



Pushing Performance



People | Power | Partnership

HARTING Connectors for High Mating Cycles

Transforming customer wishes into concrete solutions



The HARTING Technology Group is skilled in the fields of electrical, electronic and optical connection, transmission and networking, as well as in manufacturing, mechatronics and software creation. The Group uses these skills to develop customized solutions and products such as connectors for energy and data transmission applications including, for example, mechanical engineering, rail technology, wind energy plants, factory automation and the telecommunications sector. In addition, HARTING also produces electro-magnetic components for the automobile industry and offers solutions in the field of Enclosures and Shop Systems. The HARTING Group currently comprises 32 subsidiary companies and worldwide distributors employing a total of approximately 3,500 staff.



We aspire to top performance.

Connectors ensure functionality. As core elements of electrical and optical wiring, connection and infrastructure technologies, they are essential in enabling the modular construction of devices, machines and systems across a very wide range of industrial applications. Their reliability is a crucial factor guaranteeing smooth functioning in the manufacturing area, in telecommunications, applications in medical technology – in fact, connectors are at work in virtually every conceivable application area. Thanks to the consistent further development of our technologies, customers enjoy investment security and benefit from durable, long term functionality.

Always at hand, wherever our customers may be.

Increasing industrialization is creating growing markets characterized by widely diverging demands and requirements. The search for perfection, increasingly efficient processes and reliable technologies is a common factor in all sectors across the globe.

HARTING is providing these technologies – in Europe, America and Asia. The **HARTING** professionals at our international subsidiaries engage in close, partnership based interaction with our customers, right from the very early product development phases, in order to realize customer demands and requirements in the best possible manner.

Our people on location form the interface to the centrally coordinated development and production departments. In this way, our customers can rely on consistently high, superior product quality – worldwide.

Our claim: pushing performance.

HARTING provides more than optimally attuned components. In order to serve our customers with the best possible solutions, **HARTING** is able to contribute a great deal more and play a closely integrative role in the value creation process.

From ready assembled cables through to control racks or ready-to-go control desks: Our aim is to generate the maximum benefits for our customers – without compromise!

Quality creates reliability – and warrants trust.

The **HARTING** brand stands for superior quality and reliability – worldwide. The standards we set are the result of consistent, stringent quality management that is subject to regular certifications and audits.

EN ISO 9001, the EU Eco-Audit and ISO 14001:2004 are key elements here. We take a proactive stance to new requirements, which is why **HARTING** ranks among the first companies worldwide to have obtained the new IRIS quality certificate for rail vehicles.



HARTING technology creates added value for customers. Technologies by HARTING are at work worldwide. HARTING's presence stands for smoothly functioning systems, powered by intelligent connectors, smart infrastructure solutions and mature network systems. In the course of many years of close, trust-based cooperation with its customers, the HARTING Technology Group has advanced to one of the worldwide leading specialists for connector technology. Extending beyond the basic functionalities demanded, we offer individual customers specific and innovative solutions. These tailored solutions deliver sustained effects, provide investment security and enable customers to achieve strong added value.

Opting for HARTING opens up an innovative, complex world of concepts and ideas.

In order to develop connectivity and network solutions serving an exceptionally wide range of connector applications and task scopes in a professional and cost optimized manner, HARTING not only commands the full array of conventional tools and basic technologies. Over and beyond these capabilities, HARTING is constantly harnessing and refining its broad base of knowledge and experience to create new solutions that ensure continuity at the same time. In securing this know-how lead, HARTING draws on a wealth of sources from both in-house research and the world of applications alike.

Salient examples of these sources of innovative knowledge include microstructure technologies, 3D design and construction technology, as well as high temperature

or ultrahigh frequency applications that are finding use in telecommunications or automation networks, in the automotive industry, or in industrial sensor and actuator applications, RFID and wireless technologies, in addition to packaging and housing made of plastics, aluminum or stainless steel.

HARTING solutions extend across technology boundaries.

Drawing on the comprehensive resources of the group's technology pool, HARTING devises practical solutions for its customers. Whether this involves industrial networks for manufacturing automation, or hybrid interface solutions for wireless telecommunication infrastructures, 3D circuit carriers with microstructures, or cable assemblies for high-temperature applications in the automotive industry – HARTING technologies offer far more than components, and represent mature, comprehensive solutions attuned to individual customer requirements and wishes. The range covers ready-to-use cable configurations, completely assembled backplanes and board system carriers, as well as fully wired and tested control panels.

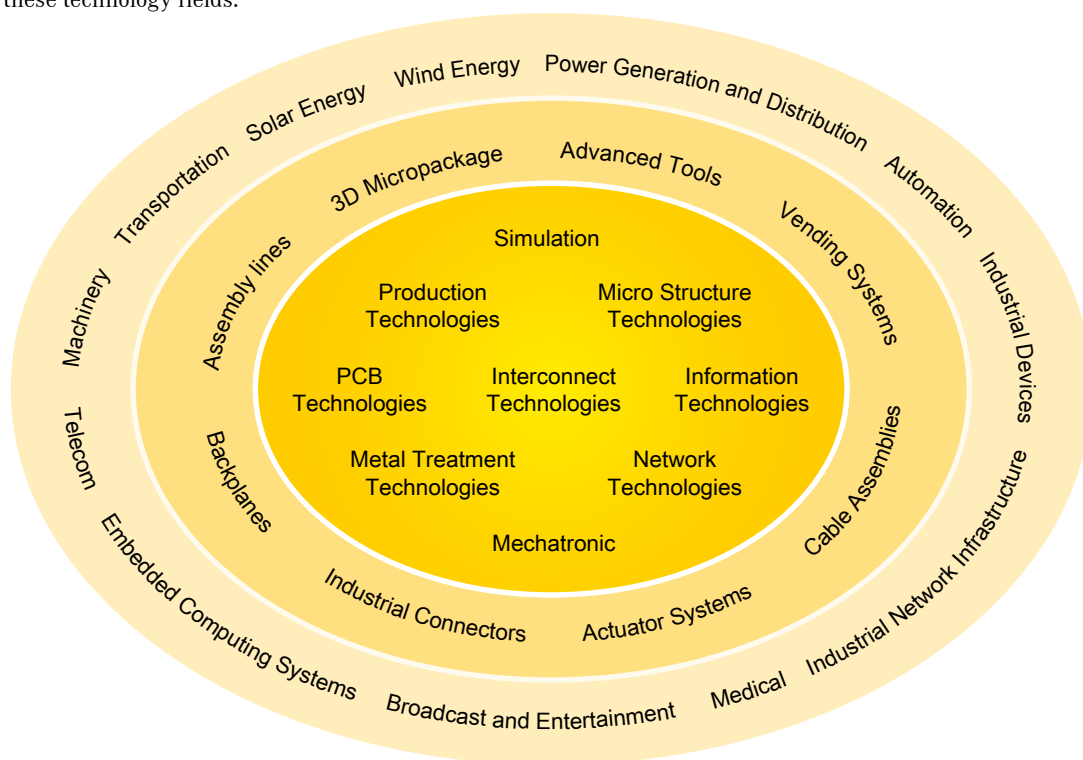
In order to ensure the future proof design of RF- and EMC-compatible interface solutions, the central HARTING laboratory (certified to EN 45001) provides simulation tools, as well as experimental, testing and diagnostics facilities all the way through to scanning electron microscopes. In the selection of materials and processes, lifecycle and environmental aspects play a key role, in addition to product and process capability considerations.



HARTING knowledge is practical know-how generating synergy effects.

HARTING commands decades of experience with regard to the applications conditions of connectors in telecommunications, computer and network technologies and medical technologies, as well as industrial automation technologies, such as the mechanical engineering and plant engineering areas, in addition to the power generation industry or the transportation sector. HARTING is highly conversant with the specific application areas in all of these technology fields.

The key focus is on applications in every solution approach. In this context, uncompromising, superior quality is our hallmark. Every new solution found will invariably flow back into the HARTING technology pool, thereby enriching our resources. And every new solution we go on to create will draw on this wealth of resources in order to optimize each and every individual solution. In this way, HARTING is synergy in action.



Availability of Products

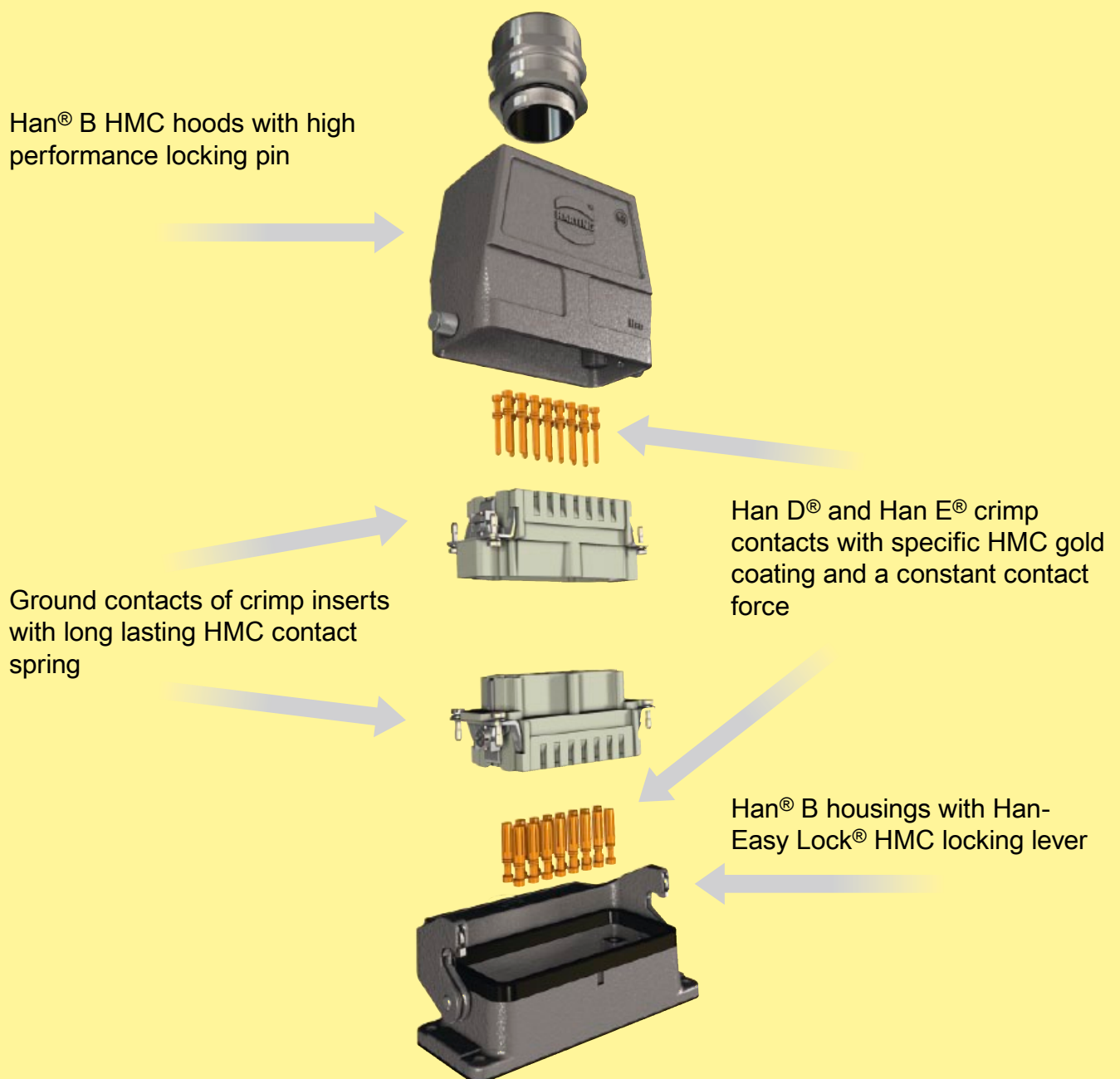
Product	Available	Page
Han [®] 24 DD HMC	April 2013	16
Han [®] 42 DD HMC	April 2013	17
Han [®] 40 D HMC	April 2013	18
Han [®] 72 DD HMC	April 2013	19
Han [®] 64 D HMC	April 2013	20
Han [®] 108 DD HMC	April 2013	21
Han [®] 6 E HMC	April 2013	26
Han [®] 10 E HMC	April 2013	27
Han [®] 16 E HMC	April 2013	28
Han [®] 40 EEE HMC	April 2013	29
Han [®] 24 E HMC	April 2013	30
Han [®] 64 EEE HMC	April 2013	31
Han [®] 10 B HMC Hoods/Housings	January 2013	50
Han [®] 16 B HMC Hoods/Housings	January 2013	54
Han [®] 24 B HMC Hoods/Housings	January 2013	58
Further products in this catalogue are available ex stock		

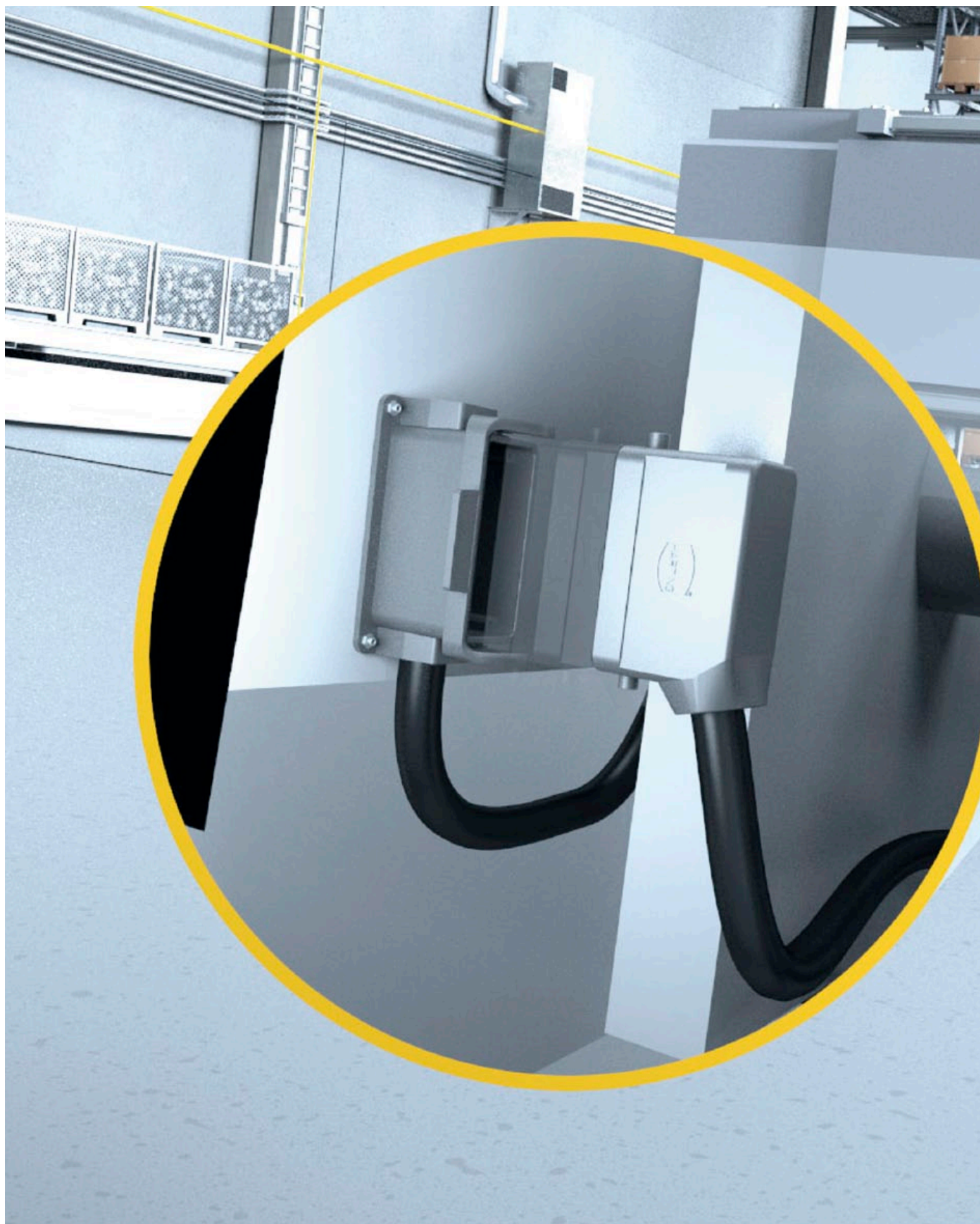
Features of the Han® HMC connectors

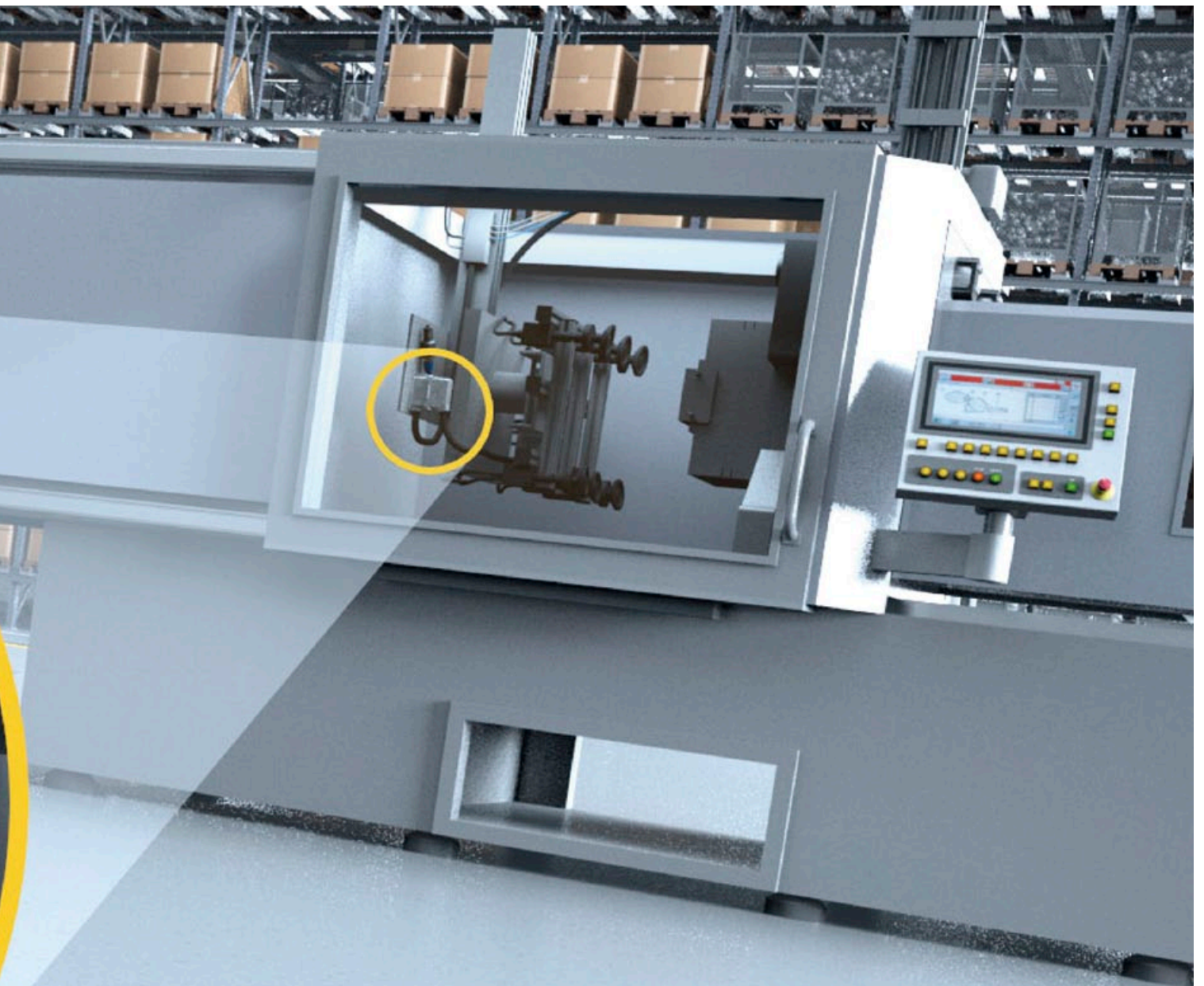
This series Han® HMC (**H**igh **M**ating **C**ycles) is a hood and housing series specifically aiming at industrial applications for 10,000 mating cycles.

Benefits:

- High mechanical robustness
- Simple and easy understandable design
- Optimized concept for signal and power transmission
- Low mating and unmating forces
- High contact density

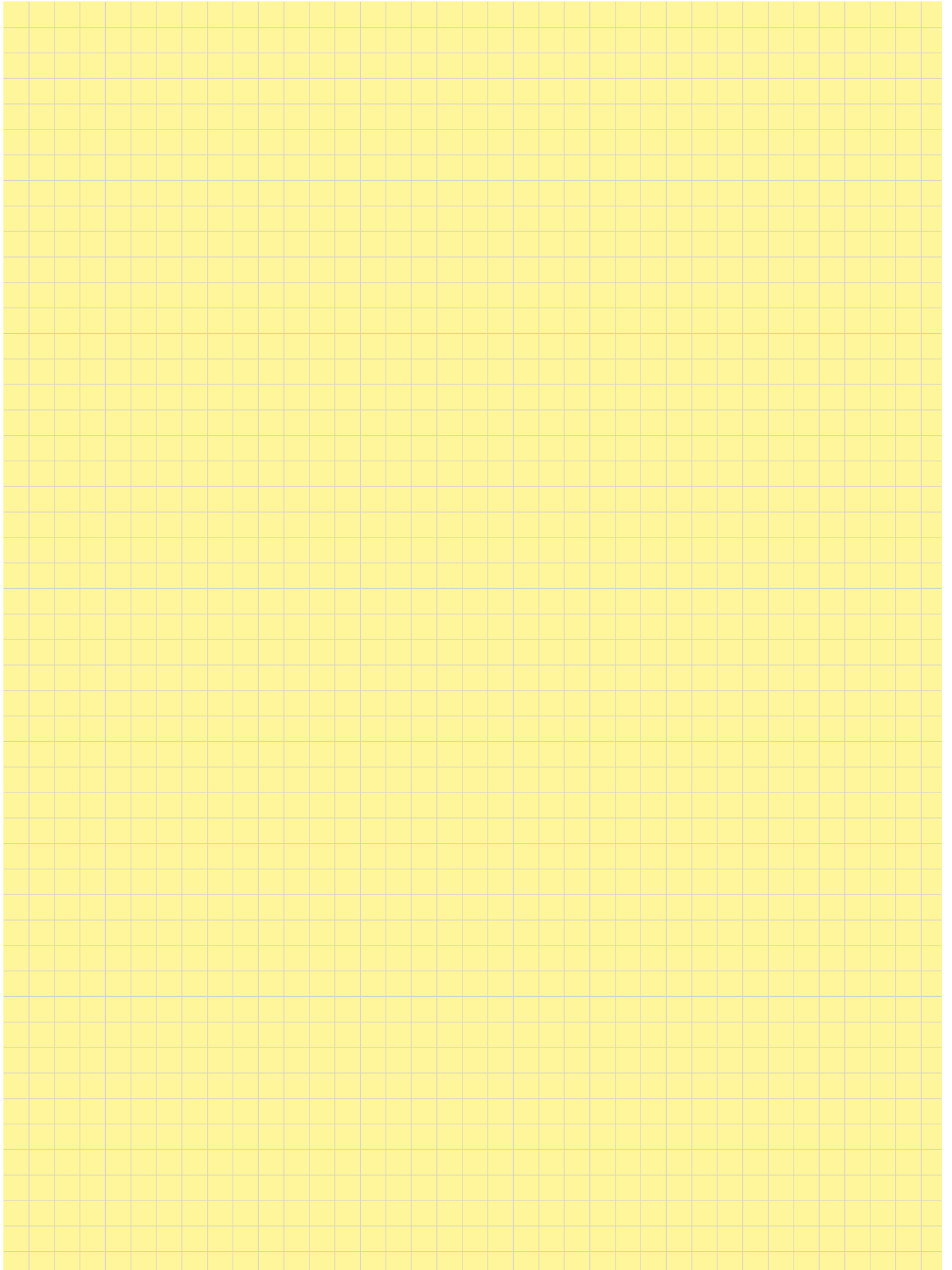






Further Applications:

- Connection of machines in modular production areas
- Test and inspection units
- Automatic tooling systems



Contents

	Page
Technical characteristics Han D® HMC	12
Technical characteristics Han DD® HMC	14
Han® 24 DD HMC	16
Han® 42 DD HMC	17
Han® 40 D HMC	18
Han® 72 DD HMC	19
Han® 64 D HMC	20
Han® 108 DD HMC	21
Technical characteristics Han E® HMC	22
Technical characteristics Han® EEE HMC	24
Han® 6 E HMC	26
Han® 10 E HMC	27
Han® 16 E HMC	28
Han® 40 EEE HMC	29
Han® 24 E HMC	30
Han® 64 EEE HMC	31
Summary Han-Modular®	32
Han-Modular® Docking frames	33
Han E® module	36
Han® EE module	38
Han E® Protected module	40
Han® EEE module	42
Han DD® module	44
Han® DDD module	46
Technical characteristics Hoods/Housings	49
Size Han® 10 B HMC	50
Size Han® 16 B HMC	54
Size Han® 24 B HMC	58
Cable glands	62
Coding of hoods / housings and inserts	64
Han® Accessories	66
Han® Tools	68

Features

- High density contacts / connector
- For requirements up to 250 V / 10 A
- Time saving rapid termination by use of crimping contacts
- Suitable for hoods/housings of series Han[®] B HMC
- Han D[®] HMC contacts available with special HMC gold plating for 10,000 mating cycles

Specifications

DIN EN 175 301-801
DIN EN 60 664-1
DIN EN 61 984

Approvals



Inserts

Number of contacts	40, 64 + PE
Electrical data acc. to EN 61 984	10 A 250 V 4 kV 3
Rated current	10 A
Rated voltage	250 V
Rated impulse voltage	4 kV
Pollution degree	3
Pollution degree 2 also – for wrap terminal only	10 A 230/400 V 4 kV 2 10 A 250 V 4 kV 2
Rated voltage acc. to UL/CSA	600 V
Insulation resistance	≥ 10 ¹⁰ Ω
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	≥ 10,000

Contacts Han D[®] HMC

Material	copper alloy
Surface	HMC gold plating
Contact resistance	≤ 3 mΩ
Crimp terminal - min	0.14 mm ² / AWG 26
Crimp terminal - max	2.5 mm ² / AWG 14

Hoods/Housings Han B[®] HMC

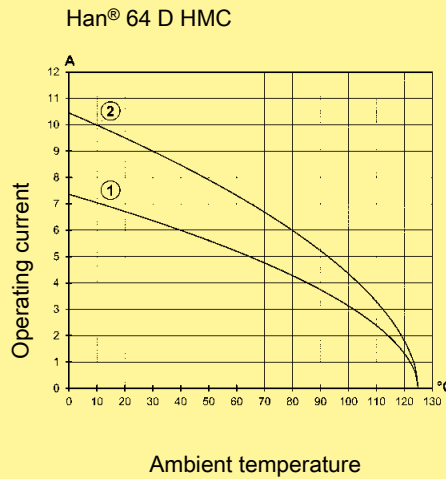
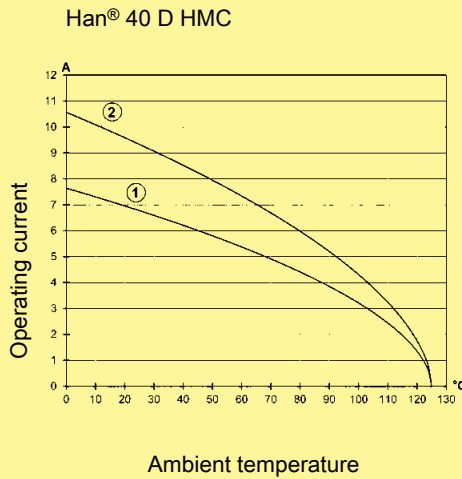
Material	aluminium die-cast
Surface	powder coated RAL 7037 (grey)
Locking element	Han-Easy Lock [®] HMC
Flammability acc. to UL 94	V 0
Hoods/Housings seal	NBR
Limiting temperatures	-40 °C ... +125 °C
Degree of protection acc. to DIN EN 60 529 for coupled connector	IP 65

Selection of hoods housings see page 49

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



- ① 0.75 mm²
- ② 1.5 mm²

Identification	Wire gauge (mm ²)	Part number		Drawing	Dimensions in mm																											
		Male contact	Female contact																													
Crimp contacts																																
HMC gold plated	0.14-0.37	09 15 200 6124	09 15 200 6224																													
	0.5	09 15 200 6123	09 15 200 6223																													
	0.75	09 15 200 6125	09 15 200 6225																													
	1	09 15 200 6122	09 15 200 6222																													
	1.5	09 15 200 6121	09 15 200 6221																													
	2.5	09 15 200 6126	09 15 200 6226																													
					<table border="1"> <thead> <tr> <th colspan="2">Wire gauge</th> <th>D</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>0.9 mm</td> <td>8 mm</td> </tr> <tr> <td>0.5 mm²</td> <td>AWG 20</td> <td>1.1 mm</td> <td>8 mm</td> </tr> <tr> <td>0.75 mm²</td> <td>AWG 18</td> <td>1.3 mm</td> <td>8 mm</td> </tr> <tr> <td>1 mm²</td> <td>AWG 18</td> <td>1.45 mm</td> <td>8 mm</td> </tr> <tr> <td>1.5 mm²</td> <td>AWG 16</td> <td>1.75 mm</td> <td>8 mm</td> </tr> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>2.25 mm</td> <td>6 mm</td> </tr> </tbody> </table>	Wire gauge		D	Stripping length	0.14-0.37 mm ²	AWG 26-22	0.9 mm	8 mm	0.5 mm ²	AWG 20	1.1 mm	8 mm	0.75 mm ²	AWG 18	1.3 mm	8 mm	1 mm ²	AWG 18	1.45 mm	8 mm	1.5 mm ²	AWG 16	1.75 mm	8 mm	2.5 mm ²	AWG 14	2.25 mm
Wire gauge		D	Stripping length																													
0.14-0.37 mm ²	AWG 26-22	0.9 mm	8 mm																													
0.5 mm ²	AWG 20	1.1 mm	8 mm																													
0.75 mm ²	AWG 18	1.3 mm	8 mm																													
1 mm ²	AWG 18	1.45 mm	8 mm																													
1.5 mm ²	AWG 16	1.75 mm	8 mm																													
2.5 mm ²	AWG 14	2.25 mm	6 mm																													

Features

- High density of crimping contacts, up to 108 contacts/connector
- Time saving rapid termination by use of crimping contacts
- For requirements up to 250 V / 10 A
- Han D[®] HMC contacts available with special HMC gold plating for 10,000 mating cycles
- Suitable for hoods/housings of series Han[®] B HMC

Specifications

DIN EN 60 664-1
DIN EN 61 984

Approvals



Inserts

Number of contacts	24, 42, 72, 108, + PE
Electrical data acc. to EN 61 984	10 A 250 V 4 kV 3
Rated current	10 A
Rated voltage	250 V
Rated impulse voltage	4 kV
Pollution degree	3
Pollution degree 2 also	10 A 230/400 V 4 kV 2
Rated voltage acc. to UL/CSA	600 V
Insulation resistance	≥ 10 ¹⁰ Ω
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	≥ 10,000

Contacts Han D[®] HMC

Material	copper alloy
Surface - hard-gold plated	HMC gold plated
Contact resistance	≤ 3 mΩ
Crimp terminal - min	0.14 mm ² / AWG 26
Crimp terminal - max	2.5 mm ² / AWG 14

Hoods/Housings Han[®] B HMC

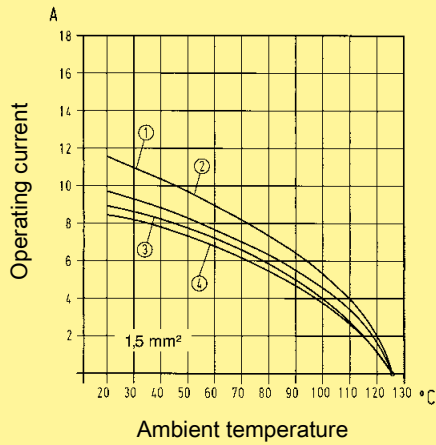
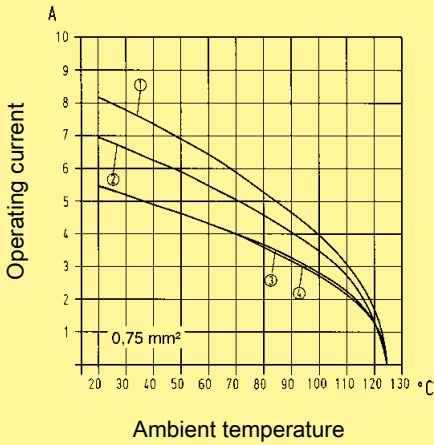
Material	aluminium die-cast
Surface	powder coated RAL 7037 (grey)
Locking element	Han-Easy Lock [®] · HMC
Flammability acc. to UL 94	V 0
Hoods/Housings seal	NBR
Limiting temperatures	-40 °C / 125 °C
Degree of protection acc. to DIN EN 60 529 for coupled connector	IP 65

Selection of hoods housings see page 49

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5

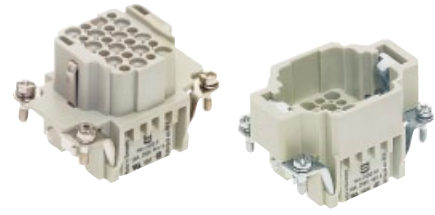


- ① Han[®] 24 DD HMC
- ② Han[®] 42 DD HMC
- ③ Han[®] 72 DD HMC
- ④ Han[®] 108 DD HMC


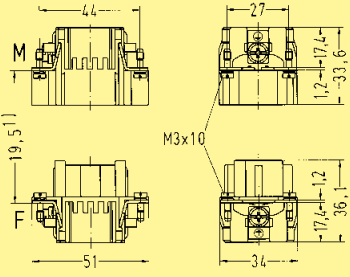
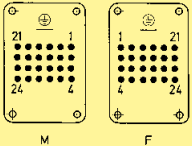
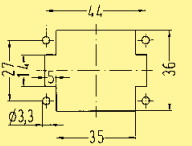


Identification	Wire gauge (mm ²)	Part number		Drawing	Dimensions in mm																												
		Male contact	Female contact																														
Crimp contacts																																	
HMC gold plated	0.14-0.37	09 15 200 6124	09 15 200 6224	<table border="1"> <thead> <tr> <th colspan="2">Wire gauge</th> <th>D</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>0.9 mm</td> <td>8 mm</td> </tr> <tr> <td>0.5 mm²</td> <td>AWG 20</td> <td>1.1 mm</td> <td>8 mm</td> </tr> <tr> <td>0.75 mm²</td> <td>AWG 18</td> <td>1.3 mm</td> <td>8 mm</td> </tr> <tr> <td>1 mm²</td> <td>AWG 18</td> <td>1.45 mm</td> <td>8 mm</td> </tr> <tr> <td>1.5 mm²</td> <td>AWG 16</td> <td>1.75 mm</td> <td>8 mm</td> </tr> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>2.25 mm</td> <td>6 mm</td> </tr> </tbody> </table>	Wire gauge		D	Stripping length	0.14-0.37 mm ²	AWG 26-22	0.9 mm	8 mm	0.5 mm ²	AWG 20	1.1 mm	8 mm	0.75 mm ²	AWG 18	1.3 mm	8 mm	1 mm ²	AWG 18	1.45 mm	8 mm	1.5 mm ²	AWG 16	1.75 mm	8 mm	2.5 mm ²	AWG 14	2.25 mm	6 mm	
Wire gauge		D	Stripping length																														
0.14-0.37 mm ²	AWG 26-22	0.9 mm	8 mm																														
0.5 mm ²	AWG 20	1.1 mm	8 mm																														
0.75 mm ²	AWG 18	1.3 mm	8 mm																														
1 mm ²	AWG 18	1.45 mm	8 mm																														
1.5 mm ²	AWG 16	1.75 mm	8 mm																														
2.5 mm ²	AWG 14	2.25 mm	6 mm																														
	0.5	09 15 200 6123	09 15 200 6223																														
	0.75	09 15 200 6125	09 15 200 6225																														
	1	09 15 200 6122	09 15 200 6222																														
	1.5	09 15 200 6121	09 15 200 6221																														
	2.5	09 15 200 6126	09 15 200 6226																														

Number of contacts

24 +



Inserts

Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 14)</p>  <p>Only with Han Docking Frame (see page 66)</p>	Han DD® HMC	09 16 224 3001	09 16 224 3101	 <p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>  <p>Panel cut out for inserts for use without hoods/housings</p> 	
<p>Coding pin</p> 				09 33 000 9915	<p>Coding pin</p>  <p>Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.</p>

Number of contacts

42 +

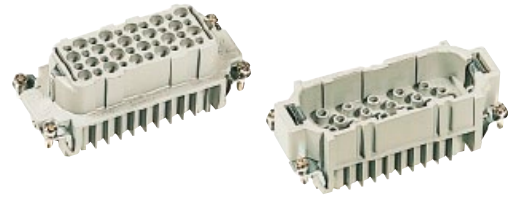


Inserts


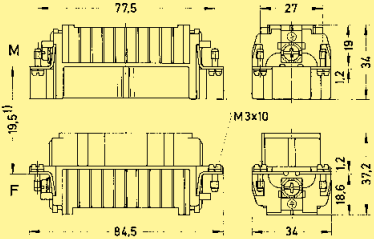
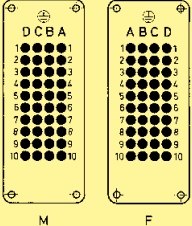
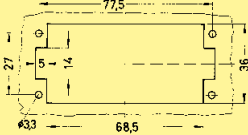


Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 14)</p>	Han DD® HMC	09 16 242 3001	09 16 242 3101	<p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p> <p>Panel cut out for inserts for use without hoods/housings</p>	
<p>Coding pin</p>				09 33 000 9915	<p>Coding pin</p> <p>Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.</p>

Number of contacts

40 +



Inserts


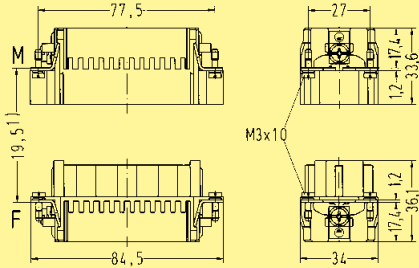
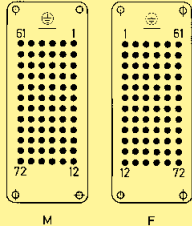
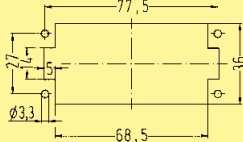

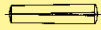
Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 12)</p> 	Han D® HMC	09 21 240 3001	09 21 240 3101	 <p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>  <p>Panel cut out for inserts for use without hoods/housings</p> 	
<p>Coding pin</p> 				09 33 000 9915	<p>Coding pin</p>  <p>Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.</p>

Number of contacts

72 +



Inserts

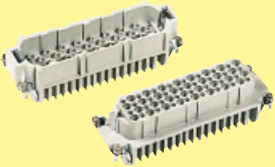
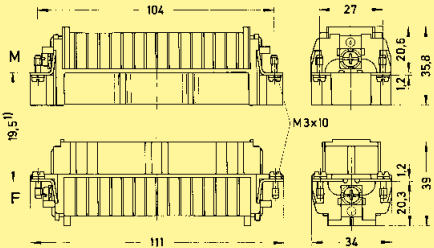
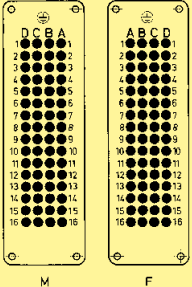
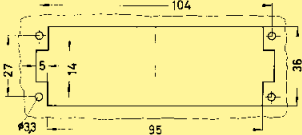


Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 14)</p> 	Han DD® HMC	09 16 272 3001	09 16 272 3101	 <p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>  <p>Panel cut out for inserts for use without hoods/housings</p> 	<p>77,5</p> <p>27</p> <p>19,5</p> <p>12</p> <p>17,4</p> <p>33,6</p> <p>M3x10</p> <p>1,2</p> <p>17,4</p> <p>36,1</p> <p>34</p> <p>84,5</p>
<p>Coding pin</p> 				09 33 000 9915	<p>Coding pin</p>  <p>Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.</p>

Number of contacts

64 +



Inserts

Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 12)</p> 	Han D® HMC	09 21 264 3001	09 21 264 3101	 <p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>  <p>Panel cut out for inserts for use without hoods/housings</p> 	
<p>Coding pin</p> 				09 33 000 9915	<p>Coding pin</p>  <p>Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.</p>

Number of contacts

108 +



Inserts

Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 14)</p>	Han DD® HMC	09 16 208 3001	09 16 208 3101	<p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p> <p>Panel cut out for inserts for use without hoods/housings</p>	
<p>Coding pin</p>				09 33 000 9915	<p>Coding pin</p> <p>Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.</p>

Features

- Han E[®] HMC contacts with crimp termination
- Suitable for hoods/housings of series Han[®] B HMC
- Han E[®] HMC contacts available with special HMC gold plating for 10,000 mating cycles

Hoods/Housings Han[®] B HMC

Material	aluminium die-cast
Surface	powder-coated
Locking element	Han-Easy Lock [®] HMC
Flammability acc. to UL 94	V 0
Hoods/Housings seal	NBR
Limiting temperatures	-40 °C ... +125 °C
Degree of protection acc. to DIN EN 60 529 for coupled connector	IP 65

selection of hoods/housings see page 49

Specifications

DIN EN 60 664-1
DIN EN 61 984

Approvals



Inserts

Number of contacts	6, 10, 16, 24, + PE
Electrical data acc. to EN 61 984	16 A 500 V 6 kV 3
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Pollution degree 2 also	16 A 400/690 V 6 kV 2
Rated voltage acc. to UL/CSA	600 V
Insulation resistance	≥ 10 ¹⁰ Ω
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	≥ 10,000

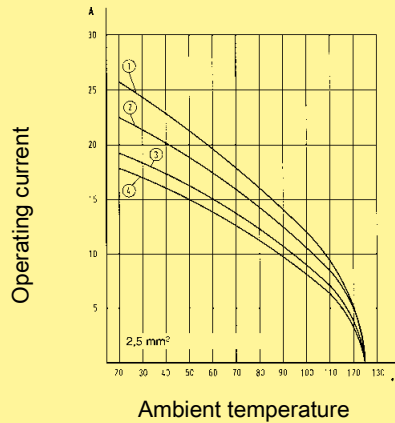
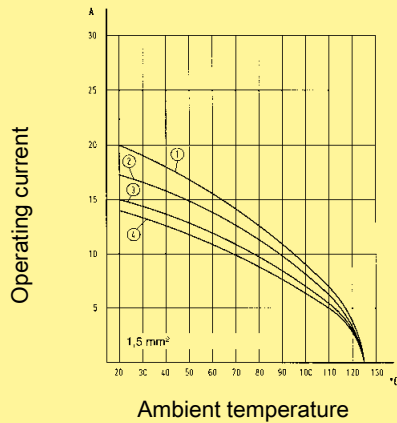
Contacts Han E[®] HMC

Material	copper alloy
Surface	HMC gold plated
Contact resistance	≤ 1 mΩ
Crimp terminal - min	0.14 mm ² / AWG 26
Crimp terminal - max	4 mm ² / AWG 12

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



- ① Han[®] 6 E HMC
- ② Han[®] 10 E HMC
- ③ Han[®] 16 E HMC
- ④ Han[®] 24 E HMC

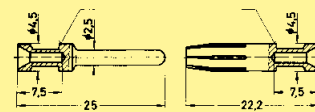
Identification	Wire gauge (mm ²)	Male contact	Female contact	Drawing	Dimensions in mm
----------------	-------------------------------	--------------	----------------	---------	------------------

Crimp contacts
HMC gold plated



0.14-0.37	09 33 200 6117	09 33 200 6217
0.5	09 33 200 6122	09 33 200 6222
0.75	09 33 200 6115	09 33 200 6215
1	09 33 200 6118	09 33 200 6218
1.5	09 33 200 6116	09 33 200 6216
2.5	09 33 200 6123	09 33 200 6223
4	09 33 200 6119	09 33 200 6221

Operating contact
Identification



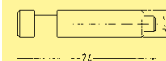
Identification	Wire gauge	Stripping length
no groove	0.14-0.37 mm ²	7.5 mm
no groove	0.5 mm ²	7.5 mm
1 groove*	0.75 mm ²	7.5 mm
1 groove	1 mm ²	7.5 mm
2 grooves	1.5 mm ²	7.5 mm
3 grooves	2.5 mm ²	7.5 mm
wide groove	3 mm ²	7.5 mm
no groove	4 mm ²	7.5 mm

* on the back crimp collar

Coding pin
for crimp inserts only



09 33 000 9954



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

Features

- Han E® HMC contacts with crimp termination
- Polarised insert
- Suitable for hoods/housings of series Han® B HMC
- Han E® HMC contacts available with special HMC gold plating for 10,000 mating cycles

Specifications

DIN EN 60 664-1
DIN EN 61 984

Approvals

Inserts

Number of contacts	40, 64 + PE
Electrical data acc. to EN 61 984	16 A 500 V 6 kV 3
Rated current	16 A
Rated voltage	500 V
Rated impulse voltage	6 kV
Pollution degree	3
Insulation resistance	$\geq 10^{10} \Omega$
Material	polycarbonate
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life - mating cycles	$\geq 10,000$

Contacts Han® E HMC

Material	copper alloy
Surface	HMC gold plated
Contact resistance	$\leq 1 \text{ m}\Omega$
Crimp terminal - min	0.14 mm ² / AWG 26
Crimp terminal - max	4 mm ² / AWG 12

Hoods/Housings Han® B HMC

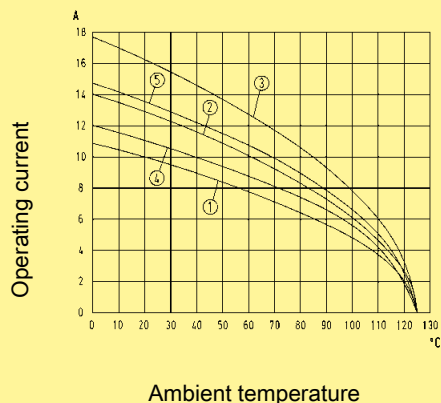
Material	aluminium die-cast
Surface	powder-coated
Locking element	Han-Easy Lock® HMC
Flammability acc. to UL 94	V 0
Hoods/Housings seal	NBR
Limiting temperatures	-40 °C ... +125 °C
Degree of protection acc. to DIN EN 60 529 for coupled connector	IP 65

Selection of hoods/housings see page 49

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5

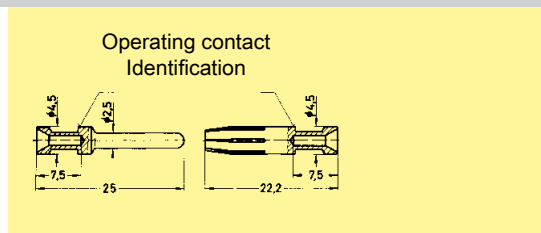


- ① Han® 64 EEE HMC / 1.5 mm²
- ② Han® 64 EEE HMC / 2.5 mm²
- ③ Han® 64 EEE HMC / 4.0 mm²
- ④ Han® 40 EEE HMC / 1.5 mm²
- ⑤ Han® 40 EEE HMC / 2.5 mm²

Identification	Wire gauge (mm ²)	Part number Male contact	Part number Female contact	Drawing	Dimensions in mm
----------------	-------------------------------	--------------------------	----------------------------	---------	------------------

Crimp contacts
HMC gold plated

0.14-0.37	09 33 200 6117	09 33 200 6217
0.5	09 33 200 6122	09 33 200 6222
0.75	09 33 200 6115	09 33 200 6215
1	09 33 200 6118	09 33 200 6218
1.5	09 33 200 6116	09 33 200 6216
2.5	09 33 200 6123	09 33 200 6223
4	09 33 200 6119	09 33 200 6221



Identification	Wire gauge	Stripping length
no groove	0.14-0.37 mm ²	7.5 mm
no groove	0.5 mm ²	7.5 mm
1 groove*	0.75 mm ²	7.5 mm
1 groove	1 mm ²	7.5 mm
2 grooves	1.5 mm ²	7.5 mm
3 grooves	2.5 mm ²	7.5 mm
wide groove	3 mm ²	7.5 mm
no groove	4 mm ²	7.5 mm

* on the back crimp collar

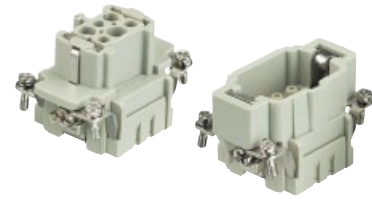
Coding pin
for crimp inserts only

09 33 000 9954


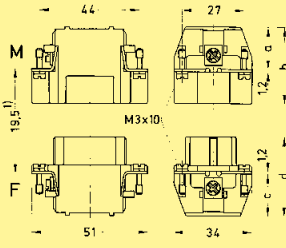
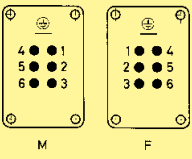
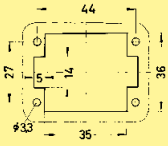
Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.

Number of contacts

6 +

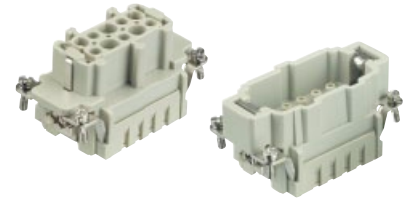


Inserts

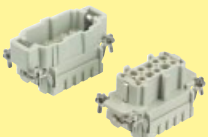
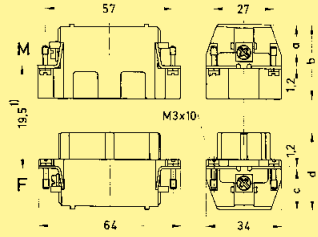
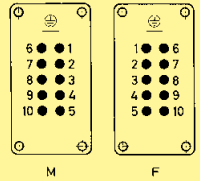
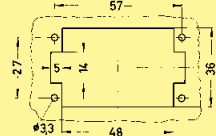
Identification	Series	Part number		Drawing	Dimensions in mm												
		Male insert (M)	Female insert (F)														
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 22)</p>  <p>Only with Han® Docking frame (page 66)</p>	Han E® HMC	09 33 206 2602	09 33 206 2702	 <p>1) Distance for contact max. 21 mm</p> <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Han E® HMC</td> <td>19</td> <td>34</td> <td>19</td> <td>36</td> </tr> </tbody> </table> <p>Contact arrangement view from termination side</p>  		a	b	c	d	Han E® HMC	19	34	19	36			
	a	b	c	d													
Han E® HMC	19	34	19	36													

Number of contacts

10 +

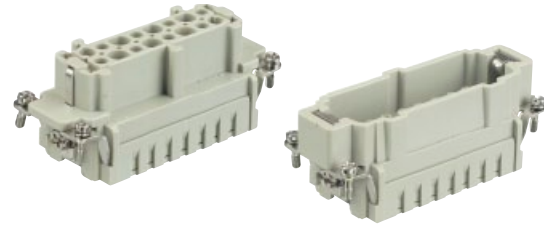


Inserts


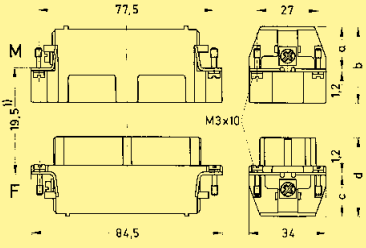
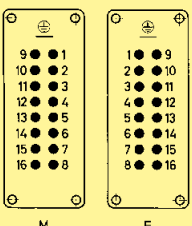
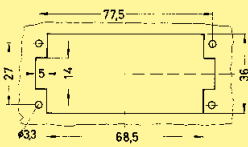
Identification	Series	Part number		Drawing	Dimensions in mm									
		Male insert (M)	Female insert (F)											
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 22)</p> 	Han E® HMC	09 33 210 2602	09 33 210 2702	 <p>1) Distance for contact max. 21 mm</p> <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Han E® HMC</td> <td>19</td> <td>34</td> <td>19</td> <td>36</td> </tr> </tbody> </table> <p>Contact arrangement view from termination side</p>  <p>Panel cut out</p> 		a	b	c	d	Han E® HMC	19	34	19	36
	a	b	c	d										
Han E® HMC	19	34	19	36										

Number of contacts

16 +

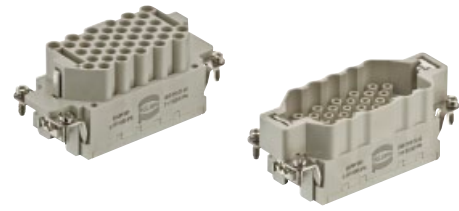


Inserts


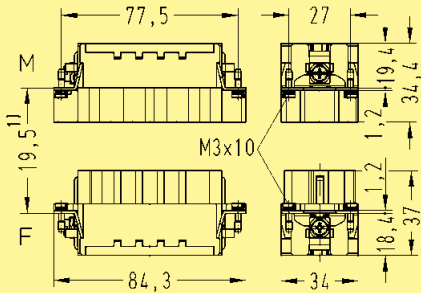
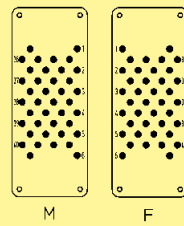
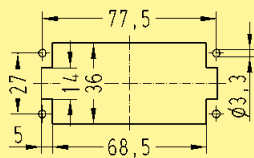
Identification	Series	Part number		Drawing	Dimensions in mm									
		Male insert (M)	Female insert (F)											
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 22)</p> 	Han E® HMC	09 33 216 2602	09 33 216 2702	 <p>1) Distance for contact max. 21 mm</p> <table border="1" data-bbox="949 929 1444 996"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Han E® HMC</td> <td>19</td> <td>34</td> <td>19</td> <td>36</td> </tr> </tbody> </table> <p>Contact arrangement view from termination side</p>  <p>Panel cut out</p> 		a	b	c	d	Han E® HMC	19	34	19	36
					a	b	c	d						
Han E® HMC	19	34	19	36										

Number of contacts

40 +

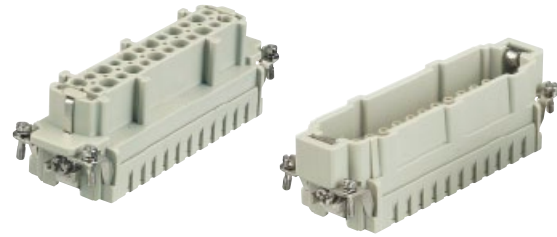


Inserts

Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp termination</p> <p>Order crimp contacts separately (see Technical characteristics on page 24)</p> 	<p>Han® EEE HMC</p>	<p>09 32 240 3001</p>	<p>09 32 240 3101</p>	 <p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>  <p>Panel cut out</p> 	

Number of contacts

24 +



Inserts


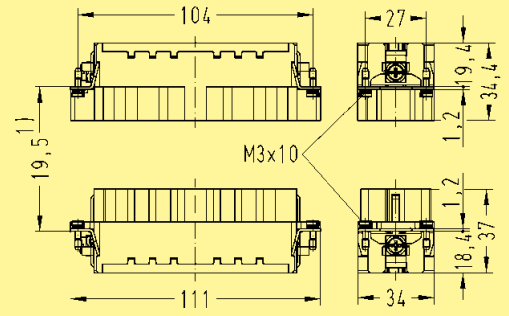
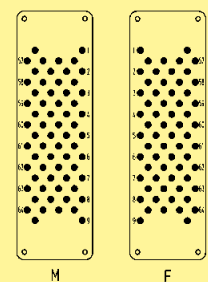
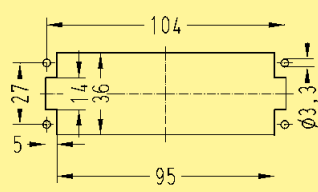
Identification	Series	Part number		Drawing	Dimensions in mm												
		Male insert (M)	Female insert (F)														
<p>Crimp terminal</p> <p>Order crimp contacts separately (see Technical characteristics on page 22)</p>	Han E® HMC	09 33 224 2602	09 33 224 2702	<p>1) Distance for contact max. 21 mm</p> <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>Han E® HMC</td> <td>19</td> <td>34</td> <td>19</td> <td>36</td> </tr> </tbody> </table> <p>Contact arrangement view from termination side</p> <p>Panel cut out</p>		a	b	c	d	Han E® HMC	19	34	19	36			
	a	b	c	d													
Han E® HMC	19	34	19	36													





Number of contacts



64 +



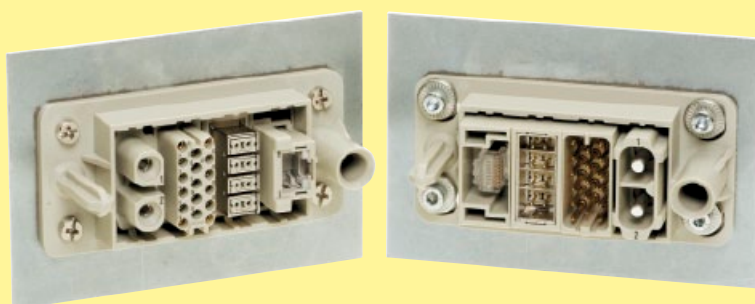
Inserts

Identification	Series	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Crimp termination</p> <p>Order crimp contacts separately (see Technical characteristics on page 24)</p> 	Han® EEE HMC	09 32 264 3001	09 32 264 3101	 <p>1) Distance for contact max. 21 mm</p> <p>Contact arrangement view from termination side</p>  <p>Panel cut out</p> 	

Series	Han E® module	Han® EE module	Han E® Protected module	Han® EEE module
Number of contacts	6	8	6	20
Modules	Crimp terminal 	Crimp terminal 	Crimp terminal 	Crimp terminal 
Rated current	16 A	16 A	16 A	16 A
Rated voltage	500 V	400 V	830 V	500 V
Wire gauge	0.14 ... 4 mm ²	0.14 ... 4 mm ²	0.14 ... 4 mm ²	0.14 ... 4 mm ²
Page	36	38	40	42

Series	Han DD® module	Han® DDD module		
Number of contacts	12	17		
Modules	Crimp terminal 	Crimp terminal 		
Rated current	10 A	10 A		
Rated voltage	250 V	160 V		
Wire gauge	0.14 ... 2.5 mm ²	0.14 ... 2.5 mm ²		
Page	44	46		

Han-Modular® Docking frame



Features

- Blind mating connector system for drawer systems
- Direct panel mounting without housing
- Very robust design
- Solid pre-leading guid pins and float bushes
- Can be fixed with standard M4 screws
- Designed for 10,000 mating cycles

Notice:

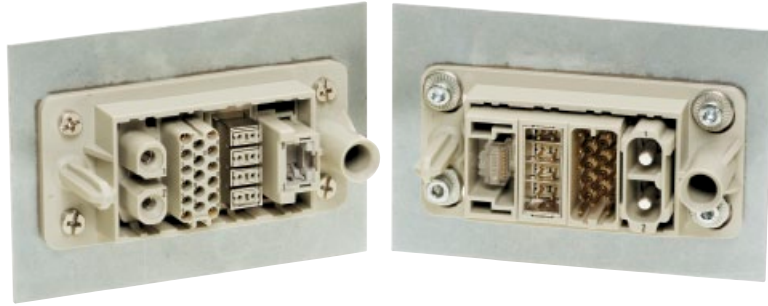
Due the plastic material used in the docking frame without PE, the panel will need to be grounded separately

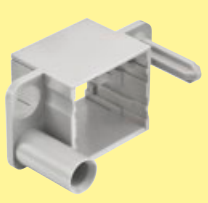
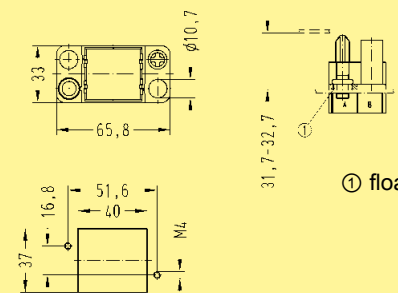
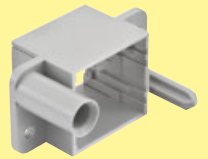
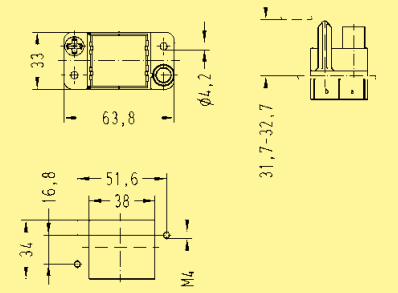

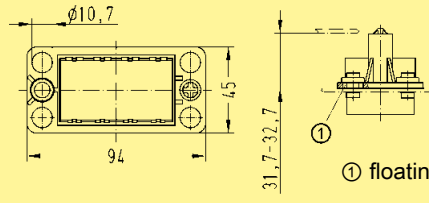
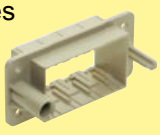
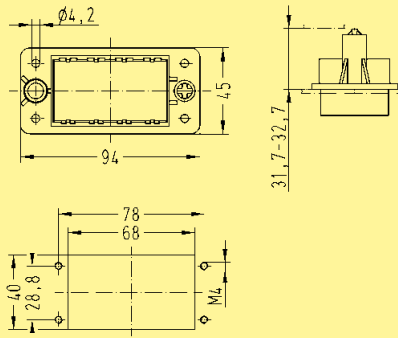
Technical characteristics

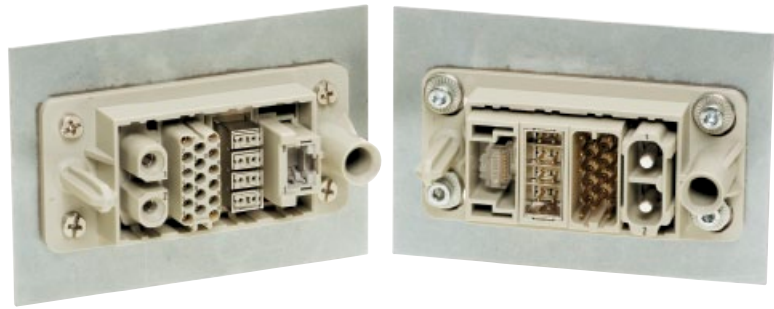
Specifications	DIN EN 60 664-1 DIN EN 61 984
----------------	----------------------------------


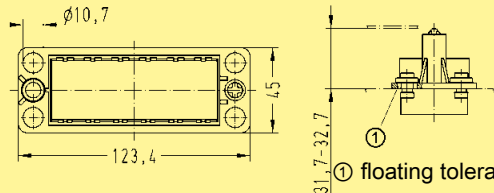

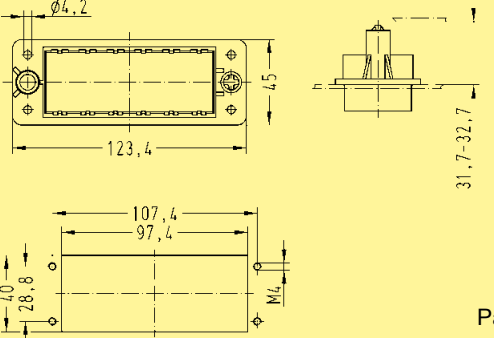

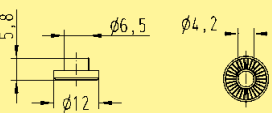
Docking frames

Number of modules	2, 4, 6
Material	
- Docking frames	polycarbonate
- Float washer	zinc die-cast
Floating tolerance	± 2 mm
Aligning tolerance	± 4 mm
Limiting temperatures	-40 °C ... +125 °C
Flammability acc. to UL 94	V 0
Mechanical working life	
- mating cycles	≥ 10,000



Identification	Part number		Drawing	Dimensions in mm
	Marking A ... F ¹⁾	Marking a ... f ²⁾		
Docking frame for 2 modules 	09 14 006 1701			① floating tolerance ± 2 mm Panel cut out
Docking frame for 2 modules 		09 14 006 1711		Panel cut out
Docking frame for 4 modules 	09 14 016 1701			① floating tolerance ± 2 mm
Docking frame for 4 modules 		09 14 016 1711		Panel cut out



Identification	Part number		Drawing	Dimensions in mm
	Marking A ... F ¹⁾	Marking a ... f ²⁾		
Docking frame for 6 modules 	09 14 024 1701		 <p>① floating tolerance ± 2 mm</p>	
Docking frame for 6 modules 		09 14 024 1711	 <p>Panel cut out</p>	
Float washer to enable the frame to be float mounted using standard M4 fixing screws 	09 14 000 9936			

1) Float mount
2) Fixed

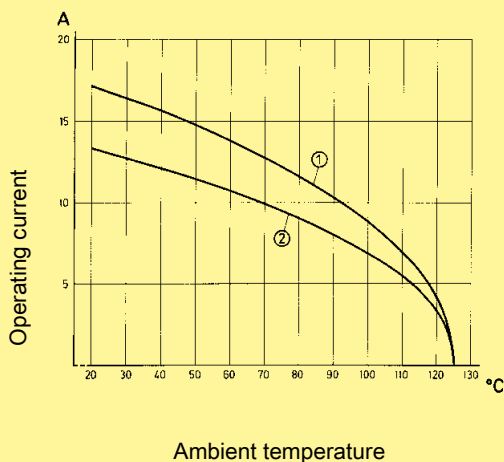
Features

- Suitable for Han E[®] HMC crimp contacts
- Standard module for power up to 40 A
- Designed for 10,000 mating cycles with Han E[®] HMC crimp contacts and only with Han-Modular[®] Docking frame

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



- ① 24 B HMC hoods/housings with 6 modules; wire gauge: 2.5 mm²
- ② 24 B HMC hoods/housings with 6 modules; wire gauge: 1.5 mm²

Technical characteristics

Specifications DIN EN 60 664-1
 DIN EN 61 984

Approvals

Inserts

Number of contacts 6
 Electrical data
 acc. to EN 61 984 **16 A 500 V 6 kV 3**
 Rated current 16 A
 Rated voltage 500 V
 Rated impulse voltage 6 kV
 Pollution degree 3

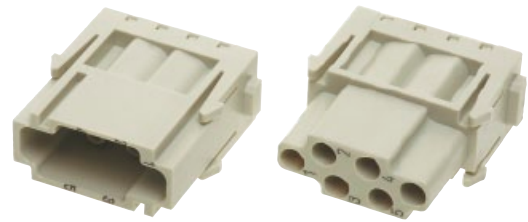
Rated voltage
 acc. to UL/CSA 600 V
 Insulation resistance ≥ 10¹⁰ Ω
 Material polycarbonate
 Limiting temperatures -40 °C ... +125 °C
 Flammability acc. to UL 94 V 0
 Mechanical working life
 - mating cycles ≥ 10,000

Contacts Han E[®] HMC

Material copper alloy
 Surface HMC gold plated
 Contact resistance ≤ 1 mΩ
 Crimp terminal
 - mm² 0.14 ... 4 mm²
 - AWG 26 ... 12

Number of contacts

6



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Crimp terminal Order crimp contacts separately	09 14 006 3001	09 14 006 3101	<p>M</p> <p>F</p> <p>M</p> <p>F</p> <p>Contact arrangement view from termination side</p>	

Identification	Wire gauge (mm²)	Part number		Drawing	Dimensions in mm																																				
		Male contact	Female contact																																						
Crimp contacts HMC gold plated 	0.14-0.37 0.5 0.75 1 1.5 2.5 4	09 33 200 6117 09 33 200 6122 09 33 200 6115 09 33 200 6118 09 33 200 6116 09 33 200 6123 09 33 200 6119	09 33 200 6217 09 33 200 6222 09 33 200 6215 09 33 200 6218 09 33 200 6216 09 33 200 6223 09 33 200 6221	<p>Operating contact</p> <p>Identification</p>	<table border="1"> <thead> <tr> <th>Identification</th> <th>Wire gauge</th> <th>AWG</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>no groove</td> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>7.5 mm</td> </tr> <tr> <td>no groove</td> <td>0.5 mm²</td> <td>AWG 20</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove*</td> <td>0.75 mm²</td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove</td> <td>1 mm²</td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>2 grooves</td> <td>1.5 mm²</td> <td>AWG 16</td> <td>7.5 mm</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm²</td> <td>AWG 14</td> <td>7.5 mm</td> </tr> <tr> <td>wide groove</td> <td>3 mm²</td> <td>AWG 12</td> <td>7.5 mm</td> </tr> <tr> <td>no groove</td> <td>4 mm²</td> <td>AWG 12</td> <td>7.5 mm</td> </tr> </tbody> </table> <p>* on the back crimp collar</p>	Identification	Wire gauge	AWG	Stripping length	no groove	0.14-0.37 mm²	AWG 26-22	7.5 mm	no groove	0.5 mm²	AWG 20	7.5 mm	1 groove*	0.75 mm²	AWG 18	7.5 mm	1 groove	1 mm²	AWG 18	7.5 mm	2 grooves	1.5 mm²	AWG 16	7.5 mm	3 grooves	2.5 mm²	AWG 14	7.5 mm	wide groove	3 mm²	AWG 12	7.5 mm	no groove	4 mm²	AWG 12	7.5 mm
Identification	Wire gauge	AWG	Stripping length																																						
no groove	0.14-0.37 mm²	AWG 26-22	7.5 mm																																						
no groove	0.5 mm²	AWG 20	7.5 mm																																						
1 groove*	0.75 mm²	AWG 18	7.5 mm																																						
1 groove	1 mm²	AWG 18	7.5 mm																																						
2 grooves	1.5 mm²	AWG 16	7.5 mm																																						
3 grooves	2.5 mm²	AWG 14	7.5 mm																																						
wide groove	3 mm²	AWG 12	7.5 mm																																						
no groove	4 mm²	AWG 12	7.5 mm																																						

Crimp contacts 0.14 ... 0.37 mm² only used with BUCHANAN crimping tool 09 99 000 0001

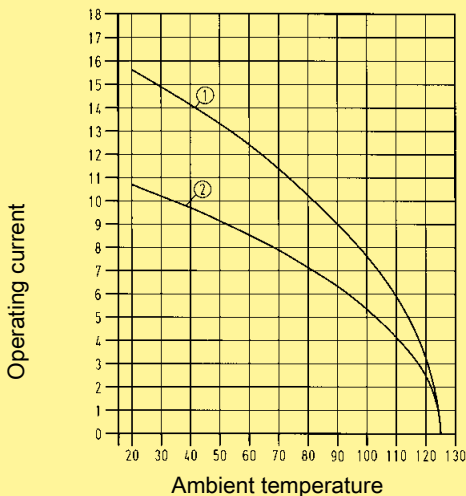
Features

- Suitable for Han E® HMC crimp contacts
- High contact density
- Designed for 10,000 mating cycles with Han E® HMC crimp contacts and only with Han-Modular® Docking frame

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



① 24 B HMC hoods/housings with 6 modules; wire gauge: 2.5 mm²

② 24 B HMC hoods/housings with 6 modules; wire gauge: 1.5 mm²

Technical characteristics

Specifications DIN EN 60 664-1
 DIN EN 61 984

Approvals

Inserts

Number of contacts 8
 Electrical data
 acc. to EN 61 984 **16 A 400 V 6 kV 3**
 Rated current 16 A
 Rated voltage 400 V
 Rated impulse voltage 6 kV
 Pollution degree 3

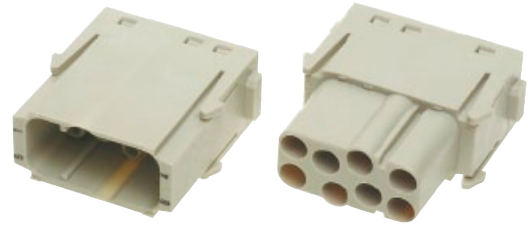
Rated voltage
 acc. to UL 600 V
 Insulation resistance ≥ 10¹⁰ Ω
 Material polycarbonate
 Limiting temperatures -40 °C ... +125 °C
 Flammability acc. to UL 94 V 0
 Mechanical working life
 - mating cycles ≥ 10,000

Contacts Han E® HMC

Material copper alloy
 Surface HMC gold plated
 Contact resistance ≤ 1 mΩ
 Crimp terminal
 - mm² 0.14 ... 4 mm²
 - AWG 26 ... 12

Number of contacts

8



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Crimp terminal Order crimp contacts separately	09 14 008 3001	09 14 008 3101	<p>M</p> <p>F</p> <p>M</p> <p>F</p> <p>Contact arrangement view from termination side</p>	

Identification	Wire gauge (mm ²)	Part number		Drawing	Dimensions in mm																											
		Male contact	Female contact																													
Crimp contacts HMC gold plated	0.14-0.37	09 33 200 6117	09 33 200 6217																													
	0.5	09 33 200 6122	09 33 200 6222																													
	0.75	09 33 200 6115	09 33 200 6215																													
	1	09 33 200 6118	09 33 200 6218																													
	1.5	09 33 200 6116	09 33 200 6216																													
	2.5	09 33 200 6123	09 33 200 6223																													
	4	09 33 200 6119	09 33 200 6221																													
				<table border="1"> <thead> <tr> <th>Identification</th> <th>Wire gauge</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>no groove</td> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> </tr> <tr> <td>no groove</td> <td>0.5 mm²</td> <td>AWG 20</td> </tr> <tr> <td>1 groove*</td> <td>0.75 mm²</td> <td>AWG 18</td> </tr> <tr> <td>1 groove</td> <td>1 mm²</td> <td>AWG 18</td> </tr> <tr> <td>2 grooves</td> <td>1.5 mm²</td> <td>AWG 16</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm²</td> <td>AWG 14</td> </tr> <tr> <td>wide groove</td> <td>3 mm²</td> <td>AWG 12</td> </tr> <tr> <td>no groove</td> <td>4 mm²</td> <td>AWG 12</td> </tr> </tbody> </table> <p>* on the back crimp collar</p>	Identification	Wire gauge	Stripping length	no groove	0.14-0.37 mm ²	AWG 26-22	no groove	0.5 mm ²	AWG 20	1 groove*	0.75 mm ²	AWG 18	1 groove	1 mm ²	AWG 18	2 grooves	1.5 mm ²	AWG 16	3 grooves	2.5 mm ²	AWG 14	wide groove	3 mm ²	AWG 12	no groove	4 mm ²	AWG 12	
Identification	Wire gauge	Stripping length																														
no groove	0.14-0.37 mm ²	AWG 26-22																														
no groove	0.5 mm ²	AWG 20																														
1 groove*	0.75 mm ²	AWG 18																														
1 groove	1 mm ²	AWG 18																														
2 grooves	1.5 mm ²	AWG 16																														
3 grooves	2.5 mm ²	AWG 14																														
wide groove	3 mm ²	AWG 12																														
no groove	4 mm ²	AWG 12																														

Crimp contacts 0.14 ... 0.37 mm² only used with BUCHANAN crimping tool 09 99 000 0001

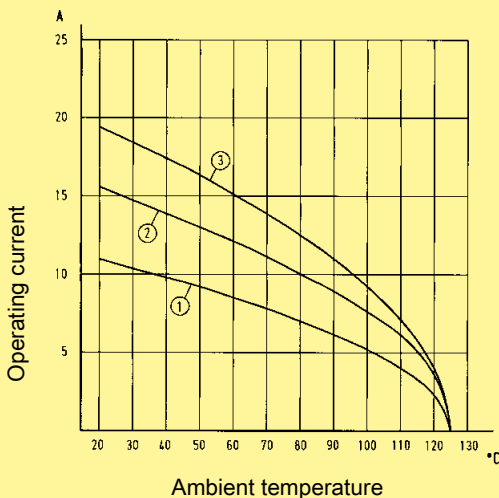
Features

- Suitable for Han E[®] HMC crimp contacts
- designed for a high working voltage up to 830 V
- finger safe male and female contacts
- Designed for 10,000 mating cycles with Han E[®] HMC crimp contacts and only with Han-Modular[®] Docking frame

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



- ① 24 B HMC hoods/housings with 6 modules; wire gauge: 1.5 mm²
- ② 24 B HMC hoods/housings with 6 modules; wire gauge: 2.5 mm²
- ③ 24 B HMC hoods/housings with 6 modules; wire gauge: 4 mm²

Technical characteristics

Specifications DIN EN 60 664-1
 DIN EN 61 984

Approvals

Inserts

Number of contacts 6
 Electrical data
 acc. to EN 61 984 **16 A 830 V 8 kV 3**
 Rated current 16 A
 Rated voltage 830 V
 Rated impulse voltage 8 kV
 Pollution degree 3

Rated voltage
 acc. to UL 600 V
 Insulation resistance ≥ 10¹⁰ Ω
 Material polycarbonate
 Limiting temperatures -40 °C ... +125 °C
 Flammability acc. to UL 94 V 0
 Mechanical working life
 - mating cycles ≥ 10,000

Contacts Han E[®] HMC

Material copper alloy
 Surface HMC gold plated
 Contact resistance ≤ 1 mΩ
 Crimp terminal
 - mm² 0.14 ... 4 mm²
 - AWG 26 ... 12

Number of contacts

6



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Crimp terminal Order crimp contacts separately	09 14 006 3041	09 14 006 3141	<p>M</p> <p>F</p> <p>M F</p> <p>Contact arrangement view from termination side</p>	

Identification	Wire gauge (mm ²)	Part number		Drawing	Dimensions in mm																											
		Male contact	Female contact																													
Crimp contacts HMC gold plated	0.14-0.37 0.5 0.75 1 1.5 2.5 4	09 33 200 6117 09 33 200 6122 09 33 200 6115 09 33 200 6118 09 33 200 6116 09 33 200 6123 09 33 200 6119	09 33 200 6217 09 33 200 6222 09 33 200 6215 09 33 200 6218 09 33 200 6216 09 33 200 6223 09 33 200 6221	<p>Operating contact Identification</p> <table border="1"> <thead> <tr> <th>Identification</th> <th>Wire gauge</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>no groove</td> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> </tr> <tr> <td>no groove</td> <td>0.5 mm²</td> <td>AWG 20</td> </tr> <tr> <td>1 groove*</td> <td>0.75 mm²</td> <td>AWG 18</td> </tr> <tr> <td>1 groove</td> <td>1 mm²</td> <td>AWG 18</td> </tr> <tr> <td>2 grooves</td> <td>1.5 mm²</td> <td>AWG 16</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm²</td> <td>AWG 14</td> </tr> <tr> <td>wide groove</td> <td>3 mm²</td> <td>AWG 12</td> </tr> <tr> <td>no groove</td> <td>4 mm²</td> <td>AWG 12</td> </tr> </tbody> </table> <p>* on the back crimp collar</p>	Identification	Wire gauge	Stripping length	no groove	0.14-0.37 mm ²	AWG 26-22	no groove	0.5 mm ²	AWG 20	1 groove*	0.75 mm ²	AWG 18	1 groove	1 mm ²	AWG 18	2 grooves	1.5 mm ²	AWG 16	3 grooves	2.5 mm ²	AWG 14	wide groove	3 mm ²	AWG 12	no groove	4 mm ²	AWG 12	
Identification	Wire gauge	Stripping length																														
no groove	0.14-0.37 mm ²	AWG 26-22																														
no groove	0.5 mm ²	AWG 20																														
1 groove*	0.75 mm ²	AWG 18																														
1 groove	1 mm ²	AWG 18																														
2 grooves	1.5 mm ²	AWG 16																														
3 grooves	2.5 mm ²	AWG 14																														
wide groove	3 mm ²	AWG 12																														
no groove	4 mm ²	AWG 12																														

Crimp contacts 0.14 ... 0.37 mm² only used with BUCHANAN crimping tool 09 99 000 0001

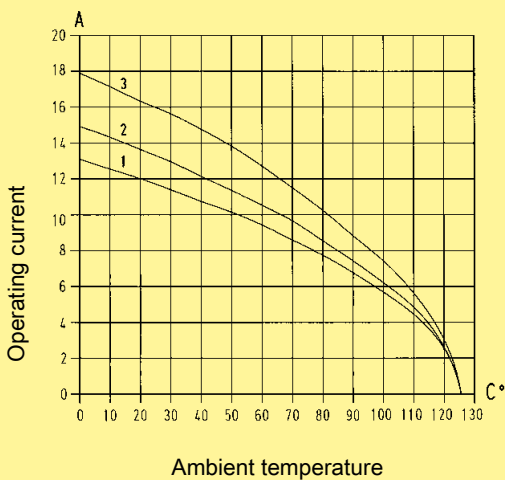
Features

- Suitable for Han E® HMC crimp contacts
- High contact density
- Up to 16 A per contact
- Also suitable as a reliable signal connector
- Designed for 10,000 mating cycles with Han E® HMC crimp contacts and only with Han-Modular® Docking frame

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



- ① 24 B HMC hoods/housings with 3 modules; wire gauge: 1.5 mm²
- ② 24 B HMC hoods/housings with 3 modules; wire gauge: 2.5 mm²
- ③ 24 B HMC hoods/housings with 3 modules; wire gauge: 4 mm²

Technical characteristics

Specifications DIN EN 60 664-1
 DIN EN 61 984

Approvals

Inserts

Number of contacts 20
 Electrical data
 acc. to EN 61 984 **16 A 500 V 6 kV 3**
 Rated current 16 A
 Rated voltage 500 V
 Rated impulse voltage 6 kV
 Pollution degree 3

Rated voltage
 acc. to UL 600 V
 Insulation resistance ≥ 10¹⁰ Ω
 Material polycarbonate
 Limiting temperatures -40 °C ... +125 °C
 Flammability acc. to UL 94 V 0
 Mechanical working life
 - mating cycles ≥ 10,000

Contacts Han E® HMC

Material copper alloy
 Surface HMC gold plated
 Contact resistance ≤ 1 mΩ
 Crimp terminal
 - mm² 0.14 ... 4 mm²
 - AWG 26 ... 12

Number of contacts

20



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
Crimp terminal Order crimp contacts separately	09 14 020 3001	09 14 020 3101	<p>Contact arrangement view from termination side</p>	

Identification	Wire gauge (mm²)	Part number		Drawing	Dimensions in mm																																			
		Male contact	Female contact																																					
Crimp contacts HMC gold plated	0.14-0.37 0.5 0.75 1 1.5 2.5 4	09 33 200 6117 09 33 200 6122 09 33 200 6115 09 33 200 6118 09 33 200 6116 09 33 200 6123 09 33 200 6119	09 33 200 6217 09 33 200 6222 09 33 200 6215 09 33 200 6218 09 33 200 6216 09 33 200 6223 09 33 200 6221																																					
				<table border="1"> <thead> <tr> <th>Identification</th> <th colspan="2">Wire gauge</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>no groove</td> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>7.5 mm</td> </tr> <tr> <td>no groove</td> <td>0.5 mm²</td> <td>AWG 20</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove*</td> <td>0.75 mm²</td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>1 groove</td> <td>1 mm²</td> <td>AWG 18</td> <td>7.5 mm</td> </tr> <tr> <td>2 grooves</td> <td>1.5 mm²</td> <td>AWG 16</td> <td>7.5 mm</td> </tr> <tr> <td>3 grooves</td> <td>2.5 mm²</td> <td>AWG 14</td> <td>7.5 mm</td> </tr> <tr> <td>wide groove</td> <td>3 mm²</td> <td>AWG 12</td> <td>7.5 mm</td> </tr> <tr> <td>no groove</td> <td>4 mm²</td> <td>AWG 12</td> <td>7.5 mm</td> </tr> </tbody> </table> <p>* on the back crimp collar</p>	Identification	Wire gauge		Stripping length	no groove	0.14-0.37 mm²	AWG 26-22	7.5 mm	no groove	0.5 mm²	AWG 20	7.5 mm	1 groove*	0.75 mm²	AWG 18	7.5 mm	1 groove	1 mm²	AWG 18	7.5 mm	2 grooves	1.5 mm²	AWG 16	7.5 mm	3 grooves	2.5 mm²	AWG 14	7.5 mm	wide groove	3 mm²	AWG 12	7.5 mm	no groove	4 mm²	AWG 12	7.5 mm
Identification	Wire gauge		Stripping length																																					
no groove	0.14-0.37 mm²	AWG 26-22	7.5 mm																																					
no groove	0.5 mm²	AWG 20	7.5 mm																																					
1 groove*	0.75 mm²	AWG 18	7.5 mm																																					
1 groove	1 mm²	AWG 18	7.5 mm																																					
2 grooves	1.5 mm²	AWG 16	7.5 mm																																					
3 grooves	2.5 mm²	AWG 14	7.5 mm																																					
wide groove	3 mm²	AWG 12	7.5 mm																																					
no groove	4 mm²	AWG 12	7.5 mm																																					

Crimp contacts 0.14 ... 0.37 mm² only used with BUCHANAN crimping tool 09 99 000 0001

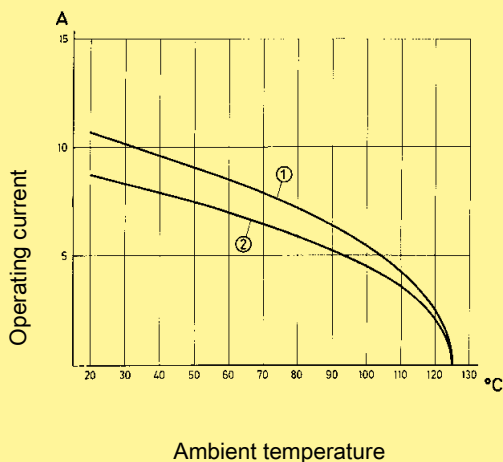
Features

- Suitable for Han D[®] HMC crimp contacts
- Standard module for power up to 10 A
- Compatible to Han D[®] module with Quick Lock terminal
- Designed for 10,000 mating cycles with Han D[®] HMC crimp contacts and only with Han-Modular[®] Doking frame

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



- ① 24 B HMC hoods/housings with 6 modules; wire gauge: 1.5 mm²
 ② 24 B HMC hoods/housings with 6 modules; wire gauge: 1.0 mm²

Technical characteristics

Specifications DIN EN 60 664-1
 DIN EN 61 984

Approvals

Inserts

Number of contacts 12
 Electrical data
 acc. to EN 61 984 **10 A 250 V 4 kV 3**
 Rated current 10 A
 Rated voltage 250 V
 Rated impulse voltage 4 kV
 Pollution degree 3

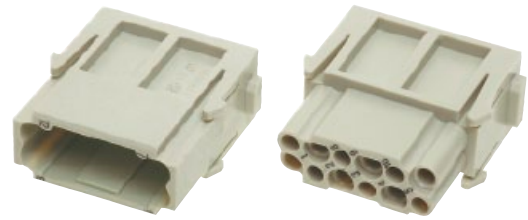
Rated voltage
 acc. to UL/CSA 600 V
 Insulation resistance ≥ 10¹⁰ Ω
 Material polycarbonate
 Limiting temperatures -40 °C ... +125 °C
 Flammability acc. to UL 94 V 0
 Mechanical working life
 - mating cycles ≥ 10,000

Contacts Han D[®] HMC

Material copper alloy
 Surface HMC gold plated
 Contact resistance ≤ 3 mΩ
 Crimp terminal
 - mm² 0.14 ... 2.5 mm²
 - AWG 26 ... 14

Number of contacts

12



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately</p>	09 14 012 3001	09 14 012 3101	<p>M</p> <p>F</p> <p>M</p> <p>F</p> <p>Contact arrangement view from termination side</p>	

Identification	Wire gauge (mm ²)	Part number		Drawing	Dimensions in mm																												
		Male contact	Female contact																														
<p>Crimp contacts</p> <p>HMC gold plated</p>	<p>0.14-0.37</p> <p>0.5</p> <p>0.75</p> <p>1</p> <p>1.5</p> <p>2.5</p>	<p>09 15 200 6124</p> <p>09 15 200 6123</p> <p>09 15 200 6125</p> <p>09 15 200 6122</p> <p>09 15 200 6121</p> <p>09 15 200 6126</p>	<p>09 15 200 6224</p> <p>09 15 200 6223</p> <p>09 15 200 6225</p> <p>09 15 200 6222</p> <p>09 15 200 6221</p> <p>09 15 200 6226</p>		<table border="1"> <thead> <tr> <th colspan="2">Wire gauge</th> <th>∅</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>0.9</td> <td>8 mm</td> </tr> <tr> <td>0.5 mm²</td> <td>AWG 20</td> <td>1.1</td> <td>8 mm</td> </tr> <tr> <td>0.75 mm²</td> <td>AWG 18</td> <td>1.3</td> <td>8 mm</td> </tr> <tr> <td>1 mm²</td> <td>AWG 18</td> <td>1.45</td> <td>8 mm</td> </tr> <tr> <td>1.5 mm²</td> <td>AWG 16</td> <td>1.75</td> <td>8 mm</td> </tr> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>2.25</td> <td>6 mm</td> </tr> </tbody> </table>	Wire gauge		∅	Stripping length	0.14-0.37 mm ²	AWG 26-22	0.9	8 mm	0.5 mm ²	AWG 20	1.1	8 mm	0.75 mm ²	AWG 18	1.3	8 mm	1 mm ²	AWG 18	1.45	8 mm	1.5 mm ²	AWG 16	1.75	8 mm	2.5 mm ²	AWG 14	2.25	6 mm
Wire gauge		∅	Stripping length																														
0.14-0.37 mm ²	AWG 26-22	0.9	8 mm																														
0.5 mm ²	AWG 20	1.1	8 mm																														
0.75 mm ²	AWG 18	1.3	8 mm																														
1 mm ²	AWG 18	1.45	8 mm																														
1.5 mm ²	AWG 16	1.75	8 mm																														
2.5 mm ²	AWG 14	2.25	6 mm																														

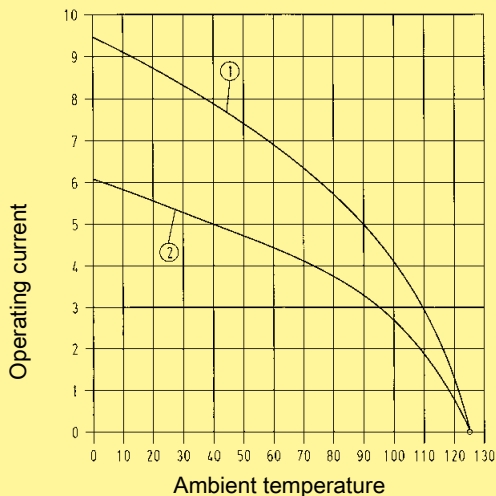
Features

- Suitable for Han D® HMC crimp contacts
- High contact density
- Designed for 10,000 mating cycles with Han® D HMC crimp contacts and only with Han-Modular® Docking frame

Current carrying capacity

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

Measuring and testing techniques according to DIN EN 60 512-5



① 24 B HMC hoods/housings with 6 modules; wire gauge: 1.5 mm²

② 24 B HMC hoods/housings with 6 modules; wire gauge: 1.0 mm²

Technical characteristics

Specifications DIN EN 60 664-1
 DIN EN 61 984

Approvals

Inserts

Number of contacts 17
 Electrical data
 acc. to EN 61 984 **10 A 160 V 2.5 kV 3**
 Rated current 10 A
 Rated voltage 160 V
 Rated impulse voltage 2.5 kV
 Pollution degree 3

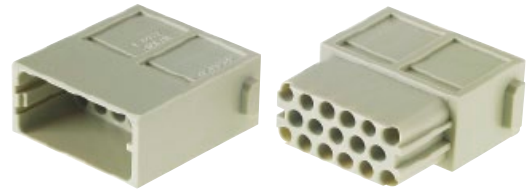
Rated voltage
 acc. to UL 250 V
 Insulation resistance ≥ 10¹⁰ Ω
 Material polycarbonate
 Limiting temperatures -40 °C ... +125 °C
 Flammability acc. to UL 94 V 0
 Mechanical working life
 - mating cycles ≥ 10,000

Contacts Han D® HMC

Material copper alloy
 Surface HMC gold plated
 Contact resistance ≤ 3 mΩ
 Crimp terminal
 - mm² 0.14 ... 2.5 mm²
 - AWG 26 ... 14

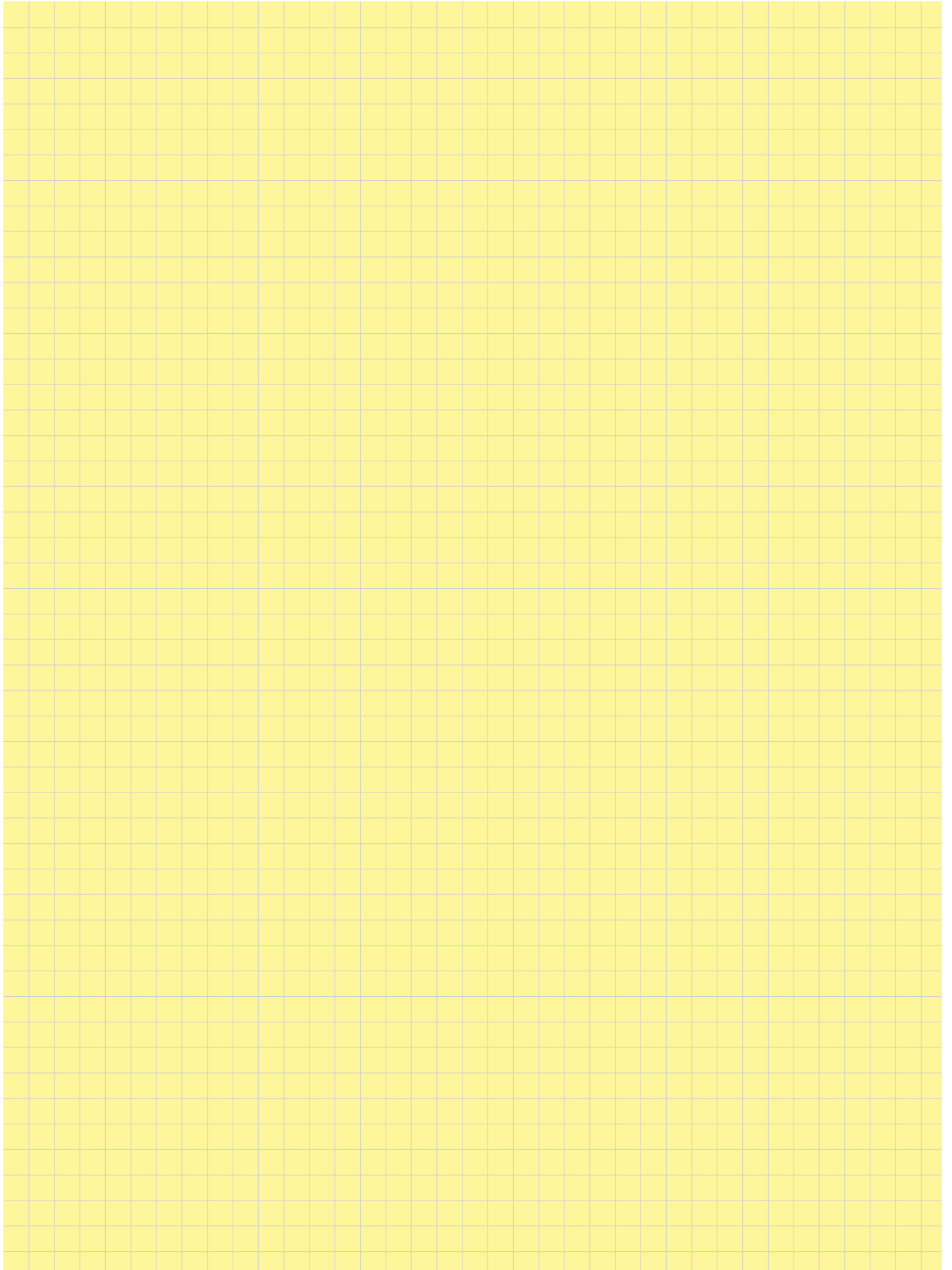
Number of contacts

17



Identification	Part number		Drawing	Dimensions in mm
	Male insert (M)	Female insert (F)		
<p>Crimp terminal</p> <p>Order crimp contacts separately</p>	09 14 017 3001	09 14 017 3101	<p>Contact arrangement view from termination side</p>	

Identification	Wire gauge (mm ²)	Part number		Drawing	Dimensions in mm																												
		Male contact	Female contact																														
<p>Crimp contacts</p> <p>HMC gold plated</p>	0,14-0,37 0,5 0,75 1 1,5 2,5	09 15 200 6124 09 15 200 6123 09 15 200 6125 09 15 200 6122 09 15 200 6121 09 15 200 6126	09 15 200 6224 09 15 200 6223 09 15 200 6225 09 15 200 6222 09 15 200 6221 09 15 200 6226	<table border="1"> <thead> <tr> <th colspan="2">Wire gauge</th> <th>∅</th> <th>Stripping length</th> </tr> </thead> <tbody> <tr> <td>0.14-0.37 mm²</td> <td>AWG 26-22</td> <td>0.9</td> <td>8 mm</td> </tr> <tr> <td>0.5 mm²</td> <td>AWG 20</td> <td>1.1</td> <td>8 mm</td> </tr> <tr> <td>0.75 mm²</td> <td>AWG 18</td> <td>1.3</td> <td>8 mm</td> </tr> <tr> <td>1 mm²</td> <td>AWG 18</td> <td>1.45</td> <td>8 mm</td> </tr> <tr> <td>1.5 mm²</td> <td>AWG 16</td> <td>1.75</td> <td>8 mm</td> </tr> <tr> <td>2.5 mm²</td> <td>AWG 14</td> <td>2.25</td> <td>6 mm</td> </tr> </tbody> </table>	Wire gauge		∅	Stripping length	0.14-0.37 mm ²	AWG 26-22	0.9	8 mm	0.5 mm ²	AWG 20	1.1	8 mm	0.75 mm ²	AWG 18	1.3	8 mm	1 mm ²	AWG 18	1.45	8 mm	1.5 mm ²	AWG 16	1.75	8 mm	2.5 mm ²	AWG 14	2.25	6 mm	
Wire gauge		∅	Stripping length																														
0.14-0.37 mm ²	AWG 26-22	0.9	8 mm																														
0.5 mm ²	AWG 20	1.1	8 mm																														
0.75 mm ²	AWG 18	1.3	8 mm																														
1 mm ²	AWG 18	1.45	8 mm																														
1.5 mm ²	AWG 16	1.75	8 mm																														
2.5 mm ²	AWG 14	2.25	6 mm																														


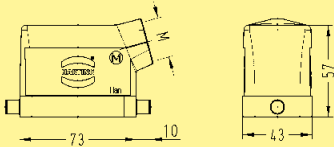


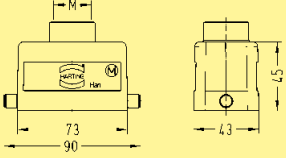


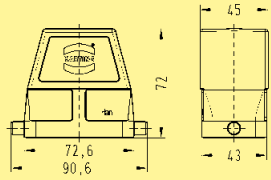


Han® B HMC


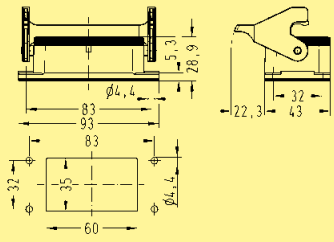
Metal hoods/housings for industrial applications

Material	aluminium die-cast
Colour	RAL 7037 (grey)
Surface	powder-coated
Locking element	Stainless steel
Lever type	Han-Easy Lock® HMC
Hoods/Housings seal	NBR
Limiting temperatures	-40 °C ... +125 °C
Approval acc. to UL 50	NEMA Type 4/4X/12
Degree of protection acc. to DIN EN 60 529	
for coupled connector	IP 65
Locking cycles	≥10,000


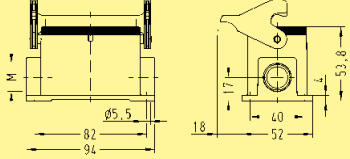

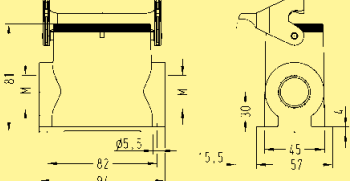
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Image	Part number		Cable entry metric	Drawing	Dimensions in mm
		Low construction	High construction			
Hoods side entry		19 30 210 1540 19 30 210 1541		1 x 20 1 x 25		73, 10, 43, 57
						
Hoods top entry		19 30 210 1440 19 30 210 1441		1 x 20 1 x 25		73, 90, 43, 45
						
Hoods without cable entry			09 30 210 0803	—		45, 72, 72,6, 90,6, 43


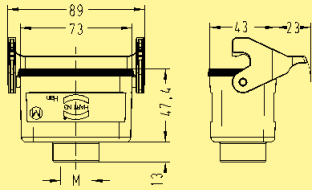

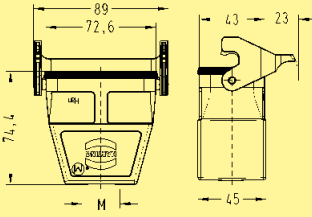
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Housings, bulkhead mounting 	09 30 210 0305			 <p>Panel cut out</p>	


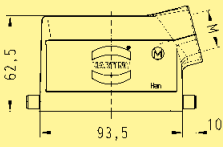
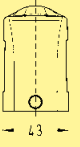

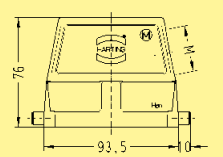
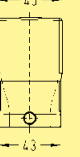

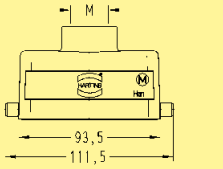
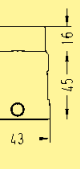

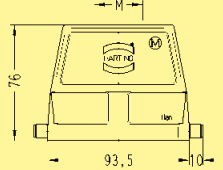
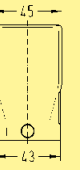

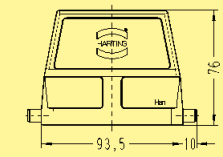
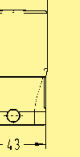
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Housings, surface mounting side entry 	19 30 210 1250 19 30 210 1290		1 x 20 2 x 20	 <p>Blind way for one cable entry</p>	
side entry 		19 30 210 0291 19 30 210 0292	2 x 25 2 x 32	 <p>Blind way for one cable entry</p>	


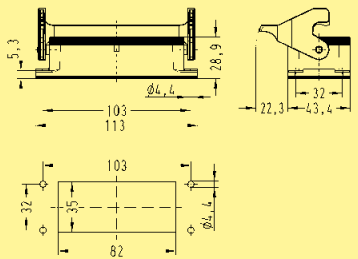
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods, cable to cable top entry 	19 30 210 1750		1 x 20		
top entry 		19 30 210 0756	1 x 25		


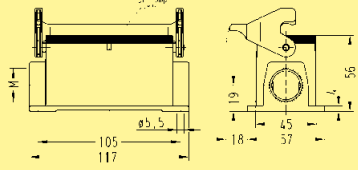
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods side entry		19 30 216 1541	1 x 25 1 x 32		
		19 30 216 1542			
side entry		19 30 216 0547	1 x 32 1 x 40		
		19 30 216 0548			
Hoods top entry		19 30 216 1441	1 x 25 1 x 32		
		19 30 216 1442			
top entry		19 30 216 0447	1 x 32 1 x 40		
		19 30 216 0448			
Hoods without cable entry		09 30 216 0803	—		


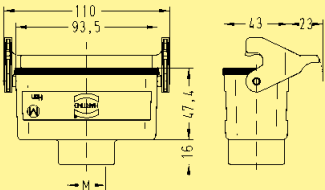

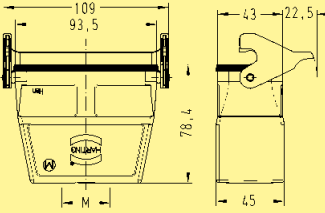
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Housings, bulkhead mounting 	09 30 216 0307			 <p>Panel cut out</p>	


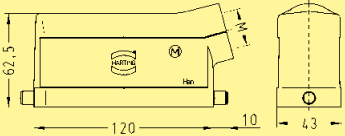

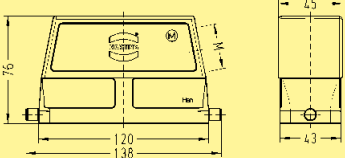

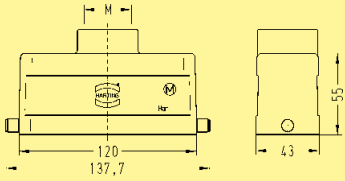

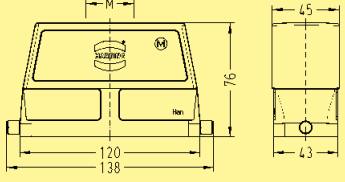

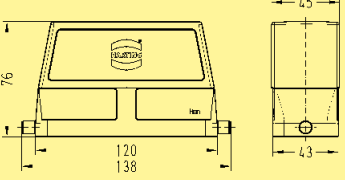
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Housings, surface mounting side entry side entry		19 30 216 1251 19 30 216 1291	1 x 25 2 x 25	 <p>Blind way for one cable entry</p>	
		19 30 216 0252 19 30 216 0291 19 30 216 0292			


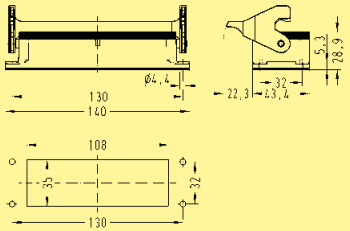
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods, cable to cable top entry 	19 30 216 1751 19 30 216 1752		1 x 25 1 x 32		
top entry 		19 30 216 0757	1 x 32		


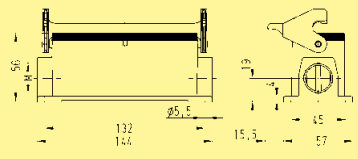

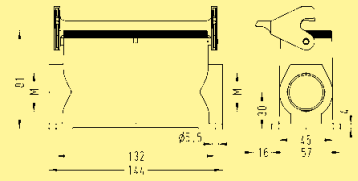
Metal hoods/housings for industrial applications / 1 lever locking system

Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods side entry		19 30 224 1541	1 x 25 1 x 32		
		19 30 224 1542			
side entry		19 30 224 0547	1 x 32 1 x 40		
		19 30 224 0548			
Hoods top entry		19 30 224 1442	1 x 32		
top entry		19 30 224 0447	1 x 32 1 x 40		
		19 30 224 0448			
Hoods without cable entry		09 30 224 0803	—		


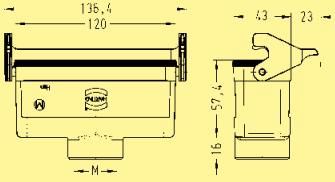

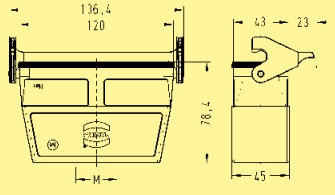
Metal hoods/housings for industrial applications / 1 lever locking system


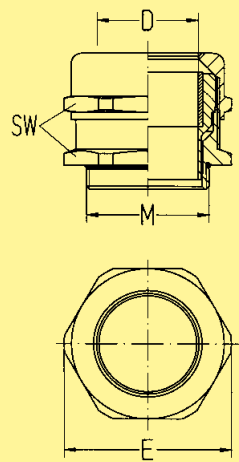


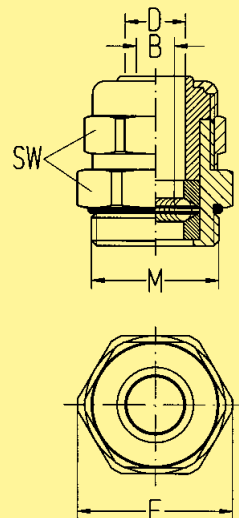
Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Housings, bulkhead mounting 	09 30 224 0307				Panel cut out



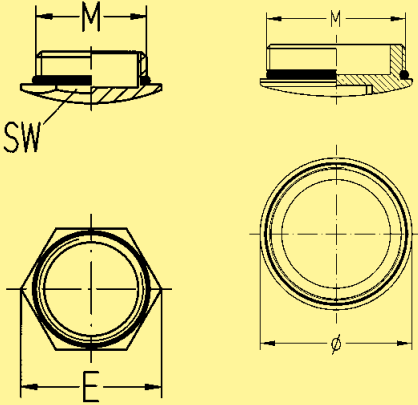

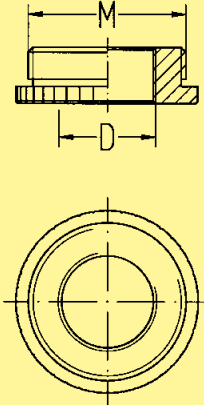
Metal hoods/housings for industrial applications / 1 lever locking system

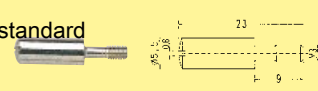

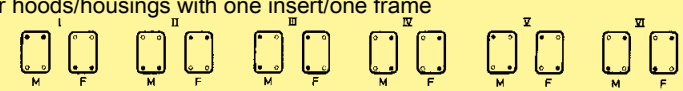
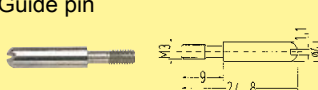

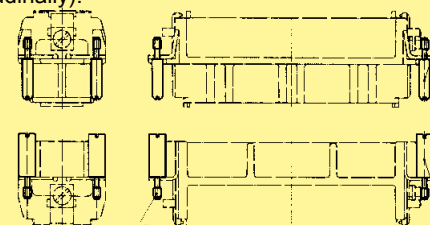
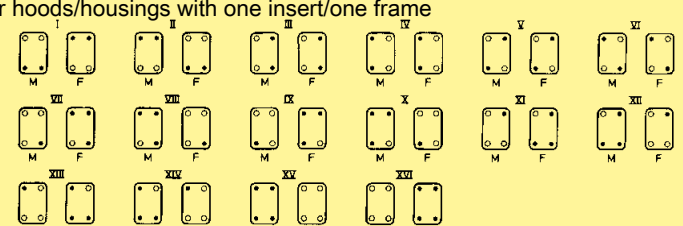

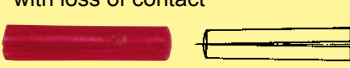

Identification	Part number	Cable entry		Drawing	Dimensions in mm
		Low construction	High construction		
Housings, surface mounting side entry 	19 30 224 1251 19 30 224 1291			1 x 25 2 x 25	 <p>Blind way for one cable entry</p>
side entry 			19 30 224 0292	2 x 32	 <p>Blind way for one cable entry</p>

Metal hoods/housings for industrial applications / 1 lever locking system

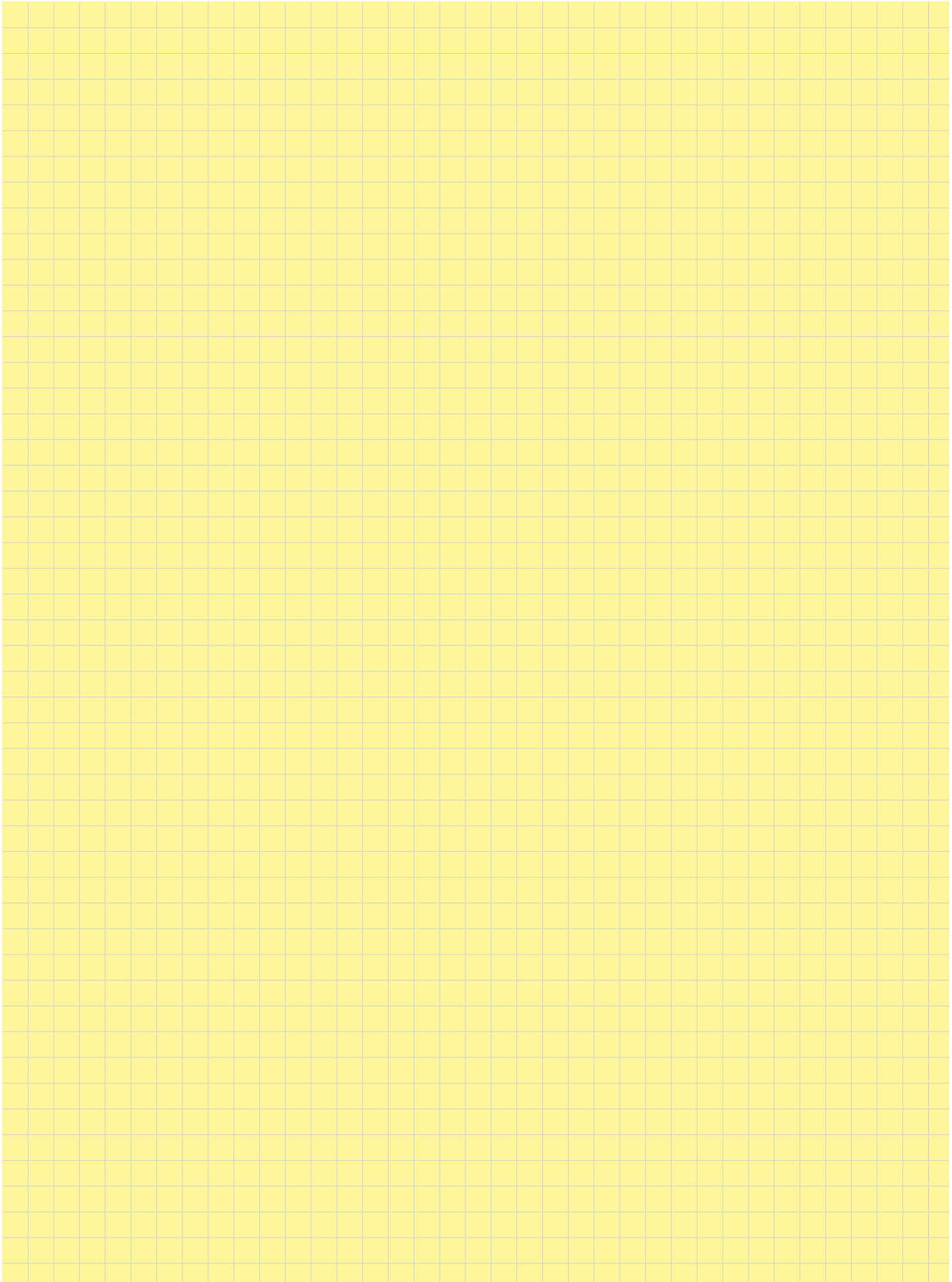
Identification	Part number		Cable entry metric	Drawing	Dimensions in mm
	Low construction	High construction			
Hoods, cable to cable top entry 	19 30 224 1752		1 x 32		
top entry 		19 30 224 0757	1 x 32		

Identification	Part number	M	Drawing	Dimensions in mm															
Cable entry protection with metric cable entries (IP 68) metal																			
	19 00 000 5080	20	22	24.4	5 ... 9 mm	10													
	19 00 000 5081	20	22	24.4	5 ... 9 mm	10													
	19 00 000 5082	20	22	24.4	6 ... 12 mm	10													
	19 00 000 5084	20	24	26.5	10 ... 14 mm	10													
	19 00 000 5090	25	30	33.5	9 ... 16 mm	15													
	19 00 000 5091	25	30	33.5	9 ... 16 mm	15													
	19 00 000 5092	25	30	33.5	13 ... 18 mm	15													
	19 00 000 5094	32	40	44	13 ... 20 mm	15													
	19 00 000 5095	32	40	44	13 ... 20 mm	15													
	19 00 000 5096	32	40	44	18 ... 25 mm	15													
	19 00 000 5097	40	50	55	20 ... 26 mm	20													
	19 00 000 5098	40	50	55	22 ... 32 mm	20													
	19 00 000 5099	40	50	55	20 ... 26 mm	20													
	19 00 000 5099	40	50	55	22 ... 32 mm	20													
	19 00 000 5086	50	57	60	32 ... 38 mm	24													
thermoplastic																			
							19 00 000 5180	20	24	26.4	5 ... 9 mm	8							
							19 00 000 5182	20	24	26.4	6 ... 12 mm	8							
							19 00 000 5184	20	27	29.8	10 ... 14 mm	10							
							19 00 000 5190	25	33	33.5	9 ... 16 mm	15							
							19 00 000 5192	25	33	36.5	13 ... 18 mm	15							
							19 00 000 5194	32	42	46.8	13 ... 20 mm	15							
							19 00 000 5196	32	42	46.8	18 ... 25 mm	15							
							19 00 000 5197	40	53	58.8	20 ... 26 mm	15							
							19 00 000 5198	40	53	58.8	22 ... 32 mm	15							
							EMC clamp with metric cable entries (IP 68)												
														19 62 000 5080	20	22	24.4	6.5 ... 9.5	3.5 ... 8.5
														19 62 000 5081	20	22	24.4	4 ... 6.5	2.5 ... 6.5
														19 62 000 5082	20	22	24.4	7 ... 10.5	6.5 ... 10.5
19 62 000 5084	20	22	24.4	9 ... 13	6.5 ... 10.5														
19 62 000 5090	25	22	31.2	6.5 ... 9.5	3 ... 8														
19 62 000 5092	25	28	31.2	9 ... 13	4.8 ... 8														
19 62 000 5094	32	35	38.5	11.5 ... 15.5	8 ... 13.5														
19 62 000 5096	32	35	38.5	14 ... 18	9 ... 14.5														
19 62 000 5097	40	43	47.3	17 ... 20.5	15 ... 20														
19 62 000 5098	40	43	47.3	20 ... 25	15 ... 20														

Identification	Part number	M	Drawing	Dimensions in mm													
Blanking piece for metric cable entries metal  	19 00 000 5070	20	<table border="1"> <thead> <tr> <th>SW</th> <th>E</th> </tr> </thead> <tbody> <tr> <td>22</td> <td>25.4</td> </tr> <tr> <td>28</td> <td>32.3</td> </tr> <tr> <td>35</td> <td>40.4</td> </tr> <tr> <td>44</td> <td>50.8</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>∅</th> </tr> </thead> <tbody> <tr> <td>35</td> </tr> <tr> <td>46.2</td> </tr> </tbody> </table> 	SW	E	22	25.4	28	32.3	35	40.4	44	50.8	∅	35	46.2	
	SW	E															
	22	25.4															
	28	32.3															
	35	40.4															
	44	50.8															
	∅																
35																	
46.2																	
19 00 000 5071	25																
19 00 000 5072	32																
19 00 000 5073	40																
19 00 000 5172	32																
19 00 000 5173	40																
Reducers for metric cable entries metal 	19 00 000 5060	20	<table border="1"> <thead> <tr> <th>D</th> </tr> </thead> <tbody> <tr> <td>16</td> </tr> <tr> <td>20</td> </tr> <tr> <td>25</td> </tr> </tbody> </table> 	D	16	20	25										
	D																
	16																
20																	
25																	
19 00 000 5067	32																
19 00 000 5068	32																

Identification	Part number	Drawing	Dimensions in mm
<p>Coding system with code pins</p> <p>standard</p>  	<p>09 30 000 9901¹⁾</p>	<p>for hoods/housings with one insert/one frame</p>  <ul style="list-style-type: none"> ● Code pin ○ Normal mounting screw <p>M - Male insert F - Female insert</p>	
<p>Coding system with guide pins/ bushes</p> <p>standard</p> <p>Guide pin</p>  <p>Guide bushing</p> 	<p>09 33 000 9908¹⁾</p> <p>09 33 000 9909¹⁾</p>	<p>This system is used to guard against angled coupling and decoupling of the connector. The maximum permitted angle according to DIN EN 175 301-801 is $\pm 5^\circ$ (longitudinally).</p>  <p>for hoods/housings with one insert/one frame</p> 	
<p>Coding pins</p> <p>for Han E®</p>  <p>for Han D®, Han DD® with loss of contact</p> 	<p>09 33 000 9954</p> <p>09 33 000 9915</p>	<p>Use of the coding pin prevents incorrect mating to other connectors of the same type. The male pin should be omitted from the opposing cavity in the male insert.</p> 	

¹⁾ Order 4 pieces for one connector



Features

- Suitable for all inserts of the series Han D® HMC, Han E® HMC, Han® EEE HMC and Han DD® HMC
- Ideal for applications in the field of transportation, as well as in the printing industry
- Due to the floating system of the docking frame the PE connection of the mounting base has to be installed separately
- Inserts are protected against mechanical damage
- Designed for 10,000 mating cycles

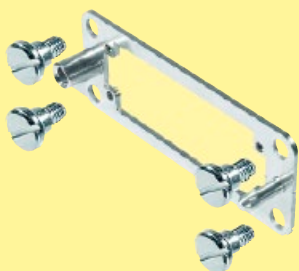
Technical characteristics

Material	
Docking frame	stainless steel
Fixing screws	steel, zinc-plated
Pull-in-range	
x-axis	± 1.5 mm
y-axis	± 1.5 mm
Mechanical working life	
- mating cycles	10,000



Identification

Han® Docking frame



Size

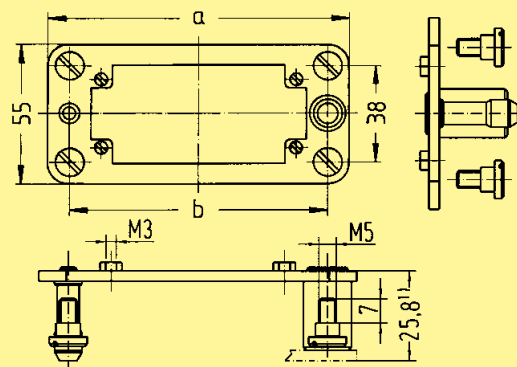
Part number

Drawing

Dimensions in mm

6 B

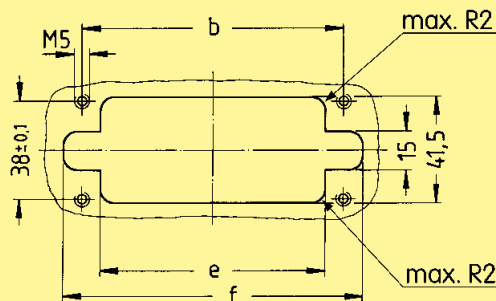
09 30 006 1701



Distance for electrical and F.O. contacts max. 27 mm; for pneumatic contacts max. 26.5 mm

10 B

09 30 010 1701



16 B

09 30 016 1701

Size	a	b	e	f
6 B	86	69	54.5	84
10 B	99	82	67.5	97
16 B	119.5	102.5	88	117.5
24 B	146	129	114.5	144

Range of delivery:

1 frame





4 cheese head shoulder screws to fix the docking frame

24 B



09 30 024 1701

Identification	Part number	Drawing	Dimensions in mm
HARTING Service crimping tool with locator set for Han D [®] , Han E [®]	09 99 000 0021	Wire gauge Han D [®] 0.14 ... 1.5 mm ²	
BUCHANAN crimping tool	09 99 000 0001	Wire gauge 0.14 ... 2.5 mm ²	
Locator Han D [®]	09 99 000 0311		
Multiple crimping tool depth adjustment gauge	09 99 000 0379	Wire gauge 0.14 mm ² Ø 1.00 ¹⁾ 0.25 mm ² Ø 1.00 ¹⁾ 0.37 mm ² Ø 1.30 0.5 ... 1.0 mm ² Ø 1.55 1.5 mm ² Ø 1.80 2.5 mm ² Ø 1.55	
HARTING crimping tool with locator for Han D [®] , Han E [®] , Han [®] C	09 99 000 0110	Wire gauge Han D [®] 0.14 ... 1.5 mm ²	
HARTING Pneumatic crimping tool CP 600	09 99 000 0810		
Crimp die Han D [®] , Han E [®] , Han [®] C	09 99 000 0813	Wire gauge Han D [®] 0.14 ... 1.5 mm ²	
Footswitch	09 99 000 0811		
Table fixing	09 99 000 0812		

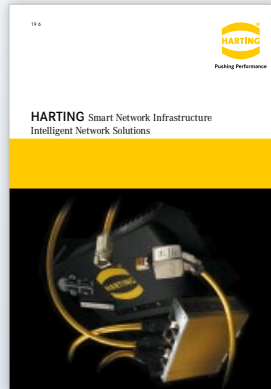
¹⁾For wire gauge 0.14 and 0.25 mm² use only male contact 09 15 000 6107 or female contact 09 15 000 6207.

Identification	Part number	Drawing	Dimensions in mm
Insertion tool for crimp contacts	09 99 000 0059	 <p>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.</p>	
Removal tool for crimp contacts			
Removal tool	09 99 000 0012		
Replacement-tip for removal tool	09 99 000 0004		
Removal tool	09 99 000 0052	 <p>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.</p>	

Identification	Part number	Drawing	Dimensions in mm
HARTING Service crimping tool with locator set for Han D [®] , Han E [®]	09 99 000 0021	Wire gauge Han E [®] 0.5 ... 2.5 mm ²	
BUCHANAN crimping tool	09 99 000 0001	Wire gauge 0.14 ... 4 mm ²	
Locator Han E [®]	09 99 000 0310		
Multiple crimping tool depth adjustment gauge	09 99 000 0379	Wire gauge 0.14 ... 0.37 mm ² Ø 1.00 0.5 ... 1.0 mm ² Ø 1.55 1.5 ... 2.5 mm ² Ø 1.80 3.0 ... 4.0 mm ² Ø 2.00	
HARTING crimping tool with locator for Han D [®] , Han E [®] , Han [®] C	09 99 000 0110	Wire gauge Han E [®] 0.5 ... 4 mm ²	
HARTING Pneumatic crimping tool CP 600	09 99 000 0810		
Crimp die Han D [®] , Han E [®] , Han [®] C	09 99 000 0813	Wire gauge Han E [®] 0.5 ... 4 mm ²	
Footswitch	09 99 000 0811		
Table fixing	09 99 000 0812		

Identification	Part number	Drawing	Dimensions in mm
Insertion tool for crimp contacts	09 99 000 0059	 <p>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.</p>	
Removal tool for crimp contacts	09 99 000 0319	 <p>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. The wire with the crimp contact can then be pulled out from the same side of the insert.</p>	

Smart Network Infrastructure

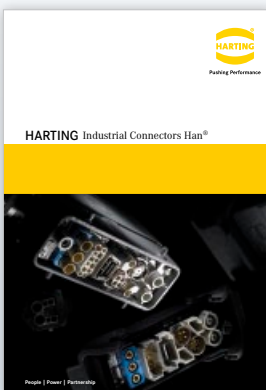


INTELLIGENT NETWORK SOLUTIONS

With its product series Ha-VIS, HARTING offers a consistent range of Ethernet network components and cabling products, which from the communication platform of convergent

automation IT networks. Under Ha-VIS HARTING offers fully integrated RFID solutions.

Installation Technology

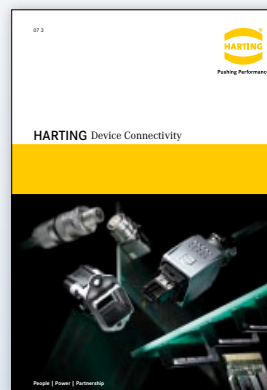


INDUSTRIAL CONNECTORS Han®

This catalogue documents the worldwide standard for industrial connectors. Han® connectors represent the preferential solution in the cable-to-cable interconnection of data, signal and power applications operating under the most

demanding conditions and meeting stringent requirements with regard to safe and detachable electrical connections with high degree of protection IP 65 / IP 67. Installations making use of Han® connectors impress with their rugged design, convenient handling and modularity of data, signal and power connections. Han® connectors represent the worldwide standard in industry, railway technology, as well as in power generation and distribution.

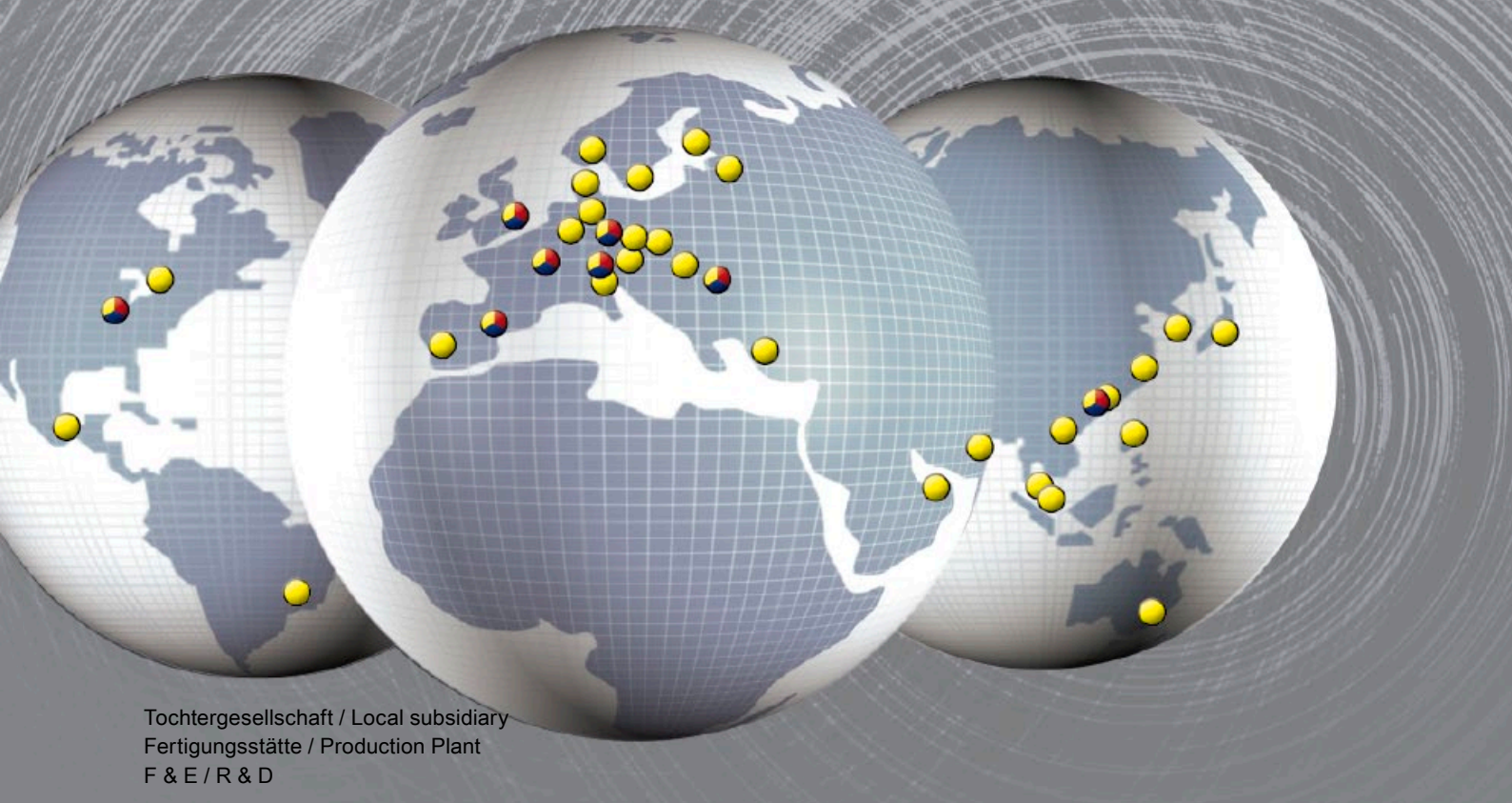
Device Connectivity



DEVICE CONNECTIVITY

The Device Connectivity catalogue provides a universal, innovative product portfolio of PCB connections and of termination technology. The product range comprises board-to-board and cable-to-board connectors for industrial electronic devices with

degree of protection IP 20 to IP 65 / IP 67. These HARTING solutions offer appropriate device connectivity for a wide range of devices, ranging from sensors to industrial computers and their respective data, signal and power interfaces.



Tochtergesellschaft / Local subsidiary
 Fertigungsstätte / Production Plant
 F & E / R & D

Sales Network – worldwide



Albania

see Eastern Europe

Argentina

Condelectric S.A.
 Hipólito Yrigoyen 2591, 1640 - Martínez
 Buenos Aires – Argentina
 Phone +54 11 4836 1053
 Fax +54 11 4836 1053
 comercial@condelectric.com.ar

Armenia

see Eastern Europe

Australia

HARTING Pty Ltd
 Suite 11 / 2 Enterprise Drive
 Bundoora 3083, AUS-Victoria
 Phone +61 3 9466 7088
 Fax +61 3 9466 7099
 au@HARTING.com
 www.HARTING.com.au

Austria

HARTING Ges.m.b.H.
 Deutschstraße 19, A-1230 Wien
 Phone +431 6162121
 Fax +431 6162121-21
 at@HARTING.com
 www.HARTING.at

Azerbaijan

see Eastern Europe

Bahrain

see United Arab Emirates

Belarus

see Eastern Europe

Belgium

HARTING N.V./S.A.
 Z.3 Doornveld 23, B-1731 Zellik
 Phone +32 2 466 0190
 Fax +32 2 466 7855
 be@HARTING.com
 www.HARTING.be

Bosnia and Herzegovina

see Eastern Europe

Brazil

HARTING Ltda.
 Rua Major Paladino 128; Prédio 11
 CEP 05307-000 São Paulo
 SP – Brazil
 Phone +55 11 5035 0073
 Fax +55 11 5034 4743
 br@HARTING.com
 www.HARTING.com.br

Brunei

see Singapore

Bulgaria

see Eastern Europe

Canada

HARTING Canada Inc.
 8455 Trans-Canada Hwy., Suite 202
 St. Laurent, QC, H4S1Z1, Canada
 Phone 855-659-6653
 Fax 855-659-6654
 info.ca@HARTING.com
 www.HARTING.ca

China

HARTING (Zhuhai) Manufacturing Co. Ltd.
 Shanghai Branch Office
 1 Grand Gateway, Room 3501-3503
 1 Hongqiao Road, Xu Hui District
 Shanghai 200030, China
 Phone +86 21 6386 2200
 Fax +86 21 6386 8636
 cn@HARTING.com
 www.HARTING.com.cn

Croatia

see Eastern Europe

Czech Republic

HARTING s.r.o.
 Mlýnská 2, CZ-160 00 Praha 6
 Phone +420 220 380 460
 Fax +420 220 380 461
 cz@HARTING.com
 www.HARTING.cz

Denmark

HARTING ApS
Hjulmagervej 4a
DK - 7100 Vejle
Phone +45 70 25 00 32
Fax +45 75 80 64 99
dk@HARTING.com
www.HARTING.com

Eastern Europe

HARTING Eastern Europe GmbH
Bamberger Straße 7
D-01187 Dresden
Phone +49 351 4361 760
Fax +49 351 436 1770
Eastern.Europe@HARTING.com
www.HARTING.com

Estonia

see Eastern Europe

Finland

HARTING Oy
Teknobulevardi 3-5
FI-01530 Vantaa
Phone +358 207 291 510
Fax +358 207 291 511
fi@HARTING.com
www.HARTING.fi

France

HARTING France
181 avenue des Nations, Paris Nord 2
BP 66058 Tremblay en France
F-95972 Roissy Charles de Gaulle
Cédex
Phone +33 1 4938 3400
Fax +33 1 4863 2306
fr@HARTING.com
www.HARTING.fr

Germany

HARTING Deutschland GmbH & Co. KG
P.O. Box 2451, D-32381 Minden
Simeons carré 1, D-32427 Minden
Phone +49 571 8896 0
Fax +49 571 8896 282
de@HARTING.com
www.HARTING.de

Georgia

see Eastern Europe

Great Britain

HARTING Ltd., Caswell Road
Brackmills Industrial Estate
GB-Northampton, NN4 7PW
Phone +44 1604 827 500
Fax +44 1604 706 777
gb@HARTING.com
www.HARTING.co.uk

Hong Kong

HARTING (HK) Limited
Regional Office Asia Pacific
3512 Metroplaza Tower 1
223 Hing Fong Road
Kwai Fong, N. T., Hong Kong
Phone +852 2423 7338
Fax +852 2480 4378
ap@HARTING.com
www.HARTING.com.hk

Hungary

HARTING Magyarország Kft.
Fehérvári út 89-95, H-1119 Budapest
Phone +36 1 205 34 64
Fax +36 1 205 34 65
hu@HARTING.com
www.HARTING.hu

Iceland

Smith & Norland, Nóatún 4
IS – 105 Reykjavík
Phone +354 520 3000
Fax +354 520 3011
olaf@sminor.is, www.sminor.is

India

HARTING India Private Limited
No. D, 4th Floor, 'Doshi Towers'
No. 156 Poonamallee High Road
Kilpauk, Chennai 600 010
Tamil Nadu, India
Phone +91 44 435604 15 / 416
Fax +91 44 435604 17
in@HARTING.com
www.HARTING.in

Indonesia

see Malaysia

Israel

COMTEL
Israel Electronic Solutions Ltd.
Bet Hapamon, 20 Hataas st.
P.O.Box 66
Kefar-Saba 44425
Phone +972-9-7677240
Fax +972-9-7677243
sales@comtel.co.il
www.comtel.co.il

Italy

HARTING SpA
Via Dell' Industria 7
I-20090 Vimodrone (Milano)
Phone +39 02 250801
Fax +39 02 2650 597
it@HARTING.com
www.HARTING.it

Japan

HARTING K. K.
Yusen Shin-Yokohama 1 Chome Bldg., 2F
1-7-9, Shin-Yokohama, Kohoku
Yokohama 222-0033 Japan
Phone +81 45 476 3456
Fax +81 45 476 3466
jp@HARTING.com
www.HARTING.co.jp

Jordan

see United Arab Emirates

Kazakhstan

see Eastern Europe

Kirghizia

see Eastern Europe

Korea (South)

HARTING Korea Limited
#308 Yatap Leaders Building
342-1, Yatap-dong, Bundang-gu
Sungnam-City, Kyunggi-do
463-828, Republic of Korea
Phone +82 31 781 4615
Fax +82 31 781 4616
kr@HARTING.com
www.HARTING.co.kr

Kosovo

see Eastern Europe

Kuwait

see United Arab Emirates

Latvia

see Eastern Europe

Lithuania

see Eastern Europe

Macedonia

see Eastern Europe

Malaysia (Office)

HARTING Singapore Pte Ltd
Malaysia Branch
11-02 Menara Amcorp
Jln. Persiaran Barat
46200 PJ, Sel. D. E., Malaysia
Phone +60 3 / 7955 6173
Fax +60 3 / 7955 5126
sg@HARTING.com

Montenegro

see Eastern Europe

Netherlands

HARTING B.V.
Larenweg 44
NL-5234 KA 's-Hertogenbosch
Postbus 3526
NL-5203 DM 's-Hertogenbosch
Phone +31 736 410 404
Fax +31 736 440 699
nl@HARTING.com
www.HARTINGbv.nl

New Zealand

see Australia

Norway

HARTING A/S
Østensjøveien 36, N-0667 Oslo
Phone +47 22 700 555
Fax +47 22 700 570
no@HARTING.com
www.HARTING.no

Oman

see United Arab Emirates

Pakistan

see United Arab Emirates

Philippines

see Malaysia

Poland

HARTING Polska Sp. z o. o.
ul. Duńska 9
PL- 54-427 Wrocław
Phone +48 71 352 81 71
Fax +48 71 350 42 13
pl@HARTING.com
www.HARTING.pl

Portugal

HARTING Iberia, S. A.
Avda. Josep Tarradellas 20-30 4º 6a
E-08029 Barcelona
Phone +351 219 673 177
Fax +351 219 678 457
es@HARTING.com
www.HARTING.es/pt

Qatar

see United Arab Emirates

Republic of Moldova

see Eastern Europe

Romania

HARTING Romania SCS
Europa Unita str. 21
550018-Sibiu, Romania
Phone +40 369-102 671
Fax +40 369-102 622
ro@HARTING.com
www.HARTING.com

Russia

HARTING ZAO
Maliy Sampsoniyevsky prospect 2A
194044 Saint Petersburg, Russia
Phone +7 812 327 6477
Fax +7 812 327 6478
ru@HARTING.com
www.HARTING.ru

Saudi Arabia

see United Arab Emirates

Serbia

see Eastern Europe

Singapore

HARTING Singapore Pte Ltd.
25 International Business Park
#04-108 German Centre
Singapore 609916
Phone +65 6225 5285
Fax +65 6225 9947
sg@HARTING.com
www.HARTING.sg

Slovakia

HARTING s.r.o.
Sales office Slovakia
J. Simora 5, SK - 940 52 Nové Zámky
Phone +421 356-493 993
Fax +421 356-402 114
sk@HARTING.com
www.HARTING.sk

Slovenia

see Eastern Europe

South Africa

HellermannTyton Pty Ltd.
Private Bag X158 Rivonia 2128
34 Milky Way Avenue
Linbro Business Park 2065
Johannesburg
Phone +27(0)11879-6600
Fax +27(0)11879-6606
sales.jhb@hellermann.co.za

Spain

HARTING Iberia S.A.
Avda. Josep Tarradellas 20-30 4º 6a
E-08029 Barcelona
Phone +34 93 363 84 75
Fax +34 93 419 95 85
es@HARTING.com
www.HARTING.es

Sweden

HARTING AB
Gustavslundsvägen 141 B 4tr
S-167 51 Bromma
Phone +46 8 445 7171
Fax +46 8 445 7170
se@HARTING.com
www.HARTING.se

Switzerland

HARTING AG
Industriestrasse 26
CH-8604 Volketswil
Phone +41 44 908 20 60
Fax +41 44 908 20 69
ch@HARTING.com
www.HARTING.ch

Taiwan

HARTING Taiwan Ltd.
Room 1, 5/F
495 GuangFu South Road
RC-110 Taipei, Taiwan
Phone +886 2 2758 6177
Fax +886 2 2758 7177
tw@HARTING.com
www.HARTING.com.tw

Tajikistan

see Eastern Europe

Thailand

see Malaysia

Turkey

HARTING TURKEI Elektronik Ltd. Şti.
Barbaros Mah. Dereboyu Cad.
Fesleğen Sok.
Uphill Towers, A-1b Kat:8 D:45
34746 Ataşehir, İstanbul
Phone +90 216 688 81 00
Fax +90 216 688 81 01
tr@HARTING.com
www.HARTING.com.tr

Turkmenistan

see Eastern Europe

Ukraine

see Eastern Europe

United Arab Emirates

HARTING Middle East FZ-LLC
Knowledge Village, Block 2A, Office F72
P.O. Box 454372, Dubai
United Arab Emirates
Phone +971 4 453 9737
Fax +971 4 439 0339
uae@HARTING.com
www.HARTING.ae

USA

HARTING Inc. of North America
1370 Bowes Road
USA-Elgin, Illinois 60123
Phone +1 (877) 741-1500 (toll free)
Fax +1 (866) 278-0307 (Inside Sales)
us@HARTING.com
www.HARTING-USA.com

Uzbekistan

see Eastern Europe

Vietnam

see Singapore

Distributors – worldwide



Farnell:
www.farnell.com

RS Components:
www.rs-components.com

Mouser Electronics:
www.mouser.com

Digi-Key Corporation:
www.digikey.com

Other countries and general contact



HARTING Electric GmbH & Co. KG
P.O. Box 1473, D-32328 Espelkamp
Phone +49 5772 47-97100
Fax +49 5772 47-495
electric@HARTING.com



Pushing Performance

HARTING Technology Group

Marienwerderstraße 3, 32339 Espelkamp – Germany

P.O. Box 11 33, 32325 Espelkamp – Germany

Phone +49 5772 47-0, Fax +49 5772 47-400

info@HARTING.com

www.HARTING.com