarbonate (PC)
Colour (insert)	Blue
Material (seal)	NBR
Colour (seal)	Black
Material (contacts)	Brass
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

IEC 61984
EN 60664-1
UL 1977 ECBT2.E235076
CSA-C22.2 No. 182.3 ECBT8.E235076

Identification		Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® Pneumatic module  Please order contacts separately.		09 14 003 3501	09 14 003 3501	 Contact arrangement (view from mating side)
Pneumatic contact, Without shut-off, Straight, Tube outer diameter 	3 mm 4 mm 6 mm	09 14 000 6353 09 14 000 6354 09 14 000 6356	09 14 000 6453 09 14 000 6454 09 14 000 6456	

Han® Pneumatic module

Identification		Part number Male	Part number Female	Drawing (dimensions in mm)
Pneumatic contact, Without shut-off, Angled, Tube outer diameter	3 mm 4 mm 6 mm	09 14 000 7353 09 14 000 7354 09 14 000 7356	09 14 000 7453 09 14 000 7454 09 14 000 7456	
Pneumatic contact, With shut-off, Straight, Tube outer diameter	3 mm 4 mm 6 mm		09 14 000 6463 09 14 000 6464 09 14 000 6466	
Pneumatic contact, With shut-off, Angled, Tube outer diameter	3 mm 4 mm 6 mm		09 14 000 7463 09 14 000 7464 09 14 000 7466	
Pneumatic contact, Without shut-off, Straight, Tube inner diameter	3 mm 4 mm 6 mm	09 14 000 6303 09 14 000 6304 09 14 000 6306	09 14 000 6403 09 14 000 6404 09 14 000 6406	
Pneumatic contact, With shut-off, Straight, Tube inner diameter	3 mm 4 mm 6 mm		09 14 000 6413 09 14 000 6414 09 14 000 6416	
O-ring rubber seal, for pneumatic contacts		09 14 000 9806		

Han® SC module

Features

- Suitable for HARTING SC contacts
- for GI-Fibre 50 - 62,5 / 125µm
- Insertion loss < 0.5 dB

Technical characteristics

Number of contacts	4
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

UL 1977 ECBT2.E235076
DNV GL

Details

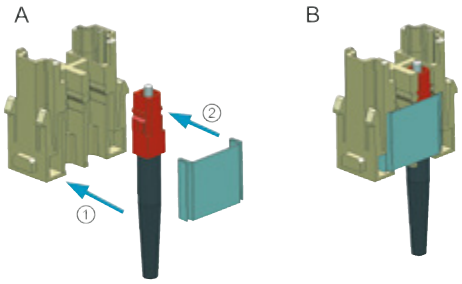
The male and female modules each use the same contacts.

Guide pins and bushes are recommended (see chapter Han 80).

Details

Assembly instructions

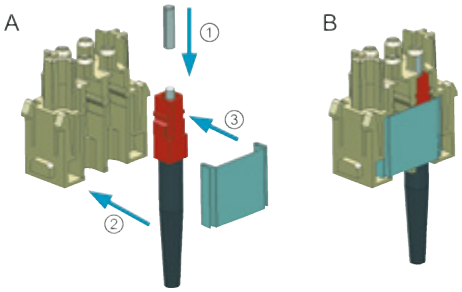
Male module



A) Assemble the SC contact
Push the SC contact from the side into the relevant insert ①
Push the fixing plate from the side over the contacts ②
B) SC contact fixed in the module

Assembly instructions

Female module

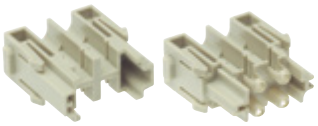
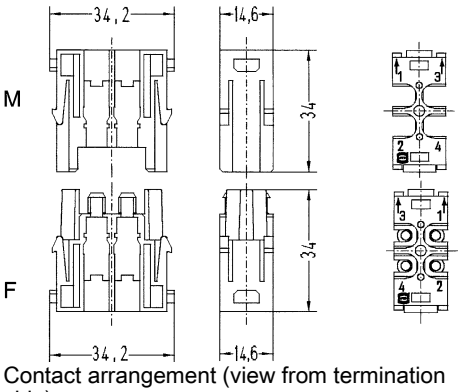
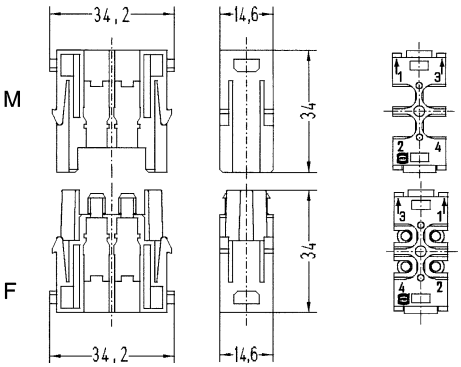
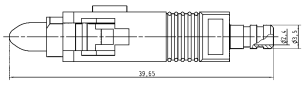


A) Assemble the SC contact
Push the centering ferrule (included in delivery) on the SC contact ①
Push the SC contact from the side into the relevant insert ②
Push the fixing plate from the side over the contacts ③
B) SC contact fixed in the module

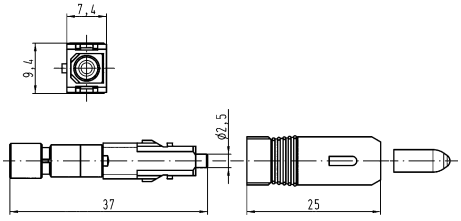
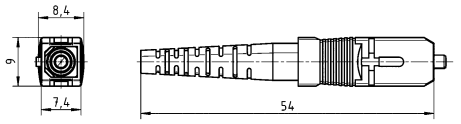
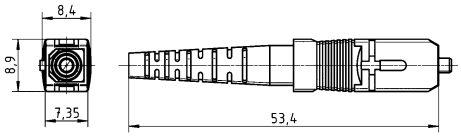
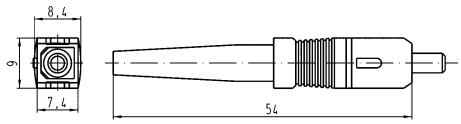
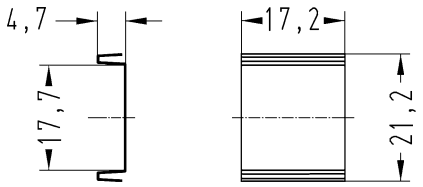
Han® SC module

Number of contacts

4

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® SC module  Please order contacts separately.	09 14 004 4701	09 14 004 4712	 Contact arrangement (view from termination side)
Han-Modular®, Han® SC module, with ceramic ferrule 62.5/125 µm  Please order contacts separately. Please order fixing plate separately.		09 14 004 4711	 Contact arrangement (view from termination side)
Han-Modular®, Han® SC module, with metal ferrule  Please order contacts separately.		09 14 004 4713	
SC contact, for 1 mm plastic fibre, Crimp termination 	20 10 001 5211		

Han® SC module

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
SC contact, for 1 mm plastic fibre, Fast termination 	20 10 001 5217		
SC contact, for singlemode fibre 9/125 µm 	20 10 125 5220		
SC contact, for GI fibre 50/125 µm, for ceramic ferrule 62.5/125 µm 	20 10 125 5211		
SC contact, for SI fibre (HCS®) 200/230 µm	20 10 230 5211		
Han-Modular®, Fixing plate, for SC module 	09 14 000 9965	09 14 000 9965	

Han® LC module

Number of contacts

6

Features

- Suitable for HARTING LC contacts
- for GI-Fibre 50 - 62.5 / 125 µm and for singlemode fibre

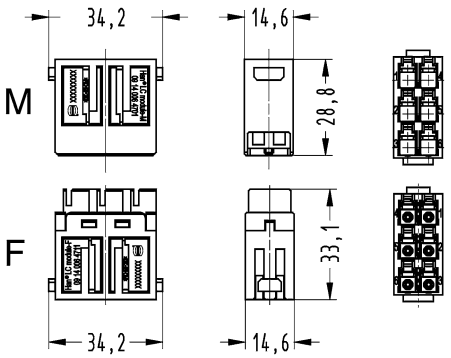
Technical characteristics

Number of contacts	6
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Details

The male and female modules each use the same contacts.

ATTENTION! Guide pins and bushes are prescribed (see chapter Han 80).

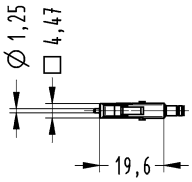
Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® LC module  Please order contacts separately.	09 14 006 4701	09 14 006 4711	 Contact arrangement (view from termination side)

Technical characteristics

Limiting temperature	-40 ... +75 °C

Technical characteristics

RoHS	compliant with exemption, compliant

Identification	Part number Male	Drawing (dimensions in mm)
LC contact, Singlemode for cable diameter up to 2 mm 	20 10 125 8221	
LC contact, Singlemode for cable diameter up to 3 mm 	20 10 125 8220	
LC contact, Multimode for cable diameter up to 2 mm 	20 10 125 8212	
LC contact, Multimode for cable diameter up to 3 mm 	20 10 125 8211	

Han-Smart® Ethernet-Switch module

Modu-
lar

Features

- Single module with standard shielded RJ45 plug and jack
- The RJ45 inserts are protected by a reliable plastic insulator
- Patch cables are assembled/removed without tools
- Auto-crossing
- Auto-negotiation
- Auto-polarity
- Store and Forward
- Fast Ethernet
- Full Gigabit Ethernet
- Non blocking
- Support of Jumbo-Frames (10 kBytes)
- Energy Efficient Ethernet acc. to IEEE 802.3az

Technical characteristics

Total number of ports	4
Insulation resistance	>10^{10} Ω
Limiting temperature	-40 ... +125 °C
Operating temperature	-40 ... +70 °C
Storage temperature	-40 ... +85 °C
Relative humidity	30 ... 95 % Non-condensing
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP30, mated condition
Nominal voltage	24 V DC
Transmission characteristics	Cat. 5, Class D up to 100 MHz
Data rate	10 Mbit/s, 100 Mbit/s, 1 Gbit/s
Diagnostic display	Connection (Link), Data transfer (Act), Data transfer rate, Power connection
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

EN 60664-1
IEC 61984
DNV GL
EN 55022 Radio disturbance characteristics
EN 61000-4-2 Electrostatic discharge (ESD)
EN 61000-4-3 Electromagnetic field
EN 61000-4-4 Rapid transients (burst)
EN 61000-4-5 Surge voltages
EN 61000-4-6 conducted disturbances
EN 61000-6-4 emission standard
IEC 60068-2-6 Vibration (sinusoidal)
IEC 60068-2-27 Shock
IEEE 802.3

Han-Smart® Ethernet-Switch module

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han® RJ45 module, Single module	09 14 001 4623		
Han-Modular®, Han® RJ45 module, Adapter, for patch cable	09 14 000 9966		
Han-Modular®, Han-Smart®, Switch US4, IP30 mated condition		09 80 113 0400	

Han-Smart® ID CAN module

Modu-
lar

Number of contacts

7

Features

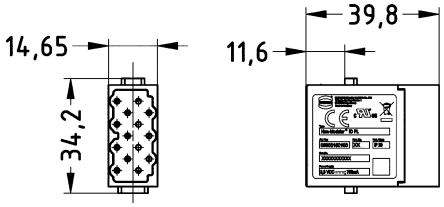
- Module for identifying industrial components
- Programming via the CANopen communication protocol
- Automatically detects baud rate
- Node ID configuration using LSS, acc. to DS305
- Status and diagnostics display
- Default Node ID: 127

Technical characteristics

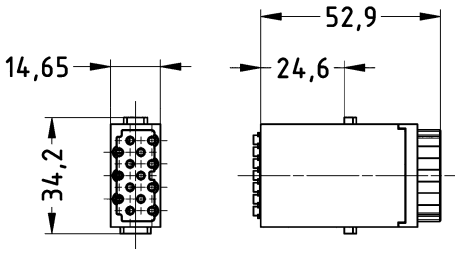
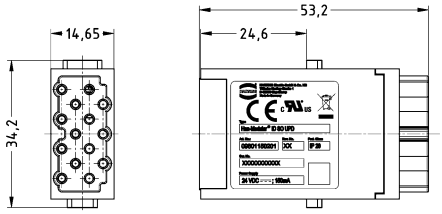
Number of contacts	7
Operating temperature	-40 ... +70 °C
Storage temperature	-40 ... +70 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP30
Nominal voltage	24 V DC
Power consumption	<5 W
Memory	10 MB Flash
Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (contacts)	Copper alloy
Material (accessories)	Polycarbonate (PC)
Material flammability class acc. to UL 94	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

IEC 60721-3-3
EN 50102
EN 61000-4-2 Electrostatic discharge (ESD)
EN 61000-4-3 Electromagnetic field
EN 61000-4-4 Rapid transients (burst)
EN 61000-4-5 Surge voltages
EN 61000-4-6 conducted disturbances

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Smart®, ID CAN, Memory module / CPU, IP30 Contact surface: Gold plated	09 80 015 0100		

Han-Smart® ID CAN module

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Smart®, ID CAN, Network module, Cage-clamp termination, IP30 Contact surface: Gold plated 		09 80 115 0200	
Han-Modular®, Update module, to update the male module 		09 80 115 0201	

Han-Smart® ID Profinet module

Number of contacts

7

Modu-
lar

Features

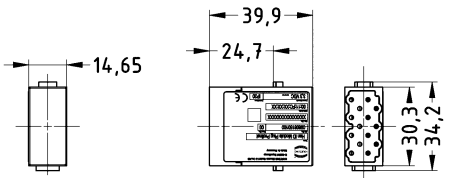
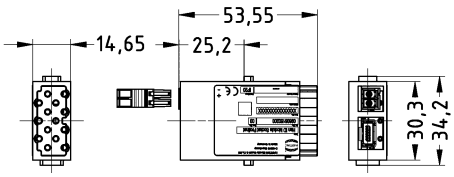
- Module for identifying industrial components
- Profinet I/O communication protocol conformance class B
- SNMP enabled (V1, V2C)

Technical characteristics

Number of contacts	7
Operating temperature	-40 ... +70 °C
Storage temperature	-40 ... +70 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP20
Nominal voltage	24 V DC ±10 %
Power consumption	<2 W
Memory	32 KByte Flash
Write cycles	≥100000
Real-time class	RT acc. to IEC 61158
Diagnostic display	Connection (Link), Power connection
Material (insert)	Polycarbonate (PC), Liquid crystal polymer (LCP)
Colour (insert)	RAL 7032 (pebble grey), White
Material flammability class acc. to UL 94	V-0

Specifications and approvals

IEC 60721-3-3
EN 50102
EN 61000-4-2 Electrostatic discharge (ESD)
EN 61000-4-3 Electromagnetic field
EN 61000-4-4 Rapid transients (burst)
EN 61000-4-5 Surge voltages
EN 61000-4-6 conducted disturbances
IEC 61158 PROFINET

Identification	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Smart®, ID Profinet, Memory module / CPU, IP20  GSD software file and operating instructions can be downloaded from the eCatalogue.	09 80 615 0100		
Han-Modular®, Han-Smart®, ID Profinet, Power supply, Data interface with HARTING ix Industrial® (Typ A), IP20  GSD software file and operating instructions can be downloaded from the eCatalogue.		09 80 615 0200	

Han-Smart® Surge protection module

Number of contacts

5

Features

- Surge protection for two pairs of balanced signals
- Protects symmetric signals interfaces with electrical isolation

Technical characteristics

Number of contacts	5
Operating temperature	-40 ... +85 °C
Storage temperature	-40 ... +85 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP20
Nominal current	0.5 A
Nominal voltage	24 V DC, 24 V AC
Material (insert)	Polyamide (PA)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

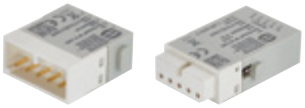
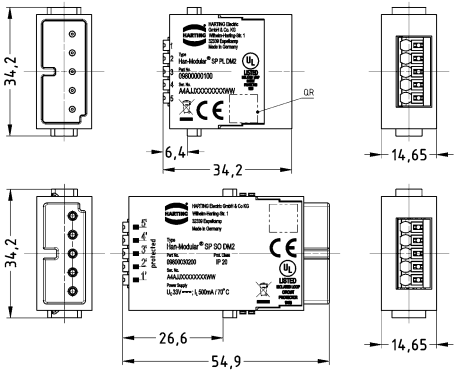
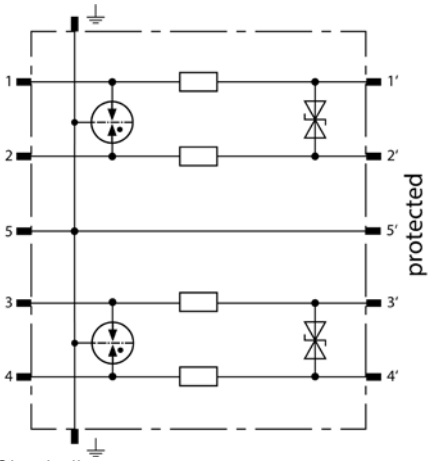
Details

The surge protection module protects up to 2 pairs of balanced signal interfaces with electrical isolation against lightning strikes or overvoltage events.

Preferred field of application is the protection of analogue signal interfaces like for 0/4-20 mA or differential signals.

The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

Han-Smart® Surge protection module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Smart®, Han-Smart® Surge protection module, Two channels, Differential mode without common refence potential, Push-in-spring-cage termination, IP20 	0.25 ... 1.5	09 80 000 0100	09 80 003 0200	  Circuit diagram

Han-Smart® Surge protection module

Number of contacts

5

Features

- Surge protection for four single lines
- Protects signals with common reference potential

Technical characteristics

Number of contacts	5
Operating temperature	-40 ... +85 °C
Storage temperature	-40 ... +85 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP20
Nominal current	0.5 A
Nominal voltage	24 V DC
Material (insert)	Polyamide (PA)
Colour (insert)	RAL 7032 (pebble grey)
Material flammability class acc. to UL 94	V-0
RoHS	compliant with exemption

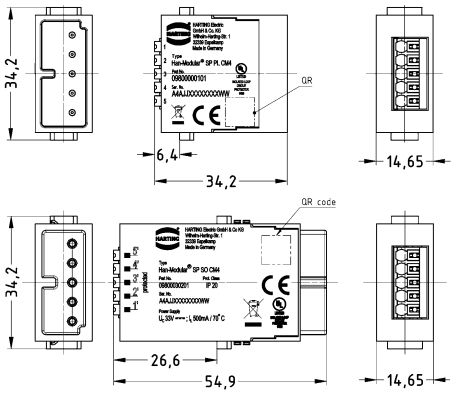
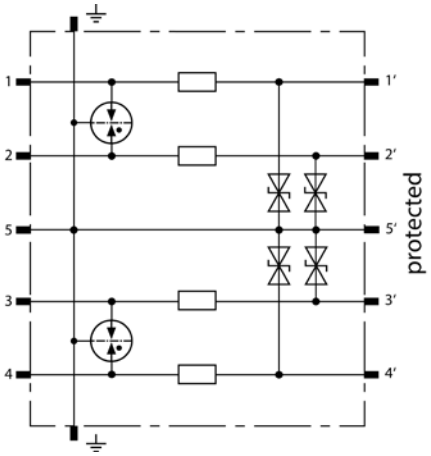
Details

The surge protection module protects up to 4 single lines with common reference potential and unbalanced interfaces against lightning strikes or overvoltages.

Preferred field of application is the protection of digital signals up to 24 VDC with a max load of 0.5 A / line.

The equipotential bonding will be led via the earthed hinged frame of the Han-Modular® system.

Han-Smart® Surge protection module

Identification	Conductor cross-section (mm²)	Part number Male	Part number Female	Drawing (dimensions in mm)
Han-Modular®, Han-Smart®, Han-Smart® Surge protection module, Four channels, Common reference potential, Push-in-spring-cage termination, IP20 	0.25 ... 1.5	09 80 000 0101	09 80 003 0201	  Circuit diagram

Features

- Robust housing
- Compact design saves space
- Modular structure increases flexibility
- Simple and quick assembly
- Two-part hood

Technical characteristics

Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP65, locked condition
Material (hood/housing)	Zinc die-cast
Surface (hood/housing)	Nickel plated
Material (seal)	NBR
Material (locking)	Stainless steel
Material (accessories)	Metal
RoHS	compliant

Specifications and approvals

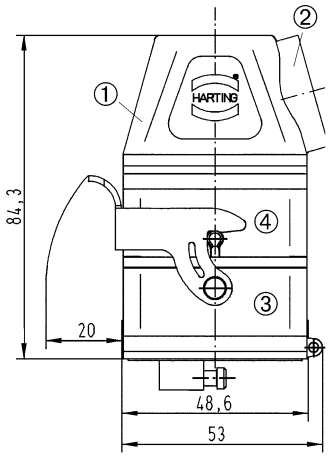
IEC 61984

CE

Details

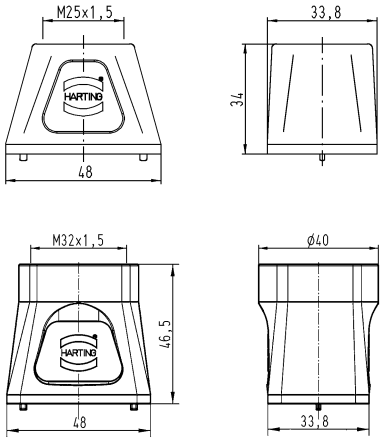
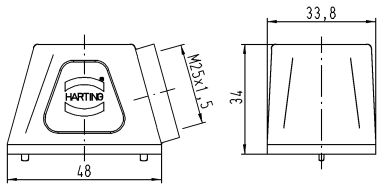
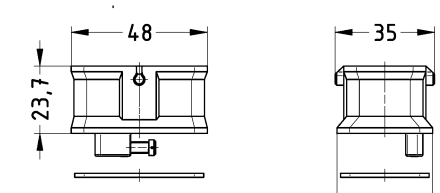
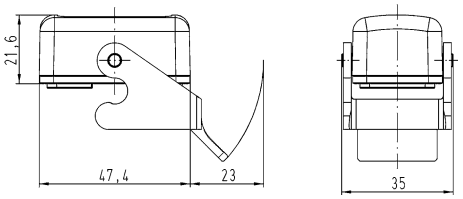
Conductor cross-section PE 0.5 ... 10 mm²

Conductor cross-section 10 mm² only with ferrule crimping tool 09 99 000 0374

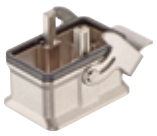
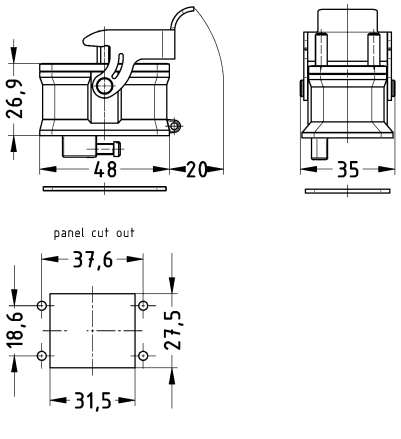
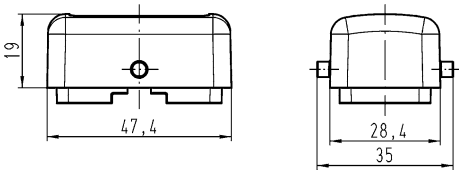
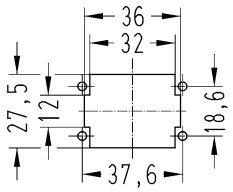


① Hood with side entry
② Cable entry M25
③ Bulkhead mounted housing with locking lever
④ Carrier hood

Single locking lever

Identification	Cable entry	Part number	Drawing (dimensions in mm)
Han-Modular® Compact, Hood, Top entry, IP65 locked condition Pack contents: 4 screws are included within the delivery 	1x M25 1x M32	19 14 001 0401 19 14 001 0402	
Han-Modular® Compact, Hood, Side entry, IP65 locked condition Pack contents: 4 screws are included within the delivery 	1x M25	19 14 001 0501	
Han-Modular® Compact, Carrier hood, IP65 locked condition 		09 14 001 0311	
Han-Modular® Compact, Protection cover, for carrier hoods, Thermoplastic, IP65 locked condition 		09 14 001 5402	

Single locking lever

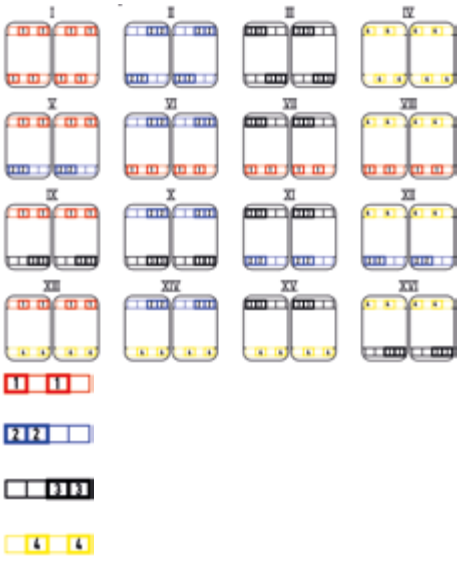
Identification	Part number	Drawing (dimensions in mm)
Han-Modular® Compact, Bulkhead mounted housing, IP65 locked condition 	09 14 001 0301	
Han-Modular® Compact, Protection cover, for bulkhead mounted housings, Thermoplastic, IP65 locked condition 	09 14 001 5401	
Fixing bracket 	09 14 000 9947	 Panel cut out

Technical characteristics

Material (accessories)	Polycarbonate (PC)

Technical characteristics

Colour (accessories)	Red, Blue, Black, Yellow
RoHS	compliant

Identification		Part number	Drawing (dimensions in mm)
Coding element, Red		09 14 000 9971	
Coding element, Blue		09 14 000 9972	
Coding element, Black		09 14 000 9973	
Coding element, Yellow		09 14 000 9974	

Features

- Robust housing
- Compact design saves space
- Modular structure increases flexibility
- Simple and quick assembly
- Two-part hood

Technical characteristics

Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP65
Material (hood/housing)	Aluminium die-cast, Zinc die-cast
Surface (hood/housing)	Powder-coated
Colour (hood/housing)	RAL 7037 (dust grey)
Material (seal)	NBR
Material (locking)	Polycarbonate (PC), Stainless steel
Colour (locking)	RAL 7037 (dust grey)
Material (accessories)	Zinc die-cast
Material flammability class acc. to UL 94 (locking levers)	V-0
RoHS	compliant, compliant with exemption

Specifications and approvals

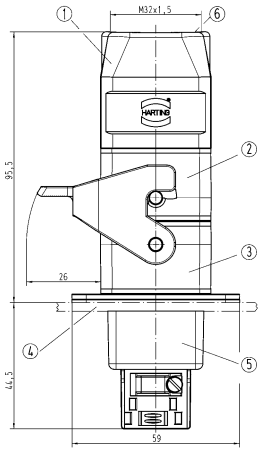
IEC 61984

CE

Details

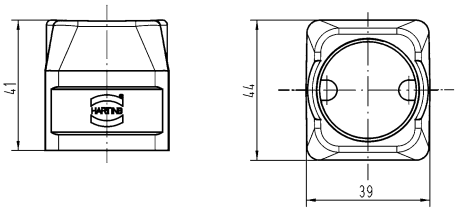
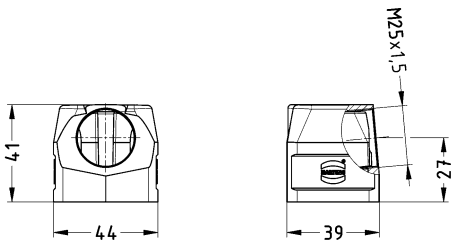
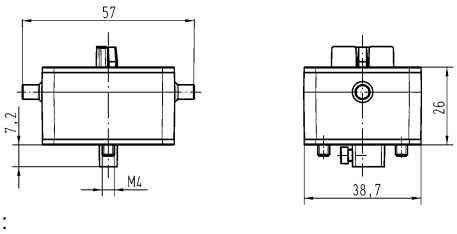
Conductor cross-section PE 0.5 ... 10 mm²

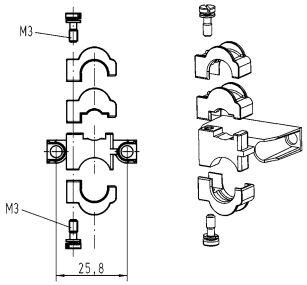
Conductor cross-section 10 mm² only with ferrule crimping tool 09 99 000 0374



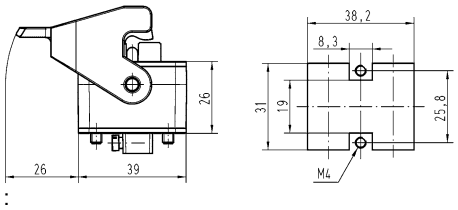
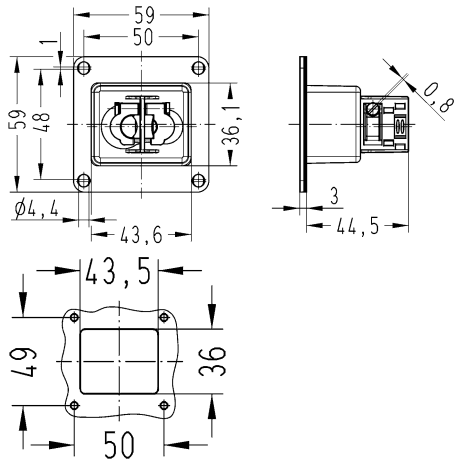
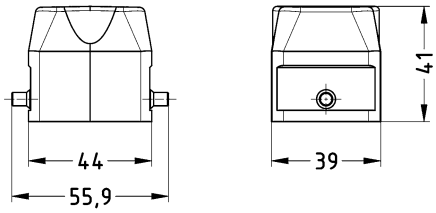
① Hood with top entry
② Carrier hood
③ Bulkhead mounted housing with locking lever
④ Switch board panel
⑤ Panel feed through housings
⑥ Cable entry

Single locking lever

Identification	Cable entry	Part number	Drawing (dimensions in mm)
Han-Modular® Twin, Hood, Top entry, IP65 	1x M20 1x M25 1x M32	19 14 002 0400 19 14 002 0401 19 14 002 0402	
Han-Modular® Twin, Hood, Side entry, IP65 	1x M25	19 14 002 0501	
Han-Modular® Twin, Carrier hood, IP65 		09 14 002 0311	
Han-Modular® Twin, Angled housing, Zinc die-cast, IP65 	1x M32	09 14 002 0950 19 14 002 0952	

Identification	Cable entry	Part number	Drawing (dimensions in mm)
Shielded frame 		09 14 000 9924	

Single locking lever

Identification	Part number	Drawing (dimensions in mm)
Han-Modular® Twin, Bulkhead mounted housing, Han-Easy Lock®, IP65 	09 14 002 0301	
Han-Modular® Twin, Panel feed through housing, Zinc die-cast, IP65 	09 14 000 9928	 Panel cut out
Han-Modular® Twin, Protection cover, for bulkhead mounted housings, Metal, IP65 	09 14 002 5401	

Features

- Suitable for all Han-Modular® single modules
- The variant with PE connection uses pin 1 of the module as PE
- Slim, space saving construction type
- Low cost plastic hoods and housings

Technical characteristics

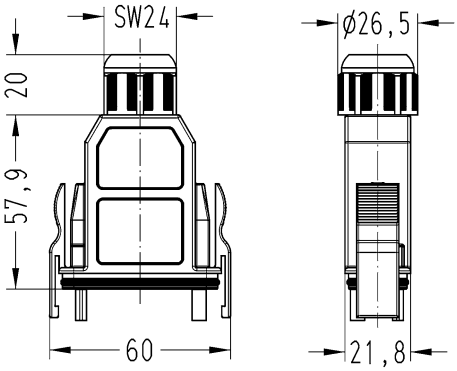
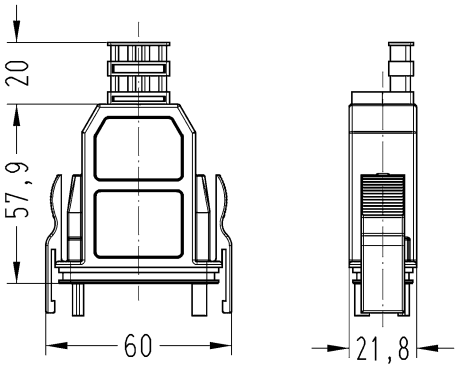
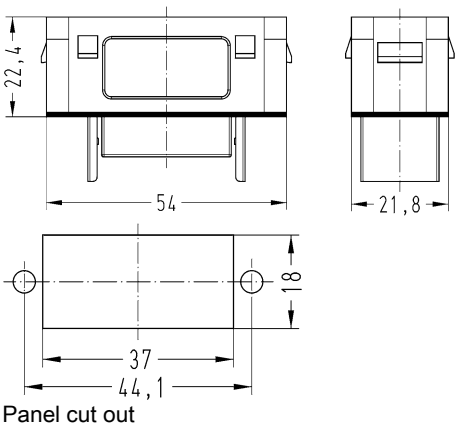
Limiting temperature	-40 ... +85 °C
Mating cycles	≥500
Degree of protection acc. to IEC 60529	IP65, IP20
Material (hood/housing)	Polycarbonate (PC)
Colour (hood/housing)	RAL 7032 (pebble grey)
Material (seal)	NBR
Material (accessories)	Polycarbonate (PC)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

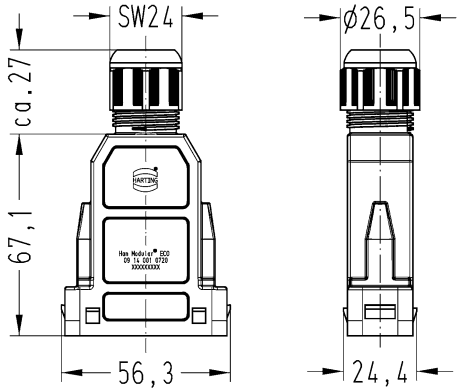
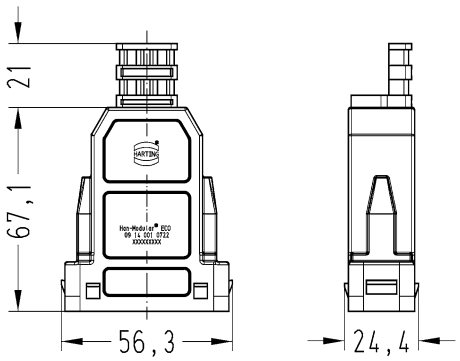
Specifications and approvals

EN 60664-1
IEC 61984

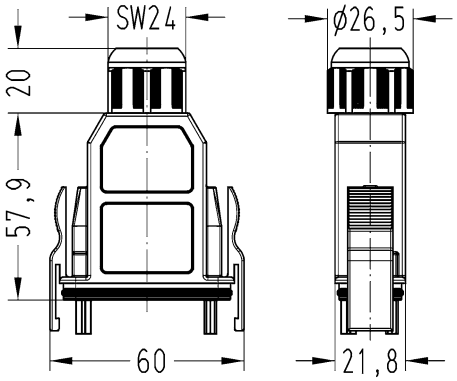
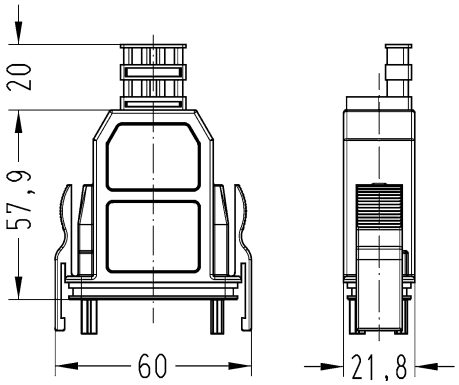
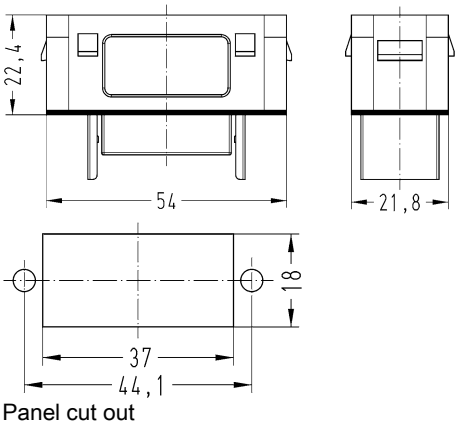
CE

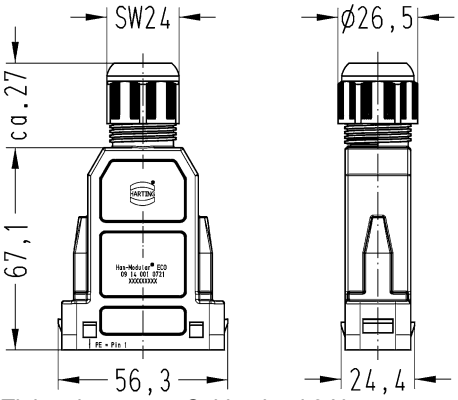
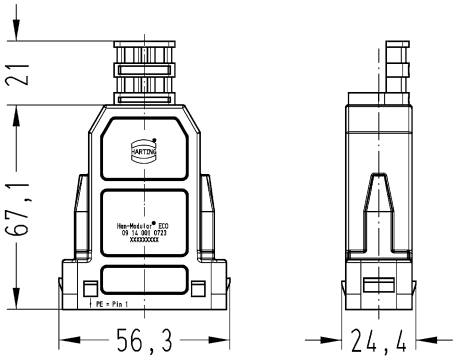
Snap-in latches

Identification	Cable entry	Cable diameter (mm)	Part number	Drawing (dimensions in mm)
Han-Modular® ECO, Hood, With integrated cable gland, Top entry, IP65, IP65 	1x Integrated	6 ... 13	09 14 001 0420	 Tightening torque Cable gland 3 Nm
Han-Modular® ECO, Hood, Top entry, IP20, IP20 	1x	3 ... 14.5	09 14 001 0422	
Han-Modular® ECO, Bulkhead mounted housing, IP65 			09 14 001 0320	 Panel cut out

Identification	Cable entry	Cable diameter (mm)	Part number	Drawing (dimensions in mm)
Han-Modular® ECO, Cable to cable housing, With integrated cable gland, Top entry, IP65, IP65 	1x Integrated	6 ... 13	09 14 001 0720	 Tightening torque Cable gland 3 Nm
Han-Modular® ECO, Cable to cable housing, Top entry, IP20, IP20 	1x	3 ... 14.5	09 14 001 0722	
Han-Modular®, Coding element, Pack contents: 8 pieces per frame 			09 14 000 9929	

Snap-in latches

Identification	Cable entry	Cable diameter (mm)	Part number	Drawing (dimensions in mm)
Han-Modular® ECO, Hood, With PE identification (pin 1 = PE), With integrated cable gland, Top entry, IP65, IP65 	1x Integrated	6 ... 13	09 14 001 0421	 Tightening torque Cable gland 3 Nm
Han-Modular® ECO, Hood, With PE identification (pin 1 = PE), Top entry, IP20, IP20 	1x	3 ... 14.5	09 14 001 0423	
Han-Modular® ECO, Bulkhead mounted housing, With PE identification (pin 1 = PE), IP65 			09 14 001 0321	 Panel cut out

Identification	Cable entry	Cable diameter (mm)	Part number	Drawing (dimensions in mm)
Han-Modular® ECO, Cable to cable housing, With PE identification (pin 1 = PE), With integrated cable gland, Top entry, IP65, IP65 	1x Integrated	6 ... 13	09 14 001 0721	 Tightening torque Cable gland 3 Nm
Han-Modular® ECO, Cable to cable housing, With PE identification (pin 1 = PE), Top entry, IP20, IP20 	1x	3 ... 14.5	09 14 001 0723	
Han-Modular®, Coding element, Pack contents: 8 pieces per frame 			09 14 000 9929	

Han-Modular® Flexbox

Features

- Fast, easy and secure assembly
- Flexible building block system
- Suitable for Han-Modular® modules
- Over 100 modules available

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP54
Material (hood/housing)	Polyamide (PA), Fibre-glass reinforced
Colour (hood/housing)	RAL 9005 (jet black)
Material (seal)	NBR
Colour (seal)	RAL 9005 (jet black)
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

IEC 61984
EN 45545-1 R22: HL1, HL2

Details

Safety note

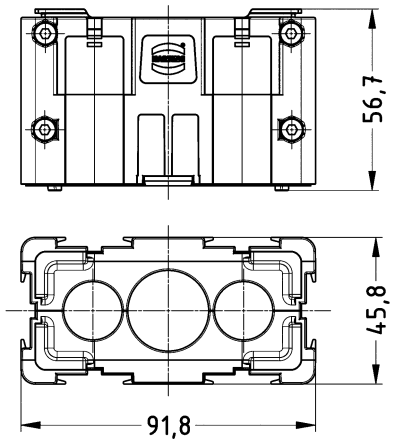
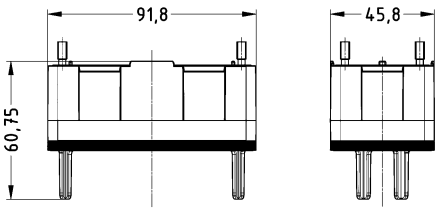
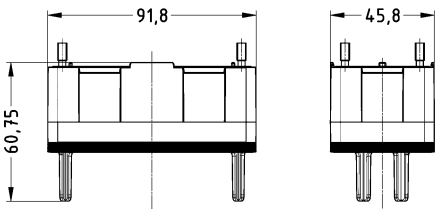
The modules listed in the table below are excluded from being used in the Han-Modular® Flexbox.

Module	Part no.
Han® 100A module (axial screw)	09 14 002 265X / 09 14 002 275X
Han® 70A module (axial screw)	09 14 002 264X / 09 14 002 274X
Han® 70A Hybrid module	09 14 005 264X / 09 14 005 274X
Han® HV module ("double")	09 14 002 302X / 09 14 002 312X
Han® HV Single module	09 14 002 3025 / 09 14 002 3125
Han® Megabit module	09 14 008 30XX / 09 14 008 31XX
Han-Smart® Ethernet-Switch module	09 80 113 0400

The following module is excluded from any use ≥ 1000 V in the Han-Modular® Flexbox:

Module	Part no.
Han® 300 A module	09 14 001 3004 / 09 14 001 3104

Han-Modular® Flexbox

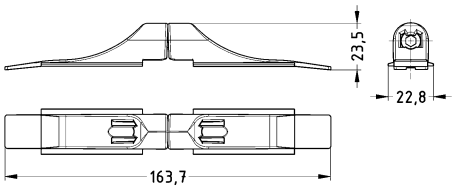
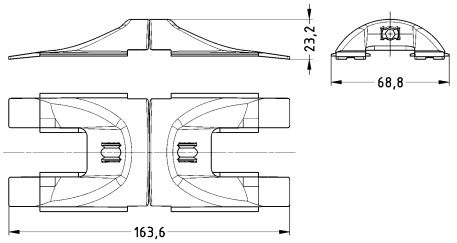
Identification	Cable entry	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Han-Modular® Flexbox, Hood, Top entry, IP54 	3x 4x	5 ... 24 4 ... 16	09 14 000 8013 09 14 000 8014	
Han-Modular® Flexbox, Carrier hood, for 4 modules, a ... d, IP54 			09 14 004 8001	
Han-Modular® Flexbox, Carrier hood, for 4 modules, A ... D, IP54 			09 14 004 8101	

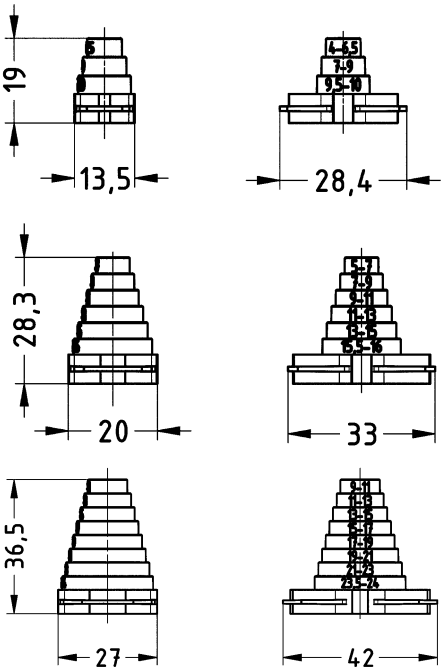
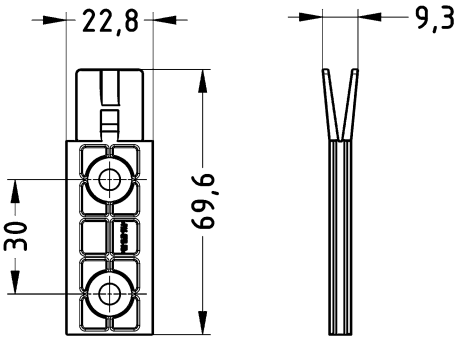
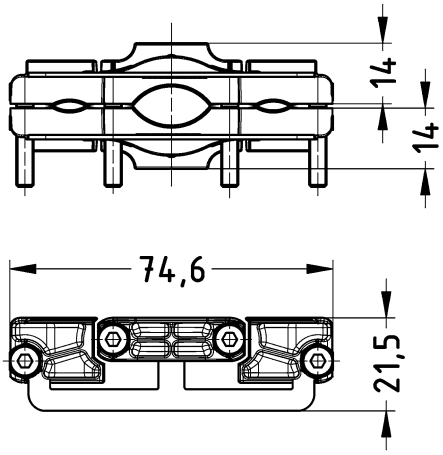
Technical characteristics

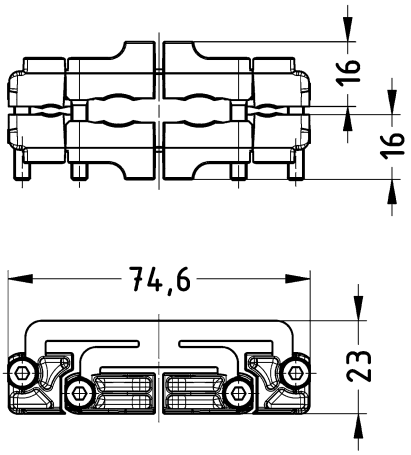
Material (seal)	NBR
Colour (seal)	RAL 9005 (jet black)
Material (locking)	Polyamide (PA), Fibre-glass reinforced

Technical characteristics

Colour (locking)	RAL 9005 (jet black)
Material (accessories)	Polyamide (PA), Fibre-glass reinforced
Colour (accessories)	RAL 9005 (jet black)
RoHS	compliant

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Locking element, Single 		09 14 000 8021	
Locking element, Double 		09 14 000 8022	

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Cable seal 	4 ... 10 5 ... 16 9 ... 24	09 14 000 8100 09 14 000 8200 09 14 000 8300	
Fixing, for the combination of two Flexboxes and for mounting the Flexbox 		09 14 000 8020	
Strain relief, 3 cable entries 		09 14 000 8033	

Identification	Clamping range (mm)	Part number	Drawing (dimensions in mm)
Strain relief, 4 cable entries 		09 14 000 8034	

Han-Modular® docking frames

Features

- Blind mating connector system for drawer systems
- Highest flexibility due to a product range of over 100 connector modules
- Direct panel mounting without hoods and housings
- Leading centring system compensates for tolerances of +/- 2 mm
- Compatible with HMC components for 10,000 mating cycles

Technical characteristics

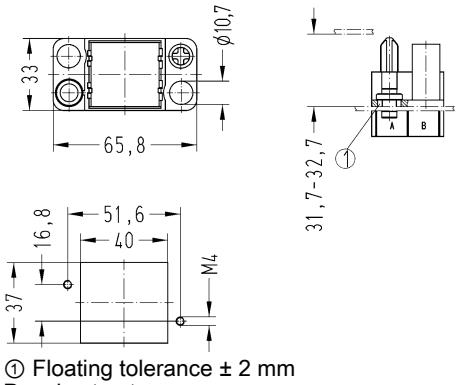
Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Mating cycles with other HMC components	≥10000
Degree of protection acc. to IEC 60529	IP20
Lock-in range	±4 mm
Material (frames)	Polycarbonate (PC)
Material (accessories)	Zinc die-cast
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

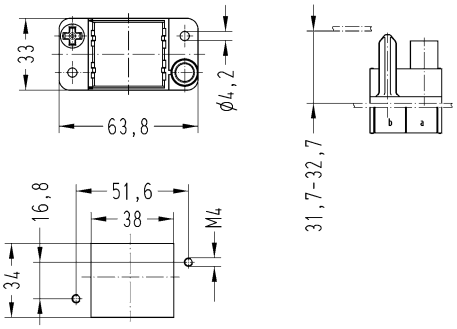
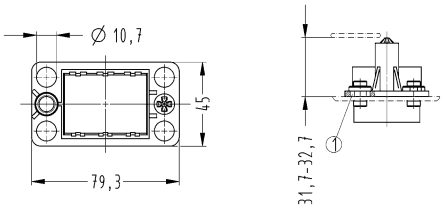
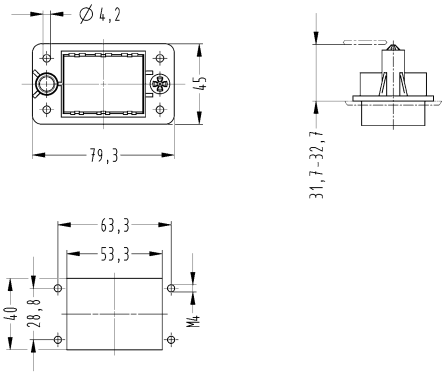
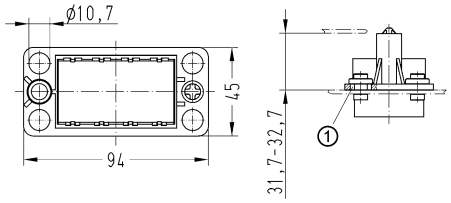
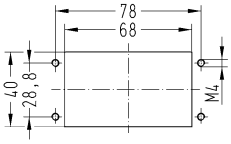
EN 60664-1
IEC 61984

Details

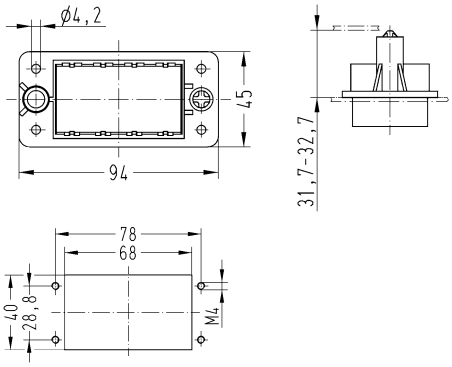
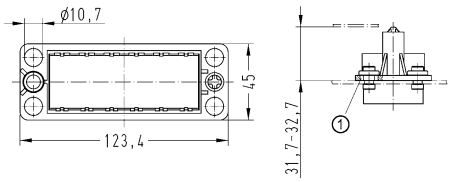
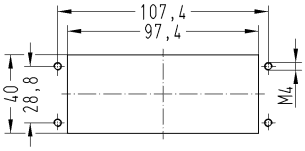
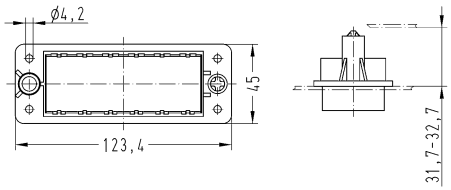
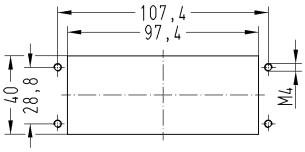
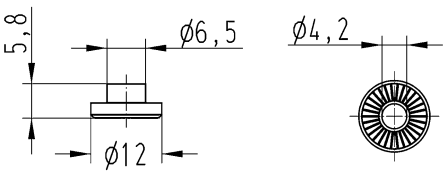
The docking frame has no PE contact as it is not required in many drawer system applications.

Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Docking frame, Float mount, for 2 modules, A ... B, IP20	09 14 006 1701	 ① Floating tolerance ± 2 mm Panel cut out

Han-Modular® docking frames

Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Docking frame, Fixed, for 2 modules, a ... b, IP20 	09 14 006 1711	 Panel cut out
Han-Modular®, Docking frame, Float mount, for 3 modules, A ... C, IP20 	09 14 010 1701	 ① Floating tolerance ± 2 mm
Han-Modular®, Docking frame, Fixed, for 3 modules, a ... c, IP20 	09 14 010 1711	 Panel cut out
Han-Modular®, Docking frame, Float mount, for 4 modules, A ... D, IP20 	09 14 016 1701	 ① Floating tolerance ± 2 mm  Panel cut out

Han-Modular® docking frames

Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Docking frame, Fixed, for 4 modules, a ... d, IP20 	09 14 016 1711	 Panel cut out
Han-Modular®, Docking frame, Float mount, for 6 modules, A ... F, IP20 	09 14 024 1701	 ① Floating tolerance ± 2 mm  Panel cut out
Han-Modular®, Docking frame, Fixed, for 6 modules, a ... f, IP20 	09 14 024 1711	  Panel cut out
Han-Modular®, Float washer To enable the frame to be float mounted using standard M4 fixing screws	09 14 000 9936	

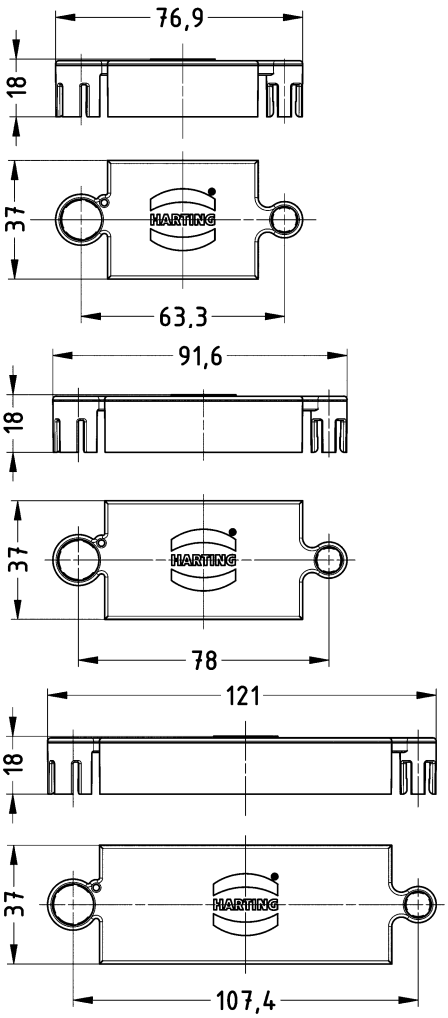
Han-Modular® docking frames

Technical characteristics

Limiting temperature	-40 ... +125 °C
Degree of protection acc. to IEC 60529	IP20
Material (accessories)	Thermoplastic
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

DIN EN 45545-2 R22: HL1, HL2, HL3
DIN EN 45545-2 R23: HL1, HL2, HL3

Identification	Size	Part number	Drawing (dimensions in mm)
Han-Modular®, Dust protection cover, for Han-Modular® plastic docking frame, IP20 	10 B 16 B 24 B	09 14 010 5701 09 14 016 5701 09 14 024 5701	

Sliding frame

Features

- Blind mating connector system for drawer systems with test position
- Direct panel mounting without hoods and housings
- Solid leading guide pins and bushes
- Suitable for many modules of the Han-Modular® product series (Please contact your HARTING salesman for support to find your specific combination.)

Technical characteristics

Limiting temperature	-5 ... +55 °C
Mating cycles	≥500
Lock-in range	±4 mm
Material (frames)	Polycarbonate (PC)
Material (accessories)	Zinc die-cast
Material flammability class acc. to UL 94	V-0
RoHS	compliant

Specifications and approvals

EN 60664-1
IEC 61984

Details

Due the plastic material used in the docking frame without PE, the panel will need to be grounded separately.

Details

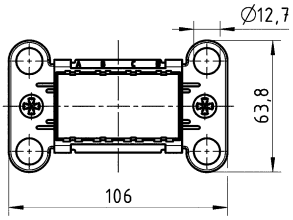
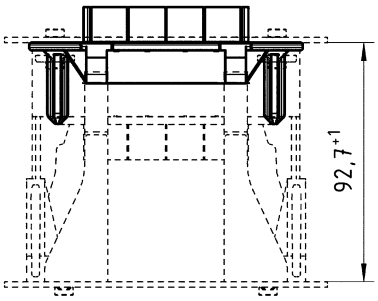
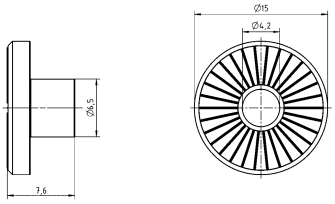
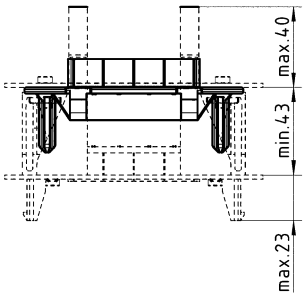
Position unmated
The drawer system and the modules are not mated.

Test position
The drawer system is in the so called test position – the modules are mated.

Working position
The drawer system is pushed completely into the rack – the modules remain mated.

Sliding frame

Size 16 B

Identification	Part number	Drawing (dimensions in mm)
Sliding frame, with test position, for 4 modules, Float mount, A ... D 	09 14 016 1721	
Sliding frame, with test position, for 4 modules, Movable side, a ... d 	09 14 016 1731	
Han-Modular®, Float washer To enable the Sliding Frame to be float mounted using standard M4 fixing screws	09 14 000 9986	
Rail guide, for sliding frames for movable side 	09 14 000 9987	

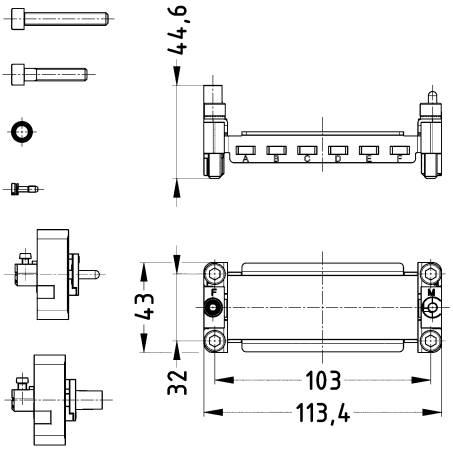
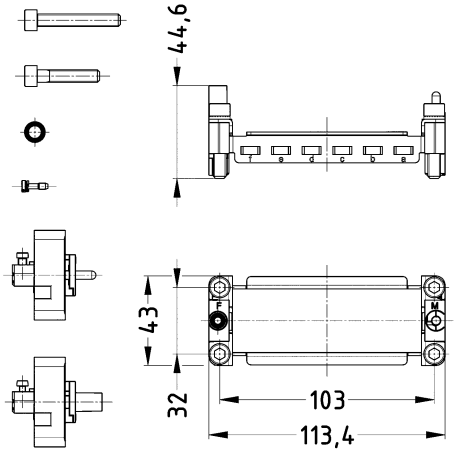
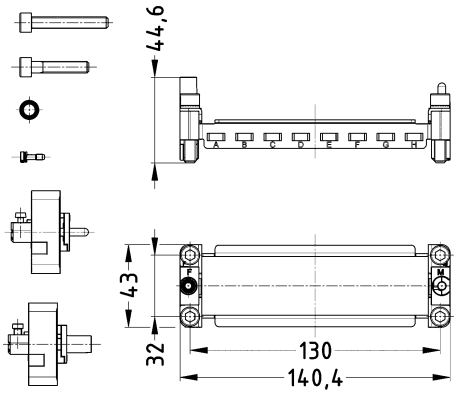
Features

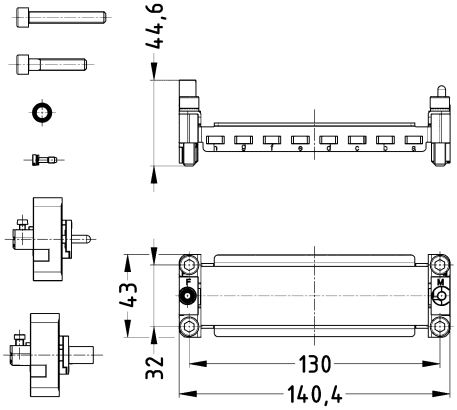
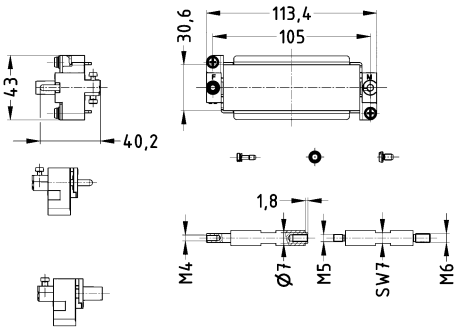
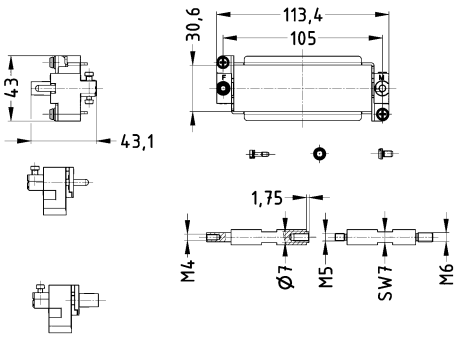
- Hinged frames with additional PE connection for 6 Han-Modular® single modules
- Two leading PE contacts
- Compatible to the hinged frame Han® HPR EasyCon
- Compatible to the hinged frame Han® HPR enlarged

Technical characteristics

Limiting temperature	-40 ... +125 °C
Mating cycles	≥500
Material (accessories)	Stainless steel, Zinc die-cast
RoHS	compliant

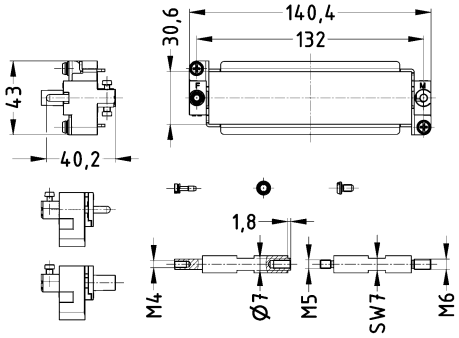
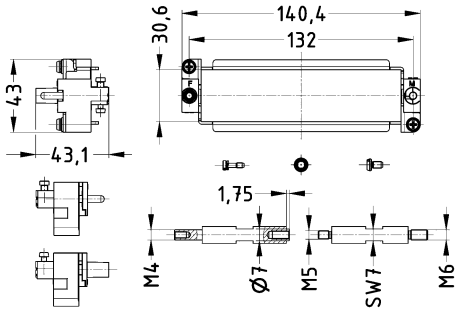
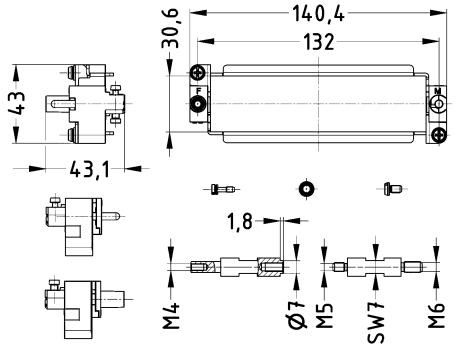
Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Han® HPR enlarged, Frame, for up to 6 single modules, A ... F, Pack contents: 2x M4 screw, 2x washer SK S4, 4x cheese-head screw M6 x 20, 4x cheese-head screw M6 x 30, 4x washer SK S6 		09 11 000 9945	
Han® HPR enlarged, Frame, for up to 6 single modules, a ... f, Pack contents: 2x M4 screw, 2x washer SK S4, 4x cheese-head screw M6 x 20, 4x cheese-head screw M6 x 30, 4x washer SK S6 		09 11 000 9946	

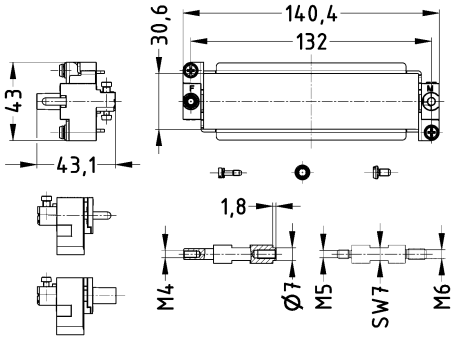
Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Han® HPR enlarged, Frame, for up to 6 single modules, A ... F, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M3 screw, 4x washer SK S6, 4x cheese-head screw M6 x 30, 4x cheese-head screw M6 x 40 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 11 016 9933	
Han® HPR enlarged, Frame, for up to 6 single modules, a ... f, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M3 screw, 4x washer SK S6, 4x cheese-head screw M6 x 30, 4x cheese-head screw M6 x 40 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 11 016 9934	
Han® HPR enlarged, Frame, for up to 8 single modules, A … H, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M3 screw, 4x washer SK S6, 4x cheese-head screw M6 x 30, 4x cheese-head screw M6 x 40 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 11 024 9933	

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Han® HPR enlarged, Frame, for up to 8 single modules, a … h, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M3 screw, 4x washer SK S6, 4x cheese-head screw M6 x 30, 4x cheese-head screw M6 x 40 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 11 024 9934	
Han® HPR EasyCon, Frame, for up to 6 single modules, A ... F, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 2x M3 screw, 2x M4 screw, 2x washer SK S4 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 40 016 9933	
Frame, for up to 6 single modules, a ... f, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 2x M3 screw, 2x M4 screw, 2x washer SK S4 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 40 016 9934	

Han® HPR Frame

Size 16 B

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Han® HPR EasyCon, Frame, for up to 8 single modules, A … H, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 2x M3 screw, 2x M4 screw, 2x washer SK S4 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 40 024 9933	
Han® HPR EasyCon, Frame, for up to 8 single modules, a … h, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 2x M3 screw, 2x M4 screw, 2x washer SK S4 	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 40 024 9934	
Han® HPR EasyCon, Frame, for up to 8 single modules, A … H, Low construction, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 2x M3 screw, 2x M4 screw, 2x washer SK S4  ATTENTION! Only to be used with Han® 24 HPR EasyCon Short hoods and housings!	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 40 024 9935	

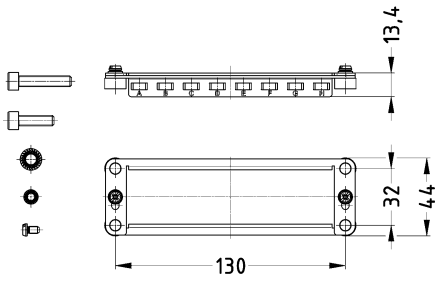
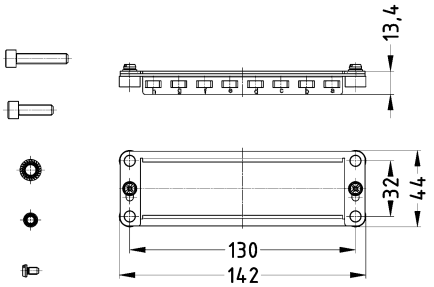
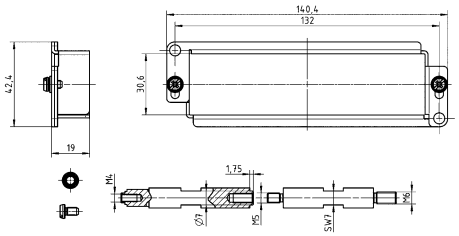
Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Han® HPR EasyCon, Frame, for up to 8 single modules, a … h, Low construction, Pack contents: 1x male PE adapter, 1x female PE adapter, 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 2x M3 screw, 2x M4 screw, 2x washer SK S4  ATTENTION! Only to be used with Han® 24 HPR EasyCon Short hoods and housings!	4 ... 10 PE terminal power side, 1 ... 2.5 PE terminal signal side	09 40 024 9936	

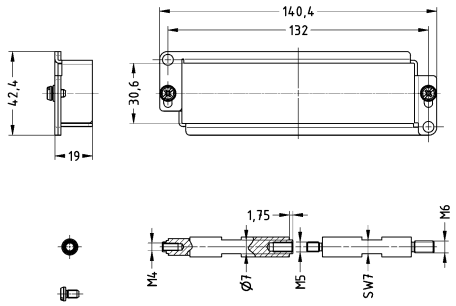
Technical characteristics

Material (accessories)	Stainless steel

Technical characteristics

RoHS	compliant

Identification	Part number	Drawing (dimensions in mm)
Han® HPR enlarged, Frame, for up to 8 single modules, A … H, Pack contents: 2x M4 screw, 2x washer SK S4, 4x cheese-head screw M6 x 20, 4x cheese-head screw M6 x 30, 4x washer SK S6	09 11 000 9935	 Tightening torque Fixing screws M6: 10 Nm Tightening torque Screws M4: 1.5 Nm
Han® HPR enlarged, Frame, for up to 8 single modules, a … h, Pack contents: 2x M4 screw, 2x washer SK S4, 4x cheese-head screw M6 x 20, 4x cheese-head screw M6 x 30, 4x washer SK S6	09 11 000 9936	 Tightening torque Fixing screws M6: 10 Nm Tightening torque Screws M4: 1.5 Nm
Han® HPR EasyCon, Frame, for up to 8 single modules, A … H, Pack contents: 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 4x M4 screw, 4x washer SK S4	09 40 024 9931	 Tightening torque Distance bolt 6 Nm Tightening torque Fixing screws M4: 1.5 Nm Tightening torque M4: 1.5 Nm

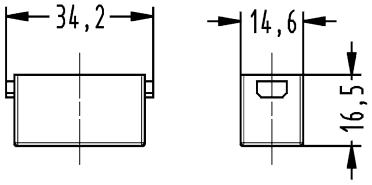
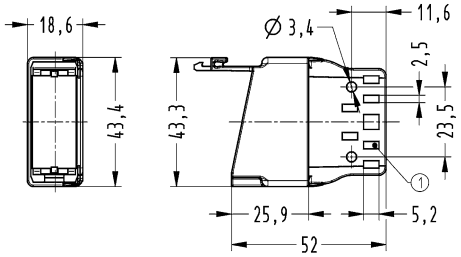
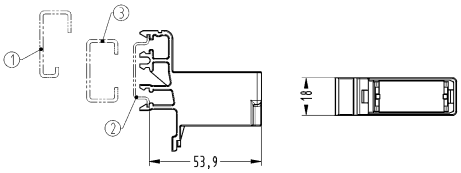
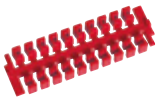
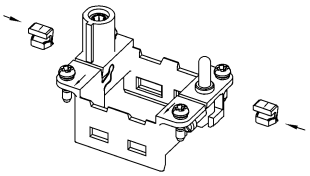
Identification	Part number	Drawing (dimensions in mm)
Han® HPR EasyCon, Frame, for up to 8 single modules, a … h, Pack contents: 2x M4/M5 distance bolts (A/F 7), 2x M5/M6 distance bolts (A/F 7), 4x M4 screw, 4x washer SK S4	09 40 024 9932	 Tightening torque Distance bolt 6 Nm Tightening torque Fixing screws M4: 1.5 Nm Tightening torque M4: 1.5 Nm

Technical characteristics

Material (insert)	Polycarbonate (PC)
Colour (insert)	RAL 7032 (pebble grey)
Material (locking)	Polycarbonate (PC)

Technical characteristics

Material (accessories)	Thermoplastic
Material flammability class acc. to UL 94	V-0
RoHS	compliant

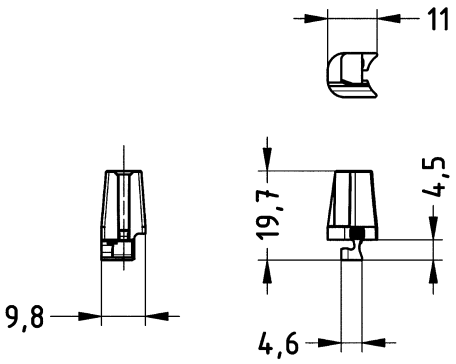
Identification	Part number	Drawing (dimensions in mm)
Han-Modular®, Han® Dummy module 	09 14 000 9950	
Han-Modular®, Module locking system, With strain relief, Pack contents: 1 module locking system 	09 14 000 0312	 ① For cable ties with max. 5 mm width
Han-Modular®, Module locking system, for rail, Pack contents: 1 module locking system 	09 14 000 0313	 ① G-rail IEC 60715-G32 ② Rail IEC 60715-35 x 7.5 with 1 mm thickness or -35 x 15 with 1.5 mm thickness ③ C-rail IEC 60715-C30
Han-Modular®, Fixing, for Han-Modular® hinged frames, Pack contents: 20 pieces per frame 	09 14 000 9960	 to fix the pre-assembled hinged frames

Features

- Applicable as a guiding element for electrical power and signal modules in the Han-Modular® hinged frame plus
- Considerable time saving assembly compared to conventional guide pins / bushes
- Colour coding with 6 different colours

Technical characteristics

Limiting temperature	-40 ... +125 °C
Material (accessories)	Polycarbonate (PC)
Colour (accessories)	Grey, Red, Blue, Black, Yellow, Green
Material flammability class acc. to UL 94	V-0
RoHS	compliant

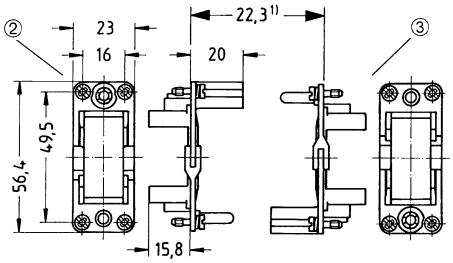
Identification		Part number	Drawing (dimensions in mm)
Han-Modular®, Guide element, Han-Modular® Guard, for Han-Modular® hinged frames	Black Blue Green Grey Red Yellow	09 14 000 9993 09 14 000 9992 09 14 000 9995 09 14 000 9990 09 14 000 9991 09 14 000 9994	

Technical characteristics

Material (accessories)	Zinc die-cast
RoHS	compliant with exemption

Details

PE connection (0.75 ... 2.5 mm²) with cable shoe

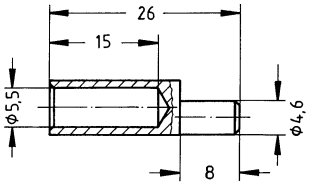
Identification	Part number	Drawing (dimensions in mm)
Frame, for 1 module, In housing Han® 10 A	09 14 000 0304	 ① Distance max. 23.5 mm ② Hood ③ Housing

Technical characteristics

Material (contacts)	Copper alloy

Technical characteristics

RoHS	compliant

Identification	Conductor cross-section (mm²)	Part number	Drawing (dimensions in mm)
Han-Modular®, Cable shoe, for PE extension  for hoods/housings high construction only	16	09 14 000 9912	 Please use pressing tools for non-insulated cable shoes following DIN 46230 with 16 mm² range (eg. K25, co. Klauke)