

# HARTING



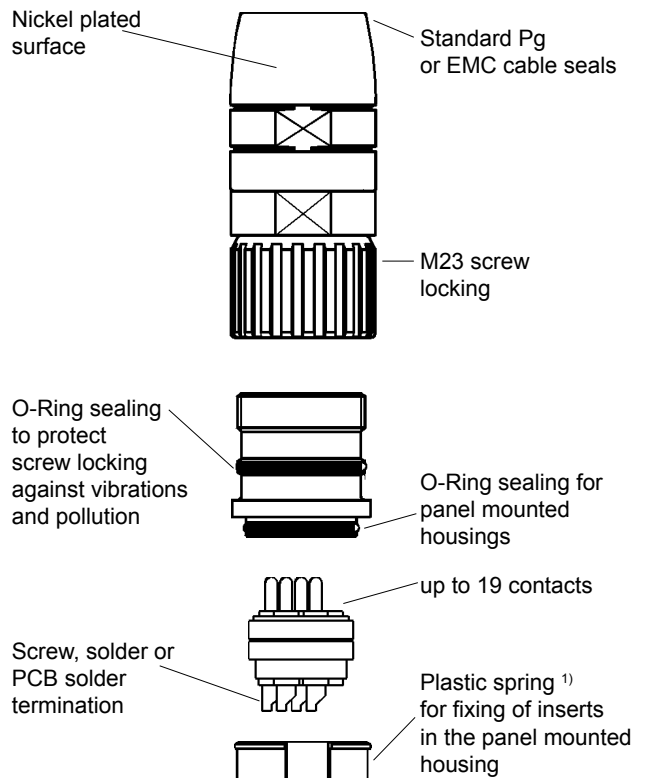
Han<sup>®</sup> R 23 Circular Connectors



Features

- Size R 23
- Outer diameter 26 mm
- High contact density
- Very robust hoods and housings
- Corrosion resistant
- Excellent EMC properties (with continuous shielding)
- Quick and easy assembly
- Vibration resistant screw locking system
- Up to 19 contacts, 25 V~ / 60 V-
- Ideal for applications such as measurement and automatic control

Description



1) is part of delivery range of bulkhead mounted housings  
Part-number of spare part: 09 15 200 9901

General information

Fields of application:

HARTING Industrial Connectors are applicable in a wide variety of electronic and electrical applications.

The degree of protection of all hoods and housings is in accordance with International Standard IEC 60 529.

- Power Utilities
- Robotics
- Chemical Plants
- Machine Tool Controls
- Injection Moulding
- Industrial Instrumentation
- Conveyor Equipment
- Transportation
- and many more



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

Specifications

- VDE 0110 table concerning clearance and creepage distances
- VDE 0627 Connectors and plug devices

Standards DIN EN 61 984

Note

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

General information

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

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

No part of this catalogue may be reproduced in any form (print, photocopy, microfilm or any other process) or processed, duplicated or distributed by means of electronic systems without the prior written consent of HARTING Electric GmbH & Co. KG, Espelkamp. We are bound by the German version only.

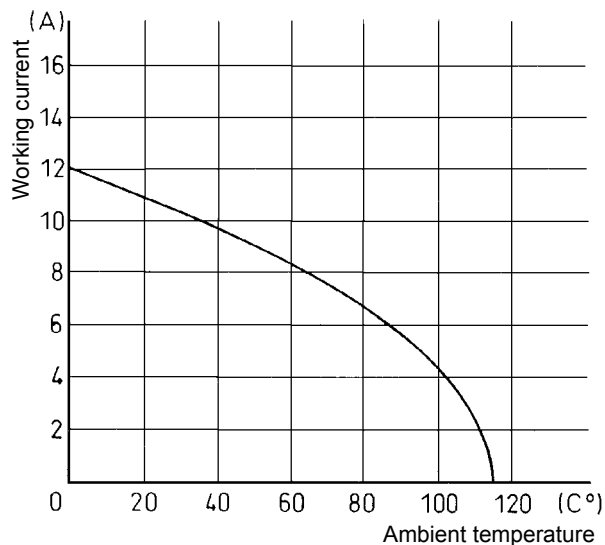


Technical characteristics

Derating Diagram

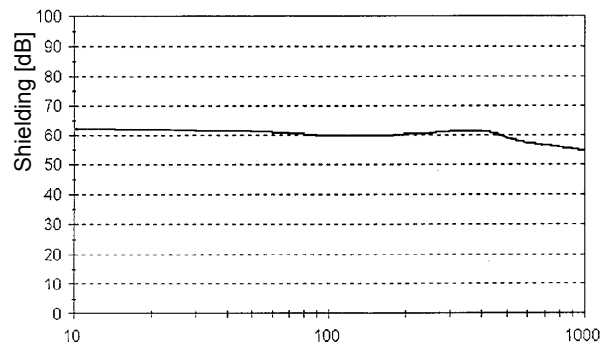
Specifications	DIN VDE 0110 DIN EN 61 984
<b>Hoods and Housings</b>	
Material	Copper zinc alloy
Surface	Nickel plated
Flat sealing	NBR
O-Ring sealing	FPM
Temperature range	-40 °C ... +115°C
Protection degree in locked position	IP 67
<b>Inserts</b>	
Number of contacts	6    9    12    17    19
Rated current	
- power contact	15A    1x15A    3 x 10A
- signal contact	8 x 7A    7A    7A    16 x 7A
(see Derating Diagram)	
Rated voltage <sup>1)</sup>	25 V~ / 60 V-
Degree of pollution	3
Test voltage U <sub>rms</sub>	1.5 kV
Insulation resistance	≥ 10 <sup>12</sup> Ω
Material	Thermoplastic polyester (PBT)
Temperature range	-40 °C ... +115 °C
Flammability accd. to UL 94	V 0

<b>Contacts</b>	
Material	Copper alloy
Surface	Gold plated
Contact resistance	≤ 5 mΩ
Screw termination	
- power contact	0.14 - 1.0 mm <sup>2</sup> / AWG 26 - 16
- signal contact	0.14 - 0.75 mm <sup>2</sup> / AWG 26 - 18
Solder termination	
- power contact	0.14 - 2.5 mm <sup>2</sup> / AWG 26 - 14
- signal contact	0.14 - 1.0 mm <sup>2</sup> / AWG 26 - 16
Crimp termination	
- D-Sub contact	see catalogue Interface Connectors
PCB solder termination	
- power contact	Ø 1.5 mm
- signal contact	Ø 0.6 mm
- reference to bulkhead mounted housing	3.5 mm


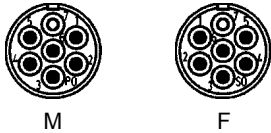


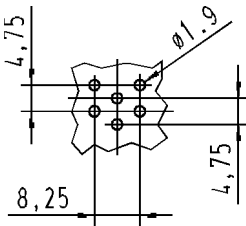

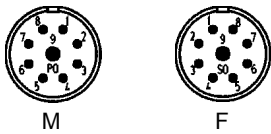



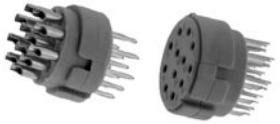

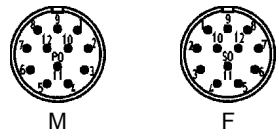
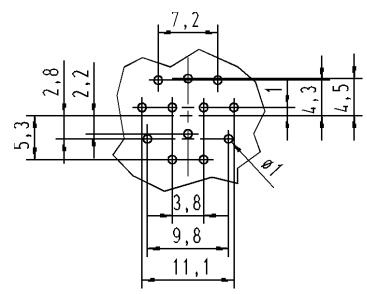


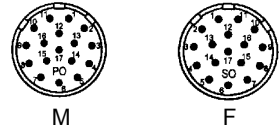
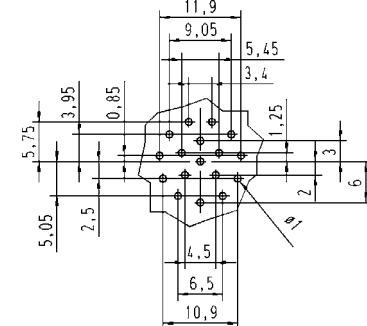

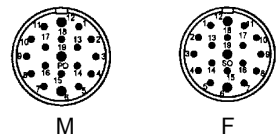
Insert: 12 pins  
Wire gauge: 1 mm<sup>2</sup> (AWG 18)


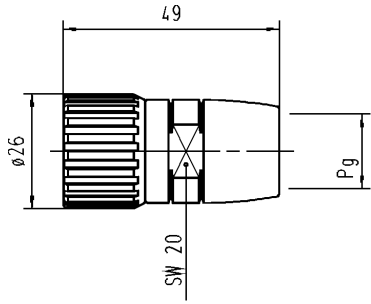

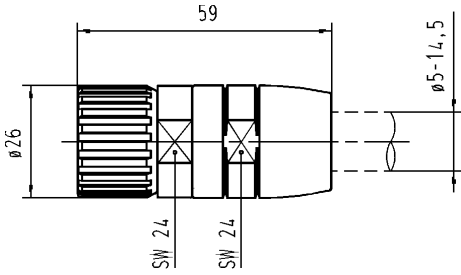

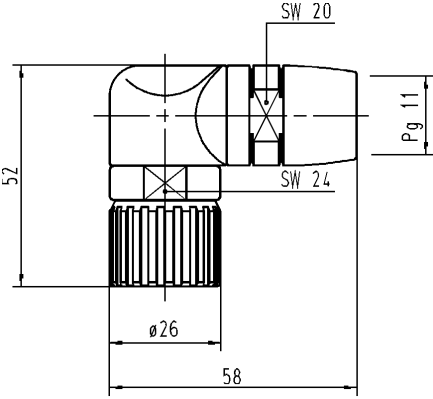
Shielding of the EMC housings


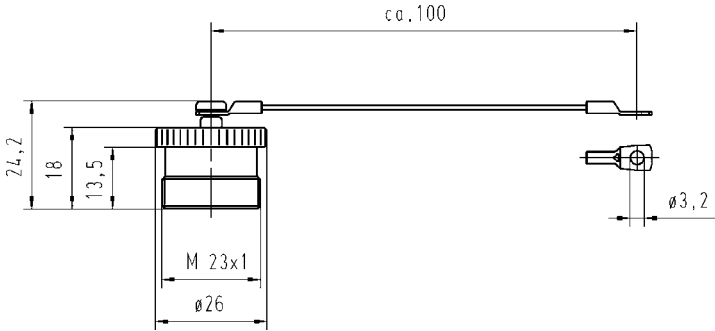



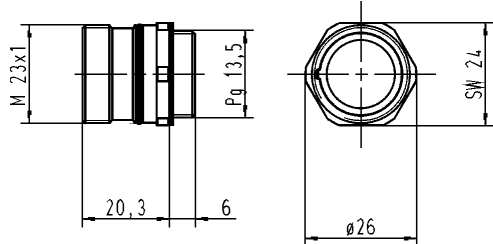

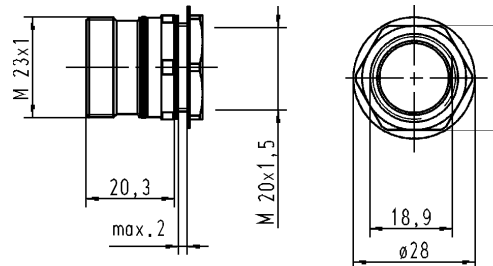

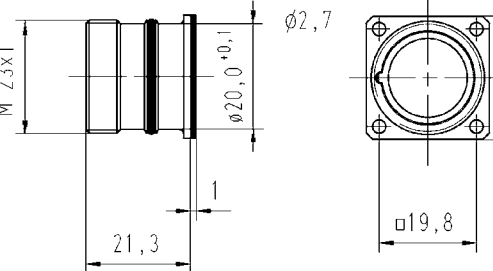

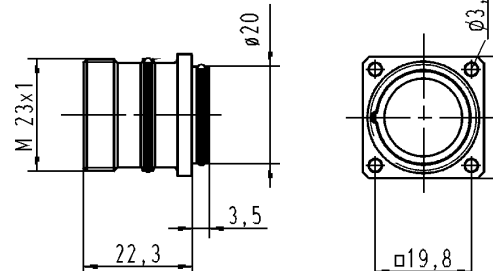

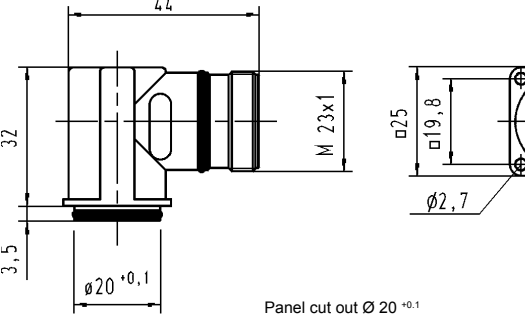
1) Accd. to DIN VDE 0627 metallic parts which may be touched by a person and may have voltages present under fault conditions, must have integral protection. Therefore this R 23 connector is limited for use up to 25 V~/60 V-.

Identification	Number of contacts	Part number		Drawing	Dimensions in mm
		Male insert (M)	Female insert (F)		
<p>Screw terminal</p> 	6	09 15 206 2601	09 15 206 2701	<p>Contact arrangement view: mating side</p> 	
<p>Solder terminal</p> 	6	09 15 206 2603	09 15 206 2703		
<p>PCB solder termination<sup>2)</sup></p> 	6	09 15 206 2604	09 15 206 2704	<p>PCB hole details:</p> 	
				<p>2) Suitable only for bulkhead mounted housings No. 09 15 200 0311, 09 15 200 0313 and 09 15 200 0301</p>	
<p>Screw terminal</p> 	9	09 15 209 2601	09 15 209 2701	<p>Contact arrangement view: mating side (numbering in opposite direction on request)</p> 	
<p>Solder terminal</p> 	9	09 15 209 2603	09 15 209 2703		

Identification	Number of contacts	Part number		Drawing	Dimensions in mm	
		Male insert (M)	Female insert (F)			
<p>Solder terminal</p>  <p>Crimp terminal for D-Sub contacts</p> <p>PCB solder termination<sup>2)</sup></p> 	12	09 15 212 2603	09 15 212 2703	<p>Contact arrangement view: mating side (numbering in opposite direction on request)</p>  <p>PCB hole details:</p>  <p>2) Suitable only for bulkhead mounted housings No. 09 15 200 0311, 09 15 200 0313 and 09 15 200 0301</p>		
<p>Solder terminal</p>  <p>Crimp terminal for D-Sub contacts</p> <p>PCB solder termination<sup>2)</sup></p> 	17	09 15 217 2601	09 15 217 2701	<p>Contact arrangement view: mating side (numbering in opposite direction on request)</p>  <p>PCB hole details:</p>  <p>2) Suitable only for bulkhead mounted housings No. 09 15 200 0311, 09 15 200 0313 and 09 15 200 0301</p>		
<p>Solder terminal</p> 	19	09 15 219 2603	09 15 219 2703	<p>Contact arrangement view: mating side</p> 		

Identification	Part-Number	Pg	Drawing	Dimensions in mm
<p>Hood top-entry</p> 	<p>09 15 200 0402 09 15 200 0403</p>	<p>9 11</p>		
<p>Hood top-entry EMC version</p> 	<p>09 15 200 0451</p>	<p>—</p>		
<p>Hood right angle entry</p> 	<p>09 15 200 0603</p>	<p>11</p>		


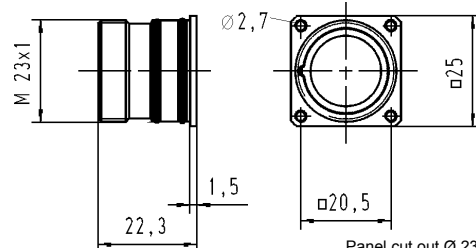

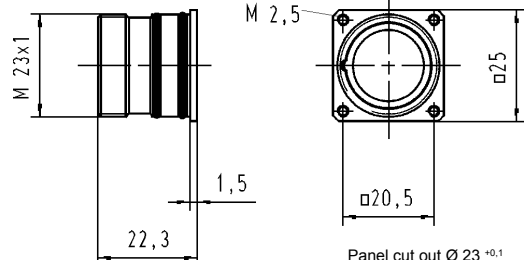

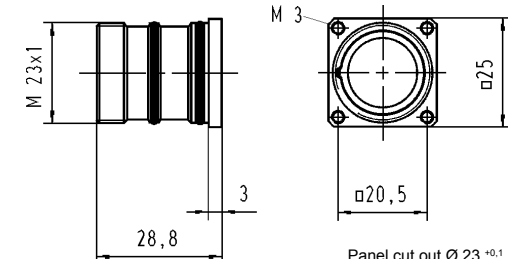

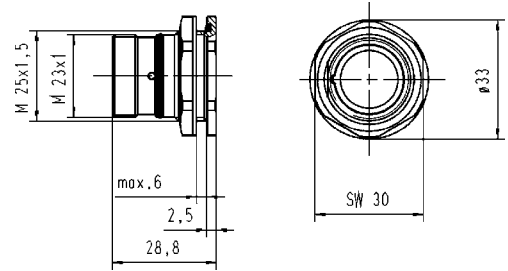

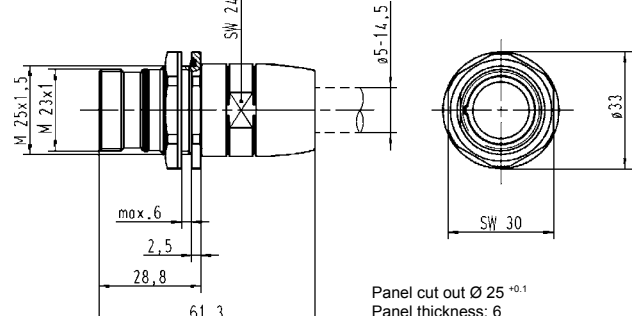
Identification	Part-Number	Drawing	Dimension in mm
<p>Screw cover for hoods with tether</p> 	<p>09 15 200 5421</p>		

Identification	Part-Number	Drawing	Dimension in mm
<p>Bulkhead mounted housing front wall assembly with central locking Pg 13.5</p> 	<p>09 15 200 0324</p>	 <p>Panel cut out Pg 13.5</p>	
<p>Bulkhead mounted housing front wall assembly with central locking M20</p> 	<p>09 15 200 0303</p>	 <p>Panel cut out <math>\varnothing 20^{+0,1}</math></p>	
<p>Bulkhead mounted housing front wall assembly with flat sealing</p> 	<p>09 15 200 0301</p>	 <p>Panel cut out <math>\varnothing 20^{+0,1}</math></p>	
<p>Bulkhead mounted housing front wall assembly with O-ring sealing</p> 	<p>09 15 200 0305</p>	 <p>Panel cut out <math>\varnothing 20^{+0,1}</math></p>	
<p>Bulkhead mounted housing front wall assembly with O-ring sealing</p> 	<p>09 15 200 0901</p>	 <p>Panel cut out <math>\varnothing 20^{+0,1}</math></p>	

Order inserts separately, see page 4 - 5

Corresponding hoods and housings see page 6


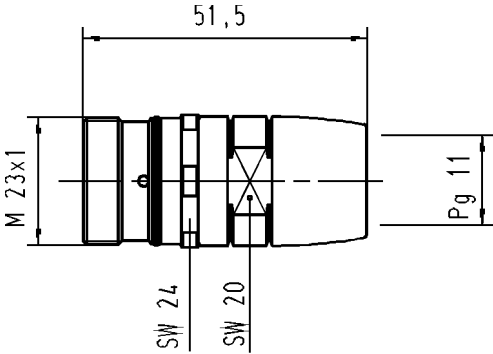

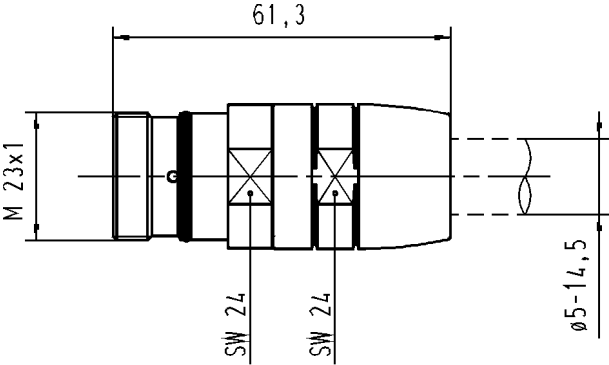



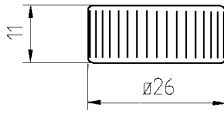

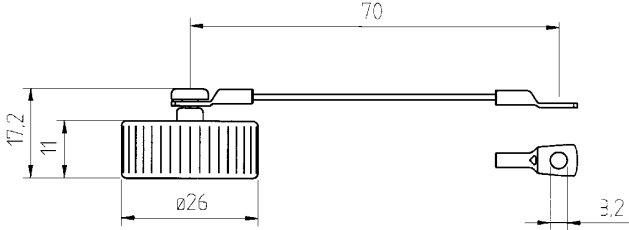
Identification	Part-Number	Drawing	Dimension in mm
<p>Bulkhead mounted housing back wall assembly with O-ring sealing</p> 	<p>09 15 200 0313</p>		<p>Panel cut out <math>\varnothing 23^{+0,1}</math> Panel thickness: 2.7 - 3.5 when using counter sunk screws</p>
<p>Bulkhead mounted housing back wall assembly with O-ring sealing</p> 	<p>09 15 200 0311</p>		<p>Panel cut out <math>\varnothing 23^{+0,1}</math> Panel thickness: 2.7 - 3.5 when using counter sunk screws</p>
<p>Bulkhead mounted housing back wall assembly with O-ring sealing</p> 	<p>09 15 200 0312</p>		<p>Panel cut out <math>\varnothing 23^{+0,1}</math> Panel thickness: 3.5 - 8.5 when using counter sunk screws</p>
<p>Bulkhead mounted housing back wall assembly with central locking M25</p> 	<p>09 15 200 0314</p>		<p>Panel cut out <math>\varnothing 25^{+0,1}</math> Panel thickness: 6</p>
<p>Cable to cable housing back wall assembly with central locking M25</p> 	<p>09 15 200 0351</p>		<p>Panel cut out <math>\varnothing 25^{+0,1}</math> Panel thickness: 6</p>


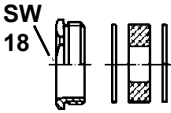


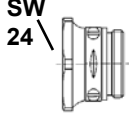


Order inserts separately, see page 4 - 5


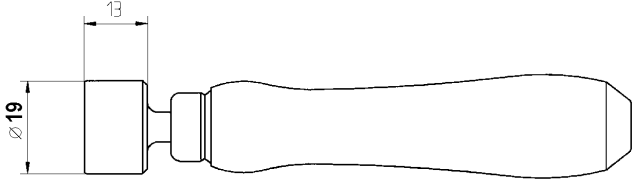

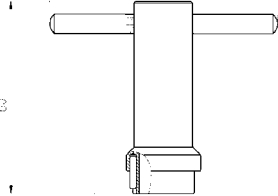

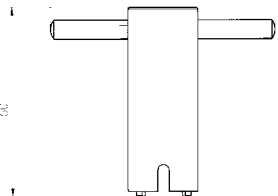
Corresponding hoods and housings see page 6



Identification	Part-Number	Pg	Drawing	Dimensions in mm
<p>Cable to cable housing top-entry</p> 	09 15 200 0703	11		
<p>Cable to cable housing top-entry EMC version</p> 	09 15 200 0751	-		

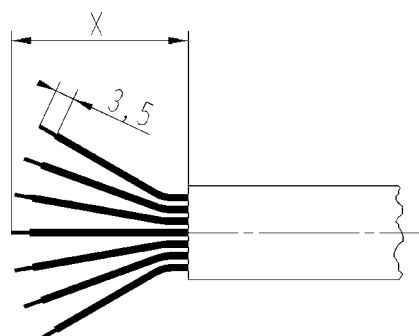
Identification	Part-Number	Drawing	Dimension in mm
<p>Screw cover for bulkhead mounted and cable to cable housings</p> 	09 15 200 5401		
<p>Screw cover for bulkhead mounted and cable to cable housings with tether</p> 	09 15 200 5411		

Identification	Part-Number	Pg	Drawing	Dimensions in mm
<p>Cable clamp metal (IP 65) with normal seal</p> 	09 00 000 5113	11	Suitable cable Ø 10 - 12	
<p>with multiple seal</p> 	09 00 000 5013	11	6.5 - 12	
<p>Spacel cable clamp metal (IP 65) with strain relief and bell mouth</p> 	09 00 000 5191	11	Suitable cable Ø 8 - 12	  
<p>with strain relief and bell mouth order separately</p> 	09 00 000 5027	11	6.5 - 12	

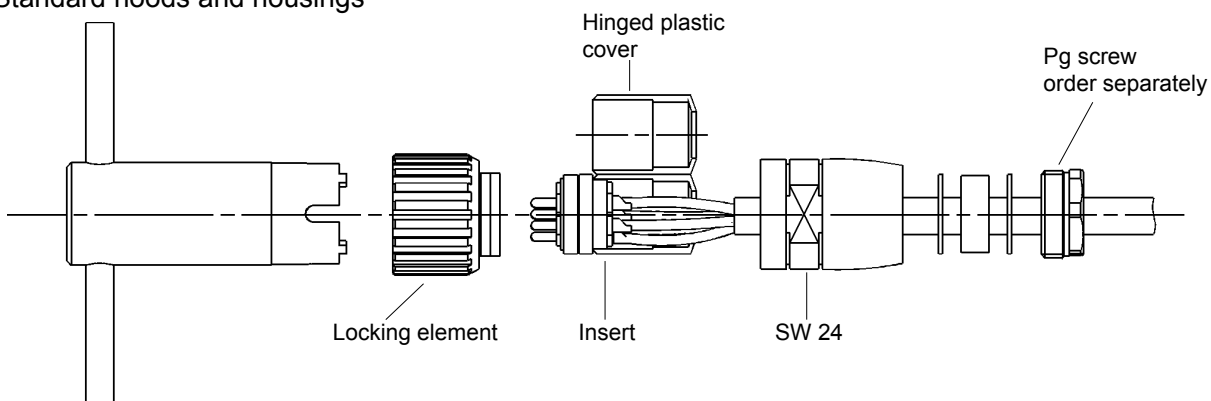
Identification	Part-Number	Drawing	Dimension in mm
<p>Assembly tool for angled bulkhead mounted  housings</p> 	09 99 000 0324		
<p>Assembly tool for bulkhead mounted and cable to cable housings</p> 	09 99 000 0325	 <p>As an alternative a screw driver can be used.</p>	
<p>Assembly tool for hoods</p> 	09 99 000 0326	 <p>Alternatively for the assembly of the EMC version a screw driver can be used.</p>	

Assembly manuals

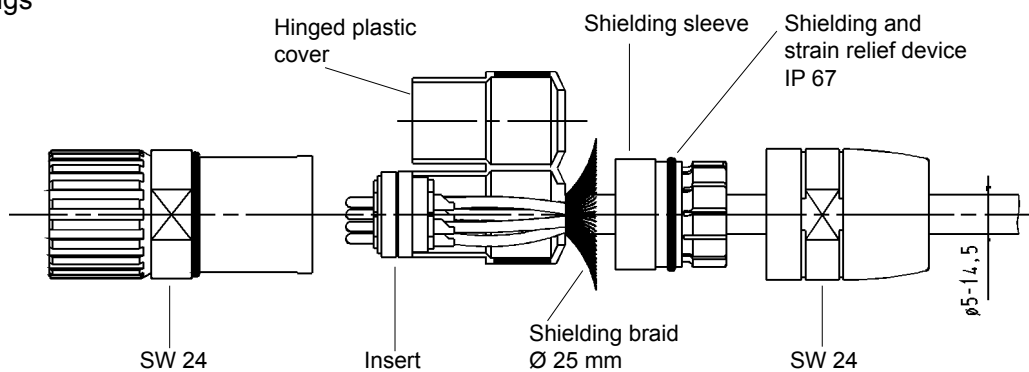
Hoods and Housings	Cable stripping length x
09 15 200 0351	26 mm
09 15 200 0403	20 mm
09 15 200 0451	26 mm
09 15 200 0603	30 mm
09 15 200 0703	20 mm
09 15 200 0751	26 mm
09 15 200 0901	30 mm



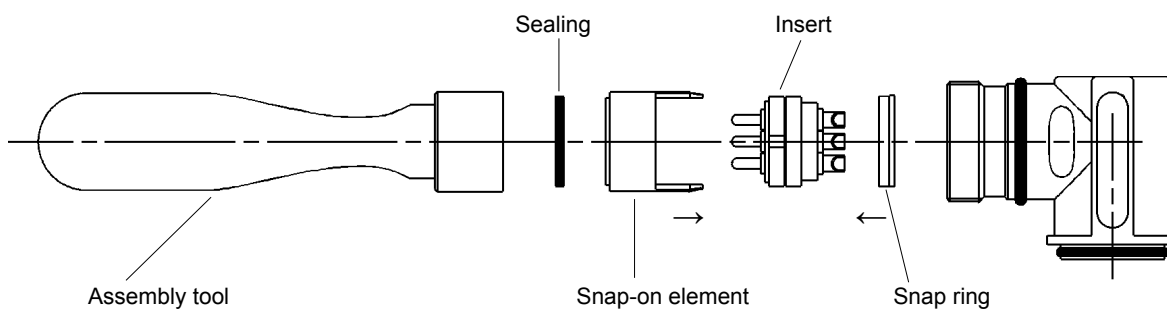
Standard hoods and housings



EMC housings



Right angled bulkhead mounted housing



## Subsidiary companies – worldwide



### Austria

HARTING Ges. m. b. H.  
Deutschstraße 19, A-1230 Wien  
Phone +43 1 6 16 21 21; Fax +43 1 6 16 21 21-21  
E-Mail: at@HARTING.com

### Belgium

HARTING N.V./S.A.  
Z.3 Doornveld 23, B-1731 Zellik  
Phone +32 2/4 66 01 90; Fax +32 2/4 66 78 55  
E-Mail: be@HARTING.com; Internet: www.HARTING.be

### Brazil

HARTING Ltda.  
Av. Dr. Lino de Moraes, Pq. Jabaquara, 255  
CEP 04360-001 - São Paulo - SP - Brazil  
Phone +55 11/50 35-00 73; Fax +55 11/50 34 - 47 43  
E-Mail: br@HARTING.com  
Internet: www.HARTING.com.br

### China

Zhuhai HARTING; Limited Shanghai branch  
Room 5403, 300 Huaihai Zhong Road  
Hong Kong New World Tower  
Luwan District, P.R.C; Shanghai 200021, China  
Phone +86 21 - 63 86 22 00; Fax +86 21 - 63 86 86 36  
E-Mail: cn@HARTING.com

### Czech Republic

HARTING spol. s.r.o.  
Mlýnská 2, 160 00 Praha 6  
Phone +420 220 380 460; Fax +420 220 380 461  
E-Mail: cz@HARTING.com; Internet: www.HARTING.cz

### Finland

HARTING Oy  
Teknobulevardi 3-5, PL 35, FI-01530 Vantaa  
Phone +358 9 350 87 300; Fax +358 9 350 87 320  
E-Mail: fi@HARTING.com

### 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 49 38 34 00; Fax +33 1 48 63 23 06  
E-Mail: fr@HARTING.com

### Germany

HARTING Deutschland GmbH & Co. KG  
Postfach 2451 · D-32381 Minden  
Simeons carré 1 · D-32427 Minden  
Phone (05 71) 88 96 - 0; Fax (05 71) 88 96 - 2 82  
E-Mail: de@HARTING.com  
Internet: www.HARTING.com

### Office Germany

HARTING Deutschland GmbH & Co. KG  
Blankenauer Straße 99; D-09113 Chemnitz  
Phone +49 0371 429211; Fax +49 0371 429222  
E-Mail: de@HARTING.com

### Great Britain

HARTING Ltd.  
Caswell Road; Brackmills Industrial Estate  
GB-Northampton, NN4 7PW  
Phone +44 16 04/76 66 86, 82 75 00  
Fax +44 16 04/70 67 77  
E-Mail: gb@HARTING.com  
Internet: www.HARTING.co.uk

### Hong Kong

HARTING (HK) Limited, Regional Office Asia Pacific  
4208 Metroplaza Tower 1; 223 Hing Fong Road  
Kwai Fong, N. T., Hong Kong  
Phone +852/24 23-73 38; Fax +852/24 80-43 78  
E-Mail: ap@HARTING.com  
Internet: www.HARTING.com.hk

### Hungary

HARTING Eastern Europe GmbH  
Magyarországi Kereskedelmi Képviselete  
1119 Budapest; Fehérvári út 89-95, II. emelet 217/A.  
Phone +36-1-205 3464; Fax +36-1-205 3465  
E-Mail: hu@HARTING.com; Internet: www.HARTING.hu

### India

HARTING India Pvt. Ltd.  
D4, Doshi Towers; 156 Poonamallee High Rd.  
Kilpauk, Chennai - 600 010, INDIA  
Tel. +91 44 43560415; Fax +91 44 4356 0417  
pushpendra.singh@HARTING.com; www.HARTING.com

### Italy

HARTING SpA  
Via Dell' Industria 7; I-20090 Vimodrone (Milano)  
Phone +39 02/25 08 01; Fax +39 02/2 65 05 97  
E-Mail: it@HARTING.com

### Japan

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

### Korea

HARTING Korea Limited  
#308 Leaders Bldg., 342-1, Yatap-dong, Bundang-gu,  
Sungnam-City, Kyunggi-do, 463-828, Korea  
Phone +82-31-781-4615; Fax +82-31-781-4616  
E-Mail: kr@HARTING.com

### Netherlands

HARTING B.V.  
Larenweg 44; NL-5234 KA 's-Hertogenbosch  
Postbus 3526; NL-5203 DM 's-Hertogenbosch  
Phone +31 73/641 04 04  
Fax +31 73/644 06 99  
E-Mail: nl@HARTING.com

### Norway

HARTING A/S,  
Østensjøveien 36, N-0667 Oslo,  
Phone +47 22/70 05 55  
Fax +47 22/70 05 70  
E-Mail: no@HARTING.com

### Poland

HARTING Eastern Europe GmbH  
Przedstawicielstwo w Polsce  
ul. Kamieńskiego 201-219  
51-126 Wrocław  
Phone +48 71-352 81 71; Fax +48 71-320 74 44  
E-Mail: pl@HARTING.com; Internet: 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  
E-Mail: es@HARTING.com

### Russia

HARTING ZAO  
ul. Tobolskaja 12, Saint Petersburg 194044 Russia  
Phone +7/8 12/3 27 64 77; Fax +7/8 12/3 27 64 78  
E-Mail: ru@HARTING.com  
Internet: www.HARTING.ru

### Singapore

HARTING Singapore Pte Ltd.  
No. 1 Coleman Street; #B1-21 The Adelphi  
Singapore 179803  
Phone +656 225 52 85; Fax +656 225 99 47  
E-Mail: sg@HARTING.com

### Spain

HARTING Iberia S.A.  
Josep Tarradellas 20-30 4º 6ª; E-08029 Barcelona  
Phone +34 933 638 475; Fax +34 934 199 585  
E-Mail: es@HARTING.com

### Sweden

HARTING AB  
Gustavslundsvägen 141 B 4tr; 167 51 Bromma  
Phone +46 8/4 45 71 71; Fax +46 8/4 45 71 70  
E-Mail: se@HARTING.com

### Switzerland

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

### Taiwan

HARTING R.O.C. Limited  
Room 1, 5th Floor, No. 495, GuangFu South Road  
Taipei, 110 Taiwan  
Phone +886-2-2758-61 77  
Fax +886-2-2758-71 77  
E-Mail: tw@HARTING.com

### USA

HARTING Inc. of North America  
1370 Bowes Road; Elgin, Illinois 60123  
Phone +1 (877) 741-1500 (toll free)  
Fax +1 (866) 278-0307 (Inside Sales)  
Fax +1 (847) 717-9430 (Sales and Marketing)  
E-Mail: us@HARTING.com  
Internet: www.HARTING-USA.com

### Eastern-Europe

HARTING Eastern Europe GmbH  
Bamberger Straße 7; D-01187 Dresden  
Phone +49 351 / 4361760  
Fax +49 351 / 4361770  
E-Mail: Eastern.Europe@HARTING.com

### Other countries

HARTING Electric GmbH & Co. KG  
P.O. Box 14 73, D-32328 Espelkamp  
Phone +49 57 72/47- 97 100  
Fax + 49 57 72/47- 4 95  
E-Mail: electric@HARTING.com

## Distributors – worldwide



**Farnell InOne**  
www.farnellinone.com;  
in US: Newark InOne: www.newarkinone.com

### RS Components

www.rs-components.com;  
in US: Allied Electronics: www.alliedelec.com

## Representatives – worldwide



### Argentina

Condelectric S.A.  
Hipólito Yrigoyen 2591  
(B1640HFY) Martínez, Buenos Aires  
Phone + Fax +54 11 4836-1053  
E-Mail: info@condelectric.com.ar

### Bulgaria COMET ELECTRONICS

16, Tsar Samuil Str., BG-1000 Sofia  
Phone +359-2-9155800; Fax +359-2-9540384  
E-Mail: office@comet.bg; Internet: www.comet.bg

### Canada Chartwell Electronics Inc.

140 Duffield Drive; Markham; Ontario L6G 1B5  
Phone +1 905-513-7100; Fax +1 905-513-7101  
Toll Free +1 877-513-7769; www.chartwell.ca

### Denmark Knud Wexøe A/S

Skaettekaeret 11, P.O. Box 152; DK-2840 Holte  
Phone +45 4546 5800; Fax +45 4546 5801  
E-Mail: wexoe@wexoe.dk  
Internet: www.wexoe.dk

### Estonia SKS-tehnika Oü

Mustamäe tee 55, EE-10621 Tallinn  
Phone +372 6819 234; Fax +372 6819 235  
E-Mail: peeter.kuus@sksf.fi

### Finland SKS-automaatio OY

Martinkyläntie 50, FIN-01721 Vantaa  
Phone +358 9 852 661; Fax +358 9 852 68 20  
E-Mail: automaatio@sksf.fi

### Hungary Mile Kft.

Mádi u. 52, H-1104 Budapest  
Phone +36-1-431-9800; Fax +36-1-431-9817  
E-Mail: milekft@mile-kft.hu  
Internet: www.mile-kft.hu

### Island Smith & Norland

Nóatún 4, IS - 105 Reykjavik  
Phone +354 520 3000; Fax +354 520 3011  
E-Mail: olaf@sminor.is; Internet: www.sminor.is

### Israel MIGVAN

Technologies & Engineering Ltd.  
13 Hashiloh St., P.O.Box 7022  
IL - Petach Tikva 49170  
Phone +972 3 9240784; Fax +972 3 9240787  
E-Mail: info@mte.co.il; Internet: www.mte.co.il

### Poland Soyter Sp. z o. o.

ul. Warszawska 3, 05-082 Warszawa - Stare Babice  
Phone +48 22 722 0 685; Fax +48 22 722 0 550  
E-Mail: handlowy@soyter.com.pl  
Internet: www.soyter.com

### South-Africa HellermannTyton Pty Ltd.,

Private Bag X158 Rivonia 2128  
34 Milky Way Avenue; Linbro Business Park 2065  
Johannesburg, South Africa  
Phone +27 (0)11 879-6600; Fax +27 (0)11 879-6606  
E-Mail: sales.jhb@hellermann.co.za

### Switzerland Distrelec AG

Grabenstrasse 6, CH-8606 Nänikon  
Phone +41 1 944 99 11; Fax +41 1 944 99 88  
E-Mail: info@distrelec.com  
Internet: www.distrelec.com

### Turkey Gökhan Elektrik San. Tic. Ltd. Sti.

Perpa Elektrikçiler Is Merkezi A Blok  
Kat:7-8-9 No.694; TR - 80270 Okmeydani/Istanbul  
Phone +90 (212) 2 21 32 36 (pbx)  
Fax +90 (212) 2 21 32 40  
E-Mail: gokhan@gokhanelektrik.com  
Internet: www.gokhanelektrik.com

### Ukraine Incomtech Ltd.

4 Lermontovskaya St., UA-04050 Kiev  
Phone +380-44-213-3641; Fax +380-44-213-3814  
E-Mail: eletech@incomtech.com.ua  
Internet: www.incomtech.com.ua

## Global Business Unit Electric



**HARTING Electric GmbH & Co. KG**  
**P.O. Box 1473**

**D-32328 Espelkamp**

**Phone +49 57 72/47-97 100**

**Fax +49 57 72/47-4 95**

**E-Mail: HARTING.electric@HARTING.com**

**Internet: www.HARTING.com**