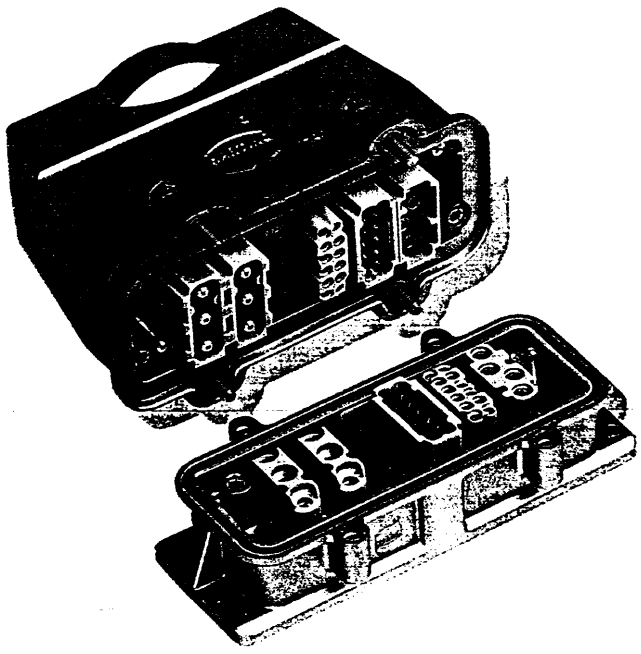
728-019 TO 159
728-263 TO 342
728-408/410

Heavy Duty Connectors Han-Modular®



Certified according to DIN ISO 9001
in design/development, production,
installation and servicing

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The best connections world-wide - connect with quality - specify HARTING

HARTING Elektronik GmbH was founded in 1945 and is 100 % privately owned.

Approximately 1,700 people are employed worldwide including 150 engineers and more than 100 sales engineers who provide the daily interface with our customers.

HARTING with its 16 subsidiaries in Europe, North America and Asia is today one of the world's leading connector manufacturers.

All the company's manufacturing plants, with the exception of Plant 1 in Espelkamp, have been built within the last ten years.

State of the art CAD-Systems are used both in the R & D department and the tool making department in order to bring new products to the market in the most efficient way.

It is HARTING's philosophy that the target of permanent zero defect production is only achievable by the integration of fully automatic in-line inspection processes.

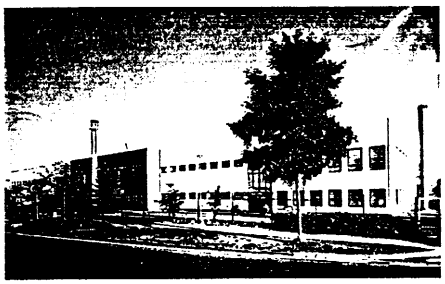
The implementation of the above quality philosophy and associated processes are documented according to DIN ISO 9001 in the Quality Assurance Manual.

In total approximately 60 quality control personnel are employed. The majority of these engineers and technicians are trained and certified by the German (DCQ) or Swiss (SAQ) quality organisations. The divisions electronic connectors, heavy duty connectors Han® and solenoids are certified according to DIN ISO 9001 for design/R & D, production, assembly and customer service.

The dedication to quality and the ability to deliver on a "Just in Time" basis have led to the development of strong relationships with leading original equipment manufacturers on the world market.

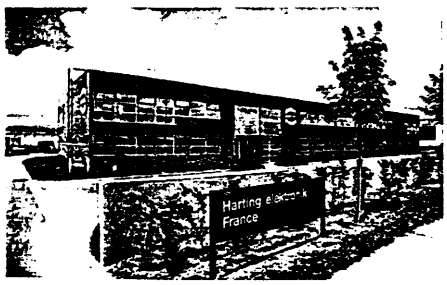
HARTING is the market leader in several of its product ranges.

Germany - Plant 1 Espelkamp

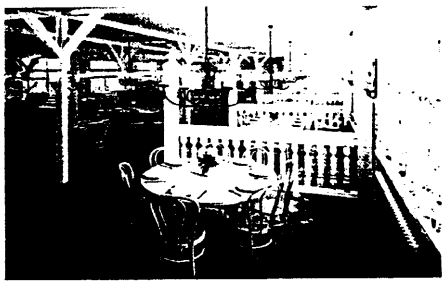


Germany - Plant 2 Espelkamp

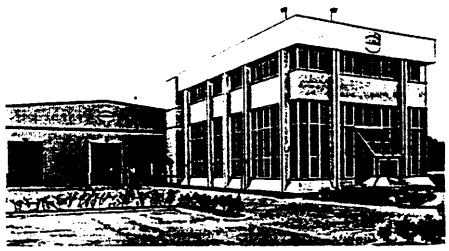
Germany - Plant 3 Espelkamp



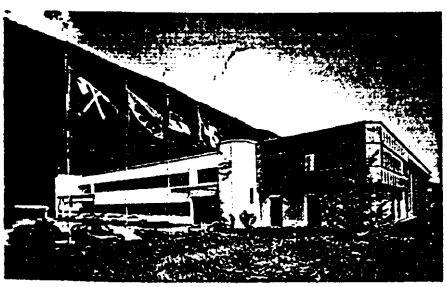
France - Sales and marketing



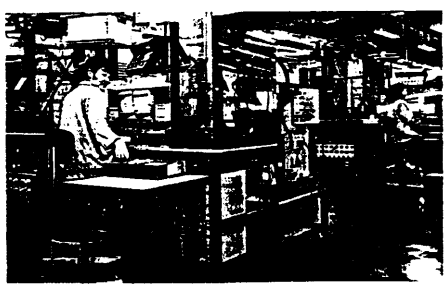
Espelkamp - Staff Cafeteria



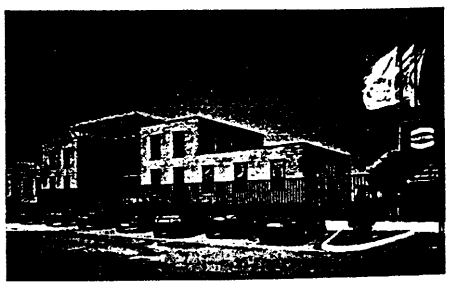
United Kingdom - Production, sales and marketing



Switzerland - Production plant



Hong Kong - Production, sales and marketing



Italy - Sales and marketing

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Contents

Han-Modular®

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Economic and Reliable Connections

Specifications
VDE 0110 table 4, concerning clearances and creepage-distances

VDE 0627 Connectors

Note
Connectors should not be coupled and decoupled under electrical load. Connectors of the same or different series being mounted side by side may be protected against incorrect mating by the use of coding options.

Approvals
UL, CSA, SEV for inserts and hoods/housings

Han M hoods/housings for harsh environmental requirements
DET NORSKE VERITAS (DNV)

Han U hoods/housings
for intrinsically safe plant

State mining board
BVS-certification no. T 6365

CERCHAR-France
"MS 83.9011 U"

SABS
South African Bureau of Standards

Certified according to DIN ISO 9001 in design/development, production, installation and servicing

Terminations
- Screw terminal
- Crimp terminal
- Solder terminal

Inserts
- Leading protective ground
- Polarised for correct mating
- Interchangeability of male and female inserts in hoods and housings
- Captive fixing screws
- Can be used with hoods and housings, or for rack and panel applications
- Compact design
- Power and signal contacts of different media in one connector

Hoods/Housings
- Standard Hoods/Housings IP 65
- Hoods/Housings for harsh environmental requirements IP 65
- Hoods/Housings for intrinsically safe plant
- Degree of protection IP 65
- Pressure tight housings IP 68
- EMC Hoods/Housings
- Electrical connection with protective ground
- High mechanical strength and vibration-resistance ensured by locking levers
- Spring-loaded and lockable covers in shockproof thermoplastic or metal

Accessories
- Extensive range of cable protection and sealing accessories
- Protective covers available

For "non standard applications" we can manufacture designs to match your requirements.
Please discuss requirements with us.

HARTING-heavy duty connectors incorporate the latest design features and provide the assurance of high quality and reliability with economy.

Sales Department
HARTING-Components

General information

It is the user's responsibility to check whether the components illustrated in this catalogue comply with different regulations from those stated in special fields of application which we are unable to foresee.

We reserve the right to modify designs in order to improve quality, keep pace with technological advancement or meet particular requirements in production.

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We are bound by the German version only.

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Description of the Han-Modular® system

The **Han-Modular®** series is a new system of inserts designed to meet the specific requirements of individual customers. In close cooperation with potential users a range of modular inserts have been developed allowing the simple assembly of custom designed complete connectors which meet the diverse requirements encountered by todays designers.

Han-Modular® is a logical development of the **Han-Com®** series which already offers the combination of power and signal circuits in one connector.

The individual modules of this series now allow the integration of **electrical**, **optical** and **gaseous** signal and power connections in one connector assembly.

The pneumatic contacts are also suitable for the connection of liquid media. However it must be stated that a combination of electrical and liquid connections in one connector is not allowed according to VDE regulations.

The individual contacts used in this system are all from existing well proven ranges and it is possible to use combinations of 2 to 12 modules depending on the size of the hoods and housings chosen.

The basic modules snap into a mounting frame and can be exchanged separately at any time.

Advantages:

- Custom designs can be simply assembled
- Optimum solutions can be reached
- Stock can be minimized

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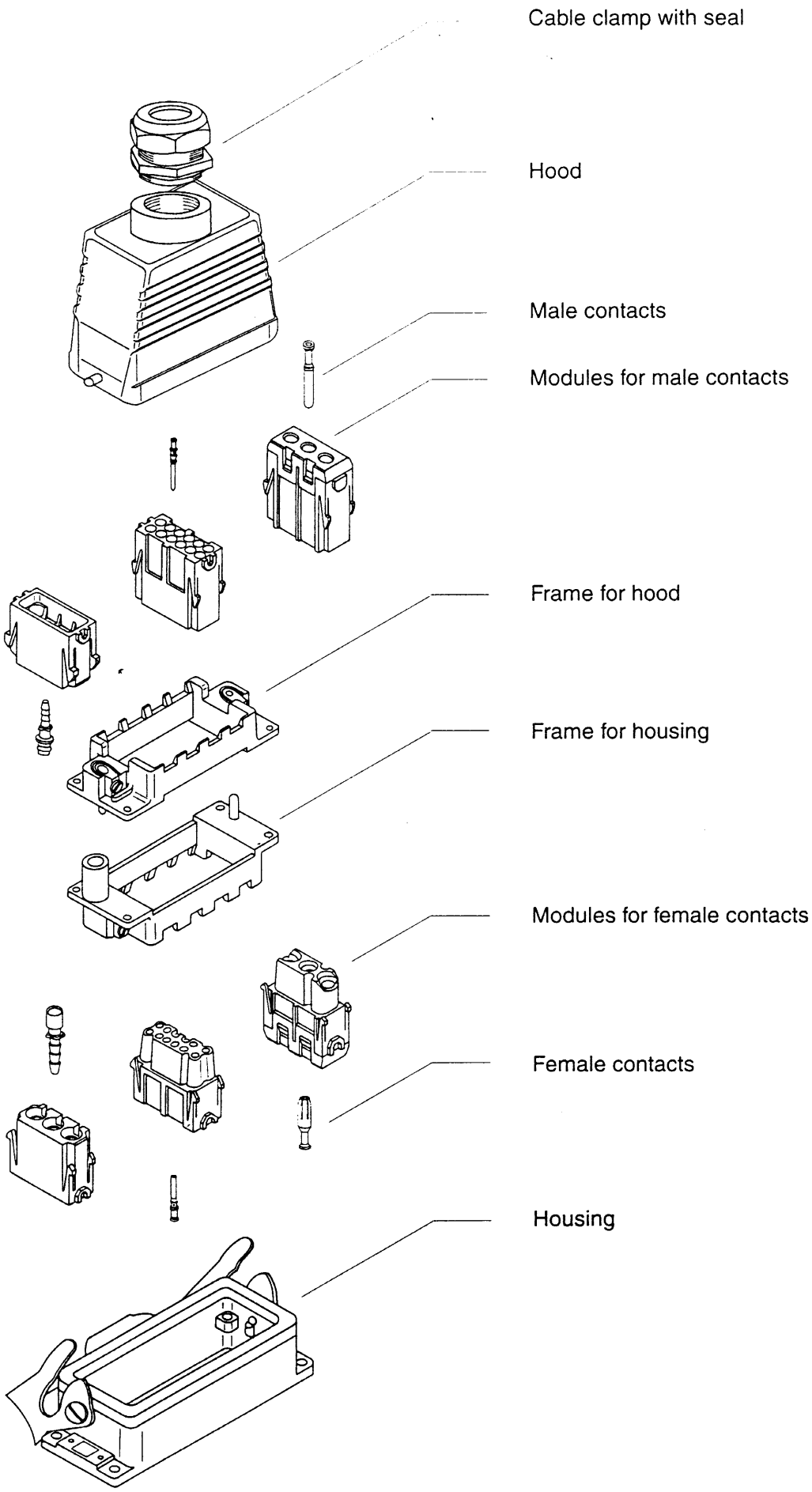

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Summary

1. Frame

Frame for	Suitable Han®-B-hoods/housings size
2 modules	6
3 modules	10
4 modules	16
6 modules	24
2 x 4 modules	32
2 x 6 modules	48

2. Modules

Type	Medium	Termination	Working current [A]	Working voltage [V ~]
Han C-module	electric	crimp	40	400 / 690
Han E-module	electric	crimp	16	500
Han DD-module				
- for signal contacts	electric	crimp	10	250
- for 1 mm POF* contacts	fibre optics	crimp		
Han Multicontact-module				
- for coaxial contacts (50 Ω)	electric	crimp/solder	1.5	50
- for high voltage contacts (1.0 kV)	electric	solder	1.5	1000
- for FOC GI-fibre	fibre optics	glue		
- for FOC 1 mm POF* contacts	fibre optics	crimp/glue		
			Working pressure		Tube termination
			[bar]	[psi]	ID [mm]
Han Pneumatic-module	air and liquid media	plug	8	116	1.6; 3.0 and 4.0

* POF = Polymer Optical Fibre

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Features

- Grounding system according to VDE
- Torsion-rigid die cast zinc frame
- one part frame
- Modules can only be snapped in polarized to guarantee correct orientation
- Alternatively use of male and female modules within one frame
- Frames are usable in standard hoods/housings
- Alphabetical marking of module positions

Technical characteristics

Termination gauge for the PE-wire

Power side:	4 - 6 mm² / AWG 12 - AWG 10
Signal side:	1 - 2.5 mm² / AWG 18 - AWG 14

Material: die cast zinc alloy

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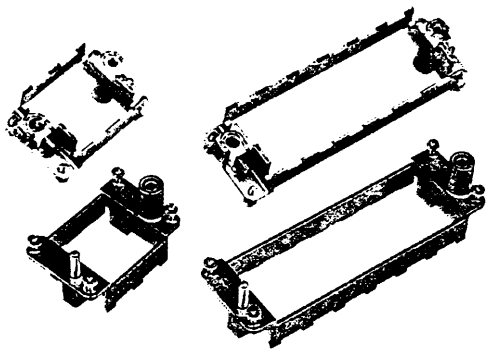
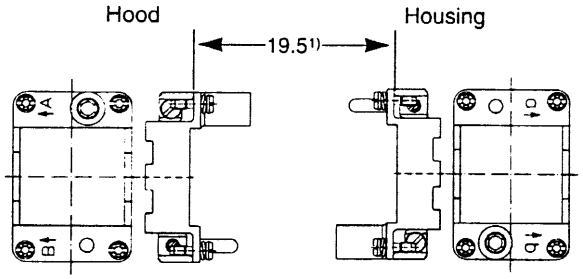
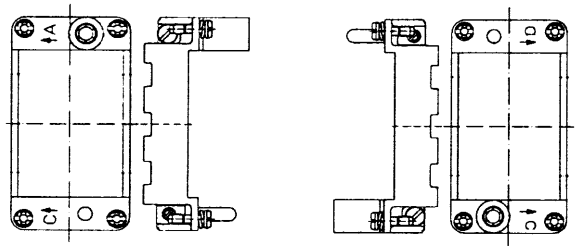
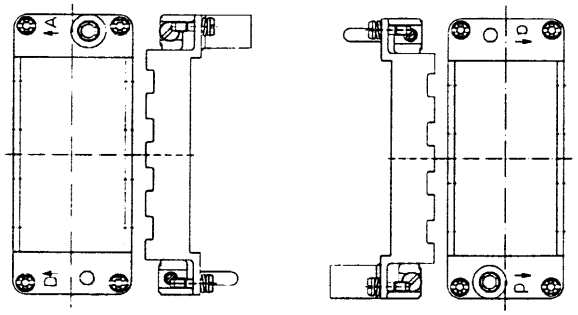
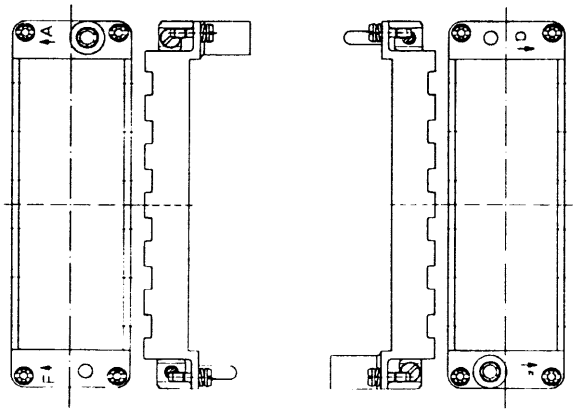


Frames

Identification	Part No. for Hood / Housing[2] Marking: A ... F	Marking: a ... f	Drawing	Dimensions in mm
Frame for 2 modules	09 14 006 0301	09 14 006 0311		
Frame for 3 modules	09 14 010 0301	09 14 010 0311		
Frame for 4 modules	09 14 016 0301	09 14 016 0311		
Frame for 6 modules	09 14 024 0301	09 14 024 0311		

[1] Distance for electrical and FOC contacts max. 21 mm; for pneumatic contacts max. 20.5 mm
[2] Frames can be used either in hood or housing, but two different markings must be used for one connector

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Features

- 3 contacts (40 A) for power circuits
- Male insert with additional protection collar
- Polarization of module
- Crimp termination

Technical characteristics

Specifications	DIN VDE 0627 DIN VDE 0110
Approvals	

Inserts

Number of contacts	3
Working current	40 A
Working voltage	400 / 690 V ~
Pollution degree	3 (C)
Material	Polycarbonate
Insulation resistance	≥ 10^{10} Ω
Temperature range	- 40 °C + 125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 500

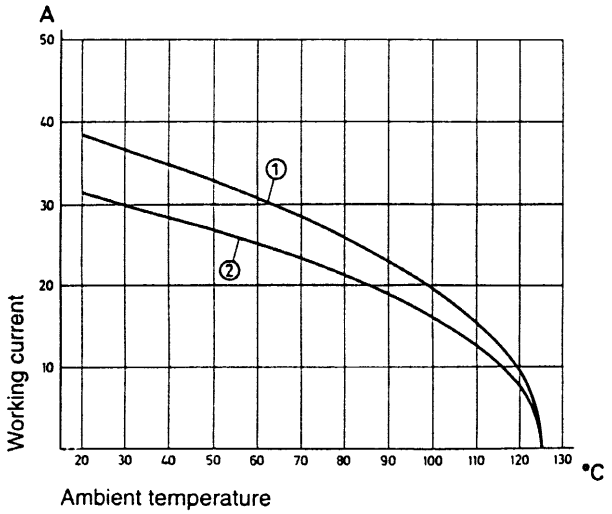
Contacts

Material	copper alloy
Surface	
- hard-silver plated	5 µm Ag
Contact resistance	≤ 0.3 mΩ
Crimp terminal	
- mm²	1.5 - 6 mm²
- AWG	16 - 10

Current carrying capacity

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

Control and test procedures according to DIN IEC 512-3.



① 24 B hood/housing with 6 modules; wire gauge: 6.0 mm²
② 24 B hood/housing with 6 modules; wire gauge: 4.0 mm²

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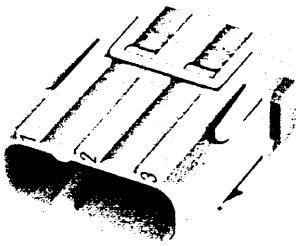
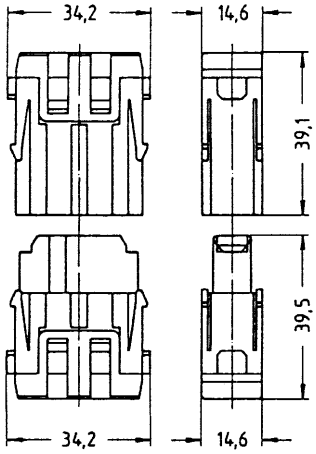
Number of contacts

3



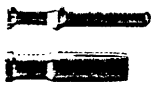
Han® C-module

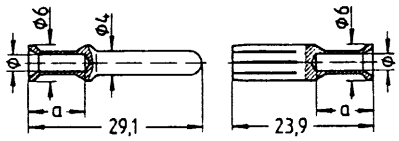
Identification	Part No. Male insert (M)	Female insert (F)	Drawing	Dimensions in mm
Crimp terminal				
Order contacts separately	09 14 003 3001		M	
		09 14 003 3101	F	



Contact arrangement View from termination side

Identification	Wire gauge (mm²)	Part No. Male contacts	Female contacts	Drawing	Dimensions in mm
Crimp contacts					
Power contacts					
silver plated	1.5	09 32 000 6104	09 32 000 6204		
	2.5	09 32 000 6105	09 32 000 6205		
	4.0	09 32 000 6107	09 32 000 6207		
	6.0	09 32 000 6108	09 32 000 6208		





ø	Wire gauge		a
1.75	1.5 mm²	AWG 16	9
2.25	2.5 mm²	AWG 14	9
2.85	4 mm²	AWG 12	9.6
3.5	6 mm²	AWG 10	9.6

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Features

- 6 contacts (16 A) for power circuits
- Male insert with additional protection collar
- Polarization of module
- Crimp termination
- Contacts with silver and gold plated surface

Technical characteristics

Specifications	DIN VDE 0627 DIN VDE 0110
Approvals	

Inserts

Number of contacts	6
Working current	16 A
Working voltage	500 V ~
Pollution degree	3 (C)
Material	Polycarbonate
Insulation resistance	≥ 10^{10} Ω
Temperature range	- 40 °C + 125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 500

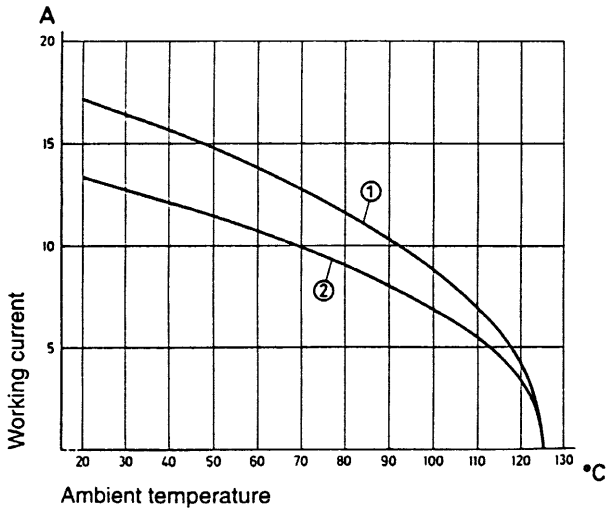
Contacts

Material	copper alloy
Surface	
- hard-silver plated	3 µm Ag
- hard-gold plated	2 µm Au over 3 µm Ni
Contact resistance	≤ 1 mΩ
Crimp terminal	
- mm²	0.5 - 4 mm²
- AWG	20 - 12

Current carrying capacity

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

Control and test procedures according to DIN IEC 512-3.



① 24 B hood/housing with 6 modules; wire gauge: 2.5 mm²
② 24 B hood/housing with 6 modules; wire gauge: 1.5 mm²

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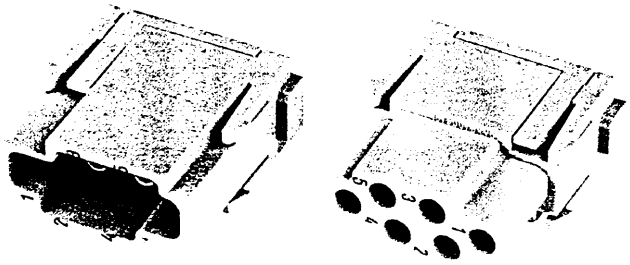
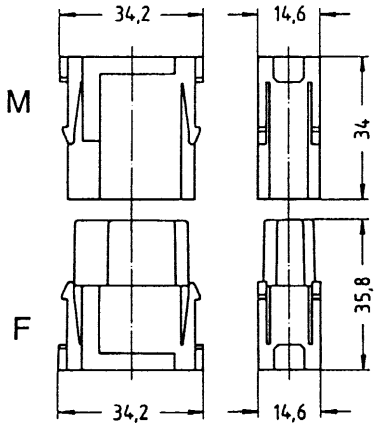
Number of contacts

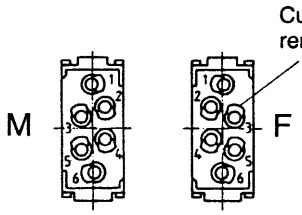
6



Han® E-module

Identification	Part No. Male insert (M)	Female insert (F)	Drawing	Dimensions in mm
Crimp terminal				
Order contacts separately	09 14 006 3001		M	
		09 14 006 3101	F	



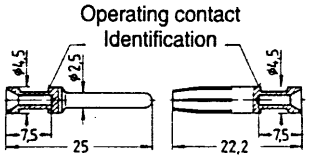


Contact arrangement View from termination side

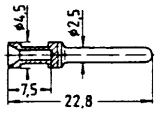
Identification	Wire gauge (mm²)	Part No. Male contacts	Female contacts
Crimp contacts			
Power contact			
silver plated	0.5	09 33 000 6121	09 33 000 6220
	0.75	09 33 000 6114	09 33 000 6214
	1.0	09 33 000 6105	09 33 000 6205
	1.5	09 33 000 6104	09 33 000 6204
	2.5	09 33 000 6102	09 33 000 6202
	3	09 33 000 6106	09 33 000 6206
	4	09 33 000 6107	09 33 000 6207
gold plated	0.5	09 33 000 6122	09 33 000 6222
	0.75	09 33 000 6115	09 33 000 6215
	1.0	09 33 000 6118	09 33 000 6218
	1.5	09 33 000 6116	09 33 000 6216
	2.5	09 33 000 6123	09 33 000 6223
	4.0	09 33 000 6119	09 33 000 6221
Relay contact silver plated	0.75	09 33 000 6109	
	1.5	09 33 000 6110	
	2.5	09 33 000 6111	

Drawing

Operating contact Identification



Relay contact



Dimensions in mm

Crimp contact identification

Identification	Wire gauge		Stripping length
no groove	0.5 mm²	AWG 20	7.5 mm
1 groove*	0.75 mm²	AWG 18	7.5 mm
1 groove	1 mm²	AWG 18	7.5 mm
2 grooves	1.5 mm²	AWG 16	7.5 mm
3 grooves	2.5 mm²	AWG 14	7.5 mm
wide groove	3.0 mm²	AWG 12	7.5 mm
no groove	4 mm²	AWG 12	7.5 mm

* on the back crimp collar

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Han® DD-module

Features

- ❑ 12 contact chambers for
  - Signal contacts (10 A)
  - FOC contacts for 1 mm plastic fibre
- ❑ Male insert with additional protection collar
- ❑ Polarization of module
- ❑ Crimp termination
- ❑ Signal contacts with silver respectively gold plated surface
- ❑ Alternatively use of male and female modules within one frame
- ❑ Contact spacing enables the use of pcb-adaptors (see page 06.36)

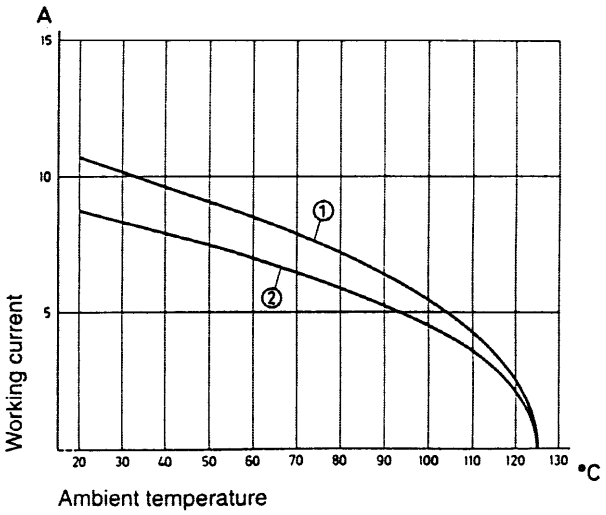
Technical characteristics

Specifications	DIN VDE 0627 DIN VDE 0110
Approvals	
Inserts	
Number of contacts	12
Working current	10 A
Working voltage	250 V ~
Pollution degree	3 (C)
Material	Polycarbonate
Insulation resistance	≥ 10^{10} Ω
Temperature range	- 40 °C + 125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 500
Contacts	
Material	copper alloy
Surface	
- hard-silver plated	3 µm Ag
- hard-gold plated	2 µm Au over 3 µm Ni
Contact resistance	≤ 3 mΩ
Crimp terminal	
- mm²	0.14 - 2.5 mm²
- AWG	26 - 14
Locking clip	
Material	non-corroding spring steel

Current carrying capacity

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

Control and test procedures according to DIN IEC 512-3.



① 24 B hood/housing with 6 modules; wire gauge: 1.5 mm²
② 24 B hood/housing with 6 modules; wire gauge: 1.0 mm²

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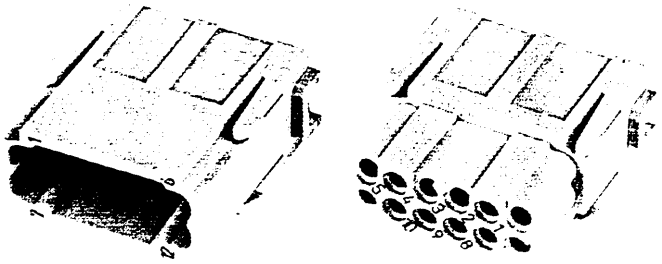
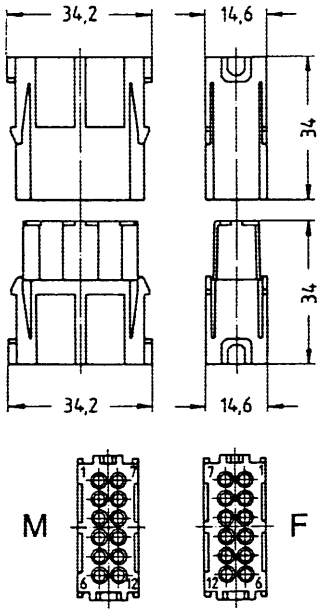
Number of contacts

12



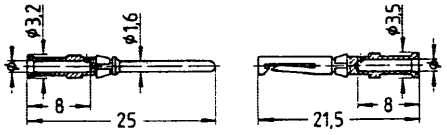
Han® DD-module

Identification	Part No. Male insert (M)	Female insert (F)	Drawing	Dimensions in mm
Crimp terminal				
Order contacts separately	09 14 012 3001		M	
		09 14 012 3101	F	



Contact arrangement View from termination side

Identification	Wire gauge (mm²)	Part No. Male contacts	Female contacts	Drawing	Dimensions in mm
Crimp contacts					
silver plated	0.14-0.37	09 15 000 6104	09 15 000 6204		
	0.5	09 15 000 6103	09 15 000 6203		
	0.75	09 15 000 6105	09 15 000 6205		
	1.0	09 15 000 6102	09 15 000 6202		
	1.5	09 15 000 6101	09 15 000 6201		
	2.5	09 15 000 6106	09 15 000 6206		
gold plated	0.14-0.37	09 15 000 6124	09 15 000 6224		
	0.5	09 15 000 6123	09 15 000 6223		
	0.75	09 15 000 6125	09 15 000 6225		
	1.0	09 15 000 6122	09 15 000 6222		
	1.5	09 15 000 6121	09 15 000 6221		
	2.5	09 15 000 6126	09 15 000 6226		
FOC contacts for 1 mm plastic fibre		20 10 001 3211	20 10 001 3221	Cable see catalogue "Fibre Optic Data Link Systems"	



Wire gauge		ø	Stripping length
0.14-0.37 mm²	AWG 26-22	0.90 mm	8 mm
0.5 mm²	AWG 20	1.10 mm	8 mm
0.75 mm²	AWG 18	1.30 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

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Han® Multicontact-module

Features

- ❑ 4 contact chambers for
  - Coaxial contacts
  - FOC contacts
  - High voltage contacts
- ❑ Male insert with additional protection collar
- ❑ Polarization of module

Technical characteristics

Specifications	DIN VDE 0627 DIN VDE 0110
Approvals	

Inserts

Number of contacts	4
Pollution degree	3 (C)
Material	Polycarbonate
Insulation resistance	≥ 10^{10} Ω
Temperature range	- 40 °C + 125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 500

Contacts

Coaxial contact	
- Material	copper alloy
- Contact surface hard-gold plated	2.5 µm / 0.8 µm Au over 4 µm Ni
- Impedance	50 Ω
- Contact resistance	
centre conductor	≤ 10 mΩ
outer conductor	≤ 3 mΩ
- max. working current	1.5 A
- Working voltage	50 V ~
High voltage	
- Material	copper alloy
- Contact surface hard-gold plated	1.3 µm Au over 4 µm Ni
- Contact resistance	max. 3.0 mΩ
- Max. working current	1.5 A
- Working voltage	1000 V ~
FOC contact[2]	
- Fibre type	glass fibre (GI)
- Attenuation	< 1.5 dB
FOC contact[2]	
- Fibre type	polymer optical fibre
- Attenuation	< 2.5 dB

Contact arrangement

according to table below:

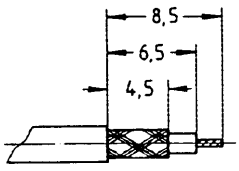
Contacts	Male insert (M) 09 14 004 4501	Female insert (F)[1] 09 14 004 4512
Coaxial contacts	Female contacts	Male contacts
High voltage contacts	Female contacts	Male contacts
FOC contacts	Male contacts	Female contacts

Coaxial contacts

usable for the cables listed below:

Cable group 2 flexible wires	Shell Ø mm	Screening Ø mm	Dielectric Ø mm	Internal wire Ø mm	Hexagonal crimp Spanner width
RG 174 / U	2.5	2.0	1.5	0.48	3.25
RG 188 A / U	2.6	2.0	1.5	0.54	3.25
RG 316 / U	2.5	2.0	1.5	0.54	3.25

Stripping description:



[1] Due to the closed entry design of female insert the upper part has to be removed by screw driver (7 mm) before extracting the contacts

[2] See catalogue „Fibre Optic Data Link Systems"

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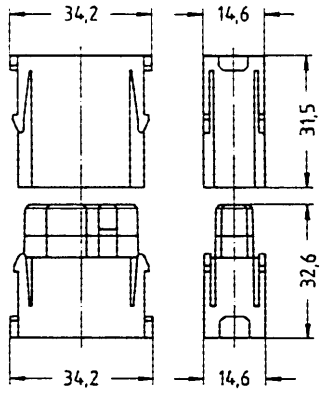
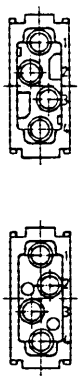
Number of contacts

4

Han® Multicontact-module

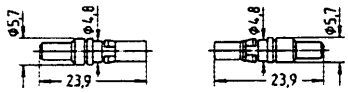
Identification	Part No. Male insert (M)	Female insert (F)	Drawing	Dimensions in mm
Multicontact-module				
Order contacts separately	09 14 004 4501		M	
		09 14 004 4512	F	



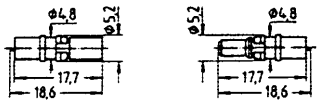


Contact arrangement
View from termination side

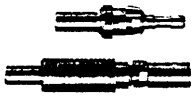
Identification	Part No. Male contacts	Female contacts	Drawing	Dimensions in mm
Coaxial contacts[1] for straight solder and/or crimp terminations	09 03 000 6160	09 03 000 6260	For cable group 2 flexible wires (see remarks on page 06.18)	

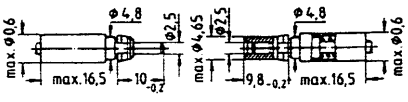


High voltage contacts[1] for straight solder terminations 1000 V	09 03 000 6140	09 03 000 6240		wire gauge max. 0.5 mm²



FOC contacts according to DIN 41 626 part 3[1] for GI-fibre 50/125 µm 62.5/125 µm	on request	on request		





for 1 mm POF[2]

[1] See contact arrangement page 06.18
[2] POF = Polymer Optical Fibre

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Features

- 3 contacts for transmission of gaseous and liquid media
- Termination of 1.6 mm, 3 mm and 4 mm ID-tubes
- Tubing sizes in module mixable
- Stable plastic construction of contacts
- Removal of tubes from already assembled pneumatic contacts is possible
- Female contacts with/without shut off
- Shut off principle:
  In open position of connector the spring integrated in female contact is active, thus the O-ring of valve seals the opening of passage.
  During the mating step, when the defined depth of immersion is reached, the male contact presses on the valve head and moves it to the termination side against the spring tension, so that the passage opens.

Technical characteristics

Specifications

Approvals

Inserts

Number of contacts	3
Colour	blue
Material	Polycarbonate
Temperature range	- 40 °C + 80 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 500

Contacts

Material	Delrin Acetal
Colour	black
Tube termination	
- Internal diameter (ID):	1.6 mm / 1/16" 3.0 mm 4.0 mm / 1/8"
Working pressure	vacuum up to 8 bar / 116 psi

Sealing

Material	Buna-N

Shut off valve

Material	Polypropylene

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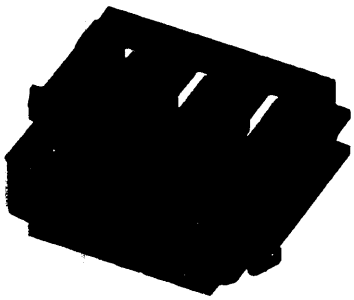
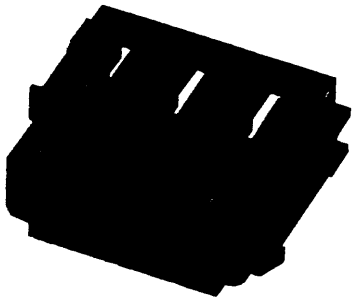
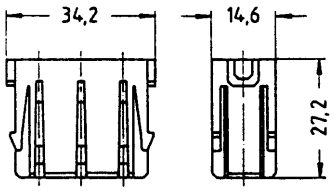
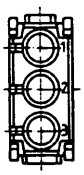
Number of contacts

3

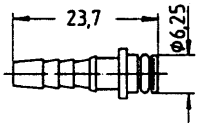
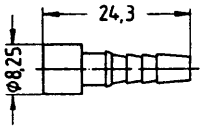


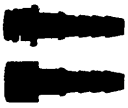


Han® Pneumatic-module

Identification	Part No. Male insert (M)	Female insert (F)	Drawing	Dimensions in mm
Pneumatic-module[1)] Order contacts separately (male and female inserts are identical)	09 14 003 4501	09 14 003 4501		

Contact arrangement View form mating side

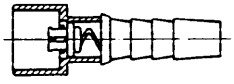
Identification	Part No. Male contacts	Female contacts	Drawing	Dimensions in mm
Contacts without shut off[1)]				
for tube internal diameter				
1.6 mm	09 14 000 6151	09 14 000 6251	 male contact	 female contact
3.0 mm	09 14 000 6152	09 14 000 6252		
4.0 mm	09 14 000 6153	09 14 000 6253		



Contacts with shut off[1)]

shut off principle: see page 06.20

for tube internal diameter		
1.6 mm	–	09 14 000 6256
3.0 mm	–	09 14 000 6257
4.0 mm	–	09 14 000 6258



female contact with shut off in closed position

[1)] Assembly of contacts before module is fixed into the frame

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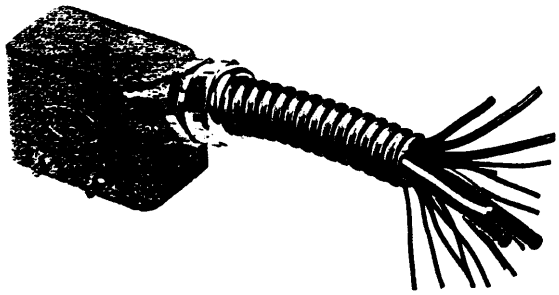
Harnessing alternatives

The integration of several electrical wires with different gauges; optical control lines and/or air tubes in one connector

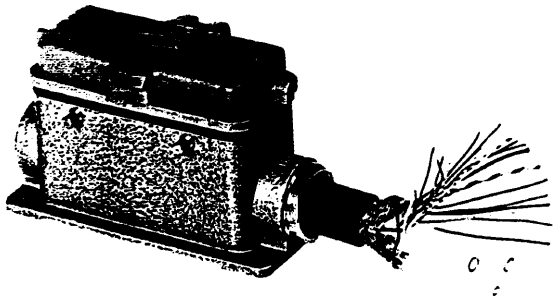
Protective tube

- Single wires have more space to move
- Ideal for short-run production
- Easy maintenance/service



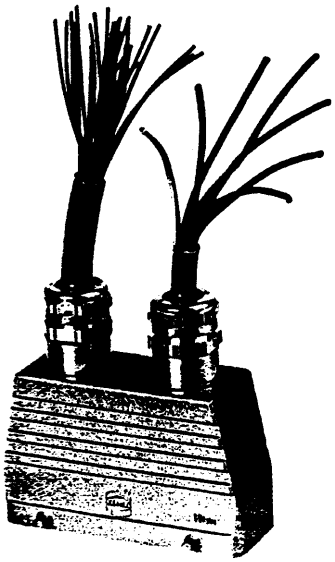
Special cable

- Optimal solution for large-scale production
- Professional design



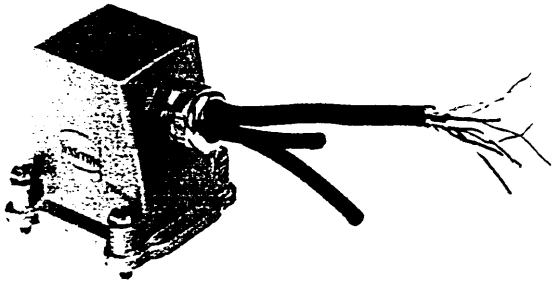
Hood with several cable entries
(see page 06.34)

- Single wires are less expensive than special wires
- Easy maintenance/service



Cable sealing with several cable inlets

- Ideal for wires/tubes with approximately similar wire gauges
- Easy maintenance/service



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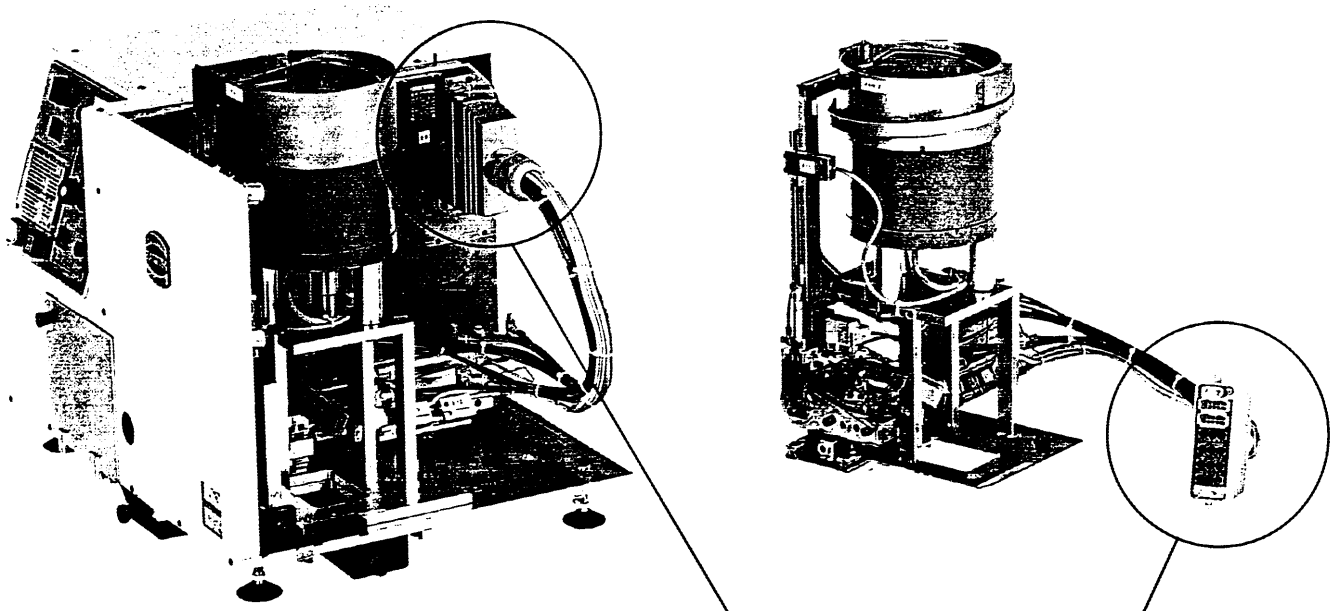
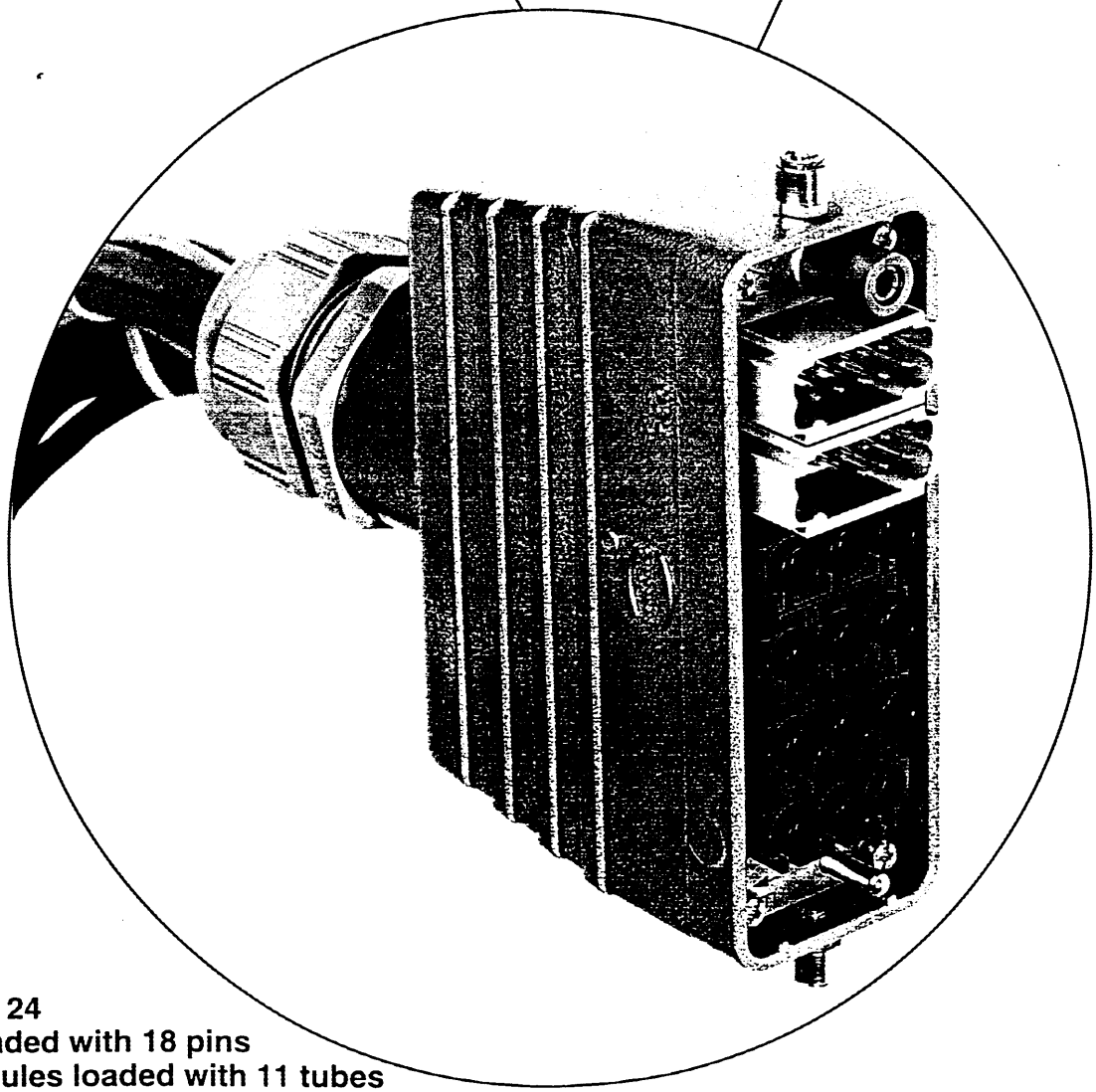


Automatic Crimping Machine TK
with change unit -E- and change unit -D-
connected with **Han-Modular®**



Han-Modular® size 24
- **2 DD modules loaded with 18 pins**
- **4 Pneumatic modules loaded with 11 tubes**

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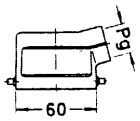
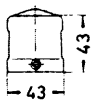
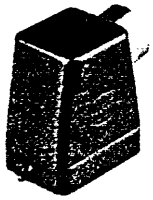
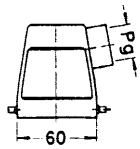
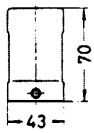
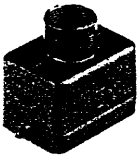
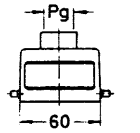
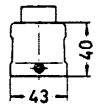
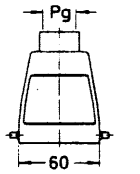
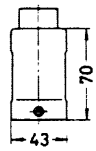
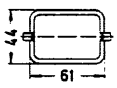
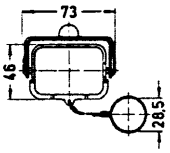
Standard Hoods/Housings with 1 lever on the housing for 2 modules

Identification	Part No. Low construction	High construction	Pg	Drawing	Dimensions in mm
Hoods side-entry					
	09 30 006 1540		13,5		
	09 30 006 1541		16		
		09 30 006 0542	21		
		09 30 006 0543	29		
Hoods top-entry					
	09 30 006 1440		13,5		
	09 30 006 1441		16		
		09 30 006 0442	21		
		09 30 006 0443	29		
Protection covers metal					
	09 30 006 5401				
	09 30 006 5423				

Hoods

For further selection of hoods/housings see catalogue Heavy Duty Connectors

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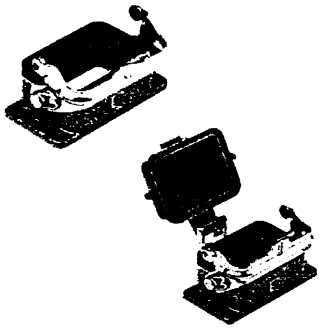
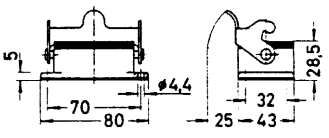
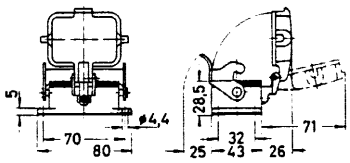
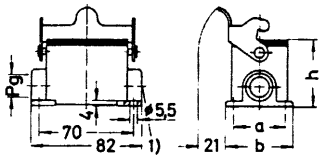
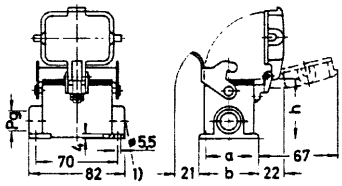
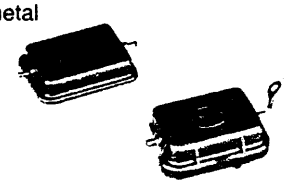
Standard Hoods/Housings with 1 lever on the housing for 2 modules

Part No.

Identification		Low construction	High construction	Pg	Drawing	Dimensions in mm
Housings bulkhead mounting		09 30 006 0301		–	Panel cut out 48 x 35 cm	
	with thermo-plastic cover	09 30 006 0302		–		
	with metal cover	09 30 006 0318		–		
Housings surface mounting	1 side-entry	09 30 006 1251		16		
	2 side-entry	09 30 006 1291	09 30 006 0292	16 21		
	with thermo-plastic cover 1 side-entry	09 30 006 1256		16		
	with metal cover	09 30 006 2256		16		
Housings	with thermo-plastic cover 2 side-entry	09 30 006 1296	with thermo-plastic cover 09 30 006 0297	16 21		
	with metal cover 2 side-entry	09 30 006 2296	with metal cover 09 30 006 2297	16 21	1) Blind way for one cable entry	

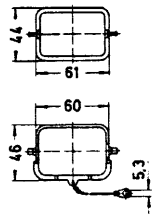
	a	b	h
Low construction	40	52	54
High construction	45	57	74

Protection covers metal



09 30 006 5404

09 30 006 5425

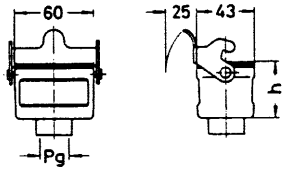


Hoods cable to cable

09 30 006 1750

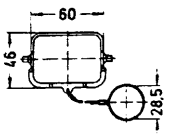
09 30 006 0752

h
42.5
72.5



Protection cover metal

09 30 006 5427



For further selection of hoods/housings see catalogue Heavy Duty Connectors

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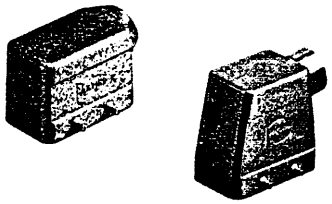
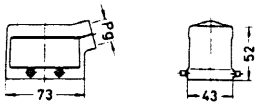
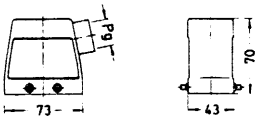
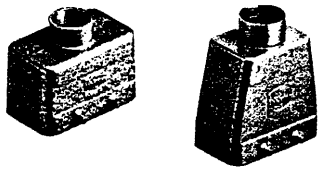
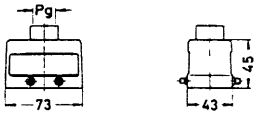
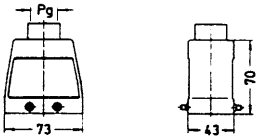
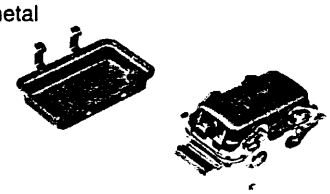
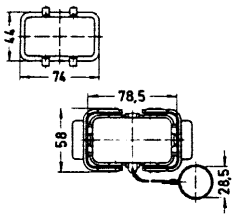
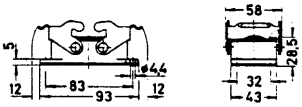
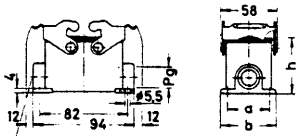
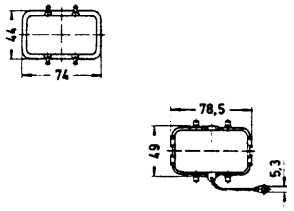
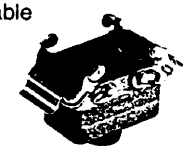
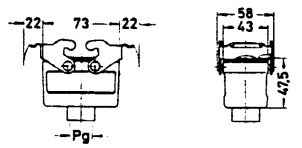
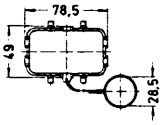
Standard Hoods/Housings with 2 levers on the housing for 3 modules

Identification		Part No. Low construction	Part No. High construction	Pg	Drawing	Dimensions in mm
Hoods						
Hoods side-entry		09 30 010 1521		16		
			09 30 010 0522	21		
			09 30 010 0523	29		
Hoods top-entry		09 30 010 1421		16		
			09 30 010 0422	21		
			09 30 010 0423	29		
Protection covers metal		09 30 010 5401				
		09 30 010 5423				
Housings						
Housing bulkhead mounting		09 30 010 0301			Panel cut out 60 x 35 	
Housings surface mounting	1 side-entry	09 30 010 1231	09 30 010 0232	16 21		
	2 side-entry	09 30 010 1271	09 30 010 0272 09 30 010 0273	16 21 29	Blind way for one cable entry	

	a	b	h
Low construction	40	52	54
High construction	45	57	74

Protection covers metal		09 30 010 5407				
		09 30 010 5425				
Hood cable to cable		09 30 010 1731		16		
Protection cover metal		09 30 010 5427				

For further selection of hoods/housings see catalogue Heavy Duty Connectors Han-Com®

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Standard Hoods/Housings with 1 lever on the housing for 3 modules

Hoods

Housings

Identification	Part No. Low construction	High construction	Pg	Drawing	Dimensions in mm
Hoods side-entry	09 30 010 1541		16		
		09 30 010 0542	21		
		09 30 010 0543	29		
Hoods top-entry	09 30 010 1441		16		
		09 30 010 0442	21		
		09 30 010 0443	29		
Housings bulkhead mounting	09 30 010 0305		16	Panel cut out 60 x 35	
	with thermo-plastic cover 09 30 010 0303		16		
	with metal cover 09 30 010 0318		16		
Housings surface mounting, 1 side-entry	09 30 010 1251		16		
2 side-entry	09 30 010 1291		16		
1 side-entry	with thermo-plastic cover 09 30 010 1256		16		
2 side-entry	with thermo-plastic cover 09 30 010 1296		16		
2 side-entry	with metal cover 09 30 010 2296		16		
Hood cable to cable	09 30 010 1751		16		

[1]) Blind way for one cable entry

For further selection of hoods/housings see catalogue Heavy Duty Connectors Han-Com®

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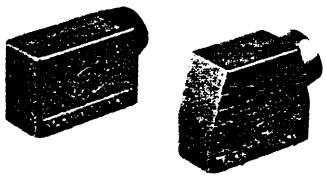
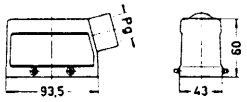
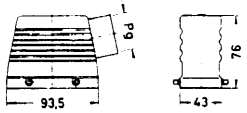
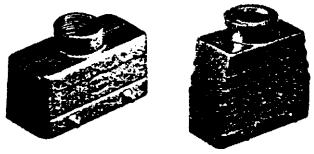
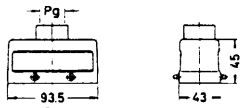
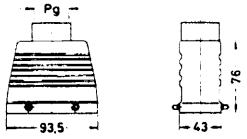
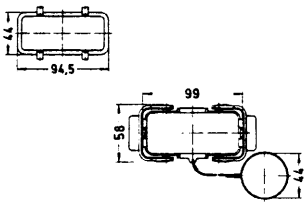
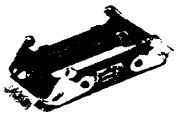
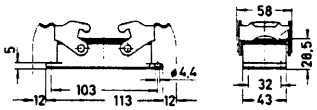
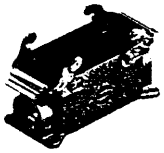
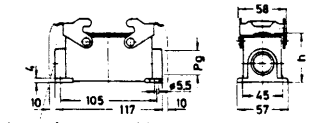
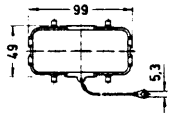
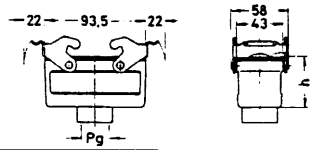
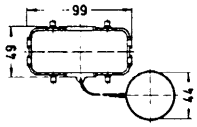
Standard Hoods/Housings with 2 levers on the housing for 4 modules

Hoods

Housings

Identification		Part No. Low construction	Part No. High construction	Pg	Drawing	Dimensions in mm
Hoods side-entry		09 30 016 1520		21		
			09 30 016 0520 09 30 016 0521	21 29		
Hoods top-entry		09 30 016 1420		21		
			09 30 016 0420 09 30 016 0421	21 29		
Protection covers metal		09 30 016 5401				
		09 30 016 5422				
Housing bulkhead mounting		09 30 016 0301			Panel cut out 82 x 35 	
Housings surface mounting		1 side-entry 09 30 016 1230	09 30 016 0230 09 30 016 0231	21 29		
		2 side-entry 09 30 016 1270	09 30 016 0270 09 30 016 0271	21 29	Blind way for one cable entry h: Low construction 56; High construction 77	
Protection covers metal		09 30 016 5405				
		09 30 016 5425				
Hoods cable to cable		09 30 016 1730				
			09 30 016 0730 09 30 016 0731	21 29	h: Low construction 47.5; High construction 78.5	
Protection cover metal		09 30 016 5426				

For further selection of hoods/housings see catalogue Heavy Duty Connectors Han-Com®

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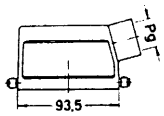
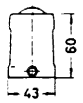
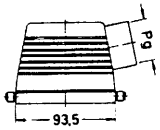
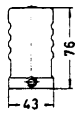
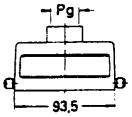
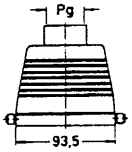
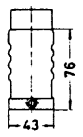
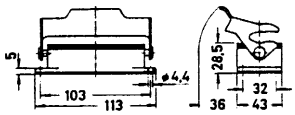
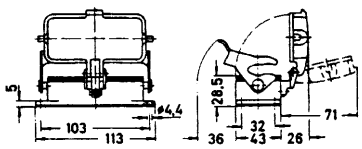
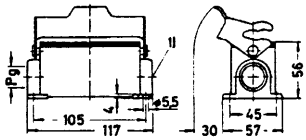
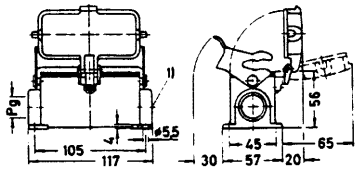
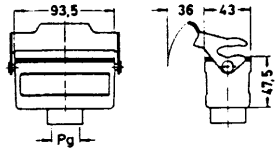
Standard Hoods/Housings with 1 lever on the housing for 4 modules

Hoods

Housings

Identification	Part No. Low construction	Part No. High construction	Pg	Drawing	Dimensions in mm
Hoods side-entry	09 30 016 1540		21		
		09 30 016 0540	21		
		09 30 016 0541	29		
Hoods top-entry	09 30 016 1440		21		
		09 30 016 0440	21		
		09 30 016 0441	29		
Housings bulkhead mounting	09 30 016 0307			Panel cut out 82 x 35	
	with thermo-plastic cover 09 30 016 0306				
	with metal cover 09 30 016 0318				
Housings surface mounting	1 side-entry	09 30 016 1250	21		
	2 side-entry	09 30 016 1290	21		
	with thermo-plastic cover 1 side-entry	09 30 016 1255	21		
	with thermo-plastic cover 2 side-entry	09 30 016 1295	21		
	2 side-entry	with metal cover 09 30 016 2295	21		
Hood cable to cable		09 30 016 1750	21		

*) Blind way for one cable entry

For further selection of hoods/housings see catalogue Heavy Duty Connectors Han-Com®

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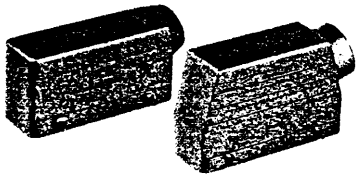
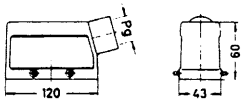
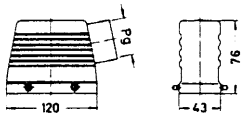
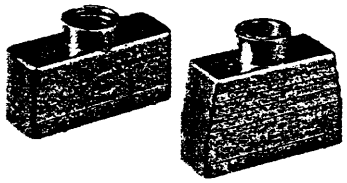
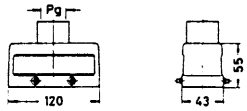
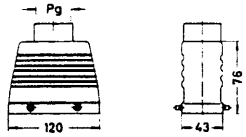
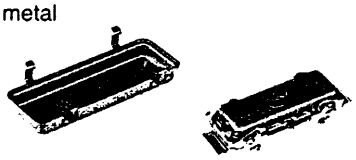
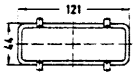
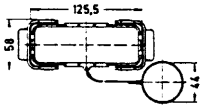
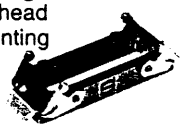
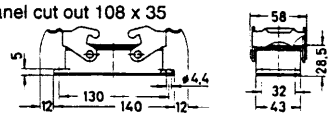
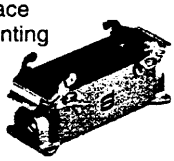
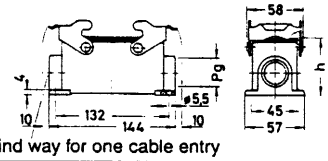
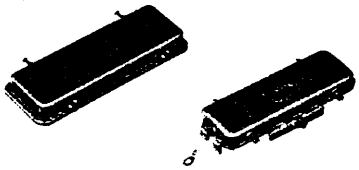
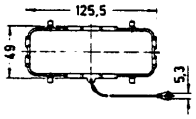
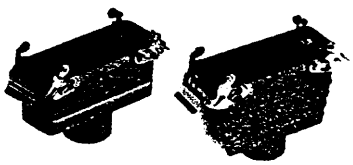
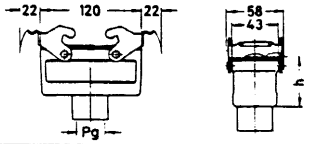
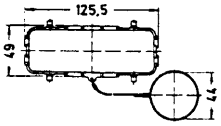
Standard Hoods/Housings with 2 levers on the housing for 6 modules

Part No.

Identification		Low construction	High construction	Pg	Drawing	Dimensions in mm
Hoods						
Hoods side-entry		09 30 024 1520		21		
			09 30 024 0520 09 30 024 0521	21 29		
Hoods top-entry		09 30 024 1421		29		
			09 30 024 0420 09 30 024 0421	21 29		
Protection covers metal		09 30 024 5401				
		09 30 024 5422				
Housings bulkhead mounting		09 30 024 0301		21	Panel cut out 108 x 35 	
Housings surface mounting		1 side-entry 09 30 024 1230	09 30 024 0230 09 30 024 0231	21 29		
		2 side-entry 09 30 024 1270	09 30 024 0270 09 30 024 0271	21 29	Blind way for one cable entry h: Low construction 56; High construction 80	
Protection covers metal		09 30 024 5405				
		09 30 024 5425				
Hoods cable to cable		09 30 024 1731		21		
			09 30 024 0730 09 30 024 0731	21 29	h: Low construction 57.5; High construction 78.5	
Protection cover metal		09 30 024 5426				

For further selection of hoods/housings see catalogue Heavy Duty Connectors Han-Com®

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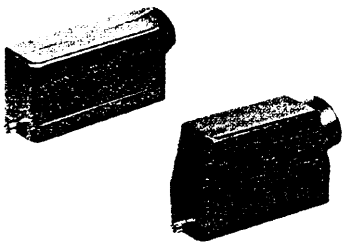
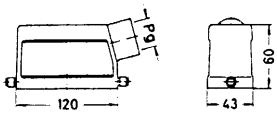
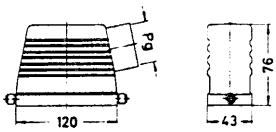
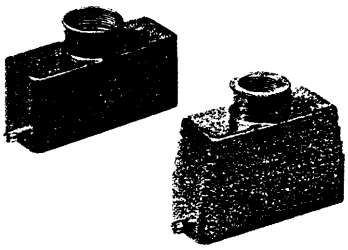
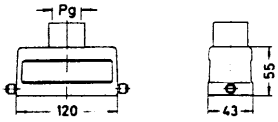
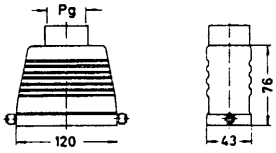
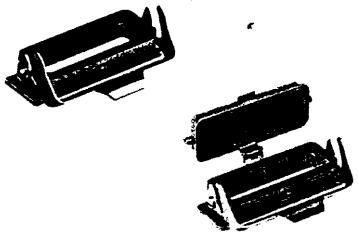
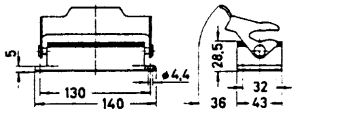
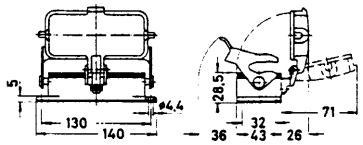
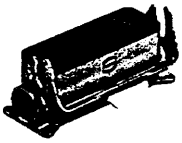
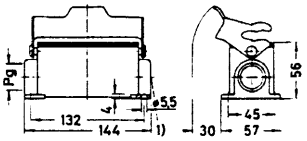
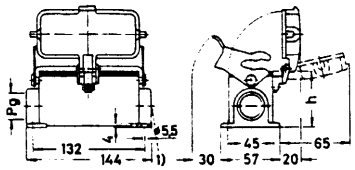
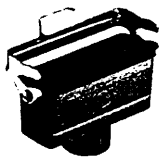
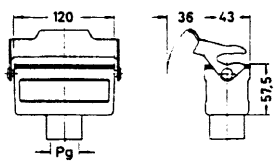
Standard Hoods/Housings with 1 lever on the housing for 6 modules

Part No.

Identification		Low construction	High construction	Pg	Drawing	Dimensions in mm
Hoods						
Hoods side-entry		09 30 024 1540		21		
			09 30 024 0540 09 30 024 0541	21 29		
Hoods top-entry		09 30 024 1441		29		
			09 30 024 0440 09 30 024 0441	21 29		
Housings						
Housings bulkhead mounting		09 30 024 0307				Panel cut out 108 x 35 mm
		with thermo-plastic cover 09 30 024 0304				
		with metal cover 09 30 024 0318				
Housings surface mounting		1 side-entry 09 30 024 1250		21		
		2 side-entry 09 30 024 1290		21		
		with thermo-plastic cover 1 side-entry 09 30 024 1255		21		") Blind way for one cable entry
		with thermo-plastic cover 2 side-entry 09 30 024 1295	with thermo-plastic cover 09 30 024 0295 09 30 024 0296	21 29		
		2 side-entry with metal cover 09 30 024 2295		21		
Hood cable to cable		09 30 024 1751		29		

	h
Low construction	56
High construction	80

For further selection of hoods/housings see catalogue Heavy Duty Connectors Han-Com®

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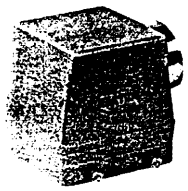
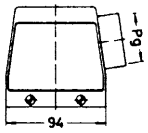
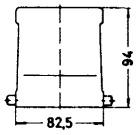
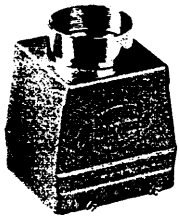
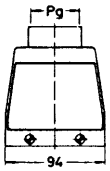
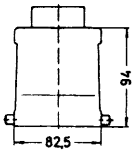
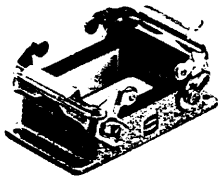
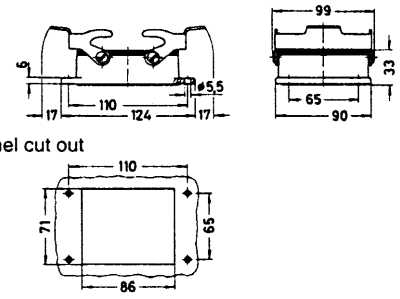
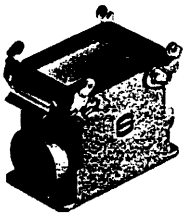
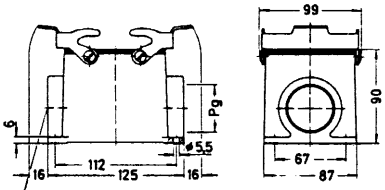
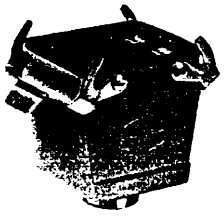
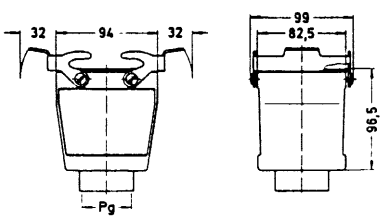
Standard Housings with 2 levers on the housing for 8 modules

Identification		Size	Part No.	Pg	Drawing	Dimensions in mm
Hoods						
Hoods side-entry		32	09 30 032 0521	29		
		32	09 30 032 0522	36		
		32	09 30 032 0523	42		
Hoods top-entry		32	09 30 032 0421	29		
		32	09 30 032 0422	36		
Housing bulkhead mounting		32	09 30 032 0301	–	 Panel cut out	
Housings surface mounting						
Housings	 1 side-entry	32	09 30 032 0231	29		
		32	09 30 032 0232	36		
	2 side-entry	32	09 30 032 0271	29	Blind way for one cable entry	
		32	09 30 032 0272	36		
Hood cable to cable		32	09 30 032 0732	36		

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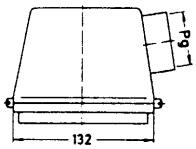
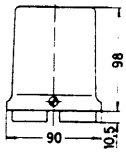
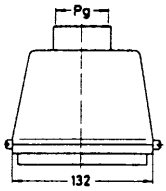
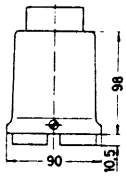
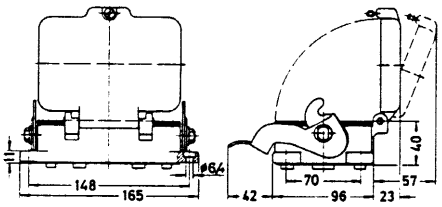
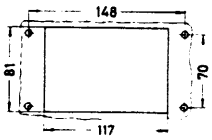
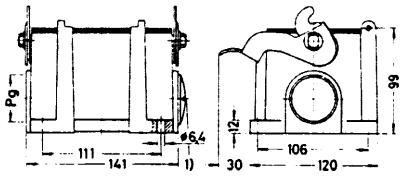
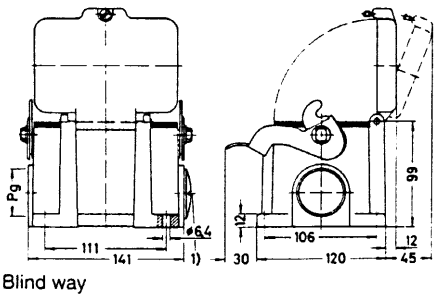
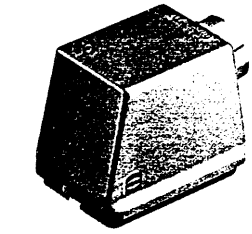
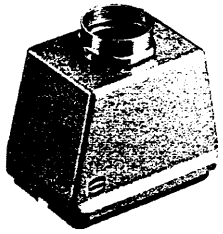
Standard Hoods/Housings with 1 lever on the housing for 12 modules

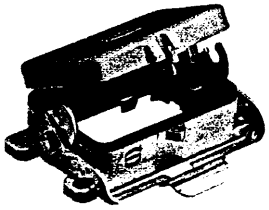
Hoods

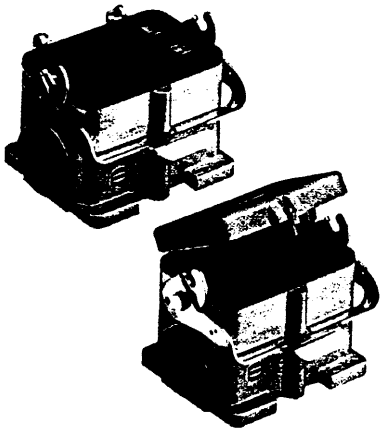
Housings

Identification	Size	Part No.	Pg	Drawing	Dimensions in mm
Hoods side-entry	48	09 30 048 0540	29		
	48	09 30 048 0541	36		
	48	09 30 048 0542	42		
Hoods top-entry	48	09 30 048 0440	29		
	48	09 30 048 0441	36		
	48	09 30 048 0442	42		
Housings bulkhead mounting	48	with thermo-plastic cover 09 30 048 0301	–		
	48	with metal cover 09 30 048 0317	–	Panel cut out 	
Housings surface mounting 2 side-entry	48	09 30 048 0290	29		
	48	09 30 048 0291	36		
	48	with thermo-plastic cover 09 30 048 0295	29		
	48	09 30 048 0296	36		









1) Blind way

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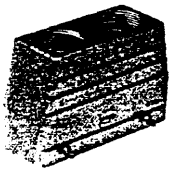
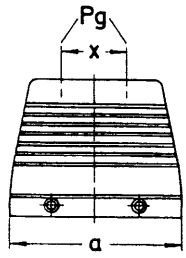
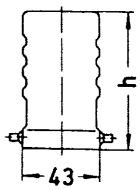
Identification | Size | Part No. | Pg | Drawing | Dimensions in mm

Hoods
top entry



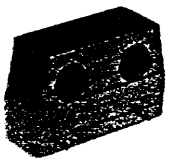
Size	Part No.	Pg
10	09 30 010 0460	2x13.5
16	09 30 016 0459	2 x 16
16	09 30 016 0462	2 x 21
24	09 30 024 0462	2 x 21
24	09 30 024 0461	2 x 29



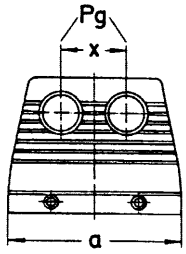


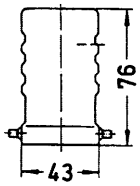
Size	a	h	x	Pg
10	73	72	20	2x13.5
16	93.5	76	36	2x16
16	93.5	76	36	2x21
24	120	76	52	2x21
24	120	76	48	2x29

Hoods
angled entry



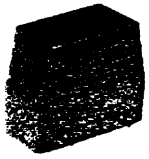
Size	Part No.	Pg
16	09 30 016 0663	2 x 21
24	09 30 024 0663	2 x 21



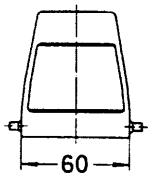


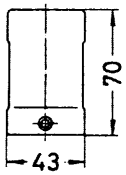
Size	a	x	Pg
16	93.5	36	2 x 21
24	120	56	2 x 21

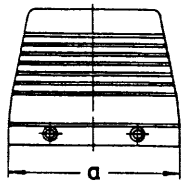
Hoods
without entries
for customer drillings

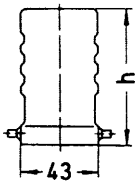


Size	Part No.	Pg
6	09 30 006 0801	–
10	09 30 010 0801	–
16	09 30 016 0801	–
24	09 30 024 0801	–









Size	a	h
10	73	72
16	93.5	76
24	120	76

Housings

Size	Part No.	Pg
6	Page 06.25	
10	Page 06.26	
16	Page 06.28	
24	Page 06.30	

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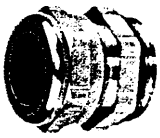
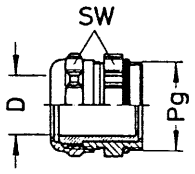
Universal cable protection
metal



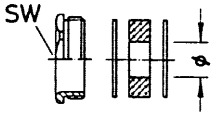
Identification	Part No.	Pg	SW	D min.	D max.
	09 00 000 5083	13.5	22	6.5	9.5
	09 00 000 5084	13.5	22	7	10.5
	09 00 000 5085	13.5	22	9	13
	09 00 000 5086	16	24	6.5	9.5
	09 00 000 5087	16	24	7	10.5
	09 00 000 5088	16	24	9	13
	09 00 000 5089	16	24	11.5	15.5
	09 00 000 5090	21	30	7	10.5
	09 00 000 5091	21	30	9	13
	09 00 000 5092	21	30	11.5	15.5
	09 00 000 5093	21	30	14	18
	09 00 000 5094	29	40	14	18
	09 00 000 5095	29	40	17	21
	09 00 000 5096	29	40	20	25
	09 00 000 5097	29	40	24	28
	09 00 000 5098	36	50	29	34
	09 00 000 5099	36	50	32	36

Dimensions in mm



Cable sealing metal
with normal seal
for Standard Hoods/Housings

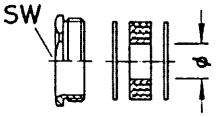
Part No.	Pg	SW	ø
09 00 000 5114	13.5	20	13
09 00 000 5115	16	22	15
09 00 000 5116	21	28	20
09 00 000 5117	29	37	29
09 00 000 5146	36	47	36
09 00 000 5119	42	54	42



Cable sealing metal
with multiple seal

for Standard Hoods/Housings

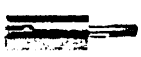
Part No.	Pg	SW	ø min.	ø max.
09 00 000 5014	13.5	20	7.5	12.5
09 00 000 5015	16	22	7.5	15
09 00 000 5016	21	28	10	19
09 00 000 5017	29	37	18	27
09 00 000 5018	36	47	24	33
09 00 000 5019	42	54	30	39



Protective tube sealing

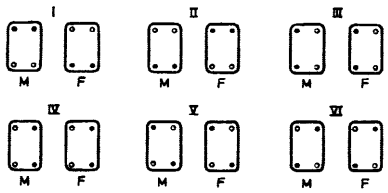
metal	on request
plastic	on request

Coding system with code bushes

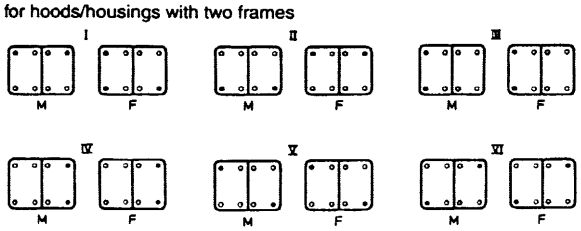


09 14 000 9901[1]

for hoods/housings with one frame



for hoods/housings with two frames



● Code bushes
○ Normal mounting screw

M – Male connector
F – Female connector

[1] Order 4 pieces for one connector

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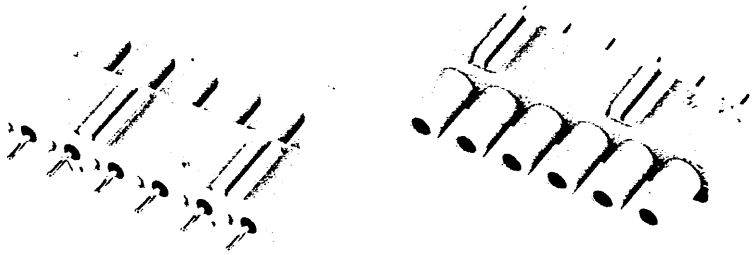
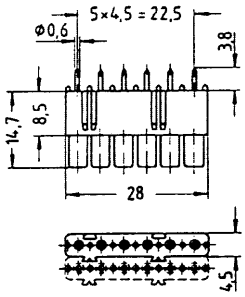


Han pcb-adapter

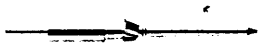
Identification	Part No.	Drawing	Dimensions in mm

Adapter (contacts included)
can be used in combination with:
Han DD-Module
Han K 8 / 24
Han K 6 / 36
Han DD

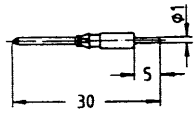
0916 000 9905



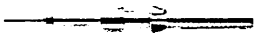
Han DD adapter contacts
male contacts



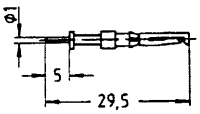
09 15 000 6191



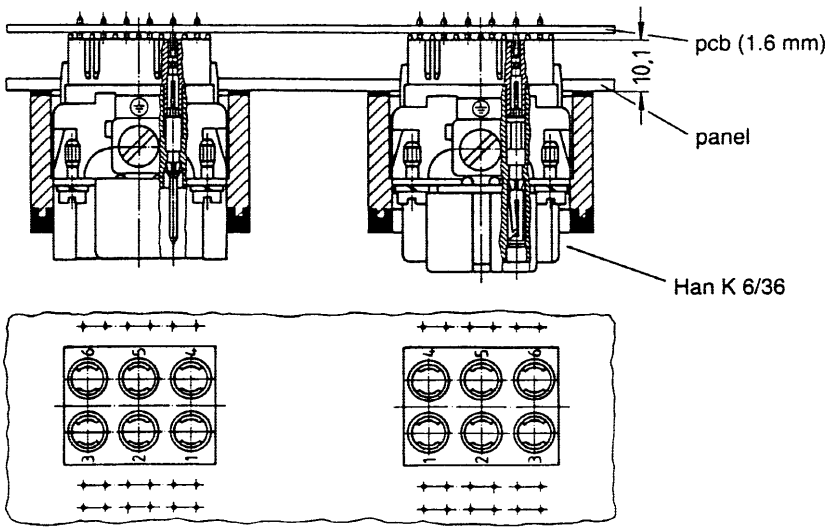
female contacts



09 15 000 6291



Application
The pcb-adapter is used to terminate control and data lines via pcb to the above mentioned connector inserts.



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Summary Han Crimping tools

Identification		mm²	AWG	Part No. Crimping tool: 09 99 000 0001	09 99 000 0110	09 99 000 0300	09 99 000 0303	09 99 000 0307	09 99 000 0314	Automatic crimping machine TK		09 99 000 0194	20 99 000 1032	20 99 000 1033	Crimping tool depth adjustment gauge: 09 99 000 0006	09 99 000 0007	09 99 000 0008	09 99 000 0009	09 99 000 0125	09 99 000 0203	20 99 001 1032	20 99 002 1032	Contact removal tool
Crimp contacts																								
Series																								
Han C-module	Power contacts Han C 09 32	1.5	16	x				x	x								x							09 99 000 0305
		2.5	14	x				x	x								x							
		4.0	12	x			x	x	x					x										
		6.0	10				x	x										x						
Han DD-module	Signal contacts Han D 09 15	0.14	26	x[3]	x	x			x[3]											x[3]				
		0.25	24	x[3]	x	x			x[3]											x				
		0.37	22	x	x	x			x	x										x				
		0.5	20	x	x	x			x	x						x								09 99 000 0012 09 99 000 0052
		0.75	18	x	x	x			x	x						x								
		1.0	18	x	x	x			x	x						x								
		1.5	16	x	x	x			x	x							x							
		2.5	14	x					x	x						x								
	FOC contacts 1 mm POF (..32x1)												x									x		
Han E-module	Power contacts Han E 09 33	0.5	20	x	x	x			x	x						x								09 99 000 0319
		0.75	18	x	x	x			x	x						x								
		1.0	18	x	x	x			x	x						x								
		1.5	16	x	x	x			x	x							x							
		2.5	14	x	x	x			x	x							x							
		4.0	12	x					x	x				x										
Multicontact-module	Coaxial contacts											x												09 99 000 0174[1] 09 99 000 0320[1]
	FOC contacts, POF (DIN 41 626)												x[1]	x[1]								x		

Identification	Part No.	Crimping tool: 09 99 000 0001	09 99 000 0110	09 99 000 0300	09 99 000 0303	09 99 000 0307	09 99 000 0314	Automatic crimping machine TK		09 99 000 0194	20 99 000 1032	20 99 000 1033	Crimping tool depth adjustment gauge: 09 99 000 0006	09 99 000 0007	09 99 000 0008	09 99 000 0009	09 99 000 0125	09 99 000 0203	20 99 001 1032	20 99 002 1032	Contact removal tool
Locator Han C	09 99 000 0308	x				x	x														
	09 99 000 0304				x																
Han D	09 99 000 0311	x					x														
	09 99 000 0301			x																	
Han E	09 99 000 0111		x																		
	09 99 000 0310	x					x														
	09 99 000 0302			x																	
	09 99 000 0112		x																		
FOC contacts (DIN 41 626)	20 99 000 1036										x[2]										

1) both tools are necessary
2) to adjust female contact, only
3) for wire gauge 0.14 mm² and 0.25 mm² use only male contact 09 15 000 6107 respectively female contact 09 15 000 6207

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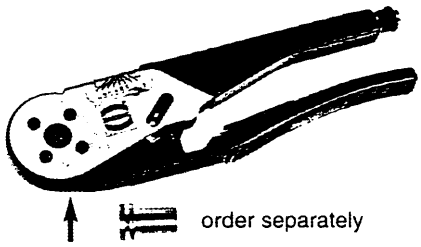
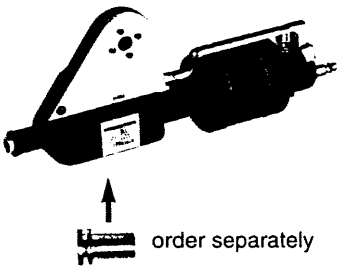
Identification	Part No.	Drawing	Dimensions in mm
BUCHANAN-crimping tool	09 99 000 0001	Wire gauge 1.5 - 4 mm²	
Locator	09 99 000 0308		
Crimping tool depth adjustment gauge		Wire gauge	
	09 99 000 0008	1.5 + 2.5 mm² ø 1.80	
	09 99 000 0006	4 mm² ø 2.00	
HARTING-crimping tool	09 99 000 0303	Wire gauge 4 - 6 mm²	
Locator as spare part	09 99 000 0304	Locator is supplied with the tool	
HARTING-pneumatic crimping tool	09 99 000 0307		
Crimping tool depth adjustment gauge		Wire gauge	
	09 99 000 0008	1.5 + 2.5 mm² ø 1.80	
	09 99 000 0006	4 mm² ø 2.00	
	09 99 000 0009	6 mm² ø 2.40	
Locator	09 99 000 0308		
Table fixing and foot switch for pneumatic crimping tool	09 99 000 0309		
Removal tool for crimp contacts			
Removal tool	09 99 000 0305		

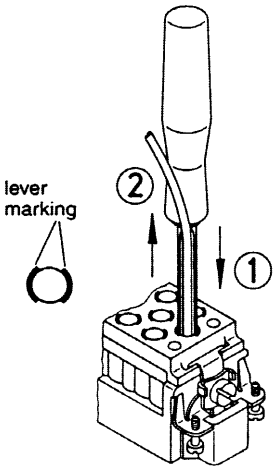


order separately



order separately

A removal tool is necessary to remove the contacts.
For each „C" contact cavity, the location of the internal locking levers are marked on the wiring side with two black arcs. The sides of the tool must be first properly aligned thus edges of the tool catch both levers simultaneously and then inserted until a stop is noticeable ①.
Once it has been inserted, the tool **must not** be turned. The wire together with the tool can then be pulled out from the wiring side of the insert ②.



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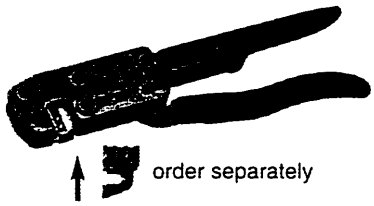
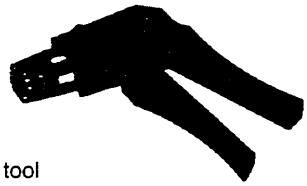
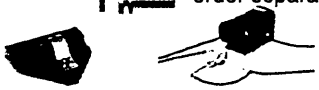
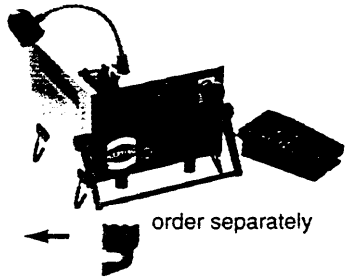
Identification	Part No.	Drawing	Dimensions in mm
HARTING-crimping tool	09 99 000 0110	Wire gauge 0.14 - 1.5 mm²	
Locator	09 99 000 0111		order separately
HARTING-crimping tool	09 99 000 0300	Wire gauge 0.14 - 1.5 mm²	
Locator as spare part	09 99 000 0301	Locator is supplied with the tool	
BUCHANAN-crimping tool	09 99 000 0001	Wire gauge 0.37 - 2.5 mm²	
Locator	09 99 000 0311		
Crimping tool depth adjustment gauge		Wire gauge	
	09 99 000 0125	0.37 mm² ø 1.30	
	09 99 000 0007	0.5-1 + 2.5 mm² ø 1.55	
	09 99 000 0008	1.5 mm² ø 1.80	order separately
For FOC contact:			
Crimping tool	20 99 000 1032		
Crimping tool depth adjustment gauge	20 99 001 1032	ø 1.45	
HARTING-pneumatic crimping tool	09 99 000 0314		
Locator	09 99 000 0311		
Crimping tool depth adjustment gauge		Wire gauge	order separately
	09 99 000 0125	0.37 mm² ø 1.30	
	09 99 000 0007	0.5-1 + 2.5 mm² ø 1.55	
	09 99 000 0008	1.5 mm² ø 1.80	
Table fixing and foot switch for pneumatic crimping tool	09 99 000 0309		
HARTING-semi-automatic crimping device			
Main drive foot-operated 220 V/50 Hz	09 99 000 0246		
Crimping head	09 99 000 0254	Wire gauge 0.14 - 1.5 mm²	
Locator	09 99 000 0111		order separately
Insertion tool for crimp contacts	09 99 000 0059		

For crimp contacts with wires of less than 0.75 mm² it is recommended that an insertion tool is used. Contacts should be inserted from the wiring side and pushed down until a positive locking is achieved.

Removal tool for crimp contacts (also for FOC contact)		. . 0012
		. . 0004
Removal tool	09 99 000 0012	. . 0052
Replacement-tip of removal tool	09 99 000 0004	
Removal tool	09 99 000 0052	

A removal tool is necessary if contacts are to be replaced in the insert. It is inserted from the mating face and pushed over the contact until a stop is noticeable. Additional pressure unlocks the contact and pushes it out of the wiring side. In case of the removal tool (. . 0052) the unlocking process is achieved by pressure on the central rod.

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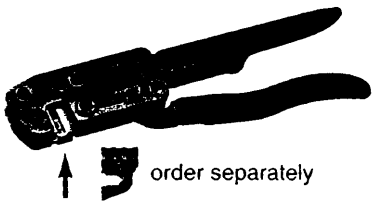
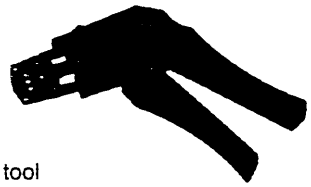
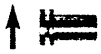
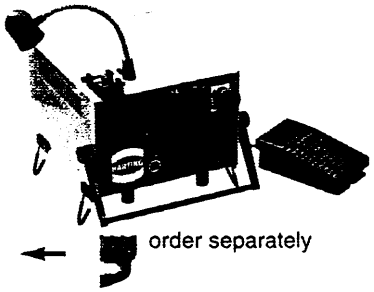
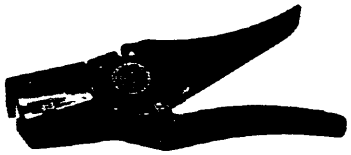
Identification	Part No.	Drawing	Dimensions in mm
HARTING-crimping tool	09 99 000 0110	Wire gauge 0.5 - 2.5 mm²	
Locator	09 99 000 0112		order separately
HARTING-crimping tool	09 99 000 0300	Wire gauge 0.5 - 2.5 mm²	
Locator as spare part	09 99 000 0302	Locator is supplied with the tool	
BUCHANAN-crimping tool	09 99 000 0001	Wire gauge 0.5 - 4 mm²	
Locator	09 99 000 0310		
Crimping tool depth adjustment gauge	09 99 000 0007 09 99 000 0008 09 99 000 0006	Wire gauge 0.5 - 1 mm² ø 1.55 1.5 - 2.5 mm² ø 1.80 4 mm² ø 2.00	order separately
HARTING-pneumatic crimping tool	09 99 000 0314		
Locator	09 99 000 0310		
Crimping tool depth adjustment gauge	09 99 000 0007 09 99 000 0008 09 99 000 0006	Wire gauge 0.5 - 1 mm² ø 1.55 1.5 - 2.5 mm² ø 1.80 4 mm² ø 2.00	 order separately
Table fixing and foot switch for pneumatic crimping tool	09 99 000 0309		
HARTING-semi-automatic crimping device			
Main-drive foot-operated 220 V/50 Hz	09 99 000 0246		
Crimping head	09 99 000 0254	Wire gauge 0.5 - 2.5 mm²	
Locator	09 99 000 0112		order separately
Insertion tool for crimp contacts	09 99 000 0059		

For crimp contacts wires of less than 0.75 mm² it is recommended that an insertion tool is used. Contacts should be inserted from the wiring side and pushed down until a positive locking is achieved.

Crimp contact removal for Han E-module	09 99 000 0319		

A removal tool is necessary if contacts are to be replaced in the insert. The tool is inserted from the wiring side until a stop is noticeable(see page 06.15). The wire with the crimp contact can then be pulled out from the same side of the insert.

Stripping tool	09 99 000 0159		 For wires from 0.5 to 4.0 mm²

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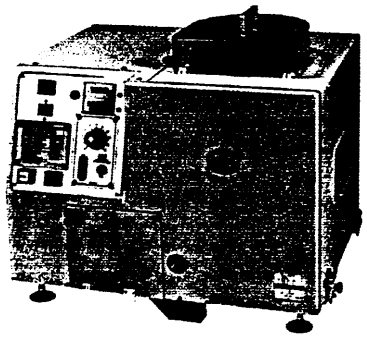
Identification	Part No.	Drawing	Dimensions in mm
HARTING- automatic crimping machine TK - Power supply 230 V, 50 Hz - Compressed air connection 6 bar	09 98 000 6000		
Change unit – E – for contacts 09 33	09 98 000 6002		

Crimping tool depth adjustment gauge

	Wire gauge	
09 98 600 6331	0.5 - 1 mm²	ø 1.55
09 98 600 6332	AWG 16	ø 1.60
09 98 600 6333	AWG 14	ø 1.70
09 98 600 6334	1.5 + 2.5 mm²	ø 1.80
09 98 600 6335	3 + 4 mm²	ø 2.00

Change unit – D –
for contacts 09 15 . . . . 09 98 000 6001

Crimping tool depth adjustment gauge

	Wire gauge	
09 98 600 6328	0.25 - 0.37 mm²	ø 1.00
09 98 600 6329	0.37 mm²	ø 1.30
09 98 600 6330	AWG 14	ø 1.45
09 98 600 6331	0.5-1 + 2.5 mm²	ø 1.55
09 98 600 6332	AWG 16	ø 1.60
09 98 600 6334	1.5 mm²	ø 1.80

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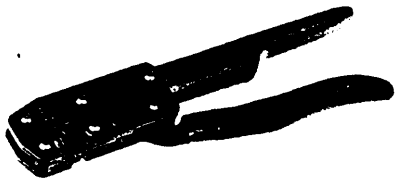
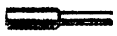
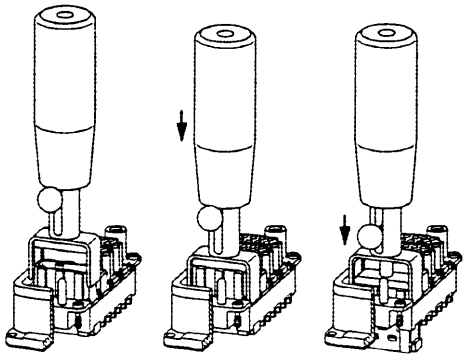
Crimping tools for contacts of Han Multicontact-module

Identification	Part No.	Drawing	Dimensions in mm
HARTING-crimping tool for coaxial contacts	09 99 000 0194	 Use the middle crimping jaws	
BUCHANAN-crimping tool for FOC contacts (1 mm POF)	20 99 000 1032	 Note: This tool is only for FOC contacts	
Crimping tool depth adjustment gauge ø 1.8 mm	20 99 002 1032		
HARTING-crimping tool for FOC contacts (1 mm POF) width 3.0 mm	20 99 000 1033		
Removal tool for contacts (see footnote on page 06.18)	09 99 000 0174	 order separately	
Removal jacket	09 99 000 0320		
Removal tool for modules	09 99 000 0318	 	

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Part No.	Page
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