HUMMEL

Setting Standards

Circular Connectors

HUMMEL AG

hummel.com – your website!

Online Catalog

- Product Pictures and Product Information
- Product and Assembly Videos
- Assembly and Operations Manual
- Technical drawings
- 3D data
- Certificates

Download-Center

- Catalog and Flyer
- Assembly instructions and installation instructions
- Press releases
- Certificates and approvals
- RoHS, REACH / SVHC, WEEE, Conflict minerals
- ...

Searching Products

- Part Number search
- Searching Details

Enclosure-Configurator

- Individual Enclosures
- Enclosure Solutions
- Online configuration, requesting and ordering

Technology Center

- Technical Information
  (Protection, thread, material, ...)
- Diagrams and evaluation
- Product description
- Assembly Video and Operations Manual

News of the HUMMEL AG

- Trade fairs and exhibitions
- Press releases
- New Products
- Job vacancies
- Studies, training and vocational practical training

Solutions all from one source

Touch

Cable Glands,
Circular Connectors

NEW

Solutions

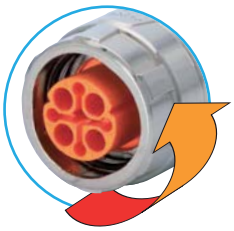
Industrial Enclosures

Electronic

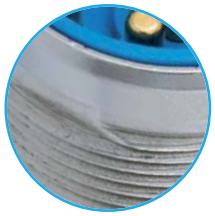
TWILOCK / TWILOCK-S

+ Quick Connect with patented Polygon Lock
+ Multi functional: Ideal with Twilock and screw connection
+ Easy handling, exceptional functionality
+ Resistant to vibration

Clearly defined:
OPEN – CLOSE



Locking with a slight rotation or release of the connection



Multi functional: Special thread allows use of Twilock and screw connection

TWILOCK-S-Version
Compatible to Speedtec

TWINTUS

The new Low-Cost-Standard for Drives

+ Minimized Size
+ Free choice of Signal and Power Inserts
+ Flange 20 x 20 and 25 x 25

Connector
4 small drives

TWINTUS

Colour coded inserts
(DESINA colour code)

IP 67 (NEMA 4x) self sealing,
even for threaded holes

Optional EMC-sheet for separating
signal and power areas

Version M 16 / M 12 available

M 23 Fast Ethernet PoE

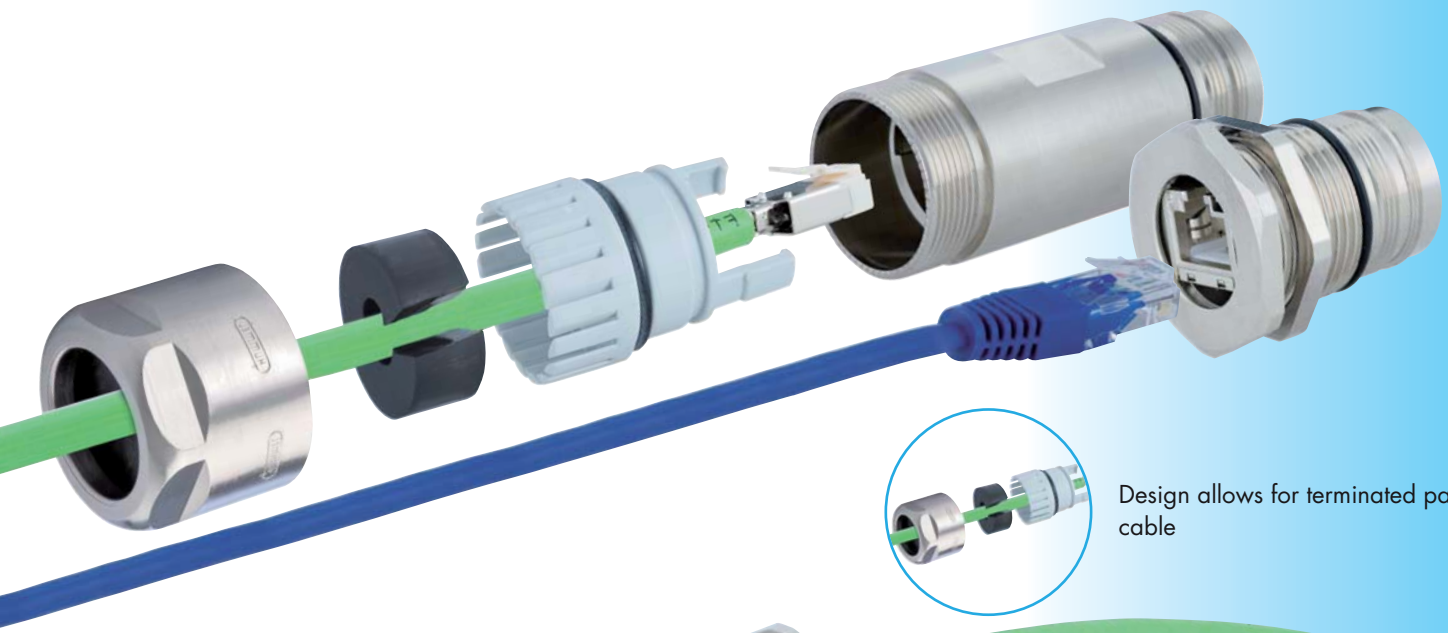
+ Data transfer up to Gigabit rate, Multibus II capability
+ Hybrid connectors for combined data and power transmission
+ Five separate shield potentials available
+ Rugged, safe, compact: ideal for use in rough industrial environments

4 Twinax inserts and 12 additional contacts provide for maximum power density in M 23 housing

End-to-end shielding of data inserts prevents crosstalk

Integrated shield springs for extremely easy shield connection

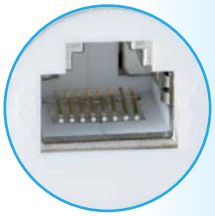
M 23 RJ 45: Robust – simple & small!



Design allows for terminated patch cable

Integrated coupler accomodates off-the-shelf RJ 45 patch cables.

Integrated cable strain relief warrant an IP 67 / IP 69 K rating making the M 23 based RJ 45 Connector an ideal solution for robust applications.

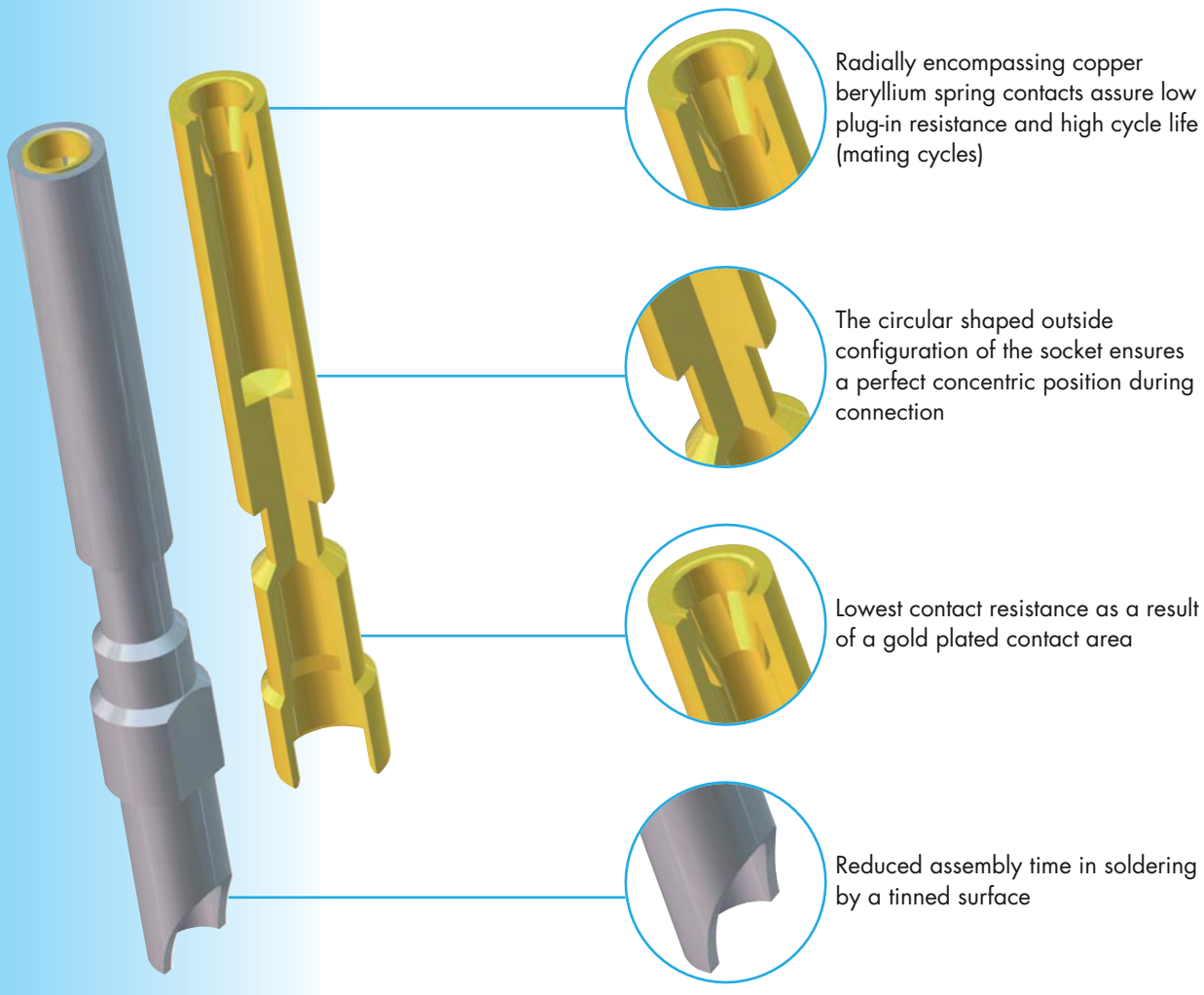


A standard RJ 45 connection is suitable as service and programmable interface.

SLS-Technology

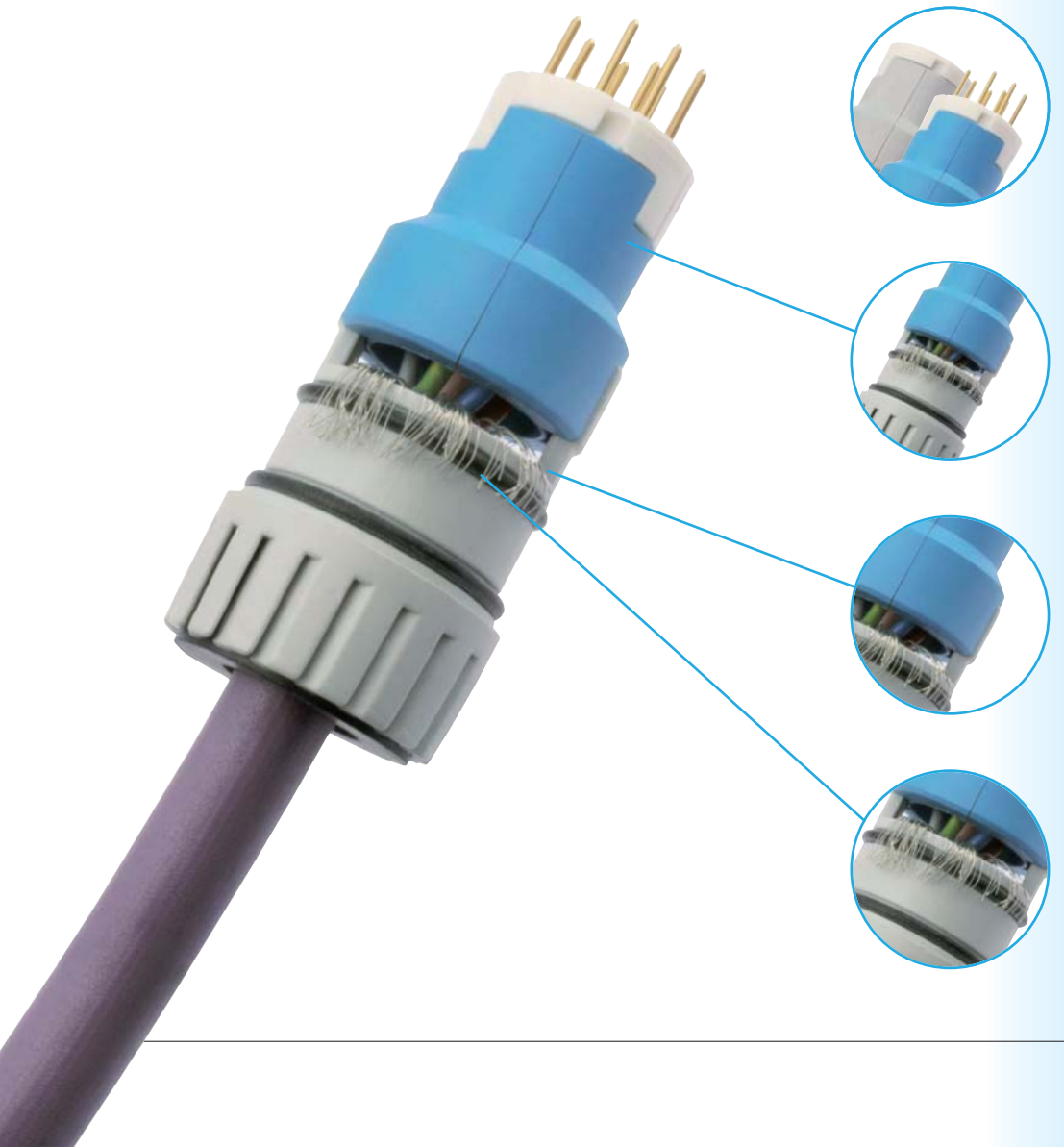
The new, high performance type of contacts – HUMMEL SLS-Technology (Spring Loaded Socket)

+ Integrated spring mates with the pin contact and encompasses it radially
+ Exceptional electrical performance with ultimate contact reliability
+ Tinned solder contacts assure easy and quick assembly



User friendly assembly

+ Clear and modular structure of all connector series
+ Patented modular strain relief insert and contact insert
+ One step cable assembly and shielding
+ Simple, quick and reliable assembly into the connector housing



Colour coding of spacers for male and female inserts

Cable assembly and shielding is possible in a single operation.

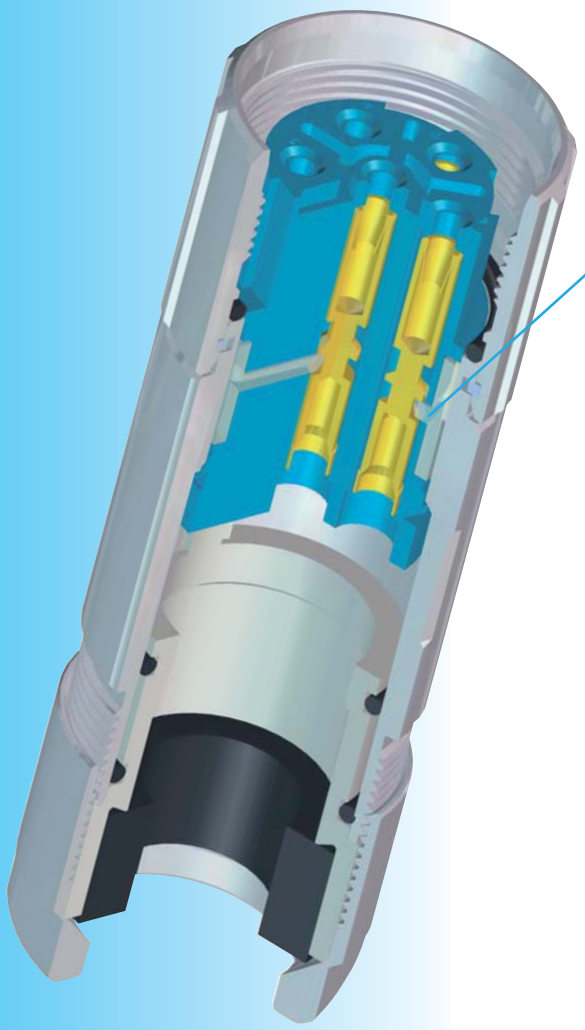
Strain relief insert with four fingers, secured in a recess, prevents cable rotation.

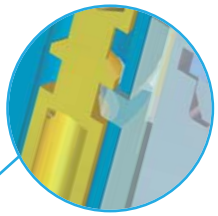
Flexible EMC-O-ring guarantees reliable EMC-protection for light and heavy braided shields.

Euro-Lock-System®

Euro-Lock-System® – the patented locking system

+ The integrated locking clip secures the contacts in the insert
+ Easy assembly and disassembly of the contacts
+ No special tools required





Secure contact lock

Quick assembly

Simple contact unlocking and disassembly

Complete assembly and disassembly without special tools

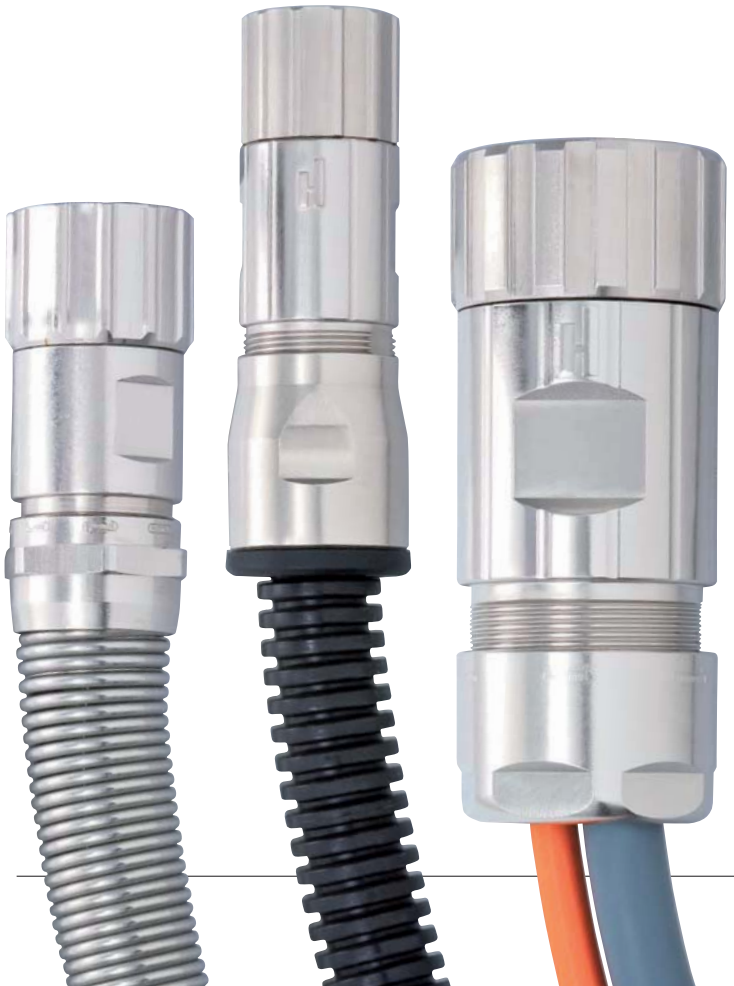
Unique Benefits

+ Interchangeability of pin or socket inserts in every style connector housing
+ Integrated Liquid Tight Strain Relief Fitting
+ Internationally certified exceptional quality

File-No. E 213337

Germanischer Lloyd

RoHS



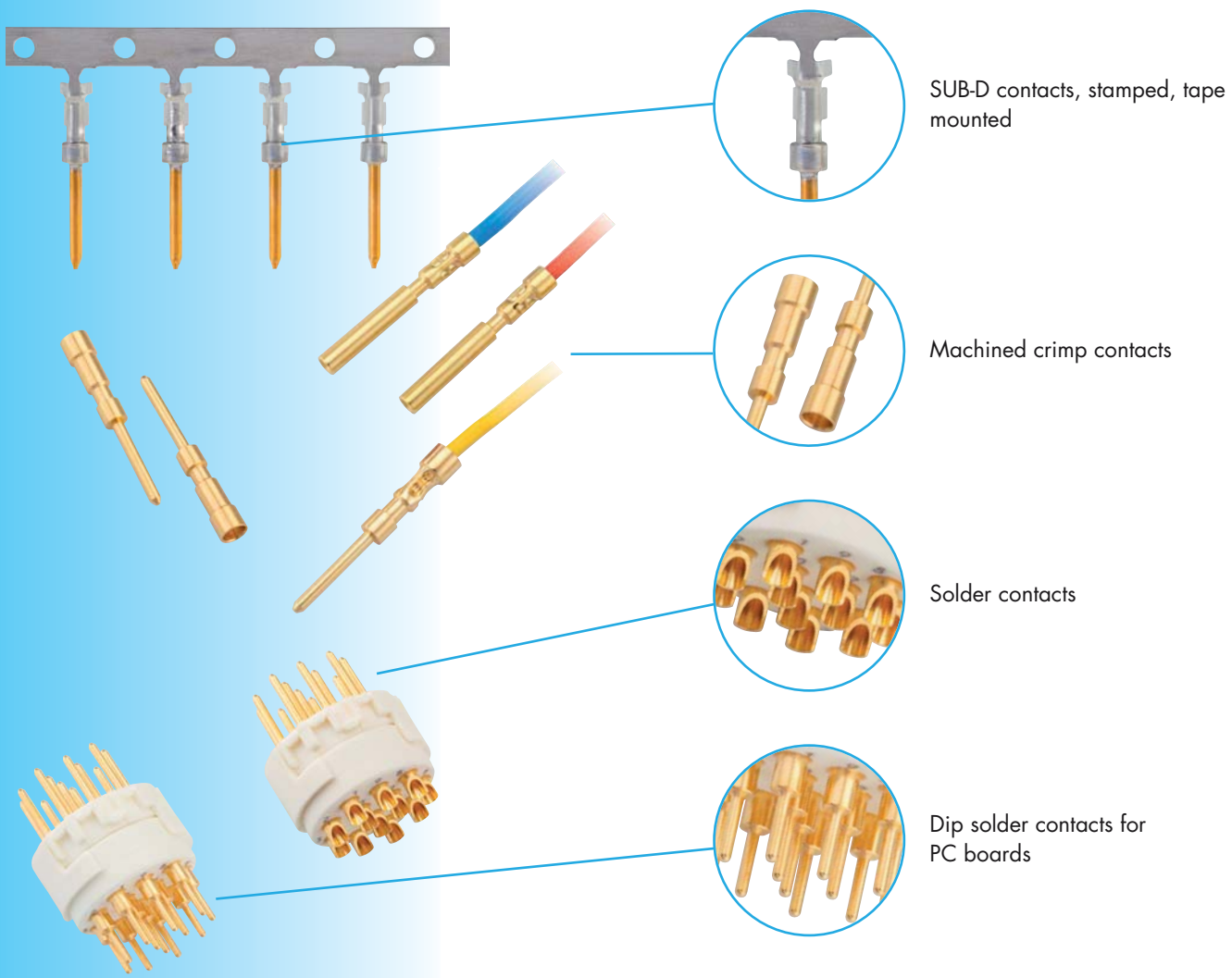
Strain Relief Fitting with flex protection for cable

Fexible conduit connector

MULTI Seal Connector

The Insert – One for all

+ Insert can be used for all types of contacts
+ Crimp contacts machined or on tape
+ Solder contacts for manual soldering or dip soldered for PC boards



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Technical Information

Nominal Currrent
Allowable current (Amp), that can be transmitted by each contact continuously and simultaneously.

Nominal Voltage
Allowable voltage (Volt), that can be applied to each contact continuously and simultaneously.

Test Voltage
Voltage which, under certain conditions, a connector can be exposed to without breakdown.

Degree of Protection
Potential dirt accumulation of a disconnected connector in a certain environment.

Degree of Protection 2
No permanent conductive dirt accumulation will occur. Temporary conductive dirt accumulation, such as condensation, is possible. Typical for households, offices, laboratories and test labs.

Degree of Protection 3
Conductive, as well as dry non-conductive dirt accumulation can occur. It can be temporarily conductive due to condensation. Typical for industrial and factory environments.

Additional remarks (pollution level)
If connectors being defined for pollution degree 1 and overvoltage category 1 are applied for other conditions (higher pollution degree and higher overvoltage category) voltages level reduce correspondingly. But the connectors can be used without any problems at reduced maximum voltages.

Mating cycles
Mating cycles are the number of insertion and extraction cycles a connector can withstand before the electrical or mechanical failure in relationship to the connector's design specification.

Air gap
The minimum gap of air between two conducting surfaces permissible at given voltage.

Creep distance
The minimum dimension along the surface of an insulating material between two conducting surfaces.

PE
The PE-Contact is a ground contact for security reasons.

Safety Guidelines
When HUMMEL connectors are used for voltages greater than 50 Volts with conductive shell components they must be used in accordance with the safety regulations DIN VDE Part 410; IEC 60364-4-41. This regulation basically dictates that the power source should be turned off before mating and unmating connector. This regulation does not provide protection against electrical shock when mating and unmating connectors in the field.

Don't connect or disconnect HUMMEL Connectors under load.

Connectors M 16

TWINTUS inclusive

Product Overview

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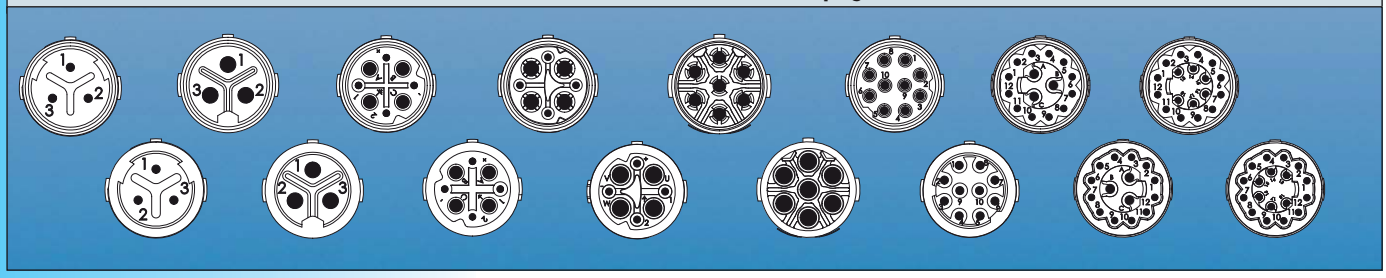


Accessories page 29

Dimensions and specifications may be changed without prior notice

M 16 Control Signal Connectors

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy Die Cast
Housing surface	Nickel plated other surface upon request
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT Fire protection class V-0
Contacts	Brass Alloy
Contact surface at point of contact	Nickel and gold plated (0,25µm Au)
Minimum mating cycles	> 1000
Seals / O-Rings	Buna-N standard, optional Viton® (Viton is a registered trademark of DuPont)
Temperature range	-40° C – 125° C (-40 °F – 257 °F)
Type of contacts	Crimp, dip-solder (PCB)
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x
Cable diameter range	2 – 11 mm (.08 – .43")

Electrical Data

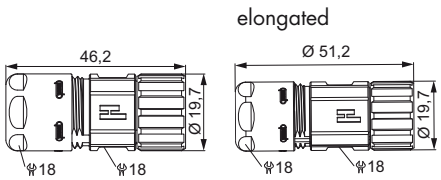
Number of positions	3 (3 x 1 mm)	3 (3 x 2 mm)	4 + 3 + PE / 320 V		4 + 3 + PE / 630 V	
Number of contacts	3	3	4	4	4	4
Contact-Ø [mm]	1	2	0,8	1,6	0,8	1,25
AWG [mm²]	0,14 – 1	0,5 – 2,5	0,08 – 0,34	0,34 – 1,5	0,08 – 0,34	0,34 – 1,5
Nominal current [1] [A]	8	20	5	16	5	16
Nominal voltage [2] [V~] degree of protection 3 [4]	400	400	160	320	300	630
Test voltage (Breakdown voltage) [3] [V~]	2500	2500	1500	2500	1500	2500
Insulation resistance [MΩ]	> 10^{10}	> 10^{10}	> 10^{10}		> 10^{10}	
Max. contact resistance [mΩ]	3	3	3		3	3

Number of positions	6+PE	10	12 + 3		18
Number of contacts	7	10	12	3	18
Contact-Ø [mm]	1,25	1	0,8	1,25	0,8
AWG [mm²]	0,5 – 1,5	0,14 – 0,75	0,08 – 0,34	0,5 – 1,5	0,08 – 0,34
Nominal current [1] [A]	16	8	3	10	3
Nominal voltage [2] [V~] degree of protection 3 [4]	630	160	24	60	24
Test voltage (Breakdown voltage) [3] [V~]	2500	1500	1500	2500	1500
Insulation resistance [MΩ]	> 10^{10}	> 10^{6}	> 10^{10}		> 10^{10}
Max. contact resistance [mΩ]	3	3	3	3	3

[1], [2], [3], [4] See Technical Information page 14

Connectors M 16 / Housing

Straight Connector, Female Thread / elongated *



Cable-Ø	Part Number
3 – 6 mm (.11 – .23“)	7.810.300.000
5 – 9 mm (.20 – .35“)	7.810.400.000
8 – 11 mm (.31 – .43“)	7.810.500.000
*** elongated**	
3 – 6 mm (.11 – .23“)	7.811.300.000
5 – 9 mm (.20 – .35“)	7.811.400.000
8 – 11 mm (.31 – .43“)	7.811.500.000

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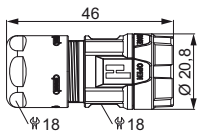
Straight Connector, Female Thread TWILOCK



Cable-Ø	Part Number
3 – 6 mm (.12 – .24“)	7.816.300.000
5 – 9 mm (.20 – .35“)	7.816.400.000
8 – 11 mm (.31 – .43“)	7.816.500.000

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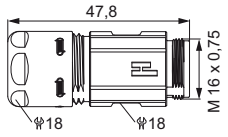
Straight Connector, Male Thread



Cable-Ø	Part Number
3 – 6 mm (.11 – .23“)	7.820.300.000
5 – 9 mm (.20 – .35“)	7.820.400.000
8 – 11 mm (.31 – .43“)	7.820.5000.00

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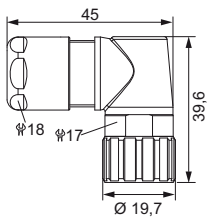
Right Angle Connector with positioning



Cable-Ø	Part Number
3 – 6 mm (.11 – .23“)	7.831.300.000
5 – 9 mm (.20 – .35“)	7.831.400.000
8 – 11 mm (.31 – .43“)	7.831.500.000

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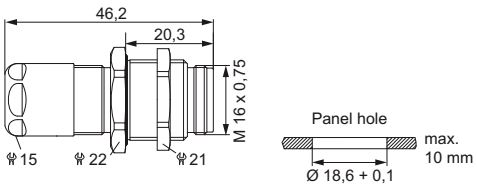
Dimensions and specifications may be changed without prior notice

Cable-Ø	Part Number	Panel Connector with built in Cable Strain Relief

Rear mounting, single hole mounted
2 – 7 mm (.08 – .28")..... 7.852.300.000
5 – 9 mm (.20 – .35")..... 7.852.400.000

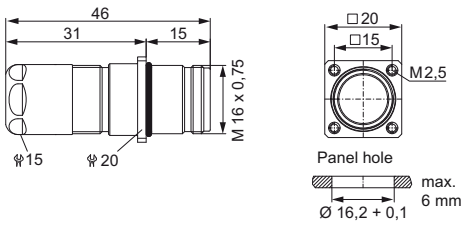
Including jam nut PG 11



Contacts and inserts page 22 • Assembly instructions page 35 / 36

Cable-Ø	Part Number	Panel Connector with built in Cable Strain Relief

Rear mounting, M 2,5 x 4 single hole mounted
2 – 7 mm (.08 – .28")..... 7.847.300.000
5 – 9 mm (.20 – .35")..... 7.847.400.000

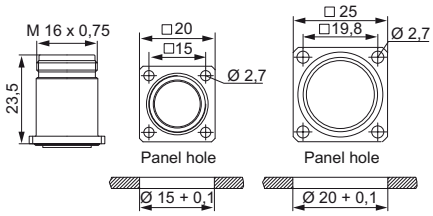


Contacts and inserts page 22 • Assembly instructions page 35 / 36

Type	Part Number	Panel Connector, Male Thread, Front Mounting

4 x holes Ø 2,7 mm (.11") .. 7.840.000.000
Flange 20 x 20 mm

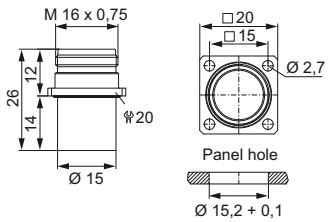
4 x holes Ø 2,7 mm..... 7.840.100.000
Flange 25 x 25 mm



Contacts and inserts page 22 • Assembly instructions page 38

Type	Part Number	Panel Connector, Male Thread, Front Mounting

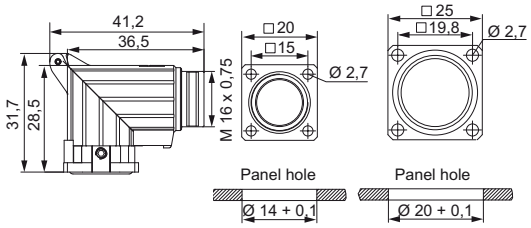
Short version
4 x holes Ø 2,7 mm (.11") .. 7.840.200.000
Flange 20 x 20 mm



Contacts and inserts page 22 • Assembly instructions page 38

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number



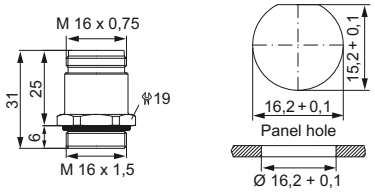
300° rotatable, locking screw at flange
4 x holes Ø 2,7 mm (.11") ..7.843.000.000
Flange 20 x 20 mm

4 x holes Ø 2,7 mm.....7.843.100.000
Flange 25 x 25 mm

Contacts and inserts page 22 • Assembly instructions page 39

Panel Connector, Male Thread

Type	Part Number



Front mounting, single hole mounted
Thread M 16 x 1,5 .....7.842.000.000

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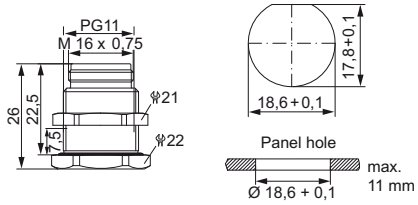
Panel Connector, Male Thread

Type	Part Number



Rear mounting, single hole mounted
Including jam nut.....7.850.000.000

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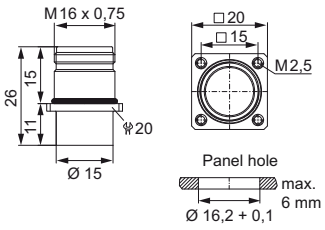
Panel Connector, Male Thread

Type	Part Number



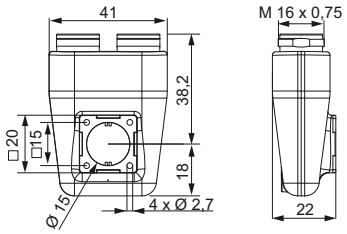
Rear mounting, 4 x thread M 2,5
Flange 20 x 20 mm 7.845.000.000

Contacts and inserts page 22 • Assembly instructions page 38

Dimensions and specifications may be changed without prior notice

Type	Part Number	TWINTUS
Flange 20 x 20 mm		
Uncoated	7.848.000.000	
Surface nickel plated	7.848.000.001	
Surface black conductive	7.848.000.00B	

Contacts and inserts page 22 • Accessories page 29 • Assembly instructions page 33



Type	Part Number	TWINTUS
Flange 25 x 25 mm		
Uncoated	7.848.100.000	
Surface nickel plated	7.848.100.001	
Surface black conductive	7.848.100.00B	

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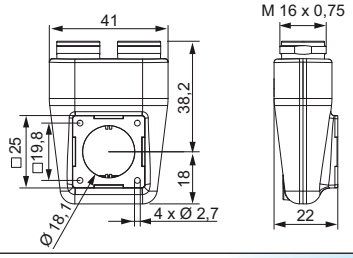

Type	Part Number	TWINTUS M 16 / M 12
Flange 20 x 20 mm		
Uncoated	7.848.200.000	
Surface nickel plated	7.848.200.001	
Surface black conductive	7.848.200.00B	

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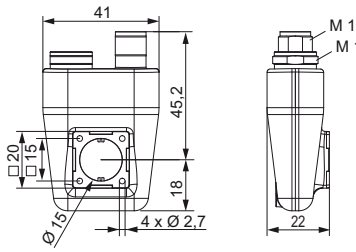

Type	Part Number	TWINTUS M 16 / M 12
Flange 25 x 25 mm		
Uncoated	7.848.300.000	
Surface nickel plated	7.848.300.001	
Surface black conductive	7.848.300.00B	

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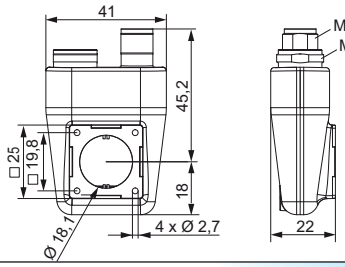
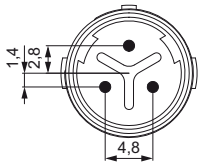


Connectors M 16 / Inserts / Pinouts

Inserts 3-pole (3 x 1 mm)

Insert pin mating view

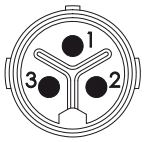
Insert socket mating view



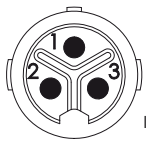
Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.903.101	7.003.903.102
Insert with dip solder contacts Length 10 mm	7.001.903.127	7.001.903.108
Insert with dip solder contacts Length 17 mm	7.001.903.137	7.001.903.118
Required Contacts 3 x 1 mm	7.010.901.001	7.010.901.002 / 7.010.901.012

Contacts page 27-28

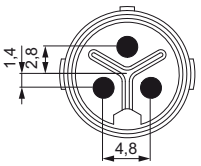
Inserts 3-pole (3 x 2 mm)



Insert pin mating view



Insert socket mating view



Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.983.101	7.003.983.102
Insert with dip solder contacts Length 10 mm	7.001.983.127	7.001.983.108
Insert with dip solder contacts Length 17 mm	7.001.983.137	7.001.983.118
Required Contacts 3 x 2 mm	7.010.982.001	7.010.982.002

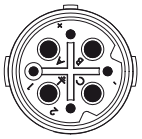
Contacts page 27-28

Dimensions and specifications may be changed without prior notice

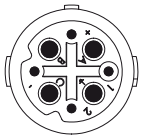
Inserts 4+3+PE

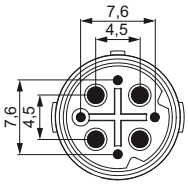
Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.943.101	7.003.943.102
Insert RAL 2003 (DESINA orange) without contacts	7.053.943.101	7.053.943.102
Insert with dip solder contacts Length 10 mm	7.001.943.127	7.001.943.108
Insert with dip solder contacts Length 17 mm	7.001.943.137	7.001.943.118
Required Contacts		
4 x 0,8 mm	7.010.980.801	7.010.980.802
4 x 1,6 mm	7.010.981.601	7.010.981.602

Insert pin mating view



Insert socket mating view



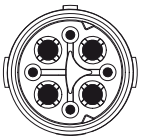


Contacts page 27-28

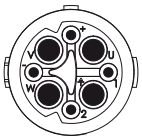
Inserts 4+3+PE 630 V

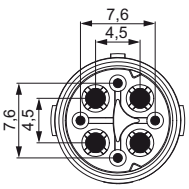
Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.908.101	7.003.908.102
Insert RAL 2003 (DESINA orange) without contacts	7.053.908.101	7.053.908.102
Insert with dip solder contacts Length 10 mm [1]	7.001.908.127	7.001.908.108
Insert with dip solder contacts Length 17 mm [1]	7.001.908.137	7.001.908.118
Required Contacts		
4 x 0,8 mm	7.010.980.811	7.010.980.812
4 x 1,25 mm	7.010.981.211	7.010.981.212

Insert pin mating view



Insert socket mating view



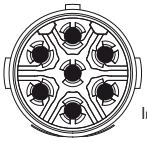


Contacts page 27-28

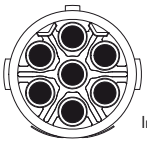
[1] Under development

Connectors M 16 / Inserts / Pinouts

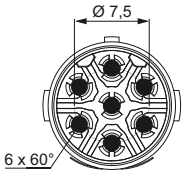
Inserts 6+PE



Insert pin mating view



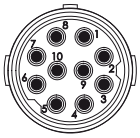
Insert socket mating view



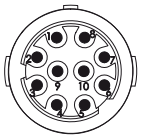
Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.961.101	7.003.961.102
Insert RAL 2003 (DESINA orange) without contacts	7.053.961.101	7.053.961.102
Insert with dip solder contacts Length 10 mm [1]	7.001.961.127	7.001.961.108
Insert with dip solder contacts Length 17 mm [1]	7.001.961.137	7.001.961.118
Required Contacts		
7 x 1,25 mm	7.010.981.211	7.010.981.212

Contacts page 27-28

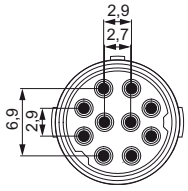
Inserts 10-pole



Insert pin mating view



Insert socket mating view



Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.910.101	7.003.910.102
Insert RAL 6018 (DESINA green) without contacts	7.053.910.101	7.053.910.102
Insert with dip solder contacts Length 10 mm	7.001.910.127	7.001.910.108
Insert with dip solder contacts Length 17 mm	7.001.910.137	7.001.910.118
Required Contacts		
10 x 1 mm	7.010.981.001	7.010.981.002

Contacts page 27-28

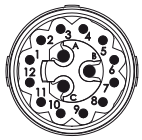
[1] Under development

Dimensions and specifications may be changed without prior notice

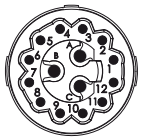
Inserts 12+3-pole

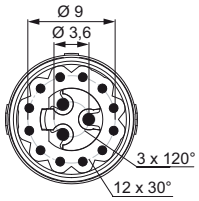
Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.985.101	7.003.985.102
Insert with dip solder contacts Length 10 mm	7.001.985.127	7.001.985.108
Insert with dip solder contacts Length 17 mm	7.001.985.137	7.001.985.118
Required Contacts		
12 x 0,8 mm	7.010.980.801	7.010.980.802
3 x 1,25 mm	7.010.981.201	7.010.981.202

Insert pin mating view



Insert socket mating view



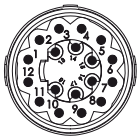


Contacts page 27-28

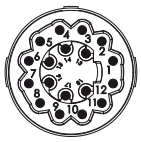
Inserts 18-pole

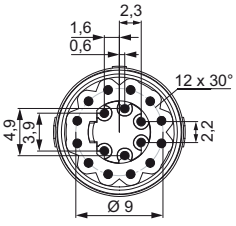
Type	Part Number Pins	Part Number Sockets
Insert without contacts	7.003.988.101	7.003.988.102
Insert RAL 6018 (DESINA green) without contacts	7.053.988.101	7.053.988.102
Insert with dip solder contacts Length 10 mm	7.001.988.127	7.001.988.108
Insert with dip solder contacts Length 17 mm	7.001.988.137	7.001.988.118
Required Contacts		
18 x 0,8 mm	7.010.980.801	7.010.980.802

Insert pin mating view



Insert socket mating view





Contacts page 27-28

Connectors M 16 / Inserts / Pinouts

Inserts M 12 for TWINTUS M 16 / M 12 8-pole	Type	Part Number
insert pin mating view	**Pins**	
	Insert with solder contacts	A712-7001908103

Inserts M 12 for TWINTUS M 16 / M 12 12-pole	Type	Part Number
insert pin mating view	**Pins**	
	Insert with solder contacts	A712-7001912103

Dimensions and specifications may be changed without prior notice

Type	Crimp Range	Part Number	Contacts
Crimp pin 0,8 mm, machined	0,08 – 0,34 mm² (AWG 28 – 22)	7.010.980.801	
Crimp socket 0,8 mm, machined	0,08 – 0,34 mm² (AWG 28 – 22)	7.010.980.802	
Crimp pin 0,8 mm, machined	0,08 – 0,34 mm² (AWG 28 – 22)	7.010.980.811	
Crimp socket 0,8 mm, machined	0,08 – 0,34 mm² (AWG 28 – 22)	7.010.980.812	
Crimp pin 1 mm, machined	0,08 – 0,75 mm² (AWG 28 – 18)	7.010.981.001	
Crimp socket 1 mm, machined	0,08 – 0,75 mm² (AWG 28 – 18)	7.010.981.002	
Crimp pin 1 mm, machined	0,14 – 1 mm² (AWG 26 – 17)	7.010.901.001	
Crimp socket 1 mm, machined	0,08 – 0,56 mm² (AWG 28 – 20)	7.010.901.012	
Crimp socket 1 mm, machined	0,34 – 1 mm² (AWG 22 – 17)	7.010.901.002	

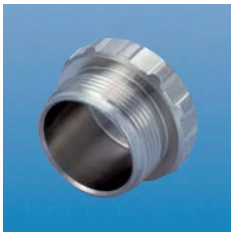
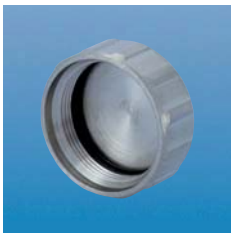
Crimp Tool Settings see page 31 / 32
Please see assembly instructions on page 40

Connectors M 16 / Contacts

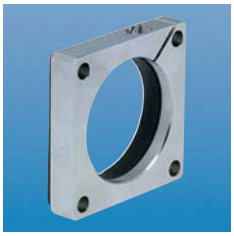
Contacts	Type	Crimp Range	Part Number
	Crimp pin 1,25 mm, machined	0,5 – 1,5 mm² (AWG 20 – 16)	7.010.981.201
	Crimp socket 1,25 mm, machined	0,5 – 1,5 mm² (AWG 20 – 16)	7.010.981.202
	Crimp pin 1,25 mm, machined	0,34 – 1,5 mm² (AWG 20 – 16)	7.010.981.211
	Crimp socket 1,25 mm, machined	0,34 – 1,5 mm² (AWG 20 – 16)	7.010.981.212
	Crimp pin 1,6 mm, machined	0,34 – 1,5 mm² (AWG 22 – 16)	7.010.981.601
	Crimp socket 1,6 mm, machined	0,34 – 1,5 mm² (AWG 22 – 16)	7.010.981.602
	Crimp pin 2 mm, machined	1,0 – 2,5 mm² (AWG 17 – 14)	7.010.982.001
	Crimp socket 2 mm, machined	1,0 – 2,5 mm² (AWG 17 – 14)	7.010.982.002

Crimp Tool Settings see page 31 / 32
Please see assembly instructions on page 40

Dimensions and specifications may be changed without prior notice

Type	Part Number	Accessories
Plastic protective cap for connectors with male thread	7.000.980.161	
for connectors with female thread	7.000.980.162	
Brass protective cap for connectors with female thread	7.010.900.163	
Brass protective cap for connectors with male thread	7.010.900.162	
Brass protective cap with chain for connectors with female thread Length 70 mm	7.010.9S0.705	
Brass protective cap with chain for connectors with male thread Length 70 mm	7.010.9S0.704	

Connectors M 16 / Accessories

Accessories	Type	Part Number
	Crimp tool for manual crimping of machined crimp contacts for signal connectors M 16 and M 23	7.000.900.904
	See page 84 for crimp tool instructions	
	Adaptor flange for Straight Connectors	7.010.900.135
	Conduit adaptor DN 10 Snapflex 16 DN 12 Snapflex 16	7.010.900.200 7.010.900.201 7.010.900.202 7.010.900.203
	EMC-sheet for TWINTUS Flange 20 x 20 for TWINTUS Flange 25 x 25	 7.040.848.101 7.040.848.102
	Plastic protective cap for TWINTUS TWINTUS M 16 TWINTUS M 16 / M 12	 7.000.848.101 7.000.848.102

Dimensions and specifications may be changed without prior notice

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.904)

Part Number	Crimp Contact	Cross Section (mm^2)	AWG	Crimp Tool Setting mm	Locator Setting
7.010.980.801	Crimp pin 0,8 mm	0,08	AWG 28	0,57	10
		0,14	AWG 26	0,60	
		0,25	AWG 24	0,64	
		0,34	AWG 22	0,73	
7.010.980.802	Crimp socket 0,8 mm	0,08	AWG 28	0,57	10
		0,14	AWG 26	0,60	
		0,25	AWG 24	0,64	
		0,34	AWG 22	0,73	
7.010.980.811	Crimp pin 0,8 mm	0,08	AWG 28	0,57	B7
		0,14	AWG 26	0,60	
		0,25	AWG 24	0,64	
		0,34	AWG 22	0,73	
7.010.980.812	Crimp socket 0,8 mm	0,08	AWG 28	0,57	B8
		0,14	AWG 26	0,60	
		0,25	AWG 24	0,64	
		0,34	AWG 22	0,73	
7.010.981.001	Crimp pin1 mm	0,08	AWG 28	0,60	7
		0,14	AWG 26	0,65	
		0,25	AWG 24	0,67	
		0,34	AWG 22	0,71	
		0,56	AWG 20	0,75	
		0,75	AWG 18	0,82	
7.010.981.002	Crimp socket 1 mm	0,08	AWG 28	0,60	8
		0,14	AWG 26	0,63	
		0,25	AWG 24	0,66	
		0,34	AWG 22	0,69	
		0,56	AWG 20	0,75	
		0,75	AWG 18	0,83	
7.010.901.001	Crimp pin 1 mm	0,14	AWG 26	0,70	1
		0,25	AWG 24	0,76	
		0,34	AWG 22	0,82	
		0,50	AWG 20	0,90	
		0,75	AWG 18	1,00	
		1,0	AWG 17	1,10	
7.010.901.012	Crimp socket 1 mm ($0,08\text{-}0,56\ mm^2$)	0,08	AWG 28	0,75	2
		0,14	AWG 26	0,78	
		0,25	AWG 24	0,82	
		0,34	AWG 22	0,86	
		0,56	AWG 20	0,90	

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

See page 40 for crimp tool instructions

Crimp Tool for Connectors M 16

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.904)

Part Number	Crimp Contact	Cross Section (mm^2)	AWG	Crimp Tool Setting mm	Locator Setting
7.010.901.002	Crimp socket 1 mm ($0,34 – 1\ mm^2$)	0,34 0,56 0,75 1,0	AWG 22 AWG 20 AWG 18 AWG 17	0,77 0,82 0,88 0,95	2
7.010.981.201	Crimp pin 1,25 mm	0,5 0,75 1,0 1,5	AWG 20 AWG 18 AWG 17 AWG 16	0,70 0,73 0,79 0,88	2
7.010.981.202	Crimp socket 1,25 mm	0,5 0,75 1,0 1,5	AWG 20 AWG 18 AWG 17 AWG 16	0,70 0,73 0,79 0,88	2
7.010.981.211	Crimp pin 1,25 mm	0,34 0,5 0,75 1,0 1,5	AWG 22 AWG 20 AWG 18 AWG 17 AWG 16	0,80 0,84 0,90 1,00 1,10	B9
7.010.981.212	Crimp socket 1,25 mm	0,34 0,5 0,75 1,0 1,5	AWG 22 AWG 20 AWG 18 AWG 17 AWG 16	1,00 1,04 1,10 1,20 1,30	B10
7.010.981.601	Crimp pin 1,6 mm	0,34 0,56 0,75 1,0 1,5	AWG 22 AWG 20 AWG 18 AWG 17 AWG 16	0,80 0,84 0,90 1,00 1,10	6
7.010.981.602	Crimp socket 1,6 mm	0,34 0,56 0,75 1,0 1,5	AWG 22 AWG 20 AWG 18 AWG 17 AWG 16	0,83 0,90 0,97 1,02 1,10	9
7.010.982.001	Crimp pin 2 mm	1,0 1,5 2,5	AWG 17 AWG 16 AWG 14	1,35 1,45 1,60	4
7.010.982.002	Crimp socket 2 mm	1,0 1,5 2,5	AWG 17 AWG 16 AWG 14	1,35 1,45 1,60	5

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

See page 40 for crimp tool instructions

Dimensions and specifications may be changed without prior notice

TWINTUS

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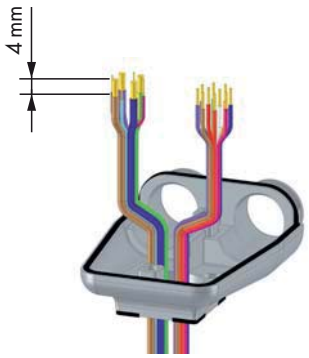

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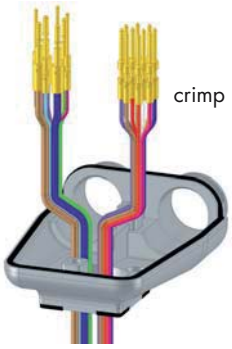

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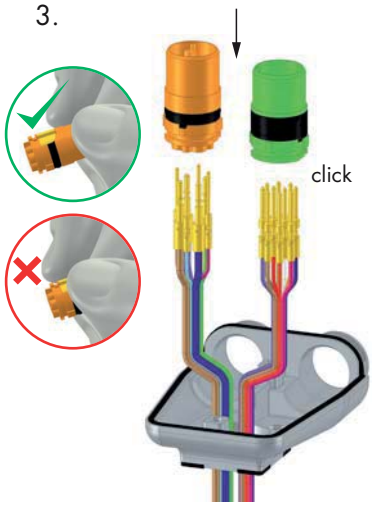

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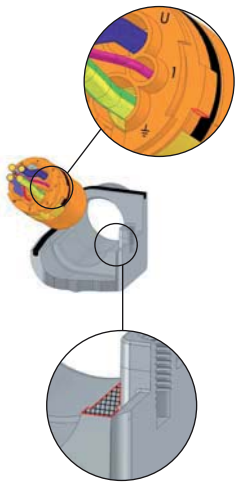

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6.

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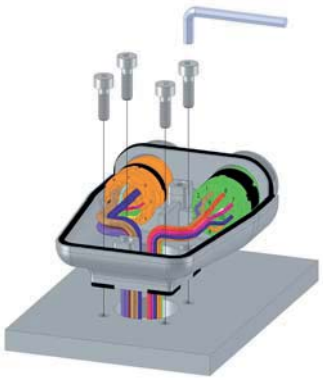

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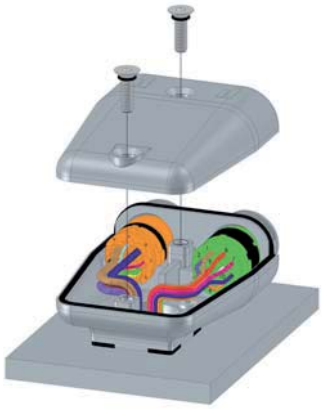
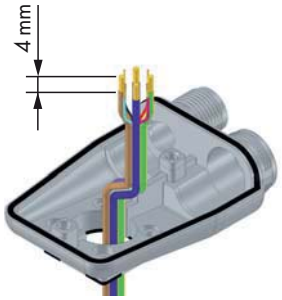


9.

Connectors M 16 / Assembly Instructions

TWINTUS M16 / M12

1.



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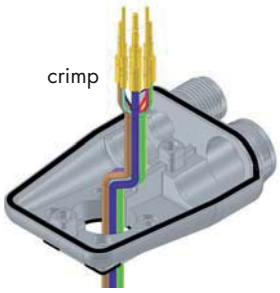

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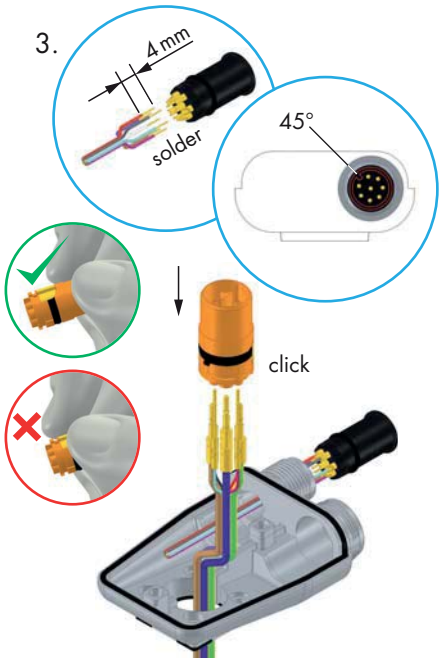

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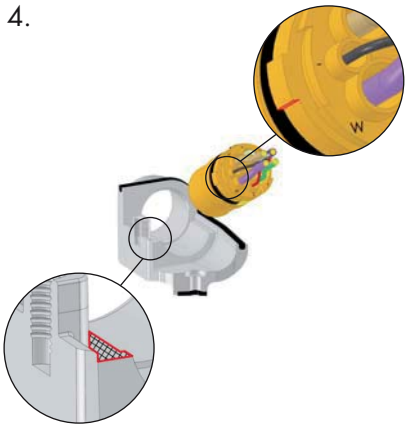

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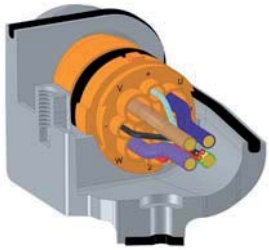

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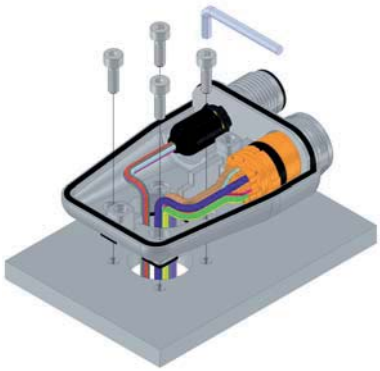

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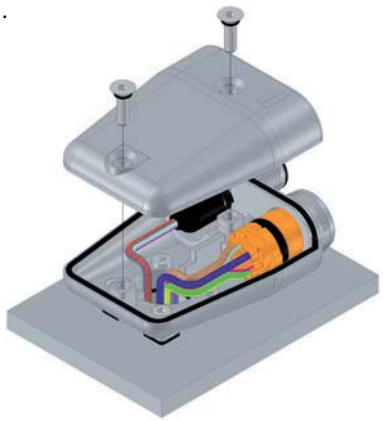

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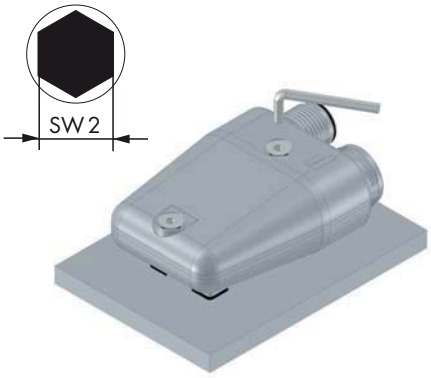
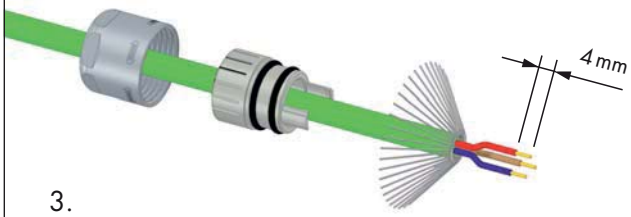


Dimensions and specifications may be changed without prior notice

Female Threaded Connector / Male Threaded Connector

1.

2.



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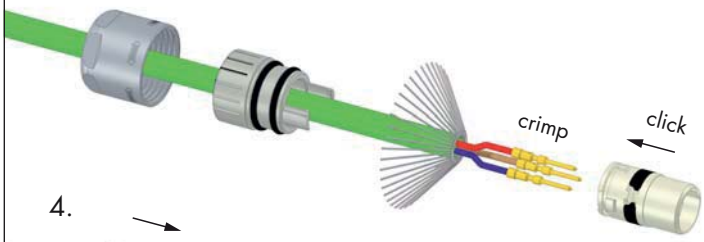

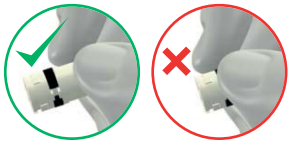

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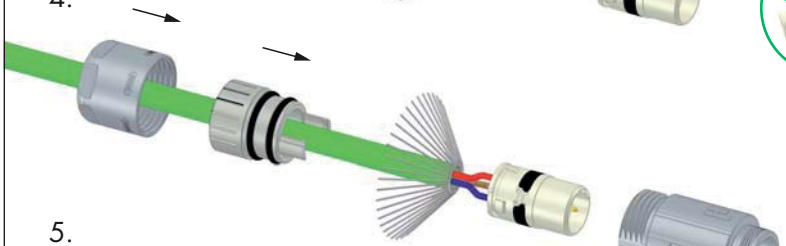

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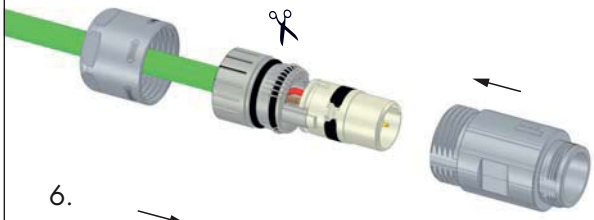

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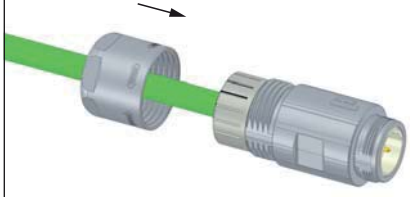

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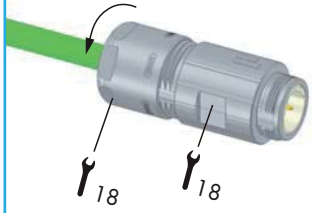


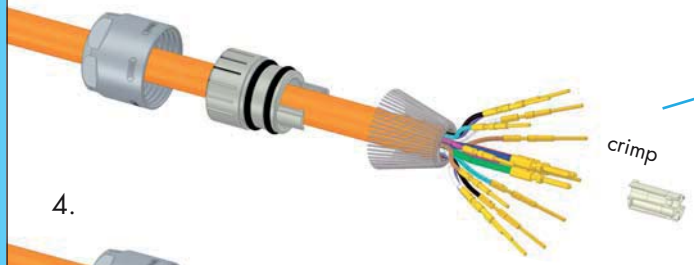
Connectors M 16 / Assembly Instructions

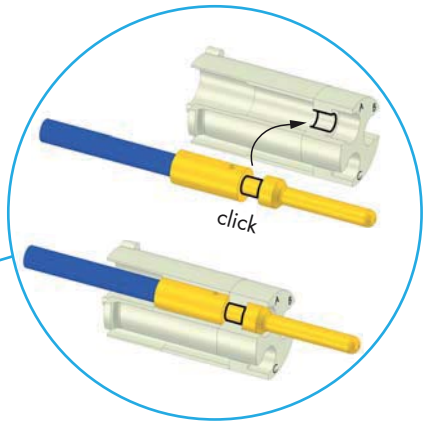
Female Threaded Connector / Male Threaded Connector 12 + 3

1.

2.

3.





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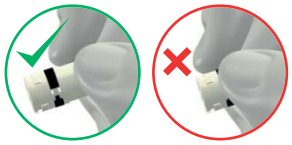

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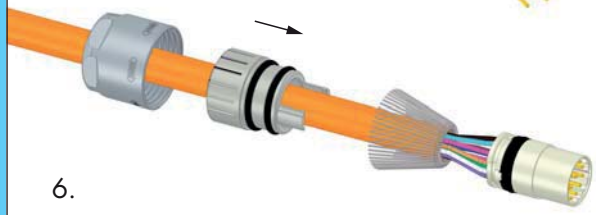

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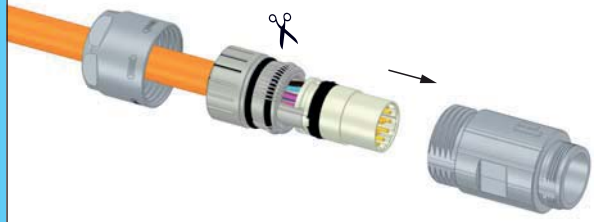

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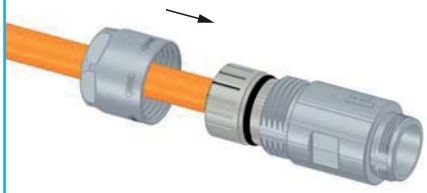


8.

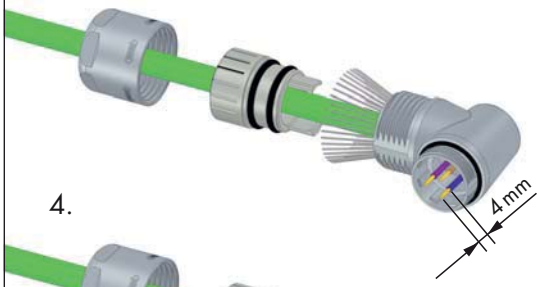
Dimensions and specifications may be changed without prior notice

Right angle connector with positioning

1.

2.

3.



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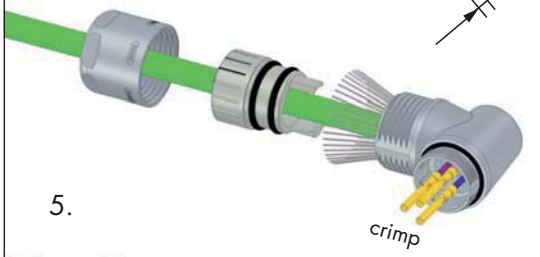

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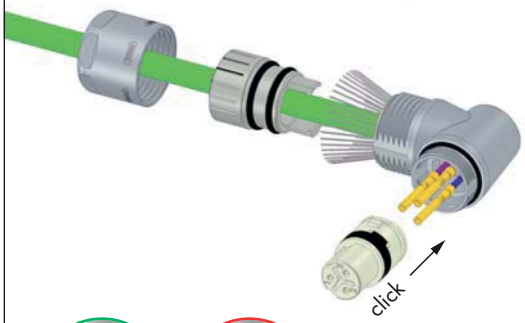

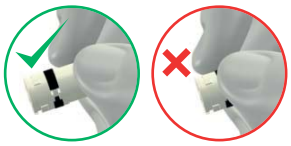

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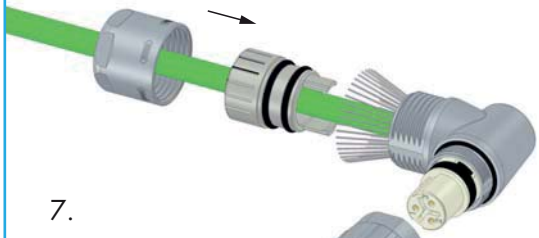


7.

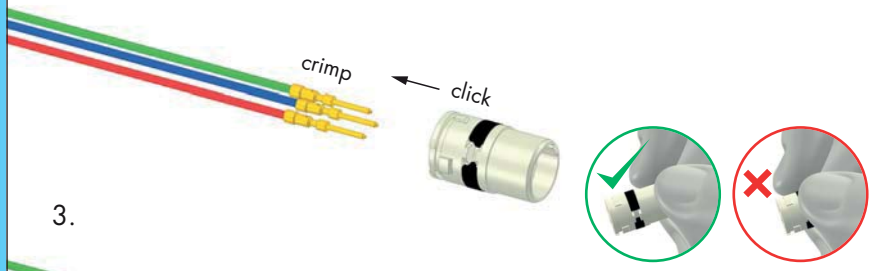
8.

Connectors M 16 / Assembly Instructions

Panel Connector

1.

2.



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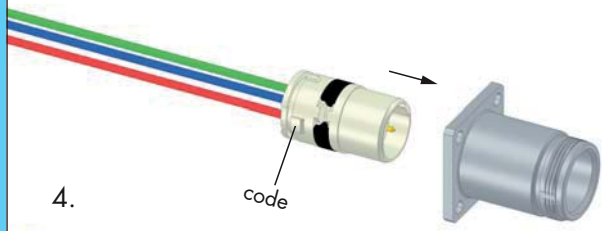

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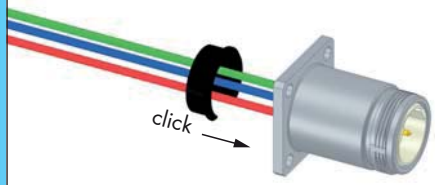
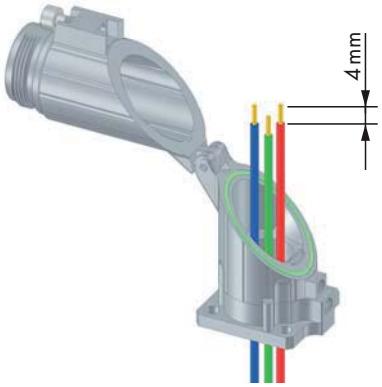


Dimensions and specifications may be changed without prior notice

Right Angle Panel Connector

1.



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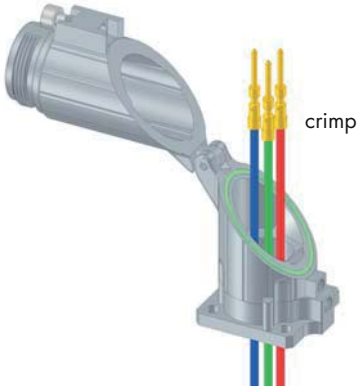

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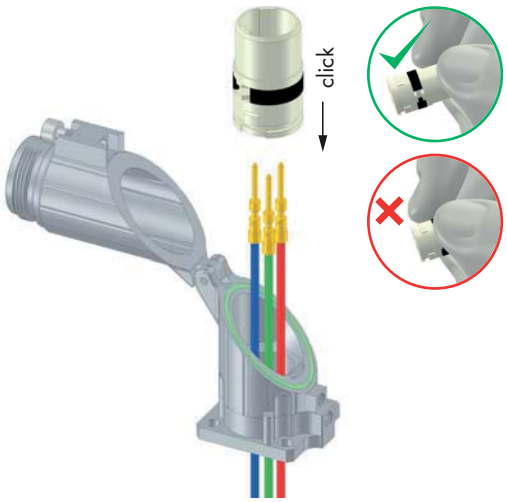

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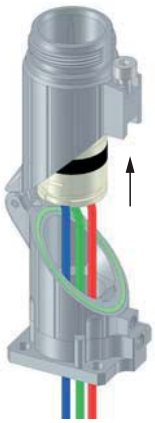

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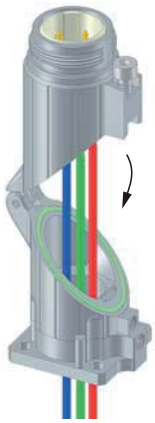

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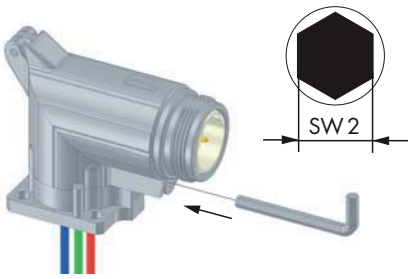

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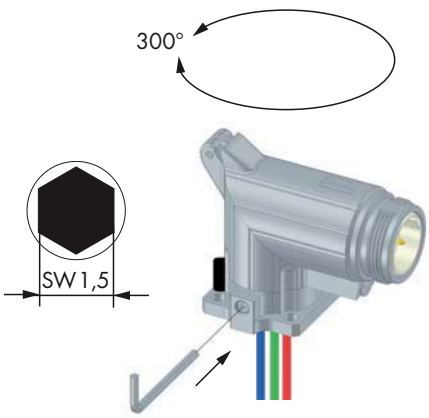
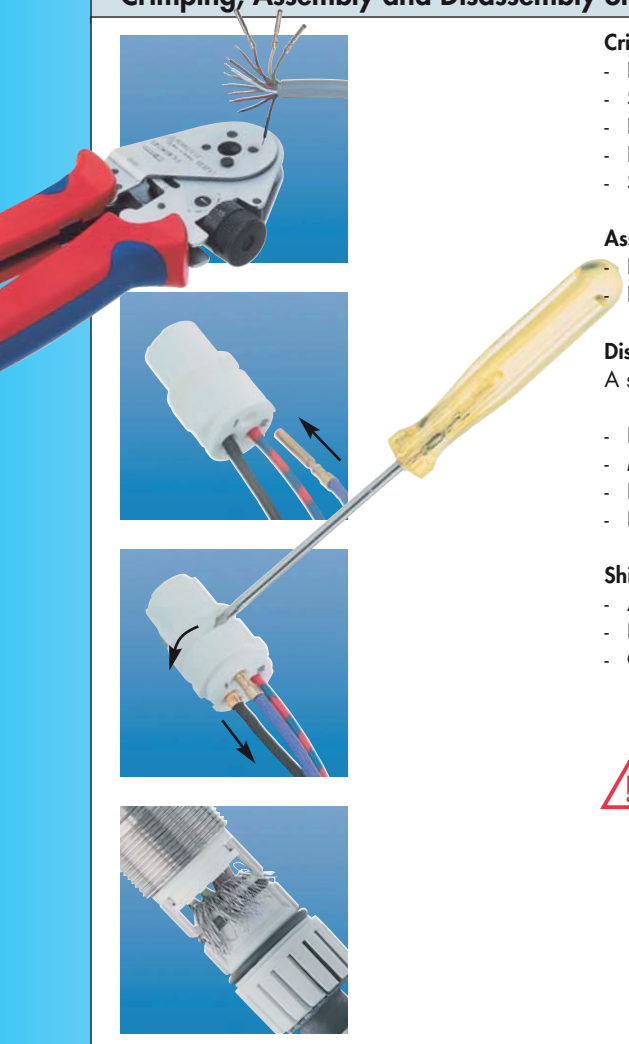


Crimping, Assembly and Disassembly of Contacts

Crimping, Assembly and Disassembly of Contacts



Crimping
- Remove conductor insulation 4 mm (.16") max.
- Select appropriate Crimp tool setting (see page 31 - 32)
- Push crimp contact into opening of crimping tool
- Insert stripped wire into the funnel shaped end of the crimp contact
- Squeeze handles of crimping tool together connect contact to wire

Assembly
- Remove crimped assembly and pull on wire to test connection
- Push into desired position of insert

Disassembly of Contacts from Insert
A small screwdriver is needed to remove the contacts from the insert.

- Release the white ring by a screwdriver out of the insert
- Move the misplaced contacts out of the insert
- Enter the ring back into the insert
- Push the contacts back into insert

Shielding
- Assemble strain relief insert with insert
- Fold stranding of the shield back over the first O-Ring of the strain relief insert
- Cut back the overextending braid

The stranding of the shield is not allowed to touch the second O-Ring.
Otherwise the assembly may not be proof.

Dimensions and specifications may be changed without prior notice

M 23 Fast Ethernet PoE

Product Overview

Housings page 44

Inserts page 46

Accessories page 51

Dimensions and specifications may be changed without prior notice

M 23 Fast Ethernet PoE Connectors

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy Die Cast
Housing surface	Nickel plated
Inserts (for contacts)	PBT UL-94 V0, PA6
Contacts	Brass Alloy
Contact surface at point of contact	Nickel and gold plated (0,25µm Au)
Minimum mating cycles	> 1000
Seals / O-Rings	Perbunan NBR (Standard)
Temperature range	-40° C – 125° C (-40 °F – 257 °F)
Type of contacts	Crimp, dip-solder (PCB)
Protection	IP 67 per EN 60 529 (connected), NEMA 4x
Cable diameter range	11 – 17 mm (.43" – .67")

Electrical Data

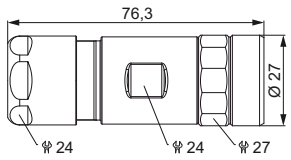
Number of positions	20 (4 x 2 + 12)	
Number of contacts	4 x 2	12
Contact-Ø [mm]	0,6	1
AWG [mm²]	0,08 – 0,34	0,14 – 1 / 1,5
Nominal current [1)] [A]	2	8*)
Nominal voltage [2)] [V~] degree of protection 3 [4)]	60	160
Test voltage (Breakdown voltage) [3)] [V~]	500	1500
Insulation resistance [MΩ]	> 10^6	> 10^6
Max. contact resistance [mΩ]	3	3
Impedance [Ω] (at 100MHz)	100	–

[1), 2), 3), 4)] See Technical Information page 14 *) for single contacts even 10 A possible

M 23 Fast Ethernet PoE Connectors / Housing

Straight Female Connector

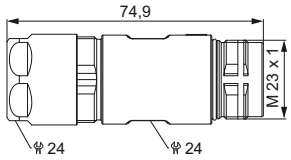
Cable-Ø	Part Number
11-17 mm (.43 – .67")	.....7.108.600.000



Inserts page 46 • Assembly instructions page 48

Straight Connector, Male Thread

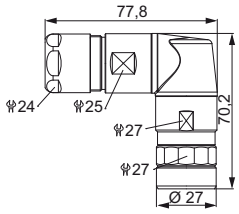
Cable-Ø	Part Number
11-17 mm (.43 – .67")	.....7.208.600.000



Inserts page 46 • Assembly instructions page 48

Right Angle Connector, Female Thread , rotatable

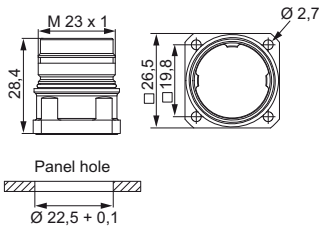
Cable-Ø	Part Number
11-17 mm (.43 – .67")	.....7.308.600.000



Inserts page 46 • Assembly instructions page 50

Panel Connector, Male Thread, Front Mounting

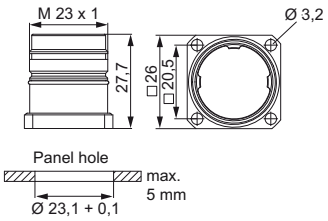
Type	Part Number
4 x holes Ø 2,7 mm (.11")	..7.408.000.000
Flange 26 x 26 mm	



Inserts page 46 • Assembly instructions page 49

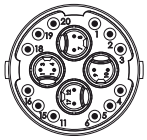
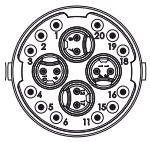
Dimensions and specifications may be changed without prior notice

Type	Part Number	Panel Connector, Rear Mounting
4 x holes Ø 3,2 mm (.13")	..7.468.000.000	
Flange 26 x 26 mm		



Inserts page 46 • Assembly instructions page 49

M 23 Fast Ethernet PoE Connectors / Inserts / Pinouts / Contacts

Inserts (4 x 2) + 12	Type	Part Number Pins	Part Number Sockets
 Insert pin mating view	Insert without contacts	7.003.920.101	7.003.920.102
	Insert with dip solder contacts	7.001.920.107	7.001.920.108
 Insert socket mating view	**Required Contacts**		
	8 x 0,6	7.010.980.641	7.010.980.602
	12 x 1	7.010.901.045	7.010.901.002
		7.010.901.049	7.010.901.012
			7.010.901.022
			7.010.901.046

Contacts	Type	Part Number	Part Number
	Crimp pin 0,6 mm, machined	0,08 – 0,34 mm²	7.010.980.641
	Crimp socket 0,6 mm, machined	0,08 – 0,34 mm²	7.010.980.602
	Crimp pin 1 mm, machined	0,14 – 1 mm²	7.010.901.049
		0,75 – 1,5 mm²	7.010.901.045
	Crimp socket 1 mm, machined	0,08 – 0,56 mm²	7.010.901.012
		0,34 – 1 mm²	7.010.901.002
		0,75 – 1,5 mm²	7.010.901.022
		1 – 1,75 mm²	7.010.901.046

See page 47 for crimp tool instructions and proper setting

Dimensions and specifications may be changed without prior notice

Crimp Tool Settings for crimp contacts M 23 Fast Ethernet PoE

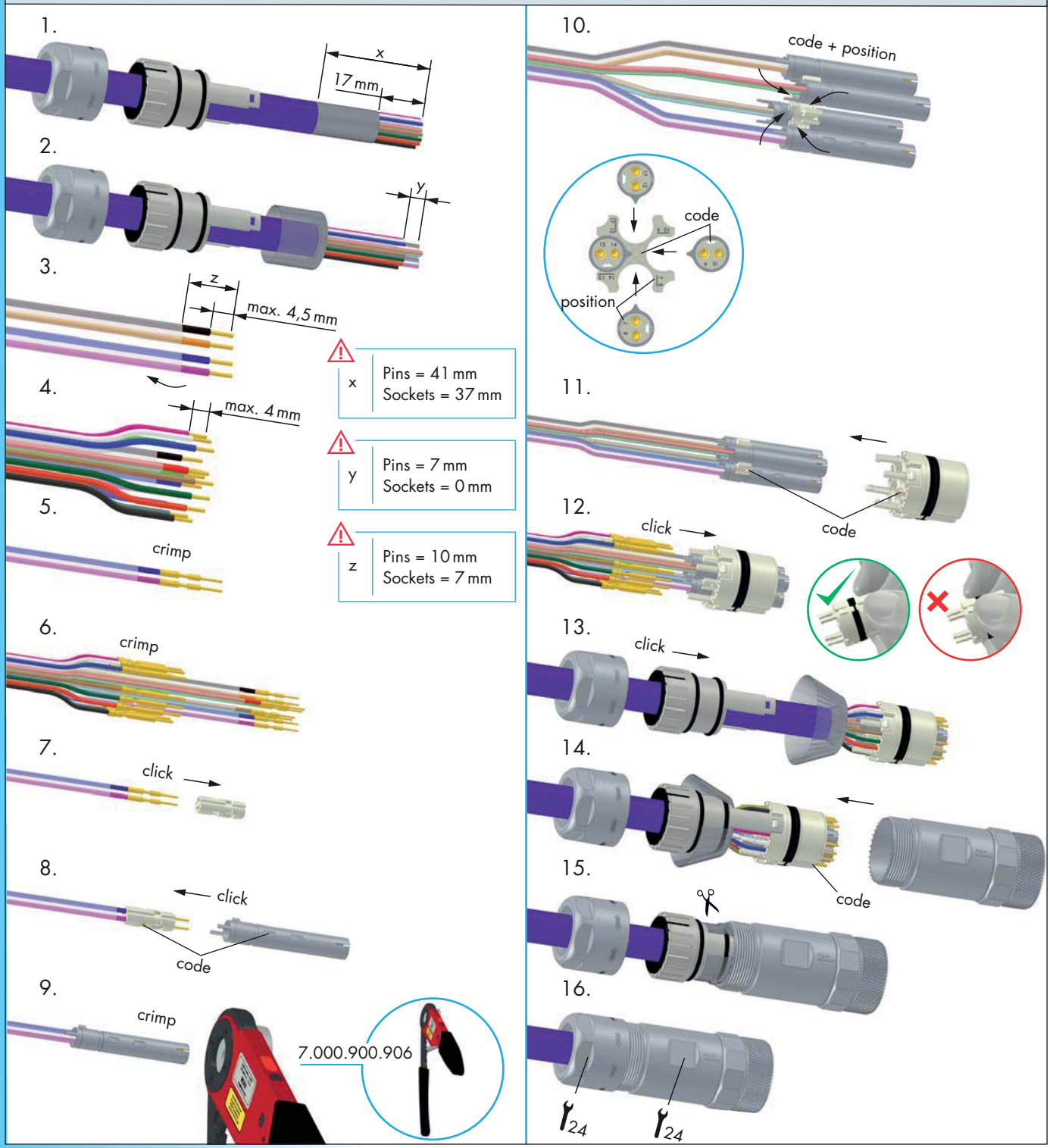
Crimp Tool Settings for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.907)

Part Number	Crimp Contact	Cross Section (mm²)	AWG	Crimp Tool Setting mm	Locator Setting
7.010.980.641	Crimp pin 0,6 mm (0,08 – 0,34 mm²)	0,08 0,14 0,25 0,34	AWG 28 AWG 26 AWG 24 AWG 22	0,57 0,60 0,64 0,73	B 1
7.010.980.602	Crimp socket 0,6 mm (0,08 – 0,34 mm²)	0,08 0,14 0,25 0,34	AWG 28 AWG 26 AWG 24 AWG 22	0,57 0,60 0,64 0,73	B 2
7.010.901.049	Crimp pin 1 mm (0,14 – 1,0 mm²)	0,14 0,25 0,34 0,56 0,75 1,00	AWG 26 AWG 24 AWG 22 AWG 20 AWG 18 AWG 17	0,70 0,76 0,82 0,90 1,00 1,10	B 3
7.010.901.045	Crimp pin 1 mm (0,75 – 1,5 mm²)	0,75 1,00 1,50	AWG 18 AWG 17 AWG 16	0,80 0,85 0,95	B 5
7.010.901.012	Crimp socket 1 mm (0,08 – 0,56 mm²)	0,08 0,14 0,25 0,34 0,56	AWG 28 AWG 26 AWG 24 AWG 22 AWG 20	0,75 0,78 0,82 0,88 0,90	B 4
7.010.901.002	Crimp socket 1 mm (0,34– 1,0 mm²)	0,34 0,56 0,75 1,00	AWG 22 AWG 20 AWG 18 AWG 17	0,77 0,82 0,88 0,95	B 4
7.010.901.022	Crimp socket 1 mm (0,75 – 1,5 mm²)	0,75 1,00 1,50	AWG 18 AWG 17 AWG 16	0,80 0,86 0,95	B 4
7.010.901.046	Crimp socket 1 mm (1 – 1,75 mm²)	1,00 1,50 1,75	AWG 17 AWG 16 AWG 15	0,85 0,95 1,00	B 6

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

M 23 Fast Ethernet PoE Connectors / Assembly Instructions

Straight Connector Male / Female Thread

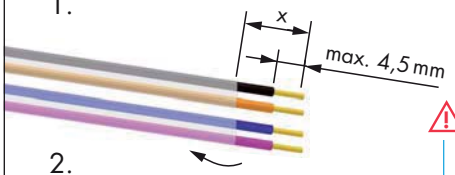


x	Pins = 41 mm Sockets = 37 mm
y	Pins = 7 mm Sockets = 0 mm
z	Pins = 10 mm Sockets = 7 mm

Dimensions and specifications may be changed without prior notice

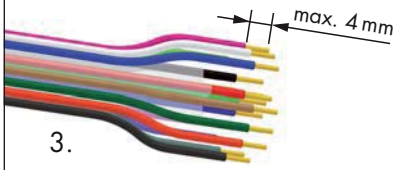
Panel Connector

1.



x | Pins = 10 mm
Sockets = 7 mm

2.

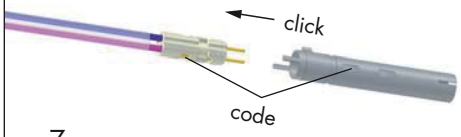


3.

4.

5.

6.



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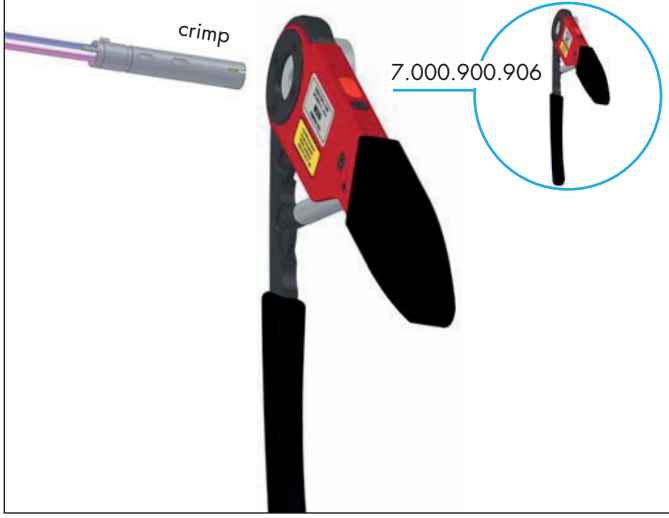

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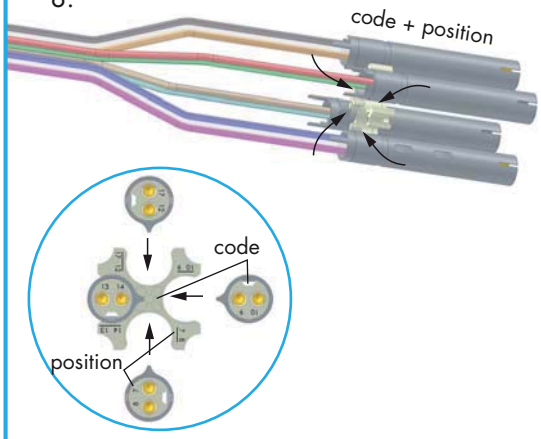

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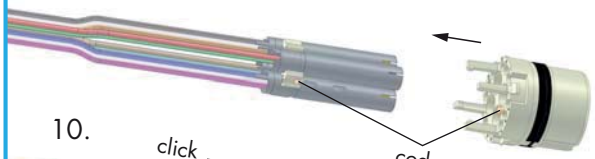

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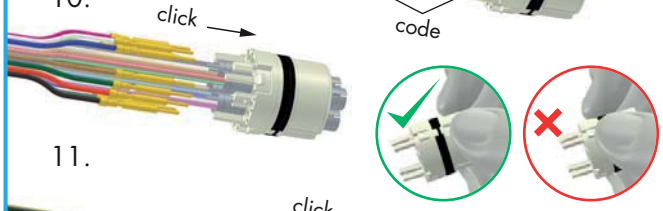
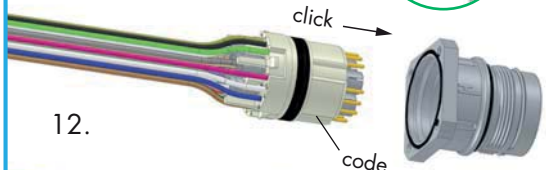
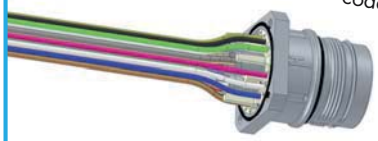


11.

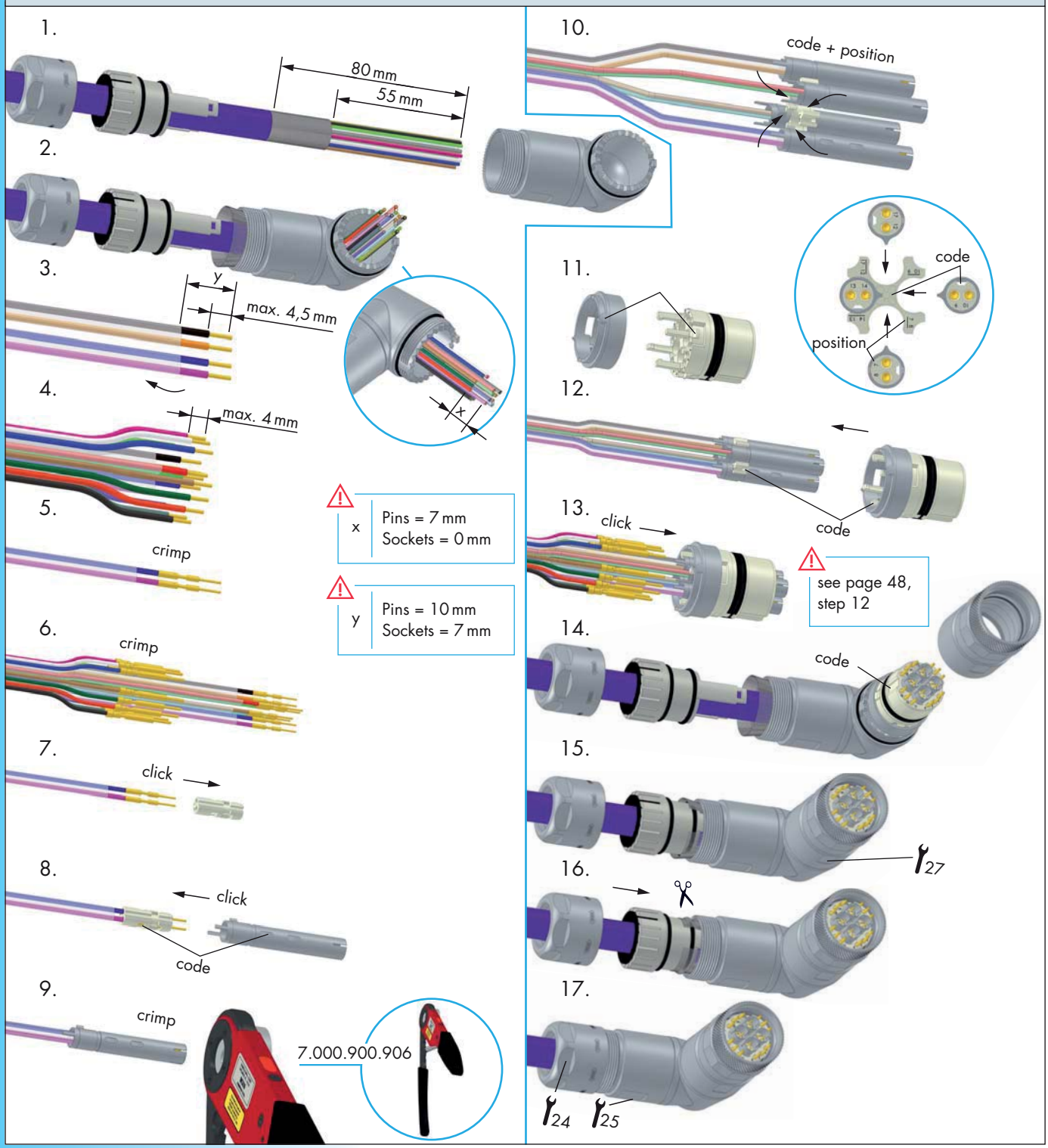


12.

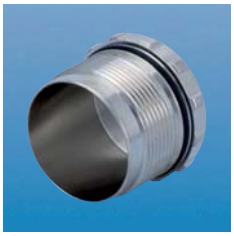
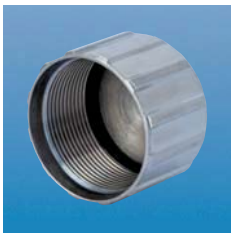


M 23 Fast Ethernet PoE Connectors / Assembly Instructions

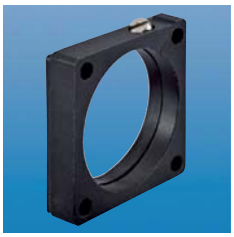
Right Angle Connector



Dimensions and specifications may be changed without prior notice

Type	Part Number	Accessories
Plastic protective cap for connectors with male thread	7.000.900.101	
for connectors with female thread	7.000.900.102	
Brass protective cap for connectors with female thread	7.010.900.183	
Brass protective cap with chain for connectors with female thread		
Length 70 mm	7.010.9S0.783	
Length 100 mm	7.010.9S1.083	
Brass protective cap for connectors with male thread	7.010.908.102	
Conduit adaptor Snapflex 16	7.010.900.204	
DN 12	7.010.900.205	
Snapflex 20	7.010.900.206	
DN 14	7.010.900.207	
Snapflex 25	7.010.900.208	
DN 17	7.010.900.209	
Adaptor flange for Straight Connectors	7.010.900.128	

M 23 Fast Ethernet PoE Connectors / Accessories

Accessories	Type	Part Number
	Adapter flange for moulded connectors	7.010.900.139
	Multi-Bus adapter wired through I:I (excentric) Multi-Bus I, Female Thread, Sockets 17pole Multi-Bus II, Male Thread, Pins .... Multi-Bus I, Female Thread, Pins, 17pole Multi-Bus II, Male Thread, Sockets	 7.010.900.143 7.010.900.144
	Control Cabinet adapter for Multibus II - AIDA Rear Mounting, central locking	 7.010.900.145
	I / O adapter module to scan or feed signals Rear Mounting, central locking	 7.010.900.146
	Manual Crimp tool for EMC sleeves M 23 Fast Ethernet PoE ..	7.000.900.906
	Manual Crimp tool for turned contacts M 23 Fast Ethernet PoE	 7.000.900.907

Dimensions and specifications may be changed without prior notice

Connectors M 23 RJ 45

Housings

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Accessories

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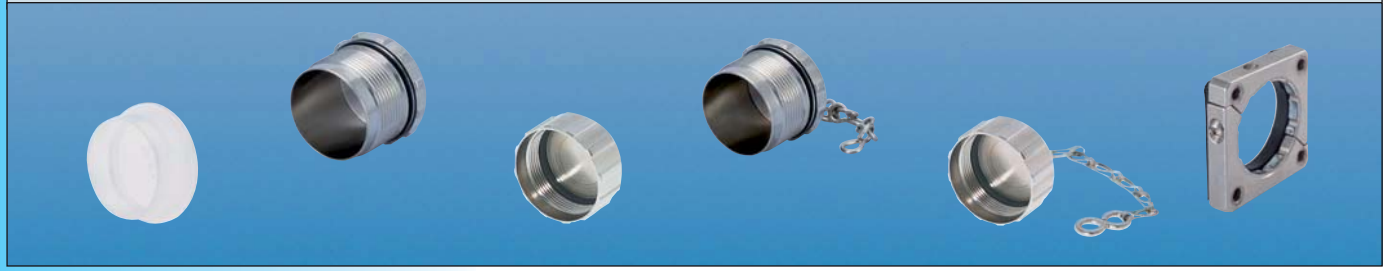


Dimensions and specifications may be changed without prior notice

M 23 RJ 45 Control Signal Connectors

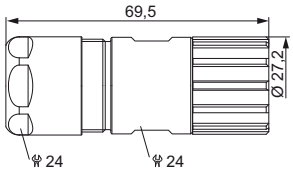
Technical Data	Materials and Technical Data
Housing	Brass Alloy, Die Cast
Housing Surface	Nickel Plated
Inserts (for contacts)	PBT UL-94 V0, PA 6
Contacts	Brass Alloy
Contact Surface at point of contact	Depends on RJ 45 type used
Seals / O-Rings	NBR / FKM (Viton)
Temperature Range	Depends on RJ 45 type used
Degree of Protection	IP 67 / IP 69 K per EN 60529 (mated)
Cable diameter range	3 - 7 / 7 - 12 / 11 - 17mm
Number of Positions	4 / 6 / 8 poles, optional 4 + 2 / 6 + 2 / 8 + 2
Nominal Current [1] [A]	Depends on RJ 45 type used
Nominal Voltage [2] [V~]	Depends on RJ 45 type used
Test Voltage [V~]	Depends on RJ 45 type used
Insulation Resistance [MΩ]	Depends on RJ 45 type used
Max. Crossover Resistance [mΩ]	Depends on RJ 45 type used
Max. Data Rate	Depends on RJ 45 type used

[1], [2] See Technical Information page 14

Connectors M 23 RJ 45 / Housing

Straight Connector Female Thread

Cable-Ø	Part Number
3 – 7 mm (.12 - .28")	7.R10.400.000



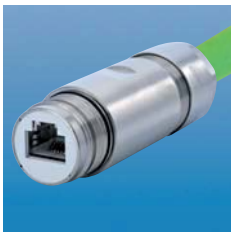
Connector with insert for patch cable

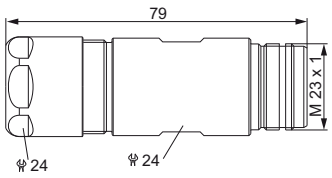
Suitable patch cable and plugs can be recommended

Assembly instructions page 61

Straight Connector Male Thread

Cable-Ø	Part Number
3 – 7 mm (.12 - .28")	7.R20.408.000



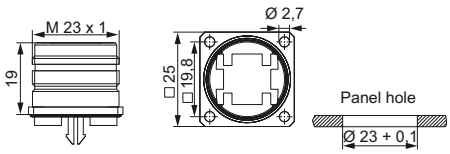


Incl. 8 poles coupler, fully occupied

Assembly instructions page 62

Panel Connector Front Mount, dip solder insert

Type	Part Number
4 holes 2.7 mm, Flange	7.R40.008.000
4 holes 2.7 mm, Flange	7.R40.082.000

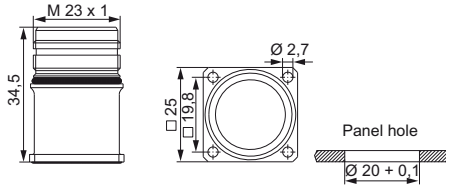


Incl. 8 poles dip solder insert

Incl. 8 + 2 poles dip solder insert

Panel Connector, Front Mount

Type	Part Number
with vibration protection	
4 holes 2.7 mm, Flange	7.R41.008.000



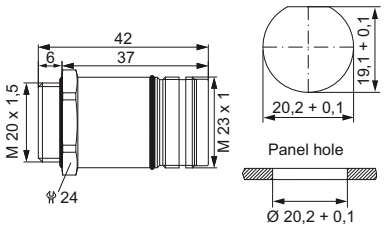
Incl. 8 poles coupler, fully occupied

Dimensions and specifications may be changed without prior notice

Type	Part Number	Single Hole Panel Connector

Front Mount
M 20 x1,5 thread.....7.R42.008.000
Incl. 8 poles coupler, fully occupied

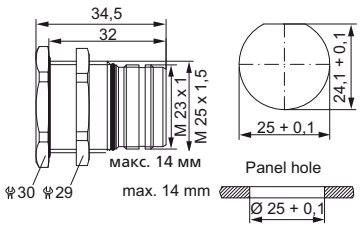
Optional:
Gasket M 20 x 1,5, Locking Nut



Type	Part Number	Single Hole Panel Connector

Rear Mount
M 25 x 1,5 thread 7.R50.008.000
Incl. 8 poles coupler, fully occupied

M 25 x 1,5 Locking Nut included

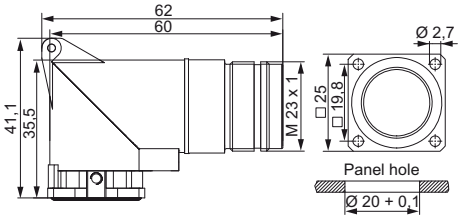


Type	Part Number	Right Angle Panel Connector, Male Thread

300° rotatable, locking screw at flange
4 holes 2.7 mm, Flange 7.R43.008.000
Incl. 8 poles coupler, fully occupied

Optional:
Gasket

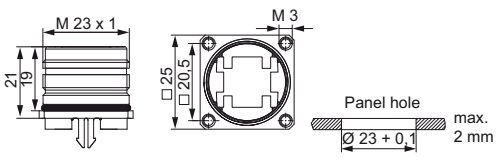
Simple installation with M 2.5 screws



Type	Part Number	Panel Connector Rear Mount, dip solder insert

with vibration protection
4x M 3 thread, Flange 7.R45.008.000
Incl. 8 poles dip solder insert

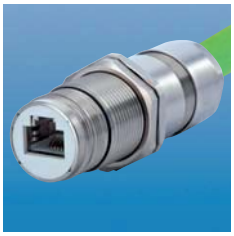
4x M 3 thread, Flange 7.R45.082.000
Incl. 8 + 2 poles dip solder insert

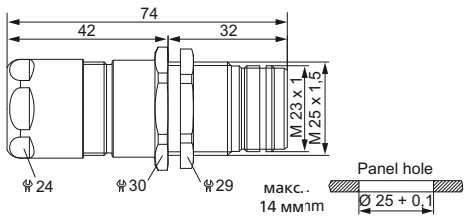


Connectors M 23 RJ 45 / Housing

Single Hole Panel Connector with strain relief

Cable–Ø	Part Number



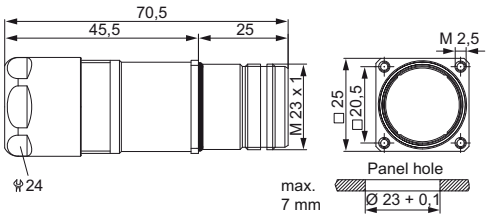


Single Hole, Rear Mount , M 25 x 1,5 thread
3 – 7 mm (.12 - .28") 7.R52.408.000
Incl. 8 poles coupler, fully occupied

M 25 x 1,5 Locking Nut included

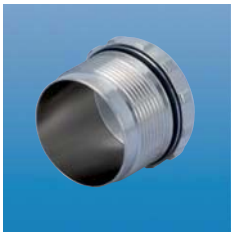
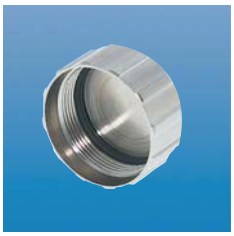
Panel Connector with strain relief

Cable–Ø	Part Number



4x M 2,5 thread, Flange, Rear Mount
3 – 7 mm (.12 - .28") 7.R47.408.000
Incl. 8 poles coupler, fully occupied

Dimensions and specifications may be changed without prior notice

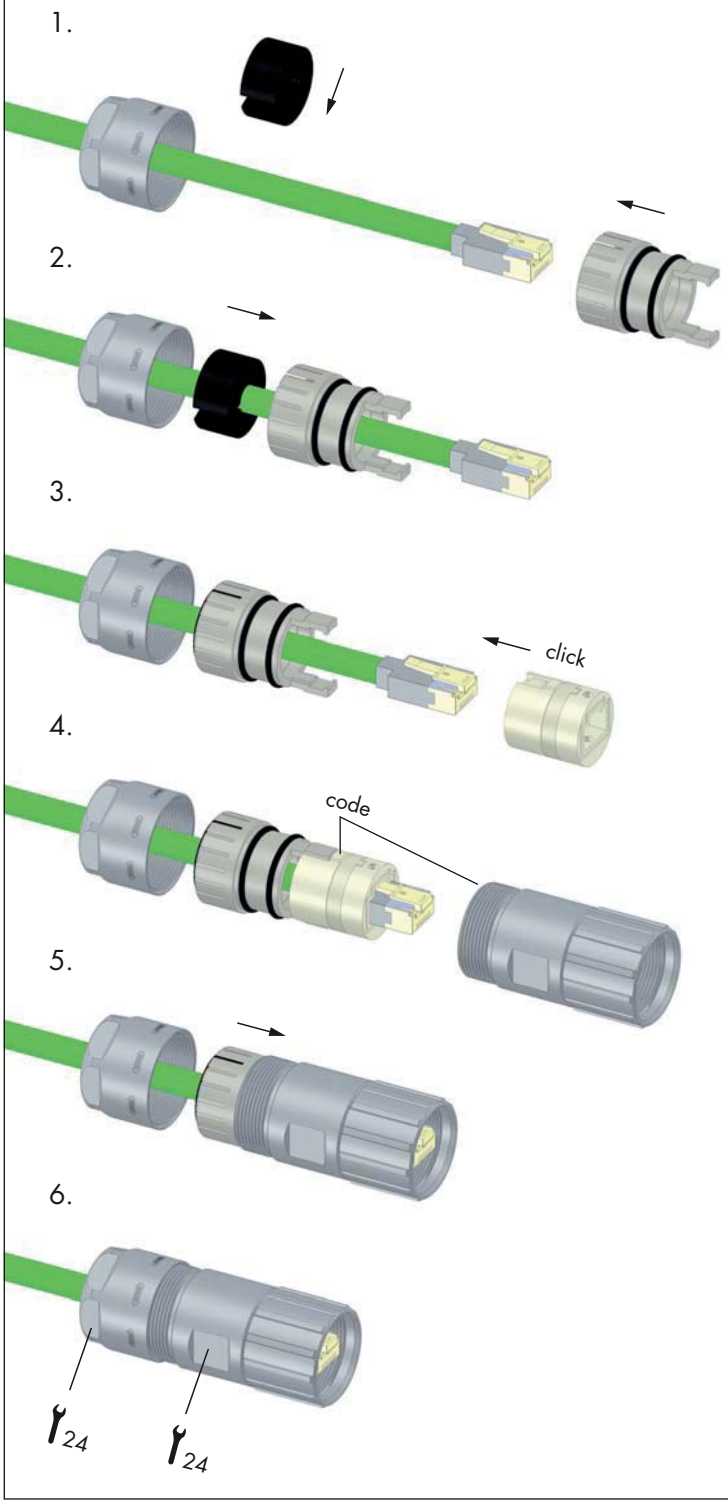
Type	Part Number	Accessories
Plastic protective cap for connectors with male thread	7.000.900.101	
for connectors with female thread	7.000.900.102	
Brass protective cap for connectors with female thread	7.010.900.183	
Brass protective cap for connectors with male thread	7.010.900.102	
Brass protective cap with chain for connectors with female thread Length 70 mm	7.010.9S0.783	
Length 100 mm	7.010.9S1.083	
Brass protective cap with chain for connectors with male thread Length 70 mm	7.010.9S0.702	
Length 100 mm	7.010.9S1.002	
Adapter flange for straight connectors	7.010.900.128	

Connectors M 23 RJ 45 / Accessories

Accessories	Type	Part Number
	Adapter for Conduit Fittings	Snapflex 16 ..... 7.010.900.204 DN 12 ..... 7.010.900.205 Snapflex 20 ..... 7.010.900.206 DN 14 ..... 7.010.900.207 Snapflex 25 ..... 7.010.900.208 DN 17 ..... 7.010.900.209
	Suitable patch cable	on request
	Field attachable RJ45 connector	8-pole ..... A7RJ-081M41 8+2-pole A7RJ-821M51

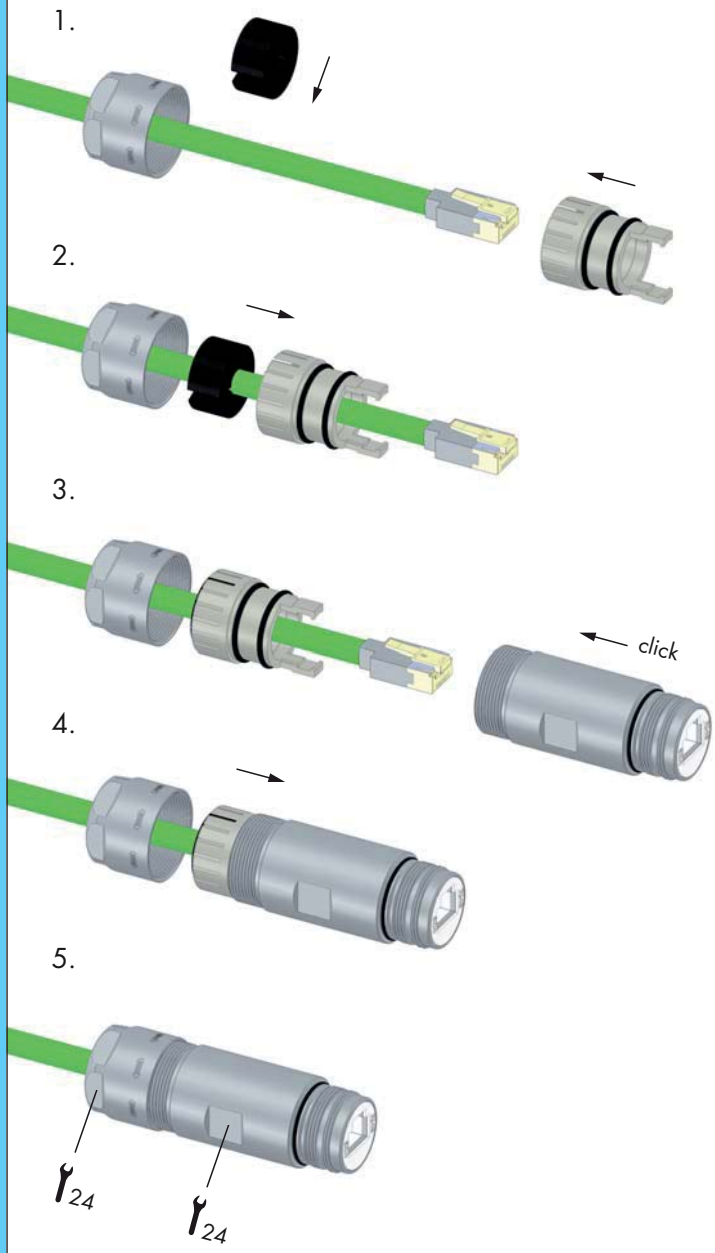
Dimensions and specifications may be changed without prior notice

Straight Connector, Female Thread



Connectors M 23 RJ 45 / Assembly Instructions

Male Threaded Connector



Dimensions and specifications may be changed without prior notice

Signal Connectors M 23

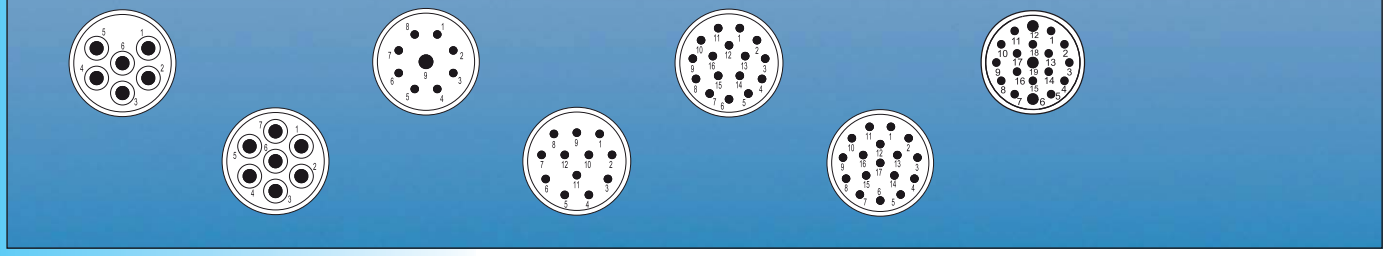
Product Overview

Housings

page 66

Inserts

page 74



Accessories

page 82

Dimensions and specifications may be changed without prior notice

M 23 Signal Connectors

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy Die Cast
Housing surface	Nickel plated other surface upon request
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT Fire protection class V-0
Contacts	Brass Alloy
Contact surface at point of contact	Nickel and gold plated (0,25µm Au)
Minimum mating cycles	> 1000
Seals / O-Rings	Buna-N standard optional Viton® (Viton is a registered trademark of DuPont)
Temperature range	-40° C – 125° C (-40 °F – 257 °F)
Type of contacts	Crimp, solder, dip-solder (PCB)
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x
Cable diameter range	3 – 17 mm (.12 – .67")

Electrical Data

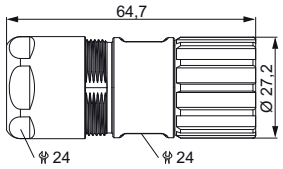
Number of positions	6	7	9 (8 + 1)	12	16	17	19 (16 + 3)
Number of contacts	6	7	8 1	12	16	17	16 3
Contact-Ø [mm]	2	2	1 2	1	1	1	1 1,5
Nominal current [1] [A]	20	20	8 20	8	8	8	8 10
Nominal voltage [2] [V~] Degree of Protection 3 [3]	300	300	200	200	160	160	100
Test voltage (Breakdown voltage) [4] [V~]	2500	2500	2500	2500	1500	1500	1500
Insulation resistance [MΩ]	> 10^{10}	> 10^{10}	> 10^{10}	> 10^{10}	> 10^{6}	> 10^{6}	> 10^{6}
Max. contact resistance [mΩ]	3	3	3	3	3	3	3

[1], [2], [3], [4] See Technical Informations page 14

Signal Connectors M 23 / Housing

Straight Connector, Female Thread

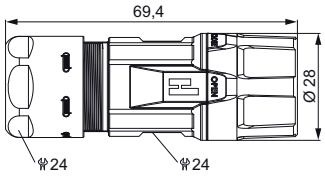
Cable-Ø	Part Number
3 – 7 mm (.12 – .28“)	7.106.400.000
7 – 12 mm (.28 – .47“)	7.106.500.000
11 – 17 mm (.44 – .67“)	7.106.600.000



Contacts and inserts page 74 • Assembly instructions page 88

Straight Connector, Female Thread TWILOCK / TWILOCK-S *

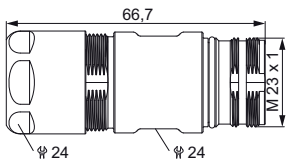
Cable-Ø	Part Number
3 – 7 mm (.12 – .28“)	7.166.400.000
7 – 12 mm (.24 – .47“)	7.166.500.000
11 – 17 mm (.43 – .67“)	7.166.600.000
*** Compatible to Speedtec**	
3 – 7 mm (.12 – .28“)	7.166.400.00S
7 – 12 mm (.24 – .47“)	7.166.500.00S
11 – 17 mm (.43 – .67“)	7.166.600.00S



Contacts and inserts page 74 • Assembly instructions page 88

Straight Connector, Male Thread

Cable-Ø	Part Number
3 – 7 mm (.12 – .28“)	7.206.400.000
7 – 12 mm (.28 – .47“)	7.206.500.000
11 – 17 mm (.44 – .67“)	7.206.600.000

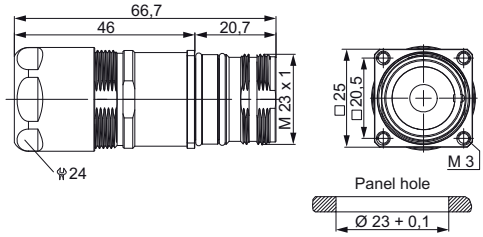


Contacts and inserts page 74 • Assembly instructions page 88

Panel Connector, Male Thread, with Strain Relief

Cable-Ø	Part Number
4 threads M 3, rear mounting	
3 – 7 mm (.12 – .28“)	7.476.400.000
7 – 12 mm (.28 – .47“)	7.476.500.000
11 – 17 mm (.44 – .67“)	7.476.600.000

Optional: Flat gasket



Contacts and inserts page 74 • Assembly instructions page 88

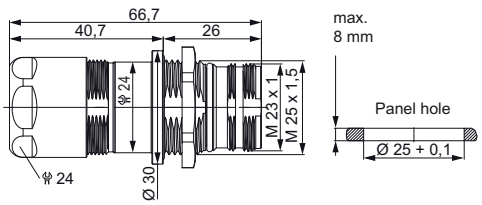
Dimensions and specifications may be changed without prior notice

Panel Connector, Male Thread, with Strain Relief

Cable-Ø	Part Number
Rear mounting, M 25 x 1,5 single hole mounted	
3 – 7 mm (.12 – .28“)	7.486.400.000
7 – 12 mm (.28 – .47“)	7.486.500.000
11 – 17 mm (.44 – .67“)	7.486.600.000

Including jam nut M 25 x 1,5

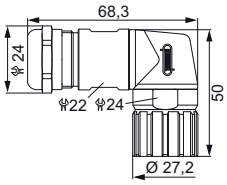
Contacts and inserts page 74 • Assembly instructions page 88



Right Angle Connector, Female Thread with positioning

Cable-Ø	Part Number
3 – 7 mm (.12 – .28“)	7.300.300.000
5 – 10 mm (.20 – .39“)	7.300.400.000
7 – 12 mm (.28 – .47“)	7.300.500.000
10 – 14 mm (.39 – .55“)	7.300.600.000

Contacts and inserts page 74 • Assembly instructions page 89



Right Angle Connector, Female Thread, EMC with positioning

Cable-Ø	Part Number
7 – 12 mm (.28 – .47“)	7.301.500.000
10 – 14 mm (.39 – .55“)	7.301.600.000

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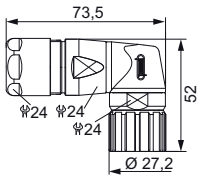

Right Angle Connector, EMC, rotating

Cable-Ø	Part Number
7 – 12 mm (.28 – .47“)	7.306.500.000
11 – 17 mm (.43 – .67“)	7.306.600.000

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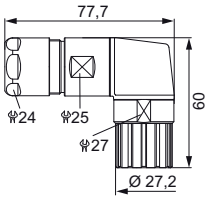
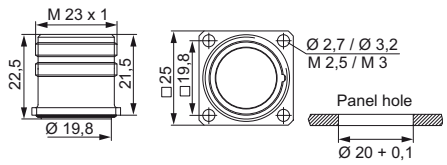


Signal Connectors M 23 / Housing

Panel Connector, Male Thread, Front Mounting

Type	Part Number
4 holes Ø 3,2 mm (.13")	7.400.000.000
4 threads M 3	7.402.000.000
4 holes Ø 2,7 mm (.11")	7.404.000.000
4 threads M 2,5	7.406.000.000

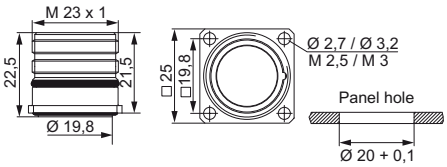


Optional:
Flat gasket

Contacts and inserts page 74 • Assembly instructions page 91 / 92

Panel Connector, Male Thread, Front Mounting

Type	Part Number
With anti-vibration O-Ring	
4 holes Ø 3,2 mm (.13")	7.410.000.000
4 threads M 3	7.412.000.000
4 holes Ø 2,7 mm (.11")	7.414.000.000
4 threads M 2,5	7.416.000.000

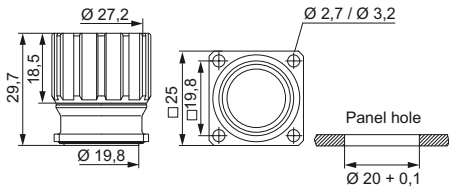


Optional: Flat gasket

Contacts and inserts page 74 • Assembly instructions page 91 / 92

Panel Connector, Female Thread, with knurled Nut

Type	Part Number
Without coding option	
4 holes Ø 3,2 mm (.13")	7.440.000.000
4 holes Ø 2,7 mm (.11")	7.444.000.000

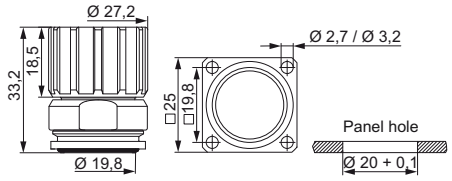


Optional:
Flat gasket

Contacts and inserts page 74 • Assembly instructions page 91 / 92

Panel Connector, Female Thread, with knurled Nut

Type	Part Number
With coding option (8 x 45°)	
4 holes Ø 3,2 mm (.13")	7.448.000.000
4 holes Ø 2,7 mm (.11")	7.449.000.000



Optional:
Flat gasket

Contacts and inserts page 74 • Assembly instructions page 91 / 92

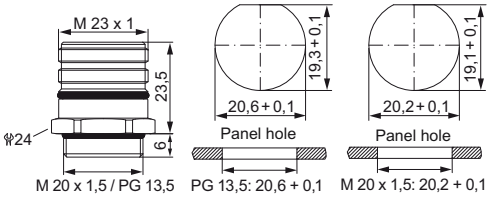
Dimensions and specifications may be changed without prior notice

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted

Front mounting for male inserts
Thread M 20 x1,5 .....7.420.000.000
Thread PG 13,5 .....7.422.000.000

Optional:
Flat gasket,
jam nut M 20 x 1,5 / PG 13,5

FOR MALE INSERTS ONLY



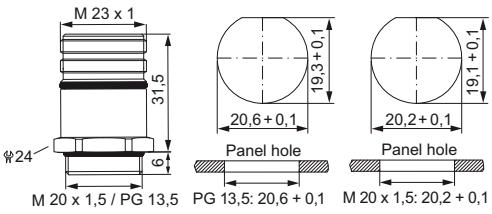
Contacts and inserts page 74 • Assembly instructions page 91

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted

Front mounting for female inserts
Thread M 20 x1,5 .....7.421.000.000
Thread PG 13,5 .....7.423.000.000

Optional:
Flat gasket,
jam nut M 20 x 1,5 / PG 13,5

FOR FEMALE INSERTS ONLY

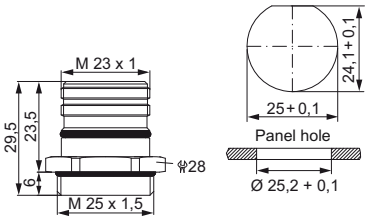


Contacts and inserts page 74 • Assembly instructions page 92

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted

For insert with pins / sockets
Thread M 25 x 1,5 .....7.425.000.000

Optional:
Flat gasket, jam nut M 25 x 1,5

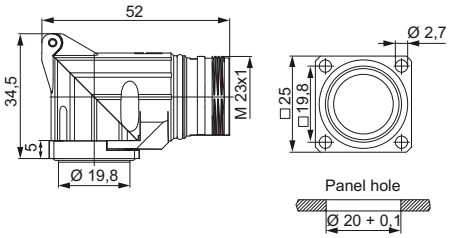


Contacts and inserts page 74 • Assembly instructions page 91 / 92

Signal Connectors M 23 / Housing

Right Angle Panel Connector, Male Thread

Type	Part Number



4 holes 2,7 mm (.11")..... 7.435.000.000

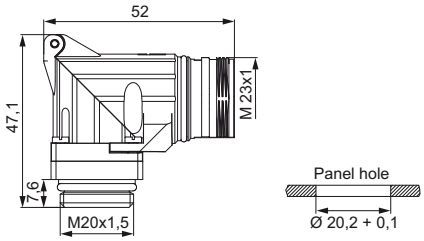
Optional:
Flat gasket

Easy fixation with M 2,5 screws

Contacts and inserts page 74 • Assembly instructions page 93

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number

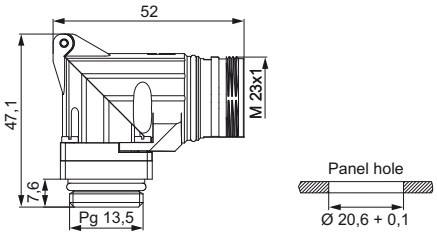


335° rotatable, hole mounted
Thread M 20 x 1,5 ..... 7.431.000.000

Contacts and inserts page 74 • Assembly instructions page 93

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number

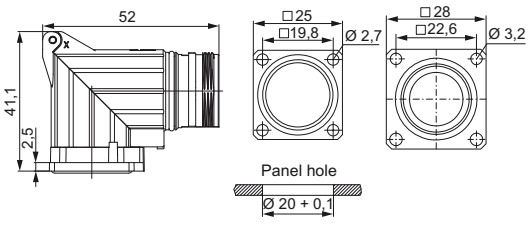


335° rotatable, hole mounted
Thread PG 13,5 ..... 7.432.000.000

Contacts and inserts page 74 • Assembly instructions page 93

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number



300° rotatable, 1,5 mm locking screw at flange
4 x holes Ø 2,7 mm (.11") ..7.433.000.000
Flange 25 x 25 mm

4 x holes Ø 3,2 mm..... 7.433.100.000
Flange 28 x 28 mm

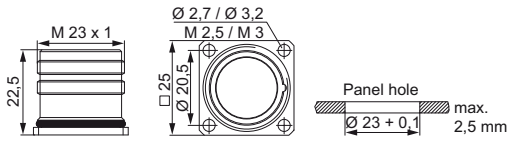
Contacts and inserts page 74 • Assembly instructions page 93

Dimensions and specifications may be changed without prior notice

Type	Part Number	Panel Connector, Male Thread, Rear Mounting
4 holes Ø 3,2 mm (.13")	7.450.000.000	
4 threads M 3	7.452.000.000	
4 holes Ø 2,7 mm (.11")	7.454.000.000	
4 threads M 2,5	7.456.000.000	

Optional:
Flat gasket

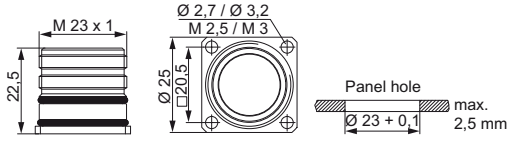
Contacts and inserts page 74 • Assembly instructions page 91 / 92



Type	Part Number	Panel Connector, Male Thread, Rear Mounting
With anti-vibration O-Ring		
4 holes Ø 3,2 mm (.13")	7.460.000.000	
4 threads M 3	7.462.000.000	
4 holes Ø 2,7 mm (.11")	7.464.000.000	
4 threads M 2,5	7.466.000.000	

Optional: Flat gasket

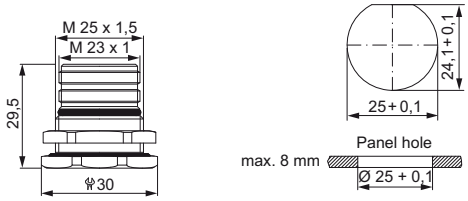
Contacts and inserts page 74 • Assembly instructions page 91 / 92



Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted
Rear mounting		
Thread M 25 x 1,5	7.458.000.000	

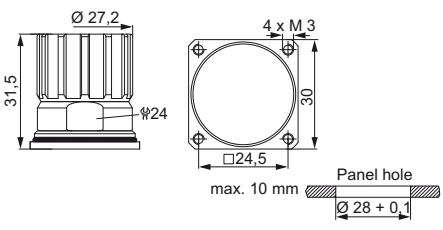
Including jam nut M 25 x 1,5

Contacts and inserts page 74 • Assembly instructions page 91 / 92



Type	Part Number	Panel Connector, Female Thread, Rear Mounting
With knurled nut, rear mounting		
4 threads M 3	7.459.000.000	

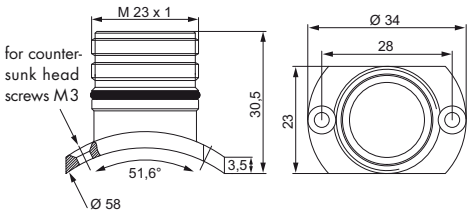
Contacts and inserts page 74 • Assembly instructions page 90



Signal Connectors M 23 / Housing

Panel Connector with Radius Flange

Type	Part Number

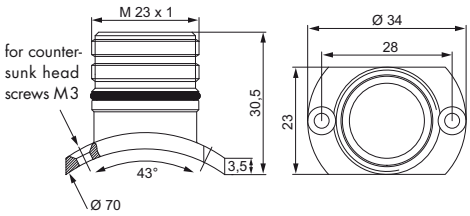


With anti-vibration O-Ring and flat body gasket
Ø 58 mm (2.28") 7.490.000.000

Contacts and inserts page 74 • Assembly instructions page 91 / 92

Panel Connector with Radius Flange

Type	Part Number

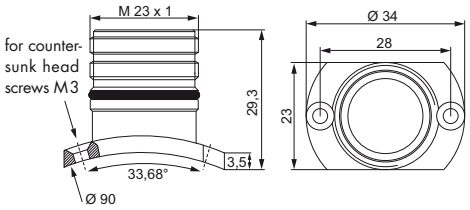


With anti-vibration O-Ring and flat body gasket
Ø 70 mm (2.76") 7.491.000.000

Contacts and inserts page 74 • Assembly instructions page 91 / 92

Panel Connector with Radius Flange

Type	Part Number

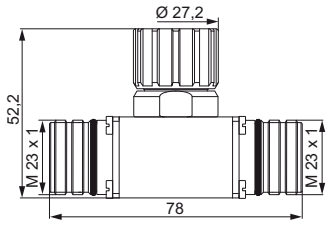


With anti-vibration O-Ring and flat body gasket
Ø 90 mm (3.54") 7.492.000.000

Contacts and inserts page 74 • Assembly instructions page 91 / 92

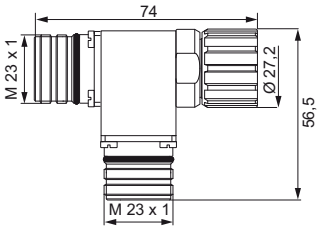
Dimensions and specifications may be changed without prior notice

Type	Part Number	Signal Distribution
T 01	7.T01	



Contacts and inserts page 74

Type	Part Number	Signal Distribution
T 02	7.T02	



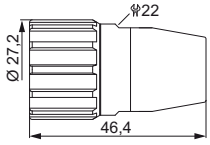
Contacts and inserts page 74

	Signal Distribution

In case of so called Flying Connections it is often required to distribute, cross or combine signals. Depending on the requirements of the application, the connections can be supplied either as male or female connector, or they can be configured with strain relief fittings. There are many possible combinations, including the internal wiring, independent of their style, as T-, Y-, H-, or other special configurations.

Type	Part Number	Bus End Connector
Closed type	7.105.000.000	

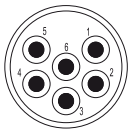
Used to cap an open male connector in bus-systems



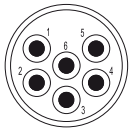
Contacts and inserts page 74

Signal Connectors M 23 / Inserts / Pinouts

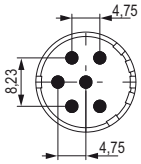
Inserts 6-pole



Insert pin mating view
(Part E)



Insert socket mating view
(Part P)

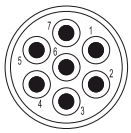


Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.906.103	7.001.906.104
Insert without contacts	7.003.906.101	7.003.906.102
Insert with dip solder contacts Length 3,5 mm	7.001.906.107	
Insert with dip solder contacts Length 10 mm	7.001.906.127	7.001.906.108
Insert with dip solder contacts Length 17 mm	7.001.906.137	7.001.906.118

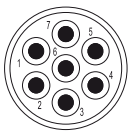
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.

Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

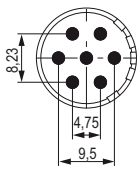
Inserts 7-pole



Insert pin mating view
(Part E)



Insert socket mating view
(Part P)



Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.907.103	7.001.907.104
Insert without contacts	7.003.907.101	7.003.907.102
Insert with dip solder contacts Length 3,5 mm	7.001.907.107	
Insert with dip solder contacts Length 10 mm	7.001.907.127	7.001.907.108
Insert with dip solder contacts Length 17 mm	7.001.907.137	7.001.907.118

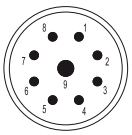
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.

Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

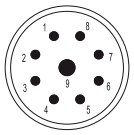
Dimensions and specifications may be changed without prior notice

Inserts 9-pole (8 + 1)

Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.981.103	7.001.981.104
Insert without contacts	7.003.981.101	7.003.981.102
Insert with dip solder contacts Length 3,5 mm	7.001.981.107	
Insert with dip solder contacts Length 10 mm	7.001.981.127	7.001.981.108
Insert with dip solder contacts Length 17 mm	7.001.981.137	7.001.981.118

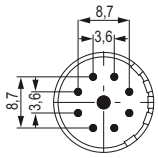


Insert pin mating view
(Part E)



Insert socket mating view
(Part P)

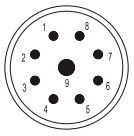
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.



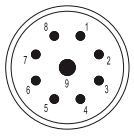
Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

Inserts 9-pole (8 + 1)

Type	Part Number	Part Number
Pinout counter-clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.002.981.103	7.002.981.104
Insert without contacts	7.004.981.101	7.004.981.102
Insert with dip solder contacts Length 3,5 mm	7.002.981.107	
Insert with dip solder contacts Length 10 mm	7.002.981.127	7.002.981.108
Insert with dip solder contacts Length 17 mm	7.002.981.137	7.002.981.118

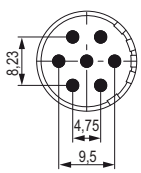


Insert pin mating view
(Part P)



Insert socket mating view
(Part E)

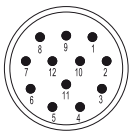
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.



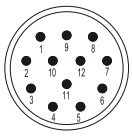
Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

Signal Connectors M 23 / Inserts / Pinouts

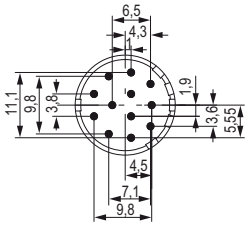
Inserts 12-pole



Insert pin mating view
(Part E)



Insert socket mating view
(Part P)

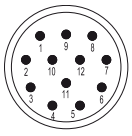


Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.912.103	7.001.912.104
Insert with solder contacts +PE (Pos.9)	7.001.912.113	7.001.912.114
Insert without contacts	7.003.912.101	7.003.912.102
Insert without contacts +PE (Pos.9)	7.003.912.111	7.003.912.112
Insert with dip solder contacts Length 3,5 mm	7.001.912.107	
Insert with dip solder contacts Length 10 mm	7.001.912.127	7.001.912.108
Insert with dip solder contacts Length 17 mm	7.001.912.137	7.001.912.118

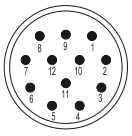
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.

Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

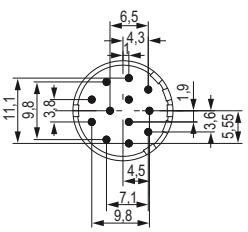
Inserts 12-pole



Insert pin mating view
(Part P)



Insert socket mating view
(Part E)



Type	Part Number	Part Number
Pinout counter-clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.002.912.103	7.002.912.104
Insert with solder contacts +PE (Pos.9)	7.002.912.113	7.002.912.114
Insert without contacts	7.004.912.101	7.004.912.102
Insert without contacts +PE (Pos.9)	7.004.912.111	7.004.912.112
Insert with dip solder contacts Length 3,5 mm	7.002.912.107	
Insert with dip solder contacts Length 10 mm	7.002.912.127	7.002.912.108
Insert with dip solder contacts Length 17 mm	7.002.912.137	7.002.912.118

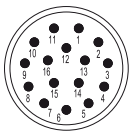
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.

Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

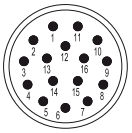
Dimensions and specifications may be changed without prior notice

Inserts 16-pole

Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.916.103	7.001.916.104
Insert without contacts	7.003.916.101	7.003.916.102
Insert with dip solder contacts Length 3,5 mm	7.001.916.107	
Insert with dip solder contacts Length 10 mm	7.001.916.127	7.001.916.108
Insert with dip solder contacts Length 17 mm	7.001.916.137	7.001.916.118

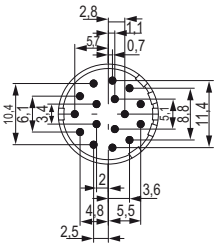


Insert pin mating view
(Part E)



Insert socket mating view
(Part P)

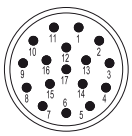
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.



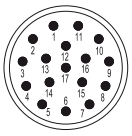
Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

Inserts 17-pole

Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.917.103	7.001.917.104
Insert without contacts	7.003.917.101	7.003.917.102
Insert with dip solder contacts Length 3,5 mm	7.001.917.107	
Insert with dip solder contacts Length 10 mm	7.001.917.127	7.001.917.108
Insert with dip solder contacts Length 17 mm	7.001.917.137	7.001.917.118

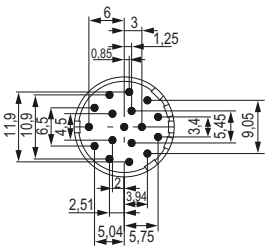


Insert pin mating view
(Part E)



Insert socket mating view
(Part P)

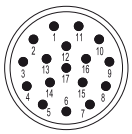
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.



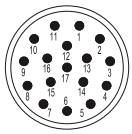
Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

Signal Connectors M 23 / Inserts / Pinouts

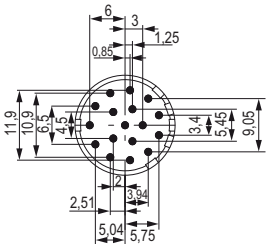
Inserts 17-pole



Insert pin mating view
(Part P)



Insert socket mating view
(Part E)

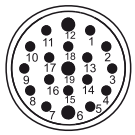


Type	Part Number Pins	Part Number Sockets
Pinout counter-clockwise		
Insert with solder contacts	7.002.917.103	7.002.917.104
Insert without contacts	7.004.917.101	7.004.917.102
Insert with dip solder contacts Length 3,5 mm	7.002.917.107	
Insert with dip solder contacts Length 10 mm	7.002.917.127	7.002.917.108
Insert with dip solder contacts Length 17 mm	7.002.917.137	7.002.917.118

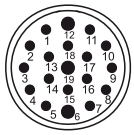
The correct dimension of a connector with dip solder contacts depends on the particular type of housing.

Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

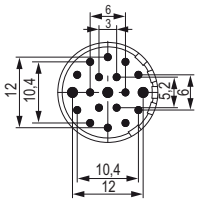
Inserts 19-pole



Insert pin mating view
(Part E)



Insert socket mating view
(Part P)



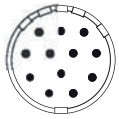
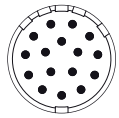
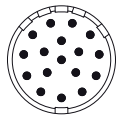
Type	Part Number Pins	Part Number Sockets
Pinout clockwise		
Insert with solder contacts	7.001.919.103	7.001.919.104
Insert with solder contacts +PE (Pos.12)	7.001.919.113	7.001.919.114
Insert with solder contacts + PE (Pos.12) 1,5 mm elongated	7.001.919.123	
Insert without contacts	7.003.919.101	7.003.919.102
Insert without contacts +PE (Pos.12)	7.003.919.111	7.003.919.112
Insert with dip solder contacts Length 3,5 mm	7.001.919.107	
Insert with dip solder contacts Length 10 mm	7.001.919.127	7.001.919.108
Insert with dip solder contacts Length 17 mm	7.001.919.137	7.001.919.118

The correct dimension of a connector with dip solder contacts depends on the particular type of housing.

Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)

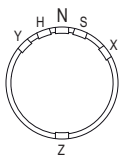
Dimensions and specifications may be changed without prior notice

Signal Connectors M 23 / Required Contacts

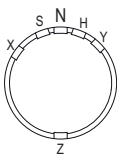
Number of Poles	Required Contacts	Contact Arrangement
6	6 x 2 mm	
7	7 x 2 mm	
9 (8 + 1)	8 x 1 mm 1 x 2 mm	
12	12 x 1 mm	
16	16 x 1 mm	
17	17 x 1 mm	
19	16 x 1 mm 3 x 1,5 mm	

Crimp contacts page 80
For the M23 crimp insert with 1 mm contacts can be used stamped crimp contact.

Number of Poles	Coding Possibilities	Coding
6-pole	N, S, H, X, Y and Z	
7-pole	N, S, H, X and Y	
9-pole	N, S, H, X and Y	
12-pole	N, S, H, X, Y and Z	
16-pole	N, S, H, X, Y and Z	
17-pole	N, S, H, X, Y and Z	
19-pole	N, S, H, X and Y	



Female Inserts
mating view



Male Inserts
mating view

As standard, coding groove N is opened. To use other codings, please remove the coding barrier.

Signal Connectors M 23 / Contacts

Contacts	Type	Crimp Range	Part Number
	Crimp pin 1 mm, machined	0,08 – 0,56 mm² (AWG 28 – 20)	7.010.901.031
	Crimp pin 1 mm, machined	0,14 – 1 mm² (AWG 26 – 17)	7.010.901.001
	Crimppin 1 mm, machined	0,75 – 1,5 mm² (AWG 17 – 16)	7.010.901.021
	Crimp socket 1 mm, machined	0,08 – 0,56 mm² (AWG 28 – 20)	7.010.901.012
	Crimp socket 1 mm, machined	0,34 – 1 mm² (AWG 22 – 17)	7.010.901.002
	Crimp socket 1 mm, machined	0,75 – 1,5 mm² (AWG 17 – 16)	7.010.901.022
	Crimp pin 1 mm, stamped	0,14 – 0,56 mm² (AWG 26 – 20)	upon request
	Crimp socket 1 mm, stamped	0,14 – 0,56 mm² (AWG 26 – 20)	upon request
	Crimp pin 1,5 mm, machined	0,14 – 1 mm² (AWG 26 – 17)	7.010.901.501

Dimensions and specifications may be changed without prior notice

Type	Crimp Range	Part Number	Contacts
Crimp socket 1,5 mm, machined	0,14 – 0,56 mm² (AWG 26 – 20)	7.010.901.512	
Crimp socket 1,5 mm, machined	0,56 – 1 mm² (AWG 20 – 17)	7.010.901.502	
Crimp pin 2 mm, machined	0,75 – 2,5 mm² (AWG 18 – 14)	7.010.902.001	
Crimp socket 2 mm, machined	0,75 – 2,5 mm² (AWG 18 – 14)	7.010.902.002	

Crimp Tool Settings see page 86

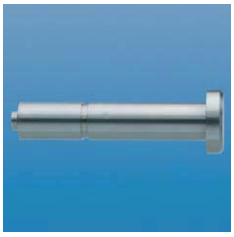
Signal Connector / Accessories

Accessories	Type	Part Number
	Plastic protective cap for connectors with male thread for connectors with female thread	 7.000.900.101 7.000.900.102
	Brass protective cap for connectors with female thread	 7.010.900.103
	Brass protective cap for connectors with male thread	 7.010.900.102
	Brass protective cap with chain for connectors with female thread	 Length 70 mm Length 100 mm	 7.010.9S0.703 7.010.9S1.003
	Brass protective cap with chain for connectors with male thread	 Length 70 mm Length 100 mm	 7.010.9S0.702 7.010.9S1.002
	Assembly tool		7.010.900.101

Dimensions and specifications may be changed without prior notice

Type	Part Number	Accessories
Crimp tool for manual crimping of machined crimp contacts for signal connectors	7.000.900.904	
Adaptor flange for Straight Connectors	7.010.900.128	
Adapter for Conduit Fittings	Snapflex 16 ..... 7.010.900.204 DN 12 ..... 7.010.900.205 Snapflex 20 ..... 7.010.900.206 DN 14 ..... 7.010.900.207 Snapflex 25 ..... 7.010.900.208 DN 17 ..... 7.010.900.209	

Operating instructions on page 84 - 87, 94

Type	Part Number	Locator
Locator for Crimp Tool DMC M22520 with positioner	7.000.9DM.C03	
For HUMMEL Contact: 7.010.901.001, 7.010.901.501, 7.010.902.001		
Locator for Crimp Tool DMC M22520 with positioner	7.000.9DM.C04	
For HUMMEL Contact: 7.010.901.012, 7.010.901.002, 7.010.901.512, 7.010.901.502, 7.010.902.002		

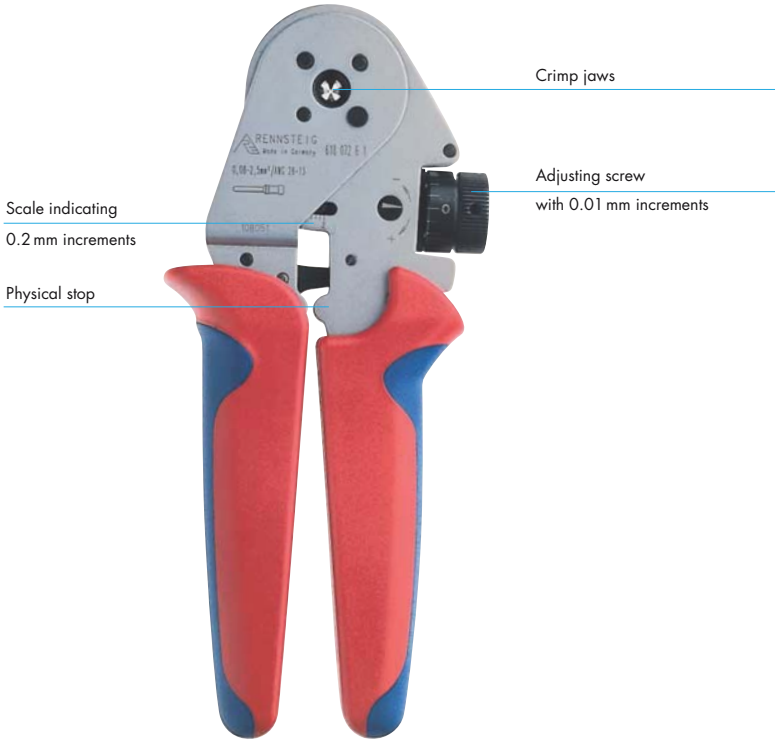
Crimp Tool for Signal Connectors M 23 / M 16

Crimp Tool	Type	Part Number
	Crimp tool	7.000.900.904 / 7.000.900.907

Application
The four indent crimp tool 7.000.900.904 / 7.000.900.907 has been developed for optimal crimping of machined contacts with diameters from 0.08 to 2.5 mm² (28 through 14 AWG).

How to Crimp
The reference table indicates the correct locator position to be selected and the crimp depth to be adjusted for the contact to be crimped. The contact is then inserted through the access hole of the tool on the opposite side of the locator. The contact is held in place by closing the handles to the first lock-in position thus preventing the contact from falling out of the tool and facilitating insertion of the wire into the contact.
The precision ratchet assures consistently accurate crimping every time by forcing the tool to be closed all the way completing the crimping cycle before the tool can be opened again.

Exchange of the Locator
The locator can be exchanged by removing the socket head cap screw with a socket wrench. It can then be disassembled from the hex head screw by turning it counter-clockwise.

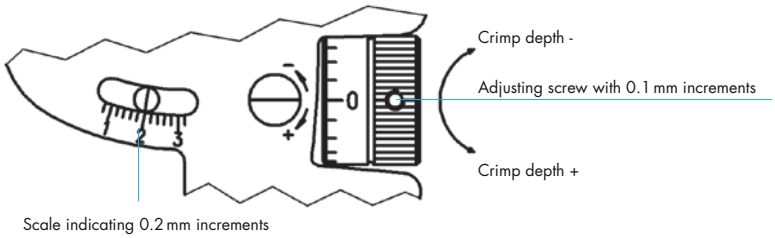


Dimensions and specifications may be changed without prior notice

Crimp Tool

Adjustment of Crimp Depth
Crimp depth can be adjusted as follows:
Turn the adjusting screw clockwise for reducing the crimp depth and counter-clockwise for increasing the crimp depth.

Adjustment Increments:
- 1 space on the adjusting screw ≙ adjustment by 0.01 mm
- 1 full rotation of adjusting screw ≙ adjustment by 0.2 mm (indication on the screw as well as on the rough scale)
- 5 rotations of the adjusting screw ≙ adjustment by 1 mm (indication on the scale)



Control of Crimp Depth
Crimp tool adjustment is done at the factory, but with frequent use, periodic calibration is recommended to insure accuracy. This is easily accomplished with a 1.0 mm Ø wire gauge as follows.
A crimp depth of 1.0 mm is set by means of the adjusting screw (scale mark at „1", screw mark at „0" as shown in the fig. above) and the tool in the closed position. After insertion of the gauge, there must be just enough space for moving the gauge inside the entry hole. If the opening is too small or too large to exactly match the gauge, the deviation (+/-) can be checked by the precision setting of the screw. Please contact the factory in case the deviation exceeds the tolerances specified by the contract manufacturer.

Maintenance and Repair
Keep the tool clean and properly stored when not in service. All pivot points need to be oiled regularly and the spring clips securing the bolts have to always be in place. For repair please send the tool back to the factory.

Crimp Tool for Signal Connectors M 23

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.904)

Part Number	Crimp Contact	Cross Section (mm^2)	AWG	Crimp Tool Setting mm	Locator Setting
7.010.901.001	Crimp pin 1 mm	0,14	AWG 26	0,70	1
		0,25	AWG 24	0,76	
		0,34	AWG 22	0,82	
		0,50	AWG 20	0,90	
		0,75	AWG 18	1,00	
		1,00	AWG 17	1,10	
7.010.901.012	Crimp socket 1 mm ($0,08 – 0,56\ mm^2$)	0,08	AWG 28	0,75	2
		0,14	AWG 26	0,78	
		0,25	AWG 24	0,82	
		0,34	AWG 22	0,86	
		0,56	AWG 20	0,90	
7.010.901.002	Crimp socket 1 mm ($0,34 – 1\ mm^2$)	0,34	AWG 22	0,77	2
		0,56	AWG 20	0,82	
		0,75	AWG 18	0,88	
		1,00	AWG 17	0,95	
7.010.901.501	Crimp pin 1,5 mm	0,14	AWG 26	0,65	3
		0,25	AWG 24	0,68	
		0,34	AWG 22	0,72	
		0,56	AWG 20	0,81	
		0,75	AWG 18	0,95	
		1,00	AWG 17	1,07	
7.010.901.512	Crimp socket 1,5 mm ($0,14 – 0,56\ mm^2$)	0,14	AWG 26	0,70	2
		0,25	AWG 24	0,73	
		0,34	AWG 22	0,77	
		0,56	AWG 20	0,85	
7.010.901.502	Crimp socket 1,5 mm ($0,34 – 1\ mm^2$)	0,34	AWG 22	0,88	2
		0,56	AWG 20	0,95	
		0,75	AWG 18	1,05	
		1,0	AWG 17	1,13	
7.010.902.001	Crimp pin 2 mm	0,75	AWG 18	1,25	4
		1,0	AWG 17	1,35	
		1,5	AWG 16	1,45	
		2,5	AWG 14	1,60	
7.010.902.002	Crimp socket 2 mm	0,75	AWG 18	1,25	5
		1,0	AWG 17	1,35	
		1,5	AWG 16	1,45	
		2,5	AWG 14	1,60	

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

Assembly information see page 94

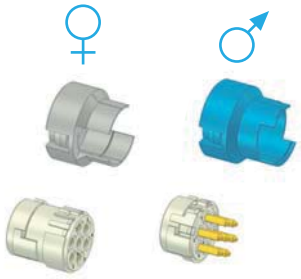
Dimensions and specifications may be changed without prior notice

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.904)

Part Number	Crimp Contact	Cross Section (mm^2)	AWG	Crimp Tool Setting mm	Locator Setting
7.010.901.031	Crimp pin 1 mm	0,08		0,72	1
		0,14		0,78	
		0,25		0,82	
		0,34		0,86	
		0,56		0,90	
7.010.901.021	Crimp pin 1 mm	0,75		0,80	1
		1,00		0,86	
		1,50		0,95	
7.010.901.022	Crimp socket 1 mm	0,75		0,80	2
		1,00		0,86	
		1,50		0,95	

Straight Connector, Male / Female Thread

1.



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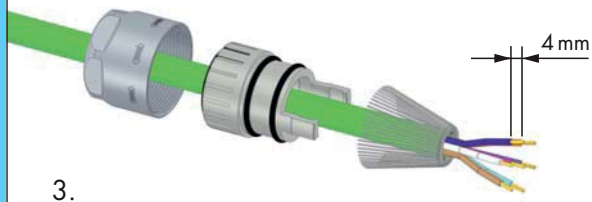

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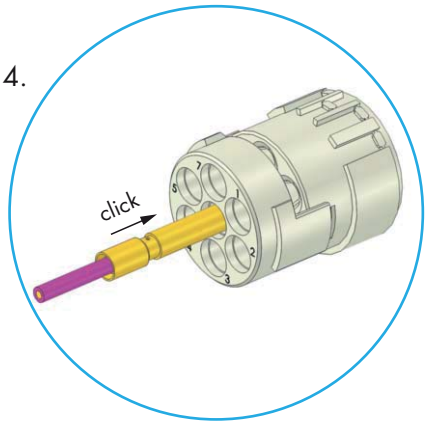

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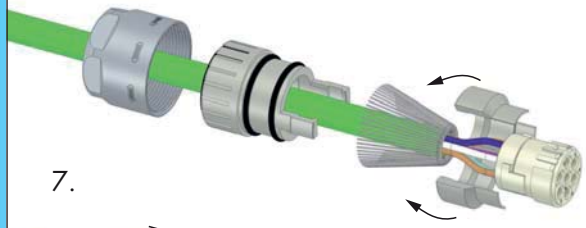

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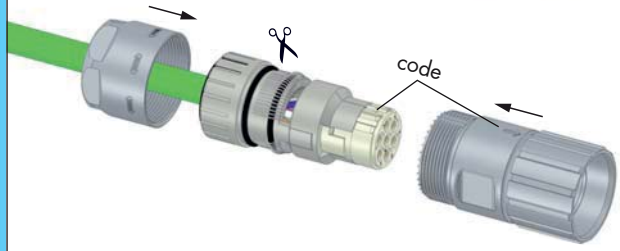

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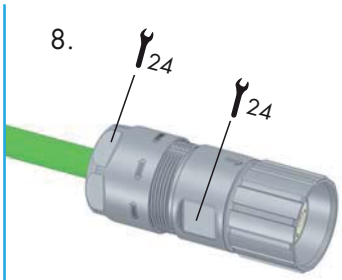
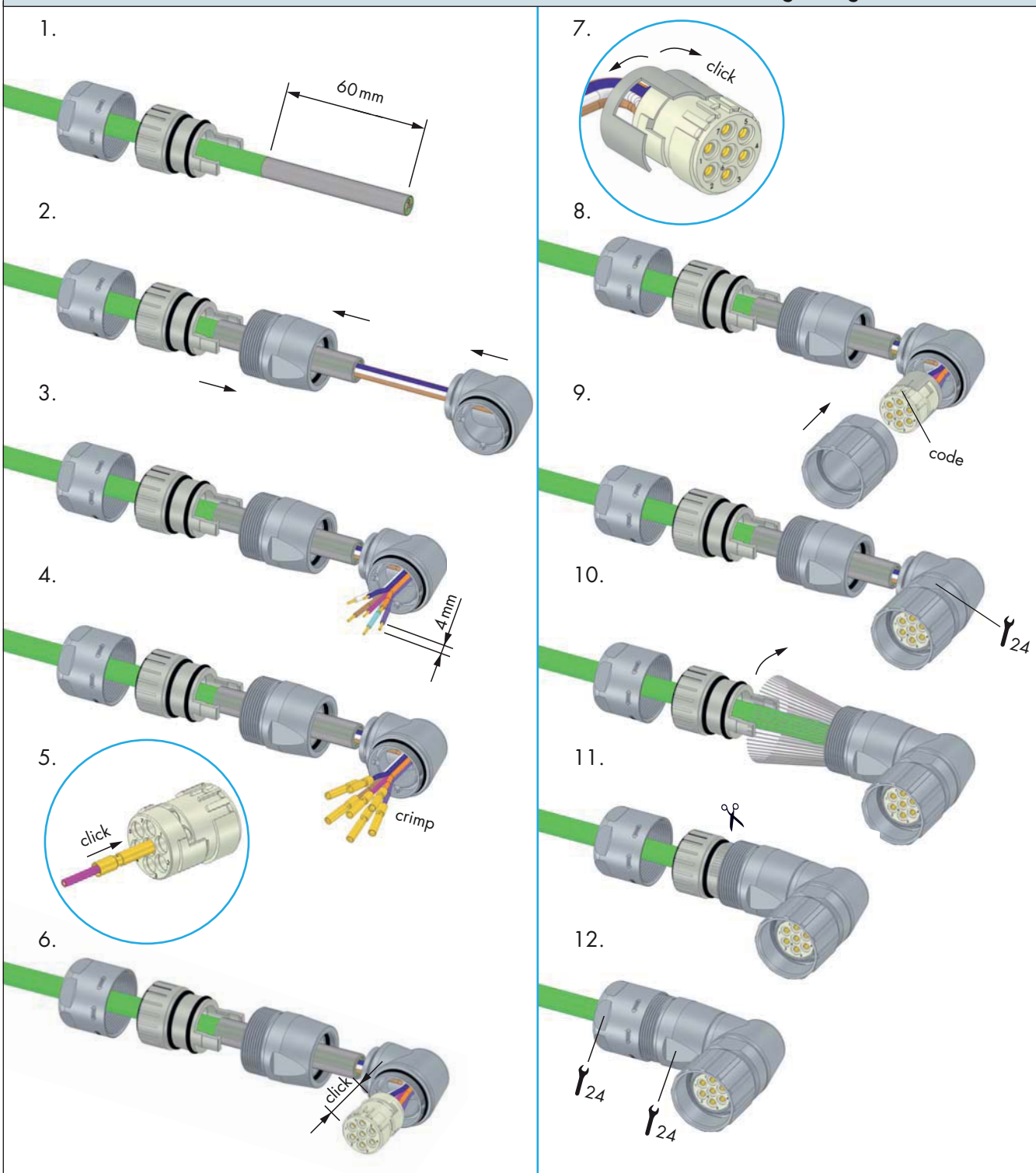


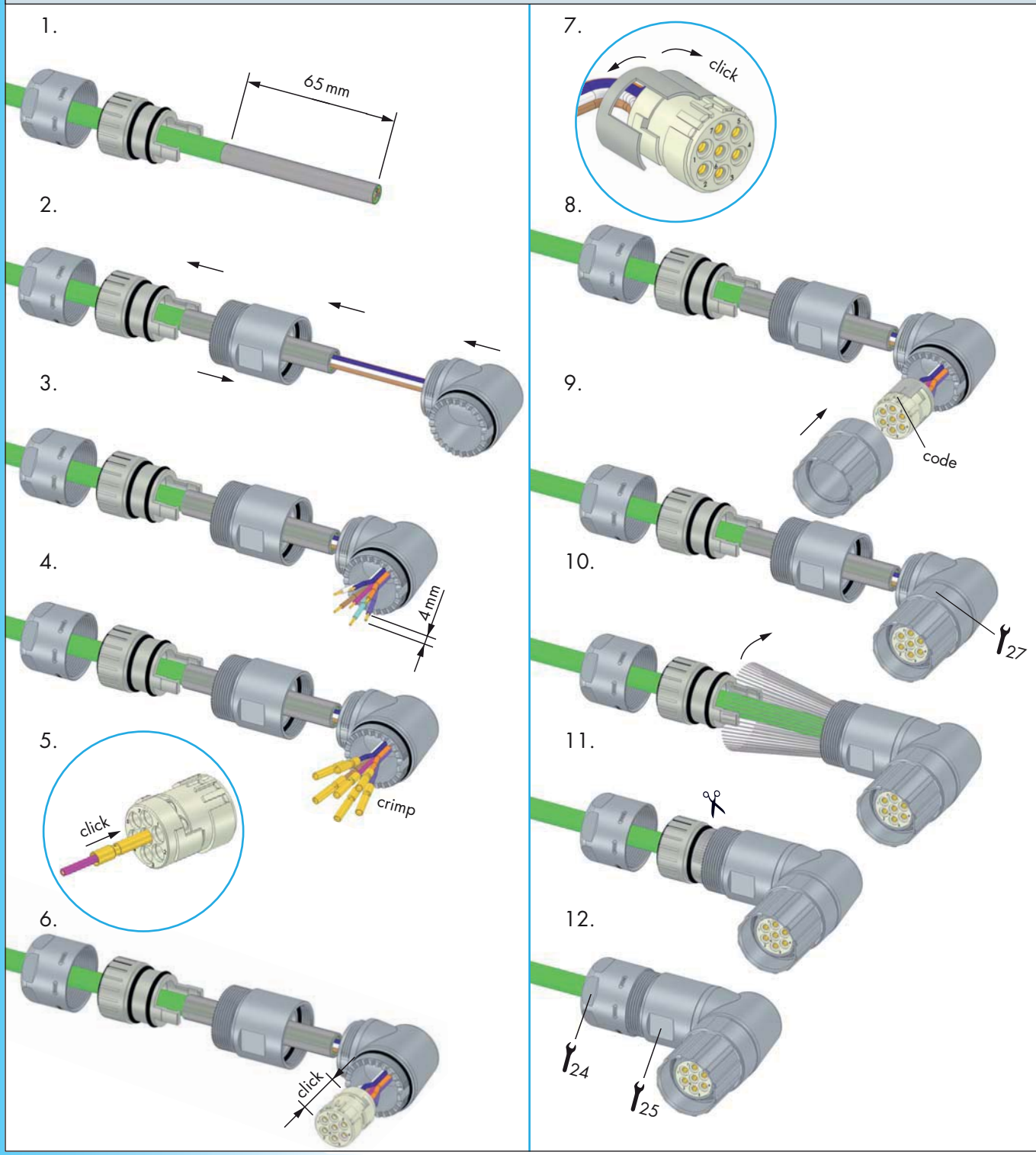
Dimensions and specifications may be changed without prior notice

Right Angle Connectors, EMC



Signal Connectors M 23 / Assembly Instructions

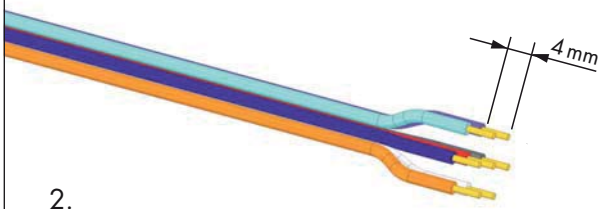
Right Angle Connector, rotatable, EMC



Dimensions and specifications may be changed without prior notice

Panel Connectors, Male Inserts

1.



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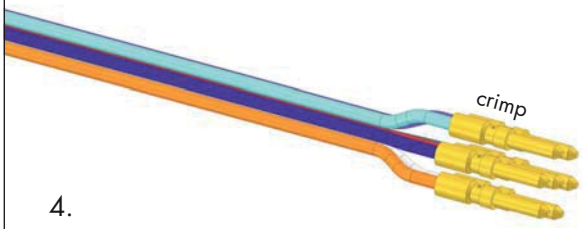

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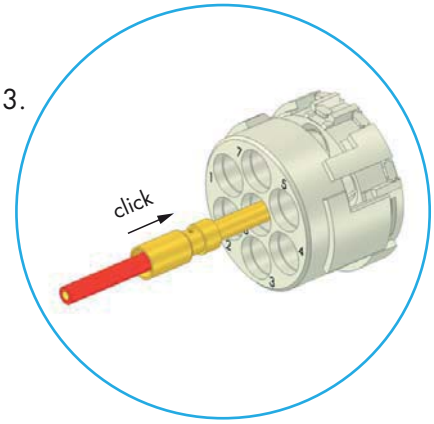

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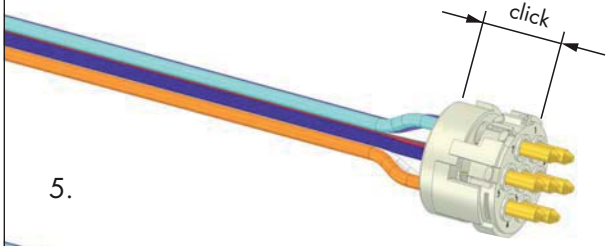

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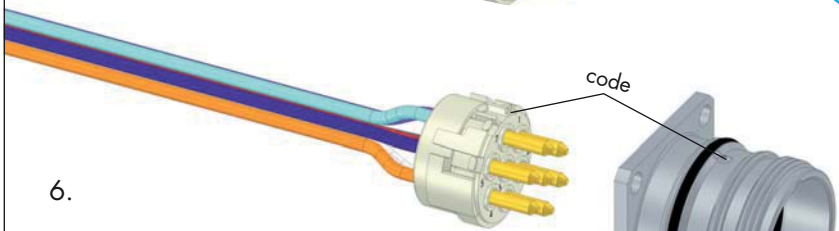

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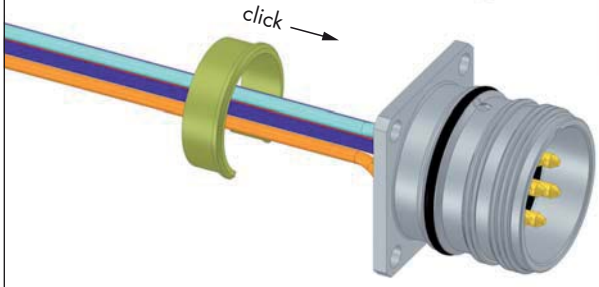
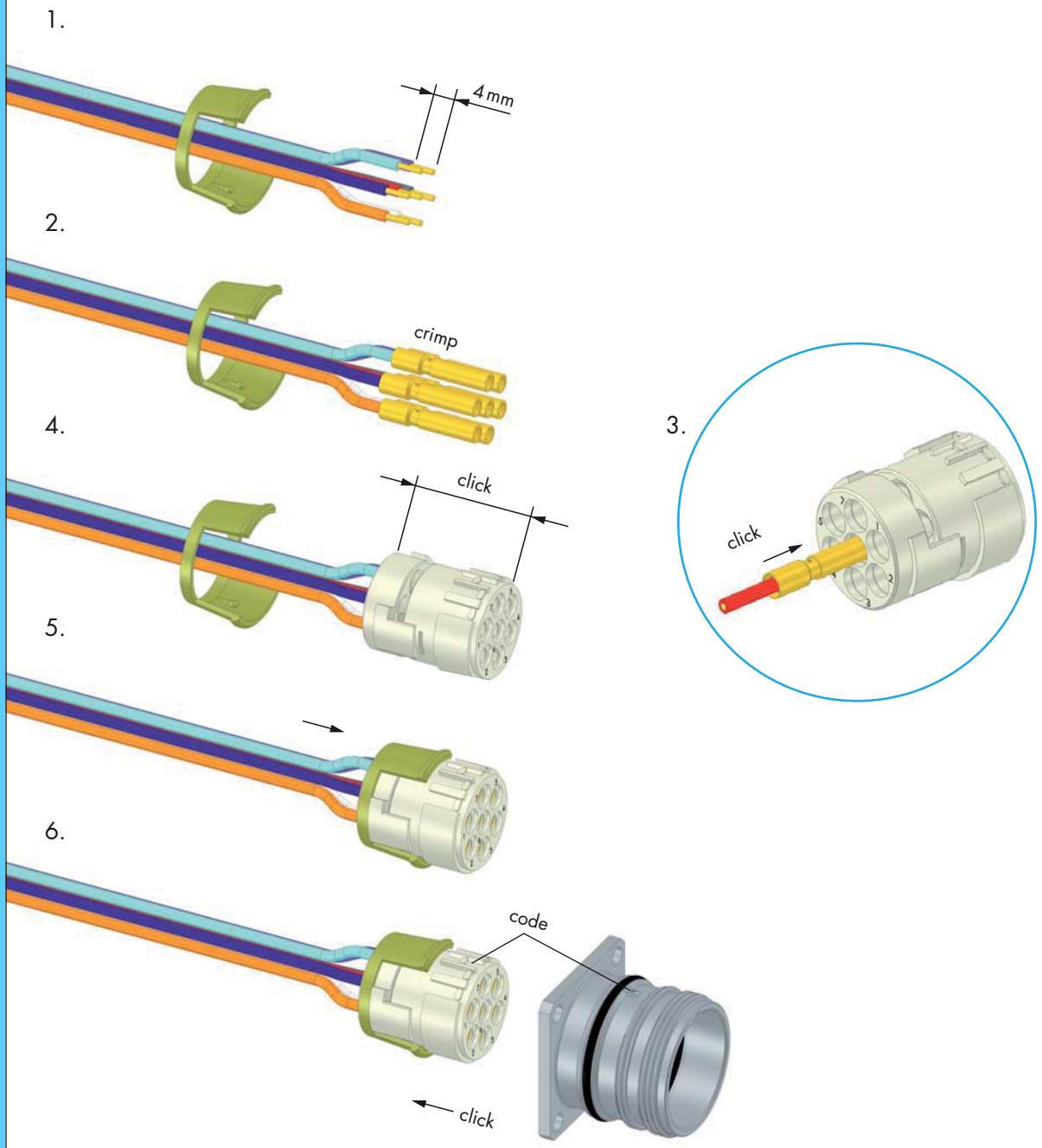


Signal Connectors M 23 / Assembly Instructions

Panel Connectors, Female Inserts



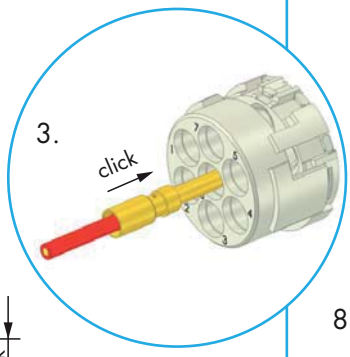
Dimensions and specifications may be changed without prior notice

Right Angle Panel Connector

1.

2.

3.



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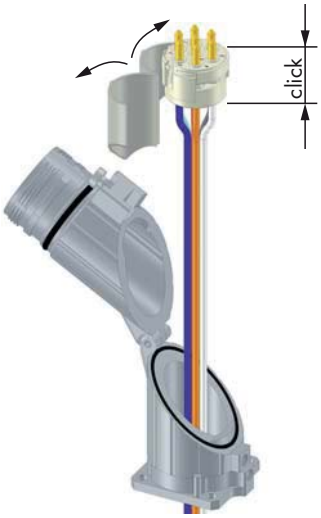

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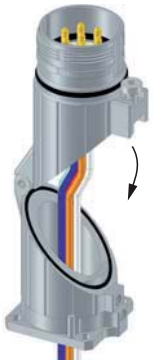

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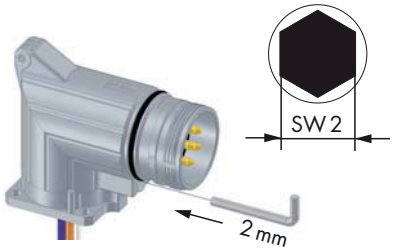

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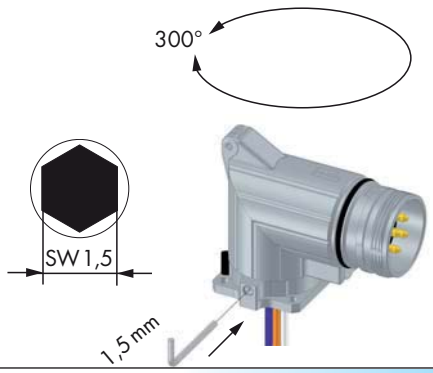
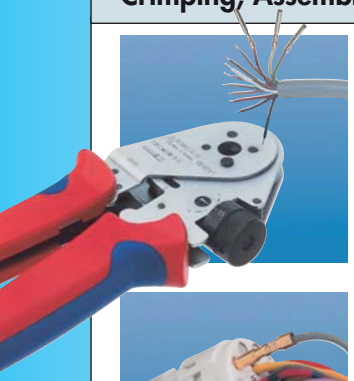
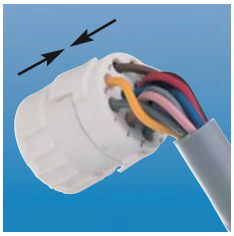
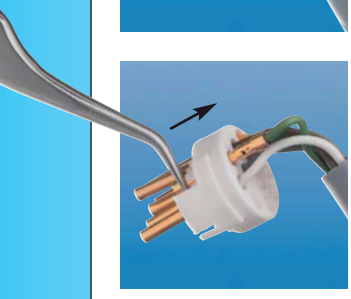


Crimping, Assembly and Disassembly of Contacts

Crimping, Assembly and Disassembly of Contacts







Crimping
- Remove conductor insulation 4 mm (.16") max.
- Select appropriate Crimp tool setting (see page 86)
- Insert Crimp contact into the positioner of the tool
- Insert stripped end of conductor into the crimp opening of the contact
- Squeeze handles of crimp tool together

Assembly
- Open crimping jaws and remove contact
- Pry open upper and lower insert approx. 3 mm (1/8") apart as shown
- Insert the contact and conductor assembly into the desired location
- Press upper and lower insert parts together

Disassembly
No special tools are needed to remove the crimp contacts from the insert.

- Remove upper part of insert
- With a pair of needle nose pliers, wiggle the contact and push it back through the lower part of insert
- Insert contacts into new location and push until it snaps in position
- Align the nose and groove of the upper and lower part of insert and press together

Shielding
- Assemble strain relief insert with insert
- Fold stranding of the shield back over the first O-Ring of the strain relief insert
- Cut back the overextending braid

The stranding of the shield is not allowed to touch the second O-Ring. Otherwise the assembly may not be proof.

Dimensions and specifications may be changed without prior notice

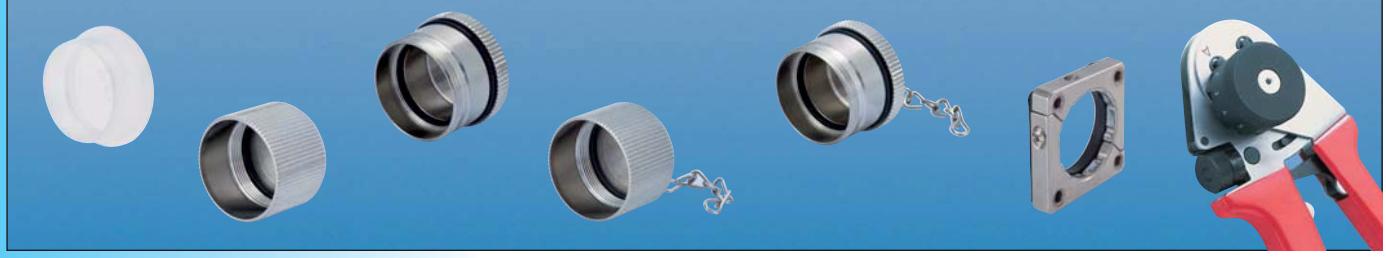
Connectors M 27

Product Overview

Housings page 98

Inserts page 99

Accessories page 101



Dimensions and specifications may be changed without prior notice

M 27 Signal Connectors

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy Die Cast
Housing surface	Nickel plated other surface upon request
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT Fire protection class V-0
Contacts	Brass Alloy
Contact surface at point of contact	Nickel and gold plated (0,25µm Au)
Minimum mating cycles	> 1000
Seals / O-Rings	Buna-N standard optional Viton® (Viton is a registered trademark of DuPont)
Temperature range	-40° C – 125° C (-40 °F – 257 °F)
Type of contacts	Crimp, solder, dip-solder (PCB)
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x
Cable diameter range	7 – 17 mm (.28 – .67")

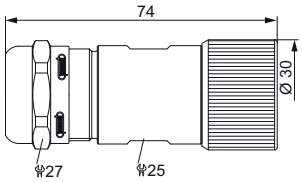
Electrical Data

Number of positions		26	28
Number of contacts		26	28
Contact-Ø [mm]		1	1
Nominal current [1] [A]		8	8
Nominal voltage [2] [V~]		150	150
Test voltage (Breakdown voltage) [3] [V~]		1500	1500
Insulation resistance [MΩ]		> 10^{12}	> 10^{12}
Max. contact resistance [mΩ]		3	3
Degree of Protection [4]		3	3

[1], [2], [3], [4] See Technical Informations page 14

Signal Connectors M 27 / Housing

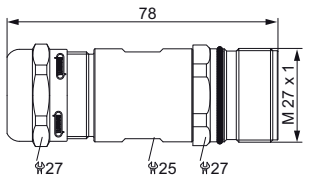
Straight Connector, Female Thread



Cable-Ø	Part Number
7 – 12 mm (.28 - .47")	7.110.500.000
11 – 17 mm (.43 - .67")	7.110.600.000

Contacts and inserts page 99 • Assembly instructions page 103

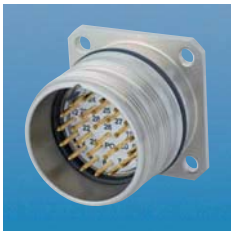
Straight Connector, Male Thread

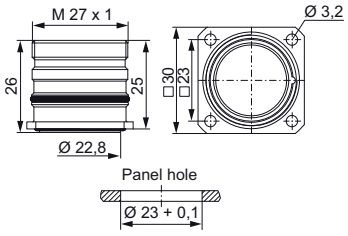


Cable-Ø	Part Number
7 – 12 mm (.28 - .47")	7.210.500.000
11 – 17 mm (.43 - .67")	7.210.600.000

Contacts and inserts page 99 • Assembly instructions page 103

Panel Connector, Male Thread, front mounting





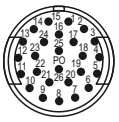
Type	Part Number
4 x holes 3,2 mm	7.410.700.000

Contacts and inserts page 99 • Assembly instructions page 104

Dimensions and specifications may be changed without prior notice

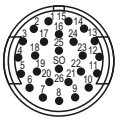
Inserts 26-pole

Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.926.103	7.001.926.104
Insert without contacts	7.003.926.101	7.003.926.102
Insert with dip solder contacts Length 10 mm	7.001.926.127	



Insert pin mating view

The correct dimension of a connector with dip solder contacts depends on the particular type of housing.

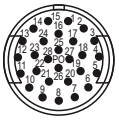


Insert socket mating view

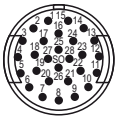
Contacts page 100

Inserts 28-pole

Type	Part Number	Part Number
Pinout clockwise	**Pins**	**Sockets**
Insert with solder contacts	7.001.928.103	7.001.928.104



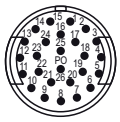
Insert pin mating view



Insert socket mating view

Contacts page 100

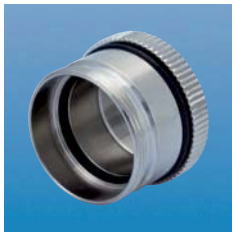
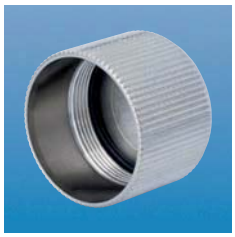
Signal Connectors M 27 / required contacts

Contact Arrangement	Number of Poles	Required Contacts
	26	26 x 1 mm
	28	28 x 1 mm

Contacts	Type	Crimp Range	Part Number
	Crimp pin 1 mm, machined	0,14 – 1 mm² (AWG 26 – 17)	7.010.971.001
	Crimp socket 1 mm, machined	0,14 – 1 mm² (AWG 26 – 17)	7.010.971.002

Crimp Tool Settings see page 102

Dimensions and specifications may be changed without prior notice

Type	Part Number	Accessories
Plastic protective cap for connectors with male thread	7.000.980.167	
for connectors with female thread	7.000.980.168	
Brass protective cap for connectors with female thread	7.010.900.169	
Brass protective cap with chain for connectors with female thread Length 70 mm	7.010.9S0.707	
Brass protective cap for connectors with male thread	7.010.900.170	
Brass protective cap with chain for connectors with male thread Length 70 mm	7.010.9S0.708	
Crimp tool for manual crimping of machined crimp contacts. Works with contacts for power or signal M 27.	7.000.900.901	
Assembly tool	7.010.900.110	

See page 117 / 118 for crimp tool instructions and page 102 proper setting

Crimp Tool for Signal Connectors M 27

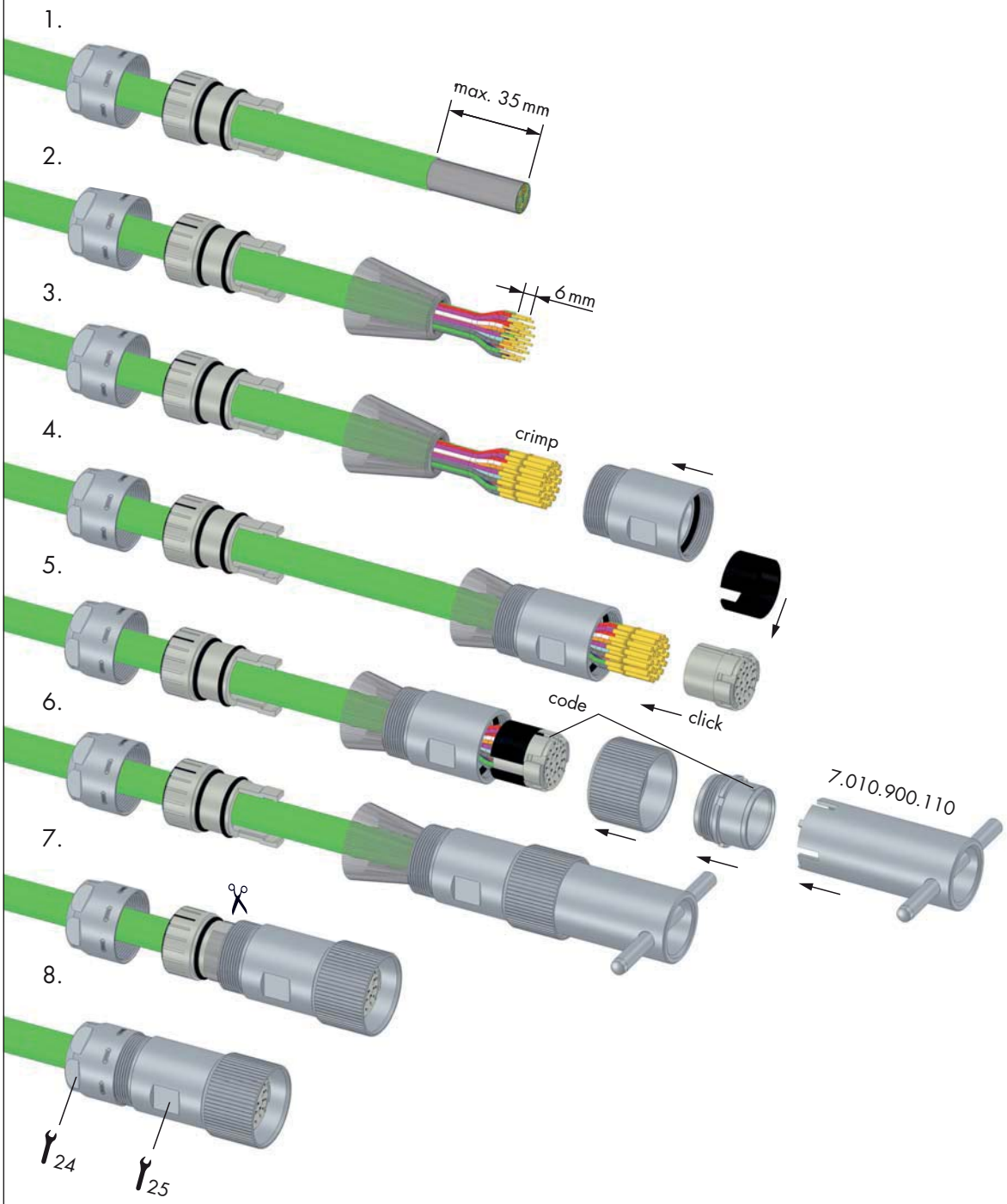
Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.901)

Part Number	Crimp Contact	Cross Section mm²	AWG	Crimp Tool Setting mm	Locator Setting
7.010.971.001	Crimp pin (signal) 1 mm	0,14	26	0,70	1
		0,25	24	0,80	1
		0,34	22	0,88	1
		0,50	20	0,95	1
		0,75	18	1	1
		1	17	1,03	1
7.010.971.002	Crimp socket (signal) 1 mm	0,14	26	0,70	4
		0,25	24	0,80	4
		0,34	22	0,88	4
		0,50	20	0,95	4
		0,75	18	1	4
		1	17	1,03	4

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

Dimensions and specifications may be changed without prior notice

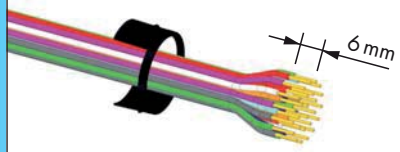
Straight Connector, Female Thread



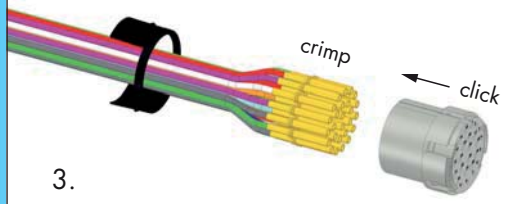
Signal Connectors M 27 / Assembly Instructions

Panel Connector

1.



2.



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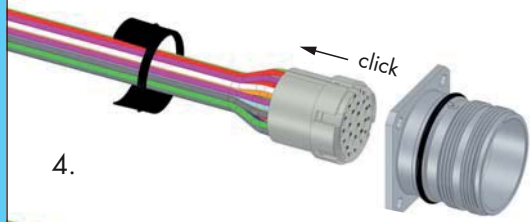

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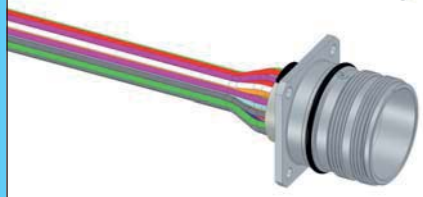


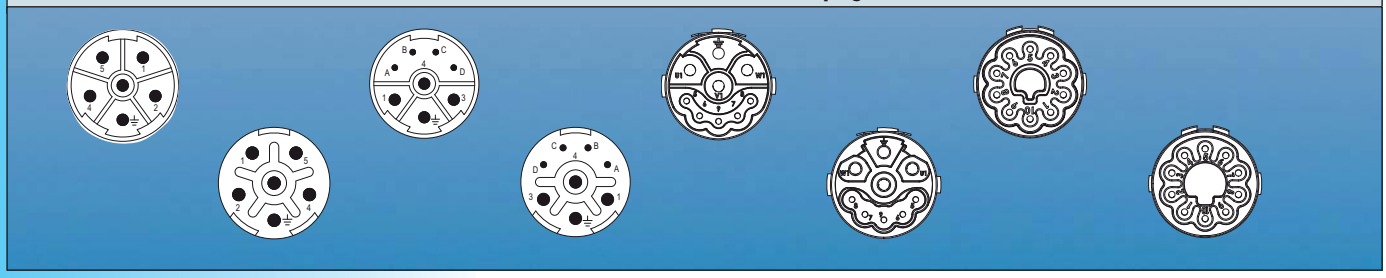
Dimensions and specifications may be changed without prior notice

Power Connectors M 23

Product Overview

Housings page 108

Inserts page 113



Accessories page 115

Dimensions and specifications may be changed without prior notice

Power Connectors M 23

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy Die Cast
Housing surface	Nickel plated other surface upon request
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT Fire protection class V-0
Contacts	Brass Alloy
Contact surface at point of contact	Nickel and gold plated (0,25 µm Au)
Minimum mating cycles	> 1000
Seals / O-Rings	Buna-N standard optional Viton® (Viton is a registered trademark of DuPont)
Temperature range	-40° C – 125° C (-40 °F – 257 °F)
Type of contacts	Crimp
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x
Cable diameter range	7 – 17 mm (.28 – .67")

Electrical Data

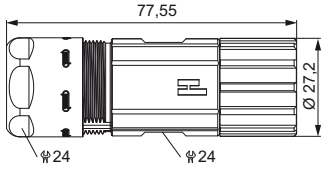
Number of positions	5 + PE	4 + 3 + PE		5 + 3 + PE		10
Number of contacts	6	4	4	5	4	10
Contact-Ø [mm]	2	1	2	1	2	1
Nominal current [1] [A]	28	8	28	10	28	10
Nominal voltage [2] [V~] Degree of Protection 3 [3]	600	300	600	250	630	160
Test voltage (Breakdown voltage) [4] [V~]	4000	2500	4000	2500	4000	2500
Insulation resistance [MΩ]	$> 10^{13}$	$> 10^{13}$		$> 10^{13}$		$> 10^{13}$
Max. contact resistance [mΩ]	3	3		3		3

[1], [2], [3], [4] See Technical Informations page 14

Power Connectors M 23 / Housing

Straight Connector, Female Thread

Cable-Ø	Part number
7 – 12 mm (.27 – .47“)	7.550.500.000
11 – 17 mm (.43 – .67“)	7.550.600.000



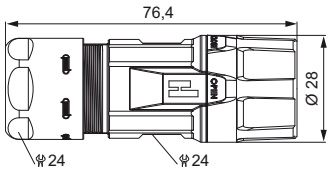
Contacts and inserts page 113 • Assembly instructions page 121

Straight Connector, Female Thread TWILOCK / TWILOCK-S *

Cable-Ø	Part number
7 – 12 mm (.24 – .47“)	7.556.500.000
11 – 17 mm (.43 – .67“)	7.556.600.000

*** Compatible to Speedtec**

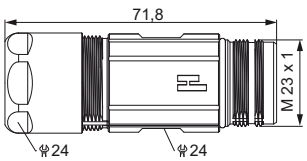
7 – 12 mm (.24 – .47“)	7.556.500.00S
11 – 17 mm (.43 – .67“)	7.556.600.00S



Contacts and inserts page 113 • Assembly instructions page 121

Straight Connector, Male Thread

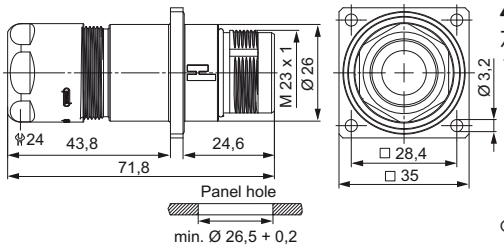
Cable-Ø	Part Number
7 – 12 mm (.27 – .47“)	7.560.500.000
11 – 17 mm (.43 – .67“)	7.560.600.000



Contacts and inserts page 113 • Assembly instructions page 121

Panel Connector, Male Thread, with Strain Relief

Cable-Ø	Part Number
4 holes Ø 3,2 mm (.13“), front or rear mounting	
7 – 12 mm (.27 – .47“)	7.683.500.000
11 – 17 mm (.43 – .67“)	7.683.600.000

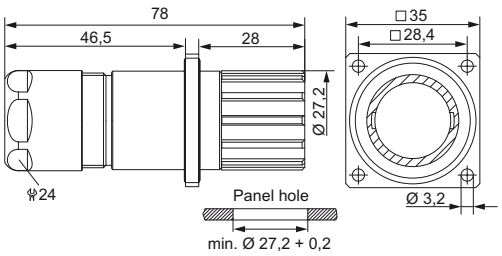


Contacts and inserts page 113 • Assembly instructions page 121

Dimensions and specifications may be changed without prior notice

Panel Connector, Female Thread, with Strain Relief

Cable-Ø	Part Number
4 holes Ø 3,2 mm (.13"), front or rear mounting	
7 – 12 mm (.27 – .47")	7.681.500.000
11 – 17 mm (.43 – .67")	7.681.600.000

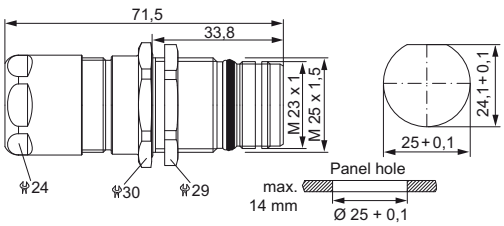


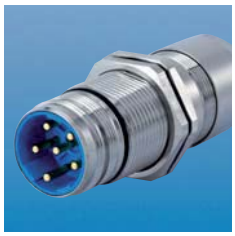
Contacts and inserts page 113 • Assembly instructions page 121

Panel Connector, Male Thread, with Strain Relief

Cable-Ø	Part Number
Single hole mounted, rear mounting, thread M 25 x 1,5	
7 – 12 mm (.27 – .47")	7.653.500.000
11 – 17 mm (.43 – .67")	7.653.600.000

Including jam nut M 25 x 1,5

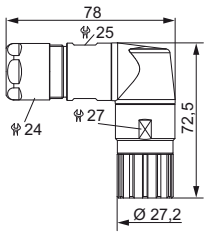




Contacts and inserts page 113 • Assembly instructions page 121

Right Angle Connector, Female Thread, rotatable

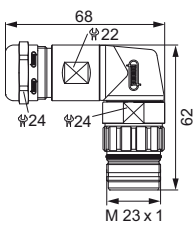
Cable-Ø	Part Number
7 – 12 mm (.27 – .47")	7.576.500.000
11 – 17 mm (.43 – .67")	7.576.600.000



Contacts and inserts page 113 • Assembly instructions page 124

Right Angle Connector, Male Thread, rotatable

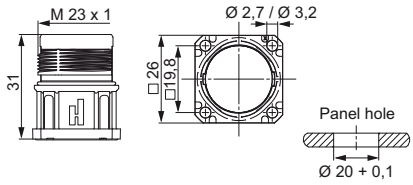
Cable-Ø	Part Number
7 – 12 mm (.27 – .47")	7.580.500.000
10 – 14 mm (.39 – .55")	7.580.600.000



Contacts and inserts page 113 • Assembly instructions page 124

Power Connectors M 23 / Housing

Panel Connectors, Male Thread, Front Mounting

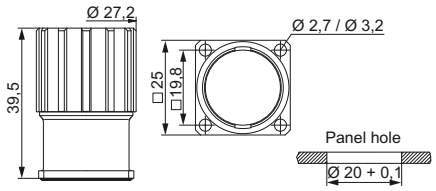


Type	Part Number
4 holes Ø 3,2 mm (.13“)	7.601.000.000
4 holes Ø 2,7 mm (.11“)	7.605.000.000

Optional:
Flat gasket

Contacts and inserts page 113 • Assembly instructions page 123

Panel Connector with knurled Nut, Front Mounting

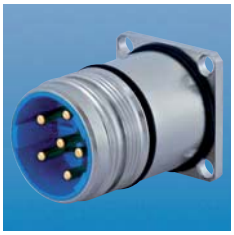


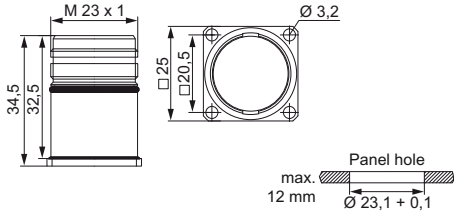
Type	Part Number
4 holes Ø 3,2 mm (.13“)	7.641.000.000
4 holes Ø 2,7 mm (.11“)	7.645.000.000

Optional:
Flat gasket

Contacts and inserts page 113 • Assembly instructions page 125

Panel Connector, Male Thread, Rear Mounting





Type	Part Number
With anti-vibration O-Ring	
4 holes Ø 3,2 mm (.13“)	7.661.000.000

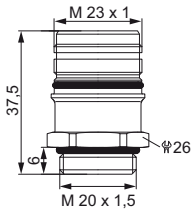
Contacts and inserts page 113 • Assembly instructions page 123

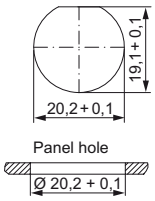
Dimensions and specifications may be changed without prior notice

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted

Front mounting
Thread M 20 x1,5 .....7.621.000.000

Options:
Flat gasket, jam nut M 20 x 1,5



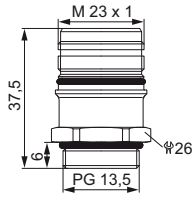


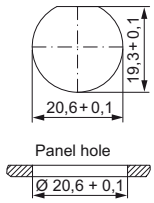
Contacts and inserts page 113 • Assembly instructions page 126

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted

Front mounting
Thread PG 13,5 .....7.623.000.000

Options:
Flat gasket, jam nut PG 13,5



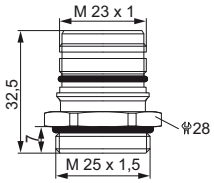


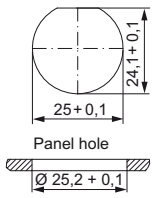
Contacts and inserts page 113 • Assembly instructions page 126

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted

Front mounting
Thread M 25x1,5 .....7.626.000.000

Options:
Flat gasket, jam nut M 25 x 1,5



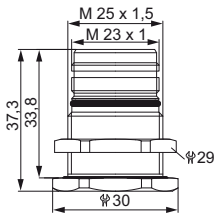


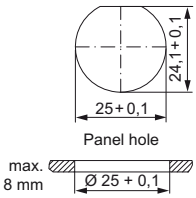
Contacts and inserts page 113 • Assembly instructions page 126

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted

Rear mounting
Thread M 25 x 1,5 .....7.651.000.000

Including jam nut M 25 x 1,5



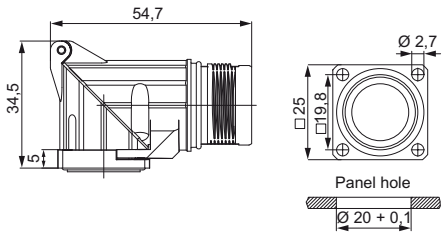


Contacts and inserts page 113 • Assembly instructions page 126

Power Connectors M 23 / Housing

Right Angle Panel Connector, Male Thread

Type	Part Number



4 holes Ø 2,7 mm (.11") 7.635.000.000

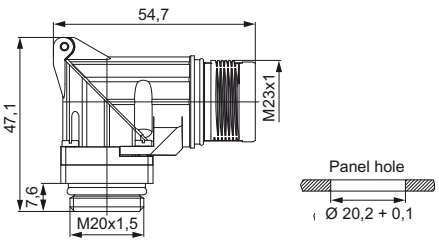
Options:
Flat gasket

Easy fastening with M2,5 x 10 mm or 4 x .39" long screws

Contacts and inserts page 113 • Assembly instructions page 127

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number

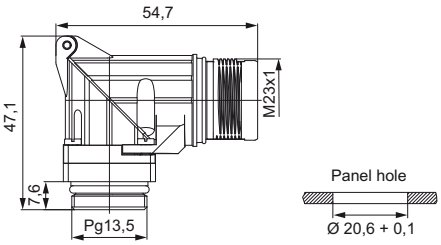


335° rotatable, single hole mounted
Thread M 20 x 1,5 .....7.636.000.000

Contacts and inserts page 113 • Assembly instructions page 127

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number

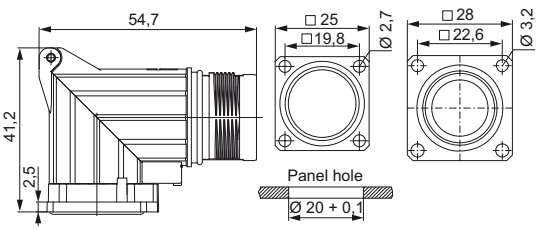


335° rotatable, single hole mounted
Thread PG 13,5 .....7.637.000.000

Contacts and inserts page 113 • Assembly instructions page 127

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number

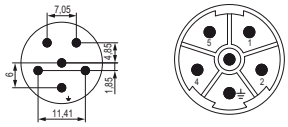
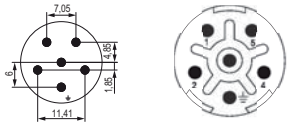
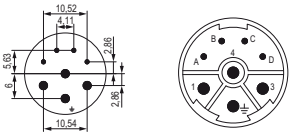
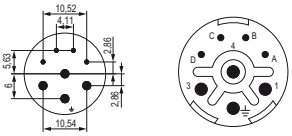
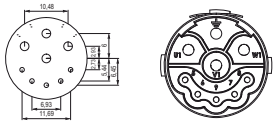
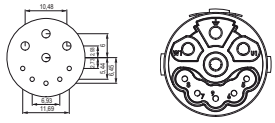
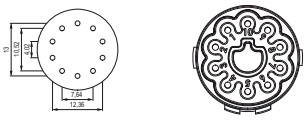
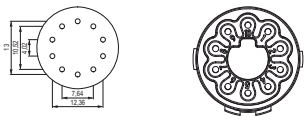


300° rotatable, locking screw at flange
4 x holes Ø 2,7 mm (.11") ..7.638.000.000
Flange 25 x 25 mm

4 x holes Ø 3,2 mm (.13") ..7.638.100.000
Flange 28 x 28 mm

Contacts and inserts page 113 • Assembly instructions page 127

Dimensions and specifications may be changed without prior notice

Type of Contact	Part Number	Contact Arrangement, Mating View
6 x crimp pins 2 mm	7.084.951.101	
6 x crimp sockets 2 mm	7.084.951.102	
4 x crimp pins 1 mm 4 x crimp pins 2 mm	7.084.943.101	
4 x crimp sockets 1 mm 4 x crimp sockets 2 mm	7.084.943.102	
5 x crimp pins 1 mm * 4 x crimp pins 2 mm *	7.084.953.101	
5 x crimp sockets 1 mm * 4 x crimp sockets 2 mm *	7.084.953.102	
10 x crimp pins 1 mm	7.084.910.101	
10 x crimp sockets 1 mm	7.084.910.102	

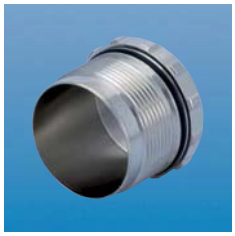
* Assembly instructions see page 122

Power Connectors M 23 / Contacts

Contacts	Type	Crimp Range	Part Number
	Crimp pin 1 mm, machined	0,14 – 1 mm² (AWG 26 – 17)	7.010.941.001
	Crimp pin 1 mm, machined	0,75 – 1,5 mm² (AWG 18 – 16)	7.010.941.021
	Crimp socket 1 mm, machined	0,14 – 1 mm² (AWG 26 – 17)	7.010.941.002
	Crimp socket 1 mm, machined	0,75 – 1,5 mm² (AWG 18 – 16)	7.010.941.022
	Crimp pin 2 mm, machined	0,75 – 2,5 mm² (AWG 18 – 14)	7.010.942.001
	Crimp pin 2 mm, machined	2,5 – 4 mm² (AWG 14 – 12)	7.010.942.011
	Crimp socket 2 mm, machined	0,75 – 2,5 mm² (AWG 18 – 14)	7.010.942.002
	Crimp socket 2 mm, machined	2,5 – 4 mm² (AWG 14 – 12)	7.010.942.012

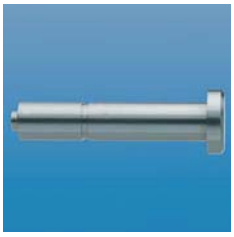
See page 128 for crimp tool instructions and proper setting

Dimensions and specifications may be changed without prior notice

Type	Part Number	Accessories
Plastic protective cap for connectors with male thread	7.000.900.101	
for connectors with female thread	7.000.900.102	
Brass protective cap for connectors with female thread	7.010.900.183	
Brass protective cap for connectors with male thread	7.010.900.102	
Brass protective cap with chain for connectors with female thread – Length 70 mm	7.010.9S0.783	
Length 100 mm	7.010.9S1.083	
Brass protective cap with chain for connectors with male thread – Length 70 mm	7.010.9S0.702	
Length 100 mm	7.010.9S1.002	

Power Connectors M 23 / Accessories

Accessories	Type	Part Number
	Crimp tool for manual crimping of machined crimp contacts. Works with contacts for power or signal	7.000.900.901
	Operating instructions on page 117	
	Adaptor flange for Straight Connectors	7.010.900.128
	Adapter for Conduit Fittings	
	Snapflex 16	7.010.900.204
	DN 12	7.010.900.205
	Snapflex 20	7.010.900.206
	DN 14	7.010.900.207
	Snapflex 25	7.010.900.208
	DN 17	7.010.900.209

Locator	Type	Part Number
	Locator for Crimp Tool DMC M22520 with positioner	7.000.9DM.C06
	For HUMMEL Contact: 7.010.941.001, 7.010.942.001, 7.010.942.011	
	Locator for Crimp Tool DMC M22520 with positioner	7.000.9DM.C07
	For HUMMEL Contact: 7.010.941.002, 7.010.942.002, 7.010.942.012	

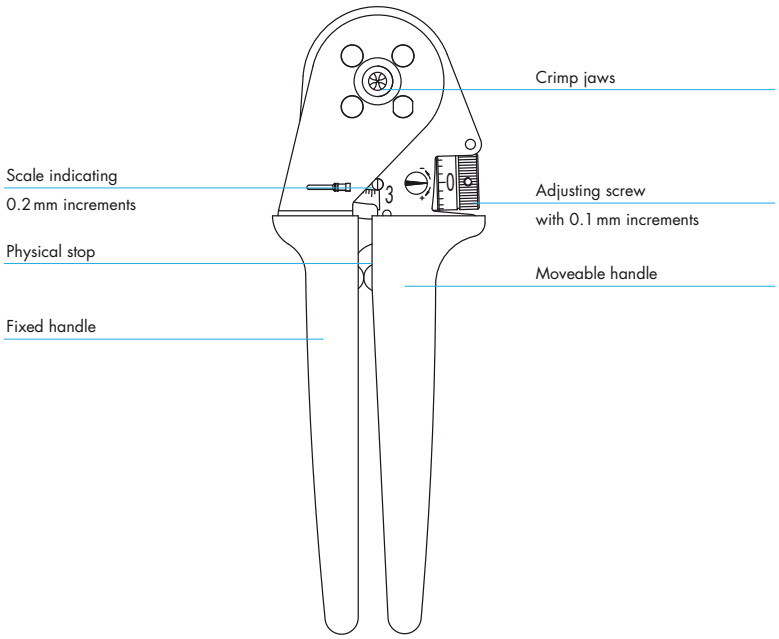
Dimensions and specifications may be changed without prior notice

Type	Part Number	Crimp Tool
Crimp tool	7.000.900.901	

Application
The four indent crimp tool 7.000.900.901 has been developed for optimal crimping of machined contacts with diameters from 0.14 to 6.0 mm² (26 through 10 AWG).

How to Crimp
The reference table indicates the correct locator position to be selected and the crimp depth to be adjusted for the contact to be crimped. The contact is then inserted through the access hole of the tool on the opposite side of the locator. The contact is held in place by closing the handles to the first lock-in position thus preventing the contact from falling out of the tool and facilitating insertion of the wire into the contact.
The precision ratchet assures consistently accurate crimping every time by forcing the tool to be closed all the way completing the crimping cycle before the tool can be opened again.

Exchange of the Locator
The locator can be exchanged by removing the socket head cap screw with a socket wrench. It can then be disassembled from the hex head screw by turning it counter-clockwise.

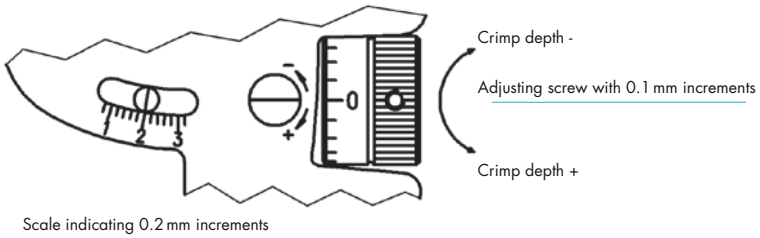


Crimp Tool for Power Connectors M 23

Crimp Tool

Adjustment of Crimp Depth
Crimp depth can be adjusted as follows:
Turn the adjusting screw clockwise for reducing the crimp depth and counter-clockwise for increasing the crimp depth.

Adjustment Increments:
- 1 space on the adjusting screw ≙ adjustment by 0.01 mm
- 1 full rotation of adjusting screw ≙ adjustment by 0.2 mm (indication on the screw as well as on the rough scale)
- 5 rotations of the adjusting screw ≙ adjustment by 1 mm (indication on the scale)



Scale indicating 0.2 mm increments

Control of Crimp Depth
Crimp tool adjustment is done at the factory, but with frequent use, periodic calibration is recommended to insure accuracy. This is easily accomplished with a 2.0 mm Ø wire gauge as follows.
A crimp depth of 2.0 mm is set by means of the adjusting screw (scale mark at „2", screw mark at „0" as shown in the fig. above) and the tool in the closed position. After insertion of the gauge, there must be just enough space for moving the gauge inside the entry hole. If the opening is too small or too large to exactly match the gauge, the deviation (+/-) can be checked by the precision setting of the screw. Please contact the factory in case the deviation exceeds the tolerances specified by the contract manufacturer.

Maintenance and Repair
Keep the tool clean and properly stored when not in service. All pivot points need to be oiled regularly and the spring clips securing the bolts have to always be in place. For repair please send the tool back to the factory.

Dimensions and specifications may be changed without prior notice

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.901)

Part Number	Crimp Contact	Cross Section mm²	AWG	Crimp Tool Setting mm	Locator Setting
7.010.901.001	Crimp pin (signal) 1 mm	0,14	26	0,75	11
		0,25	24	0,82	11
		0,35	22	0,9	11
		0,50	20	1	11
		0,75	18	1,08	11
		1,0	17	1,2	11
7.010.901.012	Crimp socket (signal) 1 mm	0,14	26	0,75	12
		0,25	24	0,8	12
		0,35	22	0,87	12
		0,50	20	0,97	12
7.010.901.002	Crimp socket (signal) 1 mm	0,50	20	0,95	12
		0,75	18	1	12
		1,0	17	1,05	12
7.010.901.501	Crimp pin (signal) 1,5 mm	0,14	26	0,75	3
		0,25	24	0,82	3
		0,35	22	0,9	3
		0,50	20	0,96	3
		0,75	18	1,03	3
		1,0	17	1	3
7.010.901.512	Crimp socket (signal) 1,5 mm	0,14	26	0,75	4
		0,25	24	0,8	4
		0,35	22	0,87	4
		0,50	20	0,97	4
7.010.901.502	Crimp socket (signal) 1,5 mm	0,50	20	0,95	4
		0,75	18	1	4
		1,0	17	1,05	4
7.010.902.001	Crimp pin (signal) 2 mm	0,75	18	1,3	5
		1,0	17	1,4	5
		1,5	16	1,55	5
		2,5	14	1,75	5
7.010.902.002	Crimp socket (signal) 2 mm	0,75	18	1,3	6
		1,0	17	1,4	6
		1,5	16	1,55	6
		2,5	14	1,75	6
7.010.941.001	Crimp pin (power) 1 mm	0,14	26	0,75	1
		0,25	24	0,8	1
		0,35	22	0,85	1
		0,50	20	1,03	1
		0,75	18	1,08	1
		1,0	17	1,13	1

Crimp Tool for Power Connectors M 23

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.901)

Part Number	Crimp Contact	Cross Section mm²	AWG	Crimp Tool Setting mm	Locator Setting
7.010.941.021	Crimp socket (power) 1 mm	0,75	18	0,79	1
		1	17	0,86	1
		1,5	16	0,99	1
7.010.941.002	Crimp socket (power) 1 mm	0,14	26	0,75	2
		0,25	24	0,8	2
		0,35	22	0,85	2
		0,50	20	0,89	2
		0,75	18	0,95	2
		1	17	1,02	2
7.010.941.022	Crimp socket (power) 1 mm	0,75	18	0,79	2
		1	17	0,86	2
		1,5	16	0,99	2
7.010.942.001	Crimp pin (power) 2 mm	0,75	18	1,3	7
		1	17	1,4	7
		1,5	16	1,55	7
		2,5	14	1,7	7
7.010.942.011	Crimp pin (power) 2 mm	2,5	14	1,47	7
		4	12	1,6	7
7.010.942.002	Crimp socket (power) 2 mm	0,75	18	1,3	8
		1	17	1,4	8
		1,5	16	1,55	8
		2,5	14	1,7	8
7.010.942.012	Crimp socket (power) 2 mm	2,5	14	1,47	8
		4	12	1,6	8

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

Please see assembly instructions on page 128

Dimensions and specifications may be changed without prior notice

Straight Connector, Female Thread

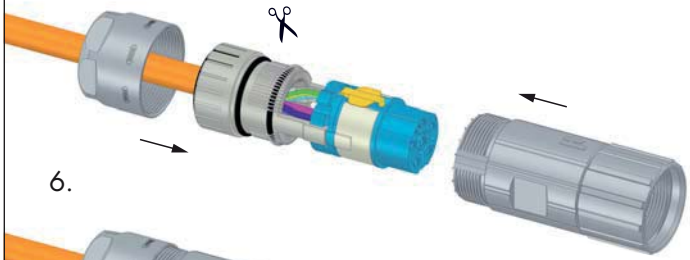
1.

2.

3.

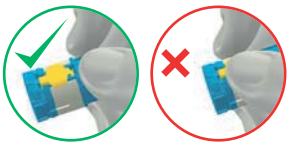
4.

5.



6.

x	Contact 1 mm = 4 mm Contact 2 mm = 7 mm



Straight Connector, Female Thread 5+3+PE

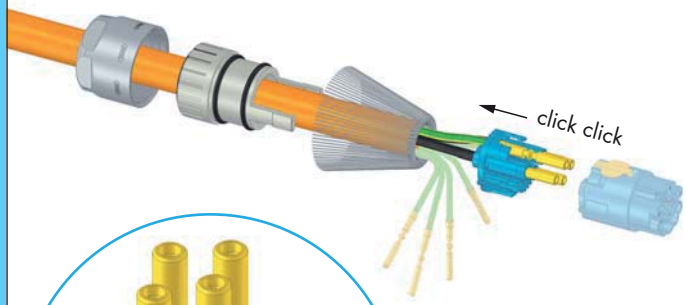
1.

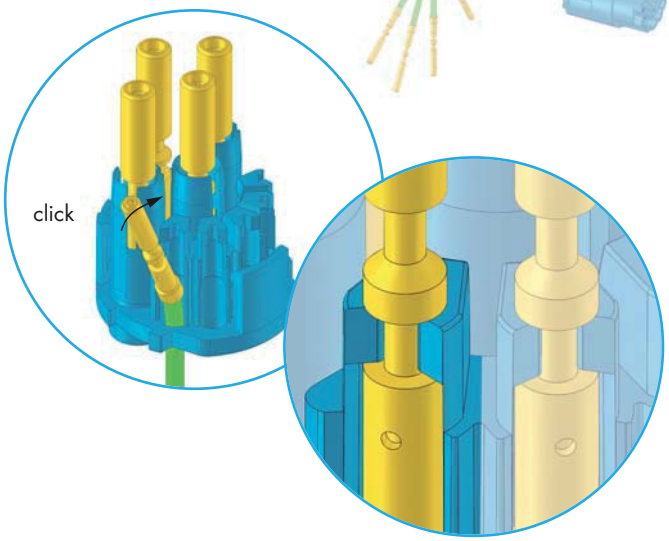
2.

x	Contact 1 mm = 4 mm Contact 2 mm = 7 mm

3.

4.





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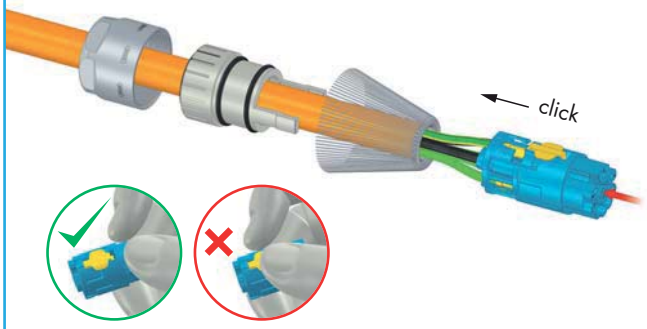

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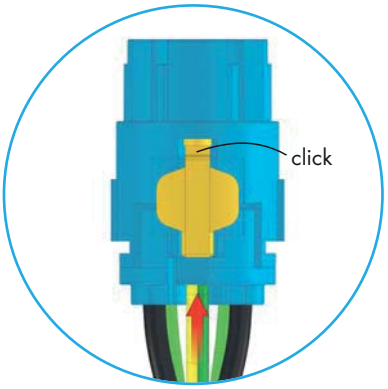

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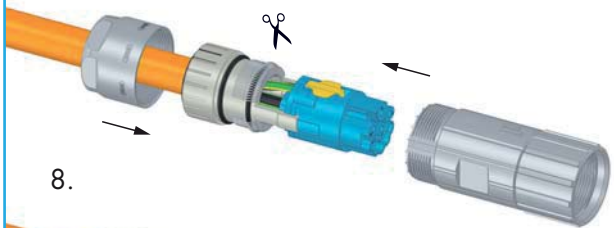
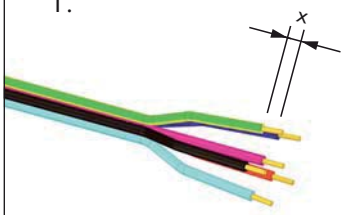


8.

Dimensions and specifications may be changed without prior notice

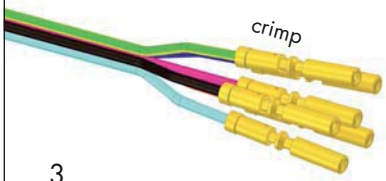
Panel Connector, Male Thread

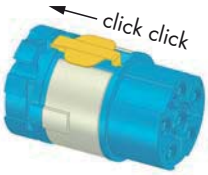
1.

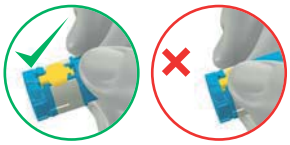


x	Contact 1 mm = 4 mm Contact 2 mm = 7 mm

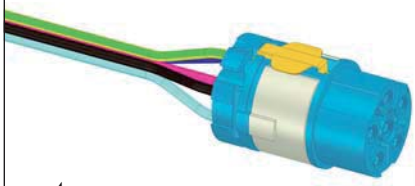
2.

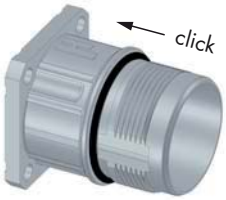






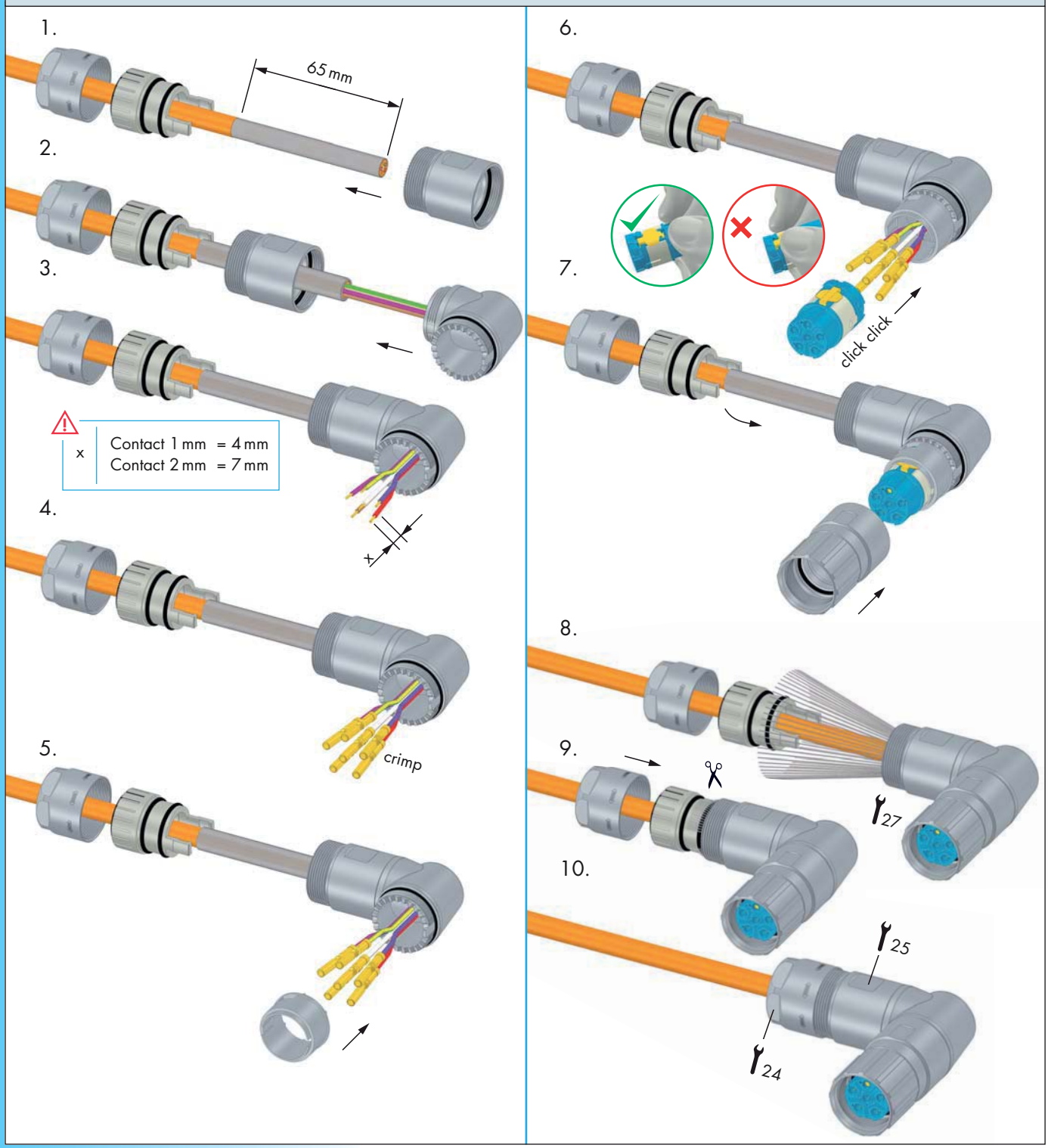
3.





4.

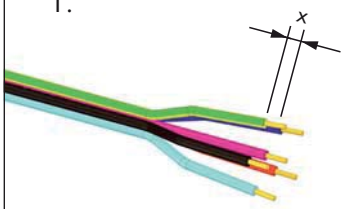
Right Angle Connector, rotatable



Dimensions and specifications may be changed without prior notice

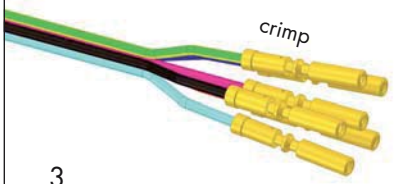
Panel Connector, Female Thread

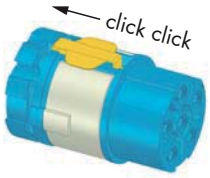
1.

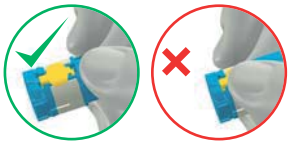


x	Contact 1 mm = 4 mm Contact 2 mm = 7 mm

2.







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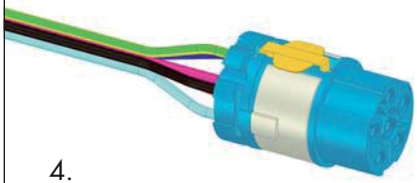

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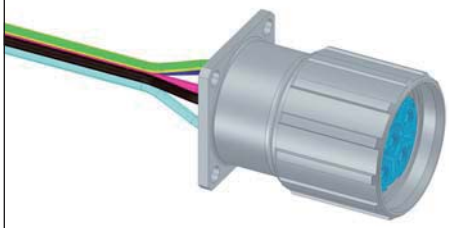
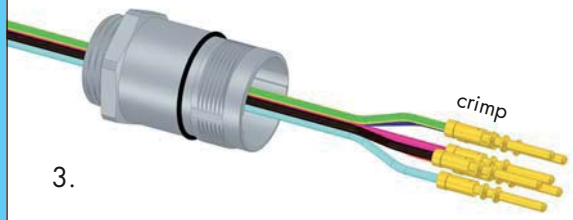


Panel Connector, Male Thread, Single Hole Mounted

1.

x | Contact 1 mm = 4 mm
Contact 2 mm = 7 mm

2.



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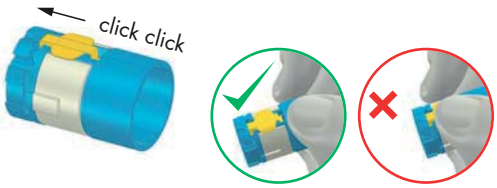

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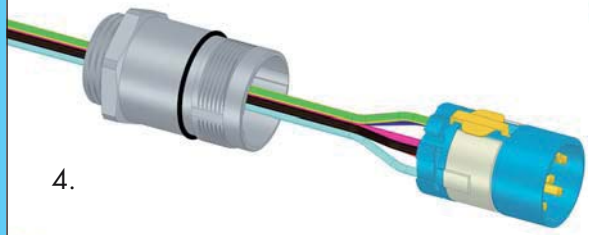
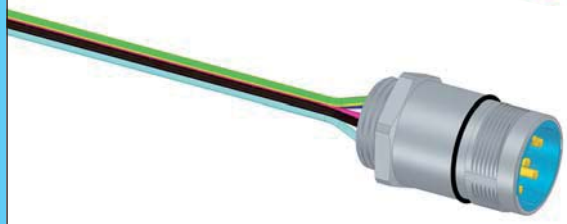
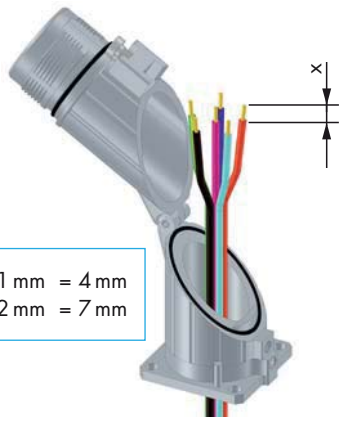




Dimensions and specifications may be changed without prior notice

Right Angle Panel Connector

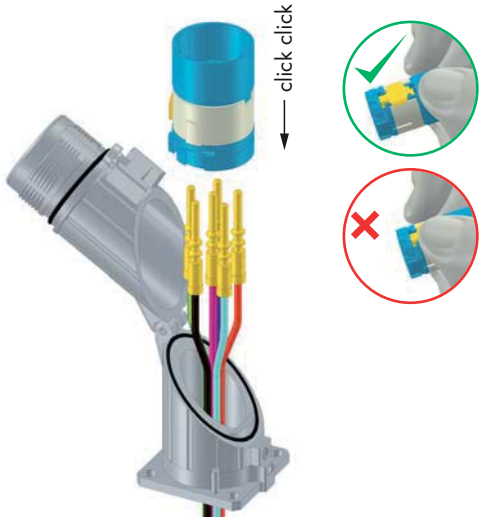
1.



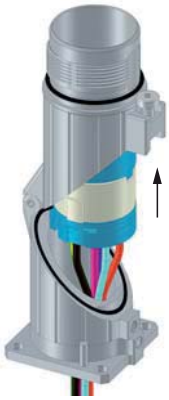
x	Contact 1 mm = 4 mm Contact 2 mm = 7 mm

2.

3.



4.



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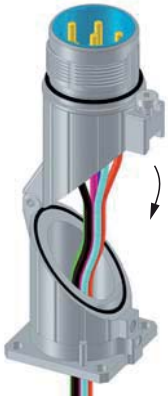

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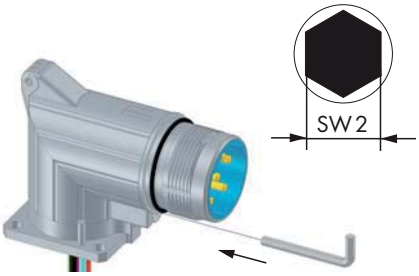
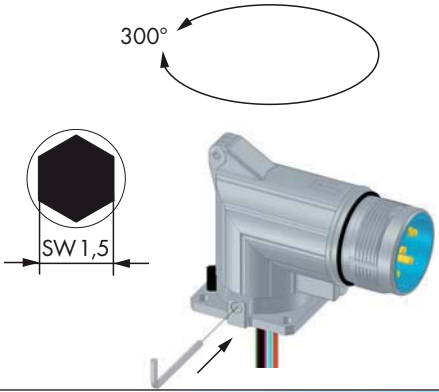
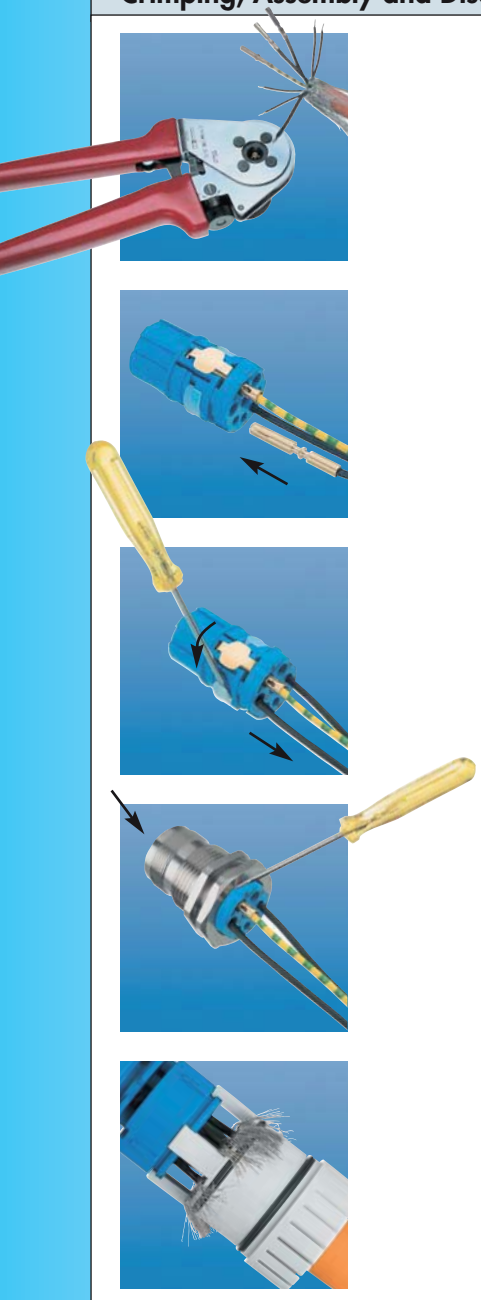


7.



Crimping, Assembly and Disassembly

Crimping, Assembly and Disasembly



Crimping
- For 1 mm contacts strip wire ends 4 mm (.16") max., for 2 mm contacts strip wire ends 7 mm (.28") max.
- Dial appropriate setting of crimping tool (page 119/120)
- Push crimp contact into opening of crimping tool
- Insert stripped wire into the funnel shaped end of the crimp contact
- Squeeze handles of crimping tool together, connecting contact to wire

Assembly
- Remove crimped assembly and pull on wire to test connection
- Push into desired position of insert
  Note: For 8-pole inserts (4 + 3 + PE) it is recommended to assemble the large contacts first.

Disassembly of Contacts from Insert
A small screw driver is required.
- Using the screw driver, push the white clip ring out of the insert
- Pull the contacts out of the insert
- Replace the white clip ring
- Reinsert the contacts

Disassembly of Insert from Housing
A small screw driver is required. Push locking tongue, located above the PE-contact, down. By simultaneously pushing on the front side of the insert, it can be disassembled from the housing.

Shielding
- Assemble strain relief insert with insert
- Fold stranding of the shield back over the first O-Ring of the strain relief insert
- Cut back the overextending braid

The stranding of the shield is not allowed to touch the second O-Ring. Otherwise the assembly may not be proof.

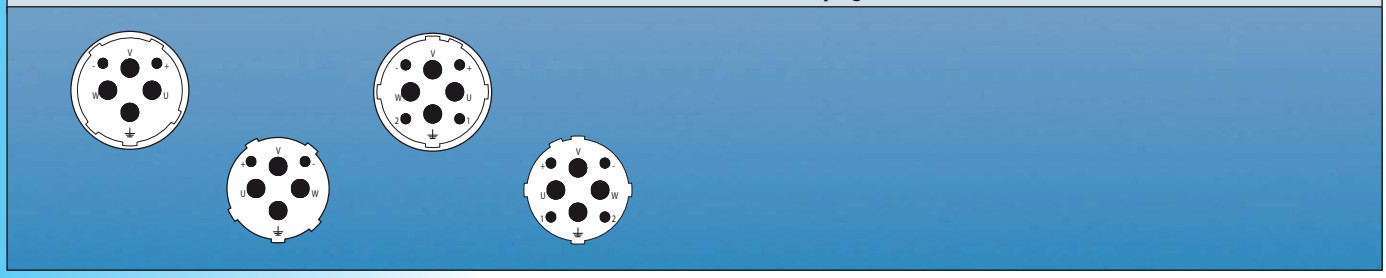
Dimensions and specifications may be changed without prior notice

Power Connectors Size 1,5 (M 40)

Product Overview

Housings page 132

Inserts page 135



Accessories page 138

Dimensions and specifications may be changed without prior notice

Power Connectors Size 1,5 (M40)

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy Die Cast
Housing surface	Nickel plated, other surface upon request
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT Fire protection class V-0
Contacts	Brass Alloy
Contact surface at point of contact	Nickel and gold plated (0,25 µm Au)
Minimum mating cycles	> 500
Seals / O-Rings	Buna-N standard optional Viton® (Viton is a registered trademark of DuPont)
Temperature range	-40° C – 125° C (-40 °F – 257 °F)
Type of contacts	Crimp
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x
Cable diameter range	13 – 28 mm (.51" – 1.10")

Electrical Data

Number of positions	3 + 2 + PE		4 + 3 + PE	
Number of contacts	2	4	4	4
Contact-Ø [mm]	2	3,6	2	3,6
Nominal current [1] [A]	28	55	28	55
Nominal voltage [2] [V~] Degree of Protection 3 [3]	300	600	300	600
Test voltage (Breakdown voltage) [4] [V~]	2500	4000	2500	4000
Insulation resistance [MΩ]	$> 10^{13}$		$> 10^{13}$	
Max. contact resistance [mΩ]	3	1	3	1

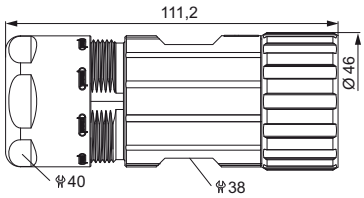
[1], [2], [3], [4] See Technical Informations page 14

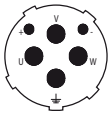
⚠ Standard delivery of M40 (size 1.5) Power Connector include Contact Insert

Power Connectors Size 1,5 (M 40)

Straight Connector, Female Thread

Cable-Ø	Part Number
2 + 3 + PE, insert for sockets	
13 – 18 mm (.51 – .71")	7.710.623.000
17 – 24 mm (.67 – .97")	7.710.723.000
21 – 28 mm (.83 – 1.10")	7.710.823.000

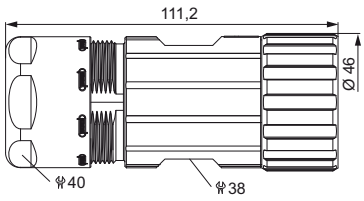


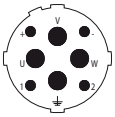


Contacts page 136 • Assembly instructions page 145

Straight Connector, Female Thread

Cable-Ø	Part Number
4 + 3 + PE, insert for sockets	
13 – 18 mm (.51 – .71")	7.710.643.000
17 – 24 mm (.67 – .97")	7.710.743.000
21 – 28 mm (.83 – 1.10")	7.710.843.000

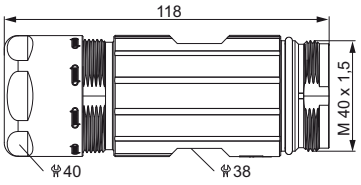


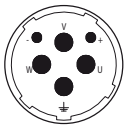


Contacts page 136 • Assembly instructions page 145

Straight Connector, Male Thread

Cable-Ø	Part Number
2 + 3 + PE, insert for pins	
13 – 18 mm (.51 – .71")	7.720.623.000
17 – 24 mm (.67 – .97")	7.720.723.000
21 – 28 mm (.83 – 1.10")	7.720.823.000

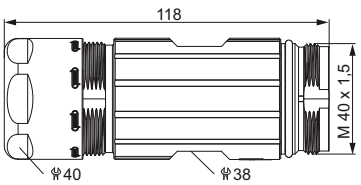


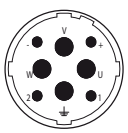


Contacts page 136 • Assembly instructions page 145

Straight Connector, Male Thread

Cable-Ø	Part Number
4 + 3 + PE, insert for pins	
13 – 18 mm (.51 – .71")	7.720.643.000
17 – 24 mm (.67 – .97")	7.720.743.000
21 – 28 mm (.83 – 1.10")	7.720.843.000



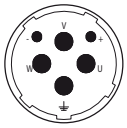


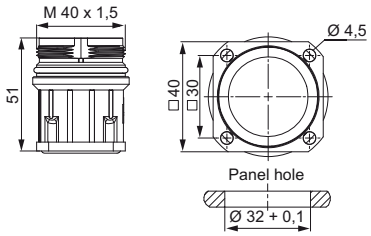
Contacts page 136 • Assembly instructions page 145

Dimensions and specifications may be changed without prior notice

Type	Part Number	Panel Connector, Male Thread, Front Mounting

2 + 3 + PE, insert for pins
4 holes Ø 4,5 mm (.18") 7.740.023.000

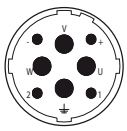


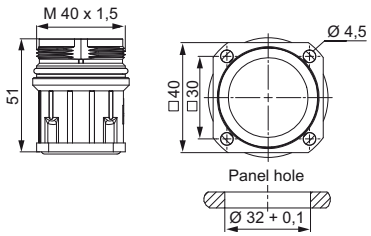


Contacts page 136 • Assembly instructions page 146

Type	Part Number	Panel Connector, Male Thread, Front Mounting

4 + 3 + PE, insert for pins
4 holes Ø 4,5 mm (.18") 7.740.043.000

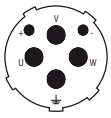


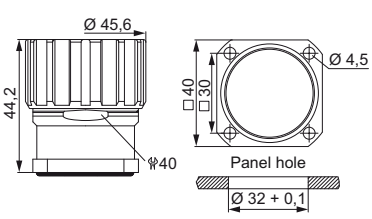


Contacts page 136 • Assembly instructions page 146

Type	Part Number	Panel Connector with knurled Nut, Front Mounting

2 + 3 + PE, insert for sockets
4 holes Ø 4,5 mm (.18") 7.744.023.000

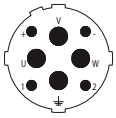


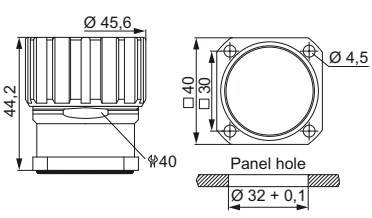


Contacts page 136 • Assembly instructions page 146

Type	Part Number	Panel Connector with knurled Nut, Front Mounting

4 + 3 + PE, insert for sockets
4 holes Ø 4,5 mm (.18") 7.744.043.000



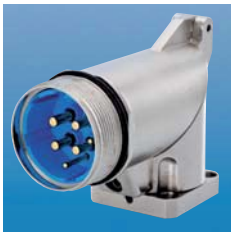


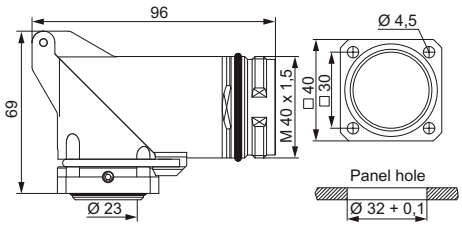
Contacts page 136 • Assembly instructions page 146

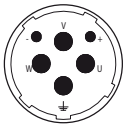
Power Connectors Size 1,5 (M 40)

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number
2 + 3 + PE, insert for pins	
4 holes Ø 4,5 mm (.18")	7.743.023.000



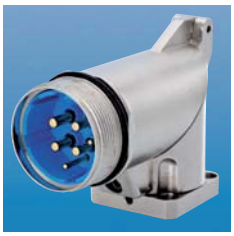


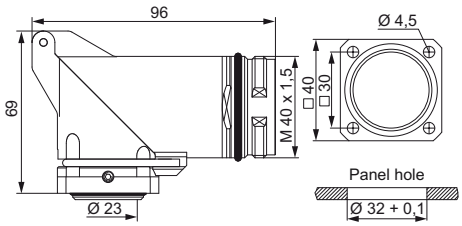


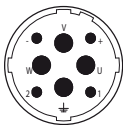
Contacts page 136 • Assembly instructions page 147

Right Angle Panel Connector, Male Thread, rotatable

Type	Part Number
4 + 3 + PE, insert for pins	
4 holes Ø 4,5 mm (.18")	7.743.043.000



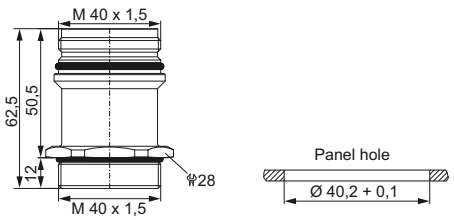


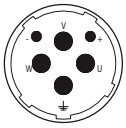


Contacts page 136 • Assembly instructions page 147

Panel Connector, Male Thread, Single Hole Mounting

Type	Part Number
Front mounting, 2 + 3 + PE, insert for pins	
Thread M 40 x 1,5	7.742.023.000

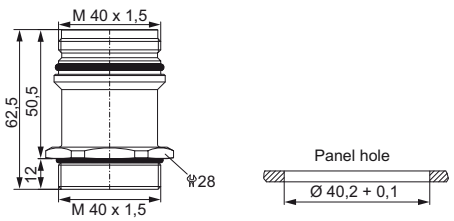


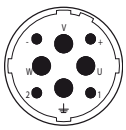


Contacts page 136 • Assembly instructions page 146

Panel Connector, Male Thread, Single Hole Mounting

Type	Part Number
Front mounting, 4 + 3 + PE, insert for pins	
Thread M 40 x 1,5	7.742.043.000

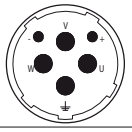
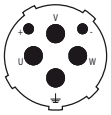
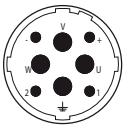
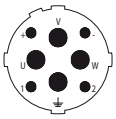




Contacts page 136 • Assembly instructions page 146

Dimensions and specifications may be changed without prior notice

Power Connectors Size 1,5 (M 40) / Required Contacts

	Type of Contact	Contact Arrangement, Mating View
Insert for pins 2 + 3 + PE	2 x crimp pins 2 mm 4 x crimp pins 3,6 mm	
Insert for sockets 2 + 3 + PE	2 x crimp sockets 2 mm 4 x crimp sockets 3,6 mm	
Insert for pins 4 + 3 + PE	4 x crimp pins 2 mm 4 x crimp pins 3,6 mm	
Insert for sockets 4 + 3 + PE	4 x crimp sockets 2 mm 4 x crimp sockets 3,6 mm	

Power Connectors Size 1,5 (M 40) / Contacts

Contacts	Type of Contact	Crimp Range	Part Number
	Crimp pin 2 mm, machined	1 – 4 mm² (AWG 17 – 12)	7.015.952.001
	Crimp socket 2 mm, machined	1 – 4 mm² (AWG 17 – 12)	7.015.952.002
	Crimp pin 3,6 mm, machined	1,5 – 4 mm² (AWG 16 – 12)	7.015.953.601
	Crimp socket 3,6 mm, machined	1,5 – 4 mm² (AWG 16 – 12)	7.015.953.602
	Crimp pin 3,6 mm, machined	6 mm² (AWG 10)	7.015.953.611
	Crimp socket 3,6 mm, machined	6 mm² (AWG 10)	7.015.953.612
	Crimp pin 3,6 mm, machined	10 mm² (AWG 8)	7.015.953.621
	Crimp socket 3,6 mm, machined	10 mm² (AWG 8)	7.015.953.622

Crimp Tool Settings see page 144

For appropriate setting of crimp tool see page 148

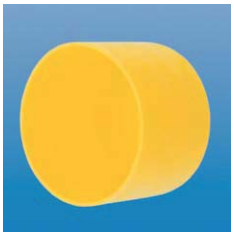
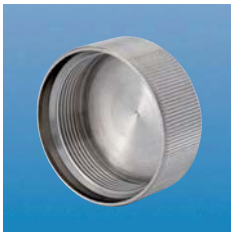
Dimensions and specifications may be changed without prior notice

Type	Part Number	Contacts
Crimp pin 3,6 mm, machined ....16 mm² (AWG 6)	7.015.953.631	
Crimp socket 3,6 mm, machined..16 mm² (AWG 6)	7.015.953.632	

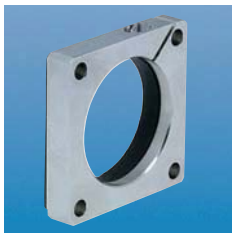
Crimp Tool Settings see page 144

For appropriate setting of crimp tool see page 148

Power Connectors Size 1,5 (M 40) / Accessories

Accessories	Type	Part Number
	Plastic protective cap for connectors with female thread	7.000.900.152
	Plastic protective cap for connectors with male thread	7.000.900.151
	Brass protective cap for connectors with female thread	7.015.900.103
	Brass protective cap for connectors with male thread	7.015.900.102
	Brass protective cap with rope for connectors with female thread	7.015.9S1.003
	Brass protective cap with rope for connectors with male thread	7.015.9S1.002

Dimensions and specifications may be changed without prior notice

Type	Part Number	Accessories
Adaptor flange for Straight Connectors	7.010.900.129	
Adapter for Conduit Fittings	Snapflex 25 ..... 7.010.900.214 DN 23 ..... 7.010.900.215 Snapflex 32 ..... 7.010.900.216 DN 29 ..... 7.010.900.217	
Crimp tool for manual crimping of machined crimp contacts up to 10 mm² (AWG 8) for power connectors See page 140 / 141 for crimp tool instructions and page 144 for proper setting	7.000.900.902	
Crimp tool for manual crimping of machined crimp contacts 16 mm² (AWG 6) See page 142 / 143 for crimp tool instructions and page 144 for proper setting	7.000.900.903	

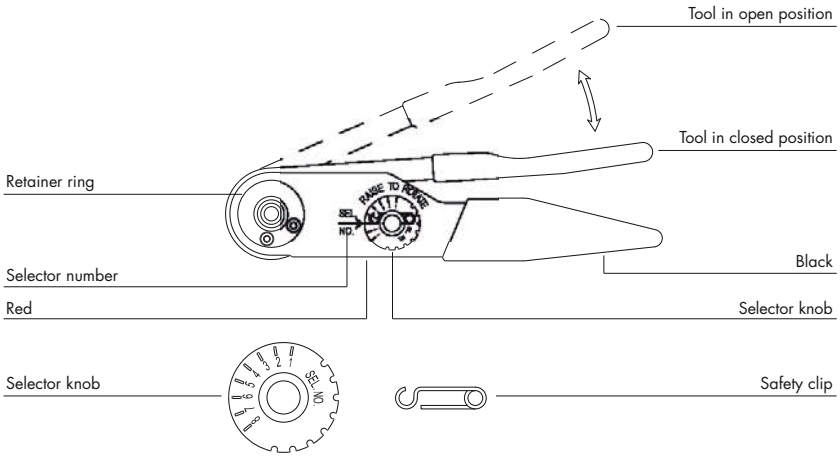
Crimp Tool for Power Connectors Size 1,5 (M 40)

Crimp Tool	Type	Part Number
	Crimp tool	7.000.900.902

Application
The four indent crimp tool 7.000.900.902 has been developed for optimal crimping of machined contacts with diameters from 1 to 10 mm² (18 through 8 AWG).

How to Crimp
The reference table indicates the correct locator position to be selected and the crimp depth to be adjusted for the contact to be crimped. The contact is then inserted through the access hole of the tool on the opposite side of the locator. The contact is held in place by closing the handles to the first lock-in position thus preventing the contact from falling out of the tool and facilitating insertion of the wire into the contact.
The precision ratchet assures consistently accurate crimping every time by forcing the tool to be closed all the way completing the crimping cycle before the tool can be opened again.

Exchange of the Locator
The locator can be exchanged by removing the socket head cap screw with a socket wrench. Then it can be disassembled from the hex head screw by turning it counter-clockwise.



Dimensions and specifications may be changed without prior notice

Crimp Tool for Power Connectors Size 1,5 (M40)

Crimp Tool

Setting Up Instructions

1. Tool must be in open position
2. Place selected single position head assembly onto retainer ring with alignment pin in alignment pin hole
3. After single position head is seated against retainer ring, tighten socket head screws with 9/64 inch socket head screw key
4. Refer to dataplate on single position head. From the proper wire size column, determine the selector number that corresponds with the contact being used
5. Remove spring clip lock wire from selector knob. Raise selector knob and rotate until selector number is in line with index mark. Replace spring clip lock wire (optional)

Crimping Instructions

1. Insert contact and prepared wire through the indenter opening into positioner
2. Squeeze handles together until ratchet releases. Handle will return to open position. Remove crimped contact and wire

Removing Single Position Head

Loosen socket head screws until threads are disengaged from retainer ring and remove with a straightlifting motion

Gaging Instructions

The correct function of the crimp tool has to be checked with a gage (item no. 7.010.900.117).

„GO"-Gaging (green)

Operate tool to fully closed position. Maintain firm hand pressure on the tool handles. Insert „GO" gage end. Gage must pass freely between indenter tips.

„NO-GO"-Gaging (red)

Operate tool to fully closed position. Maintain firm hand pressure on the tool handles. Insert „NO-GO" gage end. The „NO-GO" gage may partially enter the indenter opening, but must not pass completely through the opening.

Care of Tool

There is virtually no maintenance required. However, it is a good practice to keep intenter tips free of residual color band deposits and other debris. A small wire brush may be used for this purpose.

We strongly recommend that you:

1. Do not immerse tools in cleaning solution
2. Do not spray oil into tool to lubricate
3. Do not attempt to disassemble tool or make repairs

This is a precision crimp tool and should be handled as such.

Crimp Tool for Power Connectors Size 1,5 (M 40)

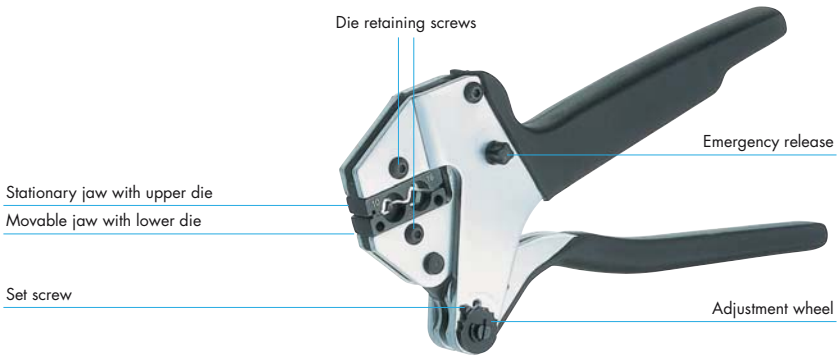
Crimp Tool	Type	Part Number
	Crimp tool for contacts 16 mm² (AWG 6)	7.000.900.903

Application

The hand crimp tool 7.000.900.903 has been developed for optimal crimping of a large variety of connectors and terminals by using different interchangeable crimping dies.

Operation

- Select crimp insert and install in tool
- Insert and align crimp contact in tool
- Compress tool until contact is held in place
- Insert conductor into contact
- Fully compress tool (tool will reopen automatically)
- Remove crimped conductor from tool



Dimensions and specifications may be changed without prior notice

Crimp Tool

Adjustment of crimp force and height
Crimp force adjustment is done in the factory (120 – 180 N when unloaded). Tool frame and jaws are connected that way, an optimal crimping result will be obtained based on the hand force indicated above. In case the result (e.g. crimp height, pull-out force, etc.) does not meet the requirements of the plug manufacturer, the following reasons can be considered:

a) Normal wear of tool
Readjustment possible

b) Worn dies
Dies have to be replaced

The quality personnel is authorized to control and readjust these parameters as described below:
- Unscrew the set screw by means of a screw driver
- Rotatable the adjustment wheel anticlockwise, the crimp force increases and the crimp height decreases (+)
- Rotatable the adjustment wheel lockwise, the crimp force decreases and the crimp height increases (-)
- When readjusting the hand force shall not exceed 180 N
- Before using the tool, the operator has to check the adjustment wheel being firmly secured by the set screw

Maintenance
Keep the tool clean and properly stored when not in service. The joints need to be regularly oiled and the circlips securing the bolts have to be always in place. Never use abrasives or hard material to clean the jaws. Please contact the manufacturer when the tool needs to be repaired or in case of readjustment problems.

Crimp Tool for Power Connectors Size 1,5 (M 40)

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.902)

Part Number	Contact	Cross Section mm²	AWG	Crimp Tool Setting mm	Locator Setting
7.015.952.001	Crimp pin 2 mm	1	17	2	3
		1,5	16	3	3
		2,5	14	4	3
		4	12	4	3
7.015.952.002	Crimp socket 2 mm	1	17	2	1
		1,5	16	3	1
		2,5	14	4	1
		4	12	4	1
7.015.953.601	Crimp pin 3,6 mm	1,5	16	3	2
		2,5	14	4	2
		4	12	5	2
7.015.953.602	Crimp socket 3,6 mm	1,5	16	3	4
		2,5	14	4	4
		4	12	5	4
7.015.953.611	Crimp pin 3,6 mm	6	10	5	2
7.015.953.612	Crimp socket 3,6 mm	6	10	5	4
7.015.953.621	Crimp pin 3,6 mm	10	8	7	2
7.015.953.622	Crimp socket 3,6 mm	10	8	7	4

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

Assembly information see page 148

Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.903)

Part Number	Crimp Contact	Cross Section mm²	AWG	Crimp Tool Setting
7.015.953.631	Crimp pin 3,6 mm	16	6	die 16
7.015.953.632	Crimp socket 3,6 mm	16	6	die 16

These values are only guidelines and actual conductor cross sections depend on manufacturer tolerances.

Assembly information see page 148

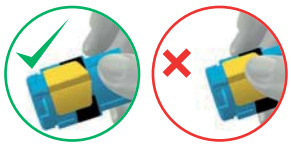
Dimensions and specifications may be changed without prior notice

Straight Connector, Female Thread / Male Threaded Connector

1.

2.

3.



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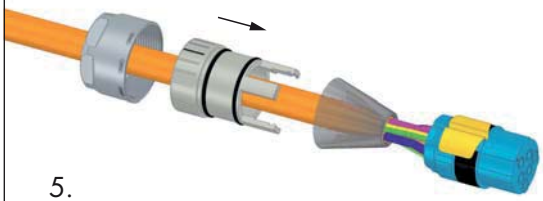

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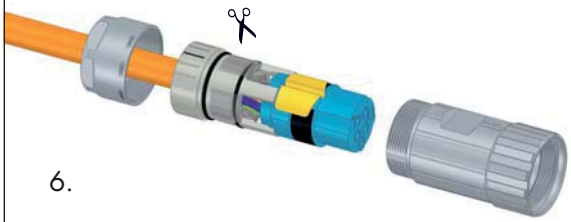

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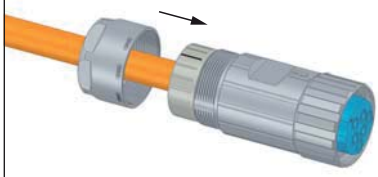

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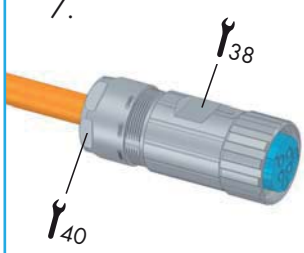
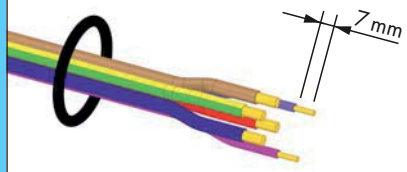


Power Connectors Size 1,5 (M40) / Assembly Instructions

Panel Connector

1.



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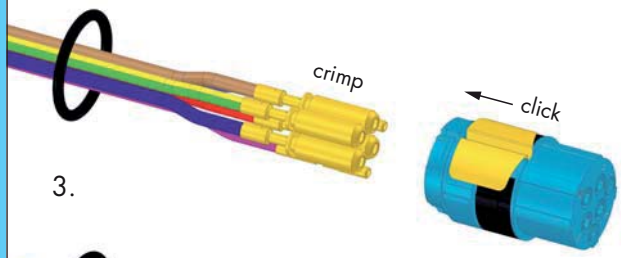

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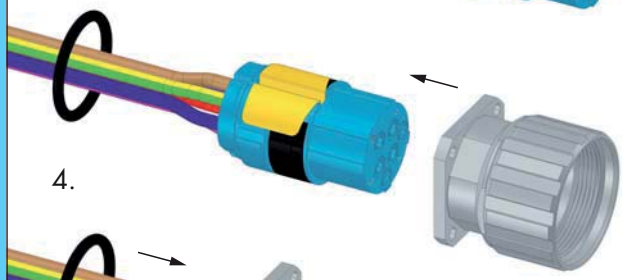

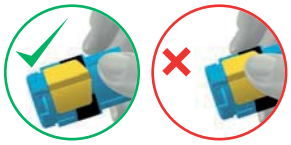

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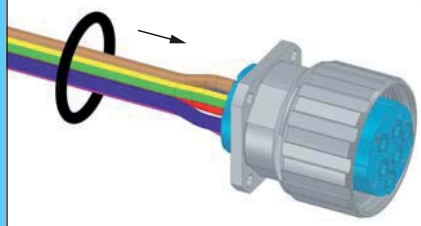
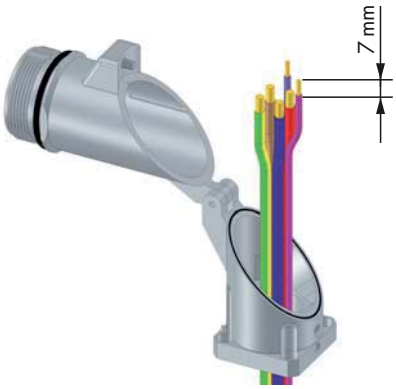


Dimensions and specifications may be changed without prior notice

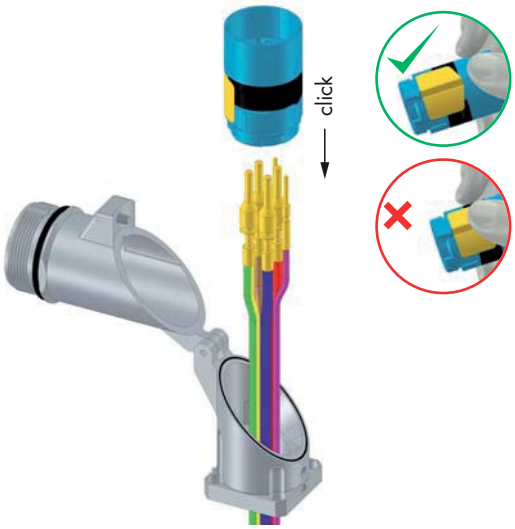
Right Angle Panel Connector

1.



2.

3.



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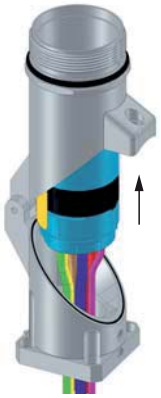

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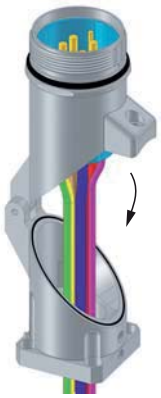

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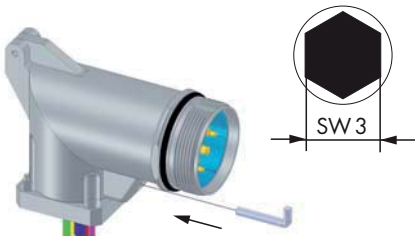

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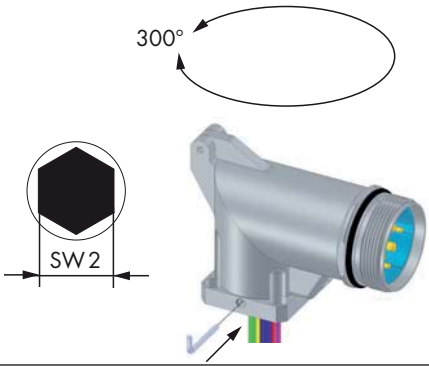
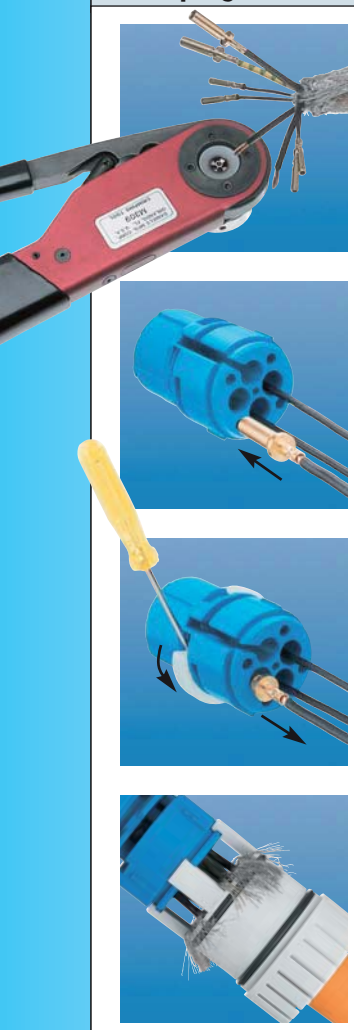


Crimping, Assembly and Disassembly



Crimping
- Strip wire ends 7 mm (.28")
- Dial appropriate setting of crimp tool (page 144)
- Push crimp contact into opening of crimping tool
- Insert stripped wire into the funnel shaped end of the crimp contact
- Squeeze handles of crimping tool together connect contact to wire

Assembly
- Remove crimped assembly and pull on wire to test connection
- Push into desired position of insert
  Note: It is recommended to assemble the large contacts first.

Disassembly of Contacts from Insert
A small screwdriver is needed to remove the contacts from the insert.

- Release the white ring by a screwdriver out of the insert
- Move the misplaced contacts out of the insert
- Enter the ring back into the insert
- Push the contacts back into insert

Shielding
- Assemble strain relief insert with insert
- Fold stranding of the shield back over the first O-Ring of the strain relief insert
- Cut back the overextending braid

The stranding of the shield is not allowed to touch the second O-Ring. Otherwise the assembly may not be proof.

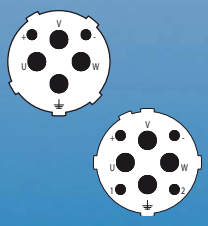
Dimensions and specifications may be changed without prior notice

Push-Pull Technology Size M 40

Product Overview

Housings page 152

Inserts page 135



Accessories page 138

Dimensions and specifications may be changed without prior notice

Push-Pull Connectors

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy Die Cast
Housing surface	Nickel plated, other surface upon request
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT Fire protection class V-0
Contacts	Brass Alloy
Contact surface at point of contact	Nickel and gold plated (0,25 µm Au)
Minimum mating cycles	> 250
Seals / O-Rings	Buna-N standard optional Viton® (Viton is a registered trademark of DuPont)
Temperature range	-40° C – 125° C (-40 °F – 257 °F)
Type of contacts power M 40	Crimp
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x

Additional Information

Electrical data see standard program
Power Connectors Size 1,5 page 131

Inserts and contacts see standard program
Power Connectors Size 1,5 page 135

⚠ We do not recommend disconnecting or connecting HUMMEL Connectors under load.

Characteristics

HUMMEL Push-Pull Connectors guarantee:

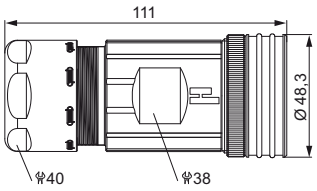
- Quick connecting cycle
- EMC compatible connection due to radially locked metal ring
- High protection rate
- Easy connection / disconnection even under tight space conditions
- Best reliability with optional safety ring

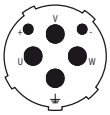
⚠ Standard delivery of M 40 (size 1.5) Power Connector include Contact Insert

Power Connectors Size 1,5 / Push-Pull

Straight Connector, Female Thread

Cable-Ø	Part Number
2 + 3 + PE, insert for sockets	
13 – 18 mm (.52 – .71“)	7.715.623.000
17 – 24 mm (.67 – .95“)	7.715.723.000
21 – 28 mm (.83 – 1.10“)	7.715.823.000



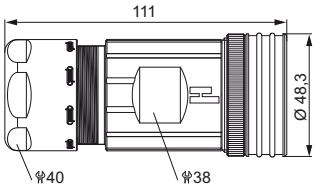


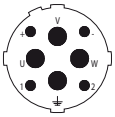
Optional:
Safety ring

Contacts page 136 • Assembly instructions page 145

Straight Connector, Female Thread

Cable-Ø	Part Number
4 + 3 + PE, insert for sockets	
13 – 18 mm (.52 – .71“)	7.715.643.000
17 – 24 mm (.67 – .95“)	7.715.743.000
21 – 28 mm (.83 – 1.10“)	7.715.843.000





Optional:
Safety ring

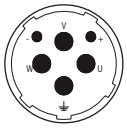
Contacts page 136 • Assembly instructions page 145

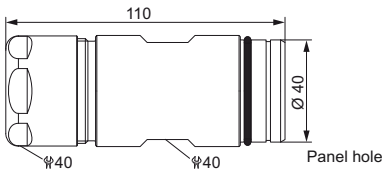
Dimensions and specifications may be changed without prior notice

Cable-Ø	Part Number	Straight Connector, Male Thread

2+3+PE, insert for pins

13 – 18 mm (.52 – .71")..... 7.725.623.000
17 – 24 mm (.67 – .95")..... 7.725.723.000
21 – 28 mm (.83 – 1.10")... 7.725.823.000



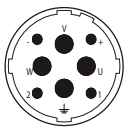


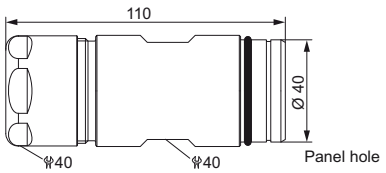
Contacts page 136 • Assembly instructions page 145

Cable-Ø	Part Number	Straight Connector, Male Thread

4+3+PE, insert for pins

13 – 18 mm (.52 – .71")..... 7.725.643.000
17 – 24 mm (.67 – .95")..... 7.725.743.000
21 – 28 mm (.83 – 1.10")... 7.725.843.000

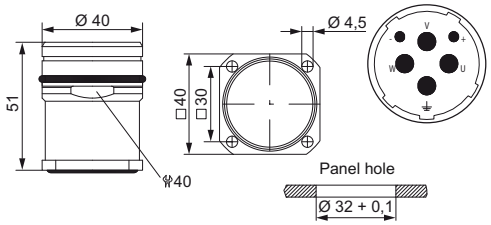




Contacts page 136 • Assembly instructions page 145

Power Connectors Size 1,5 / Push-Pull

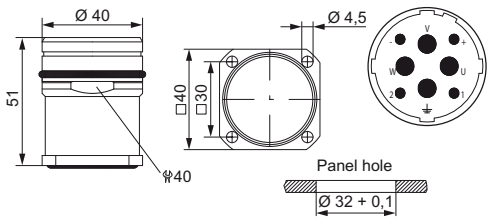
Panel Connector	Type	Part Number



2 + 3 + PE, insert for pins
4 holes Ø 4,5 mm (.18") 7.740.523.000

Contacts page 136 • Assembly instructions page 146

Panel Connector	Type	Part Number



4 + 3 + PE, insert for pins
4 holes Ø 4,5 mm (.18") 7.740.543.000

Contacts page 136 • Assembly instructions page 146

Dimensions and specifications may be changed without prior notice

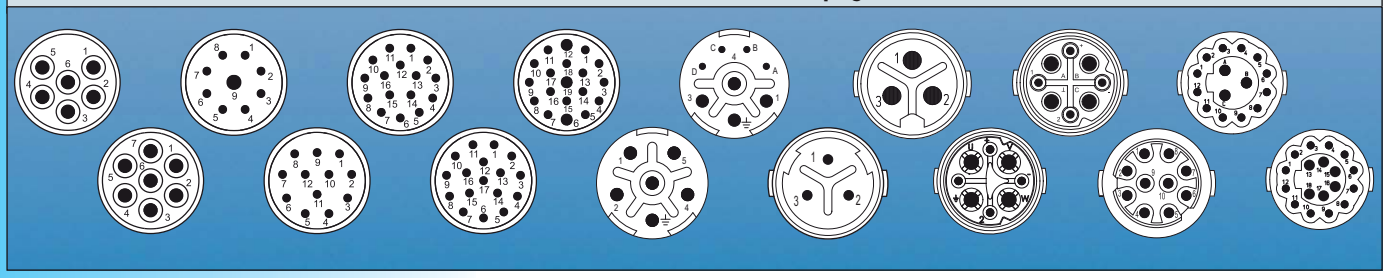
Stainless Steel Connectors (INOX)

Housings

page 158

Inserts

page 22, 74, 113



Accessories

page 29, 82, 115

Dimensions and specifications may be changed without prior notice

Connectors Stainless Steel (INOX)

Mechanical Data	Materials and Technical Data	
Housing	Stainless Steel V4A	1.4404 (AISI 316 L)
Housing surface	Clear	
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT	Fire protection class V-0
Contacts	Brass Alloy	
Contact surface at point of contact	Nickel and gold plated (0,25 µm Au)	
Minimum mating cycles	> 1000	
Seals / O-Rings	Viton (FPM), alternativ EPDM	
Temperature range	-40° C – 125° C	
Type of contacts signal M23	Crimp, solder, dip-solder (PCB)	
Type of contacts power M 23	Crimp	
Type of contacts M 16	Crimp, dip-solder (PCB)	
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x	

Additional Information

Electrical data see standard program

Connectors M 16	page 17
Signal Connectors M 23	page 65
Power Connectors M 23	page 107

Inserts and contacts see standard program

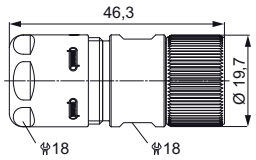
Connectors M 16	page 22
Signal Connectors M 23	page 74
Power Connectors M 23	page 113

⚠ We do not recommend disconnecting or connecting HUMMEL Connectors under load.

Typical Applications

Signal Connectors M 16 / Stainless Steel (INOX)

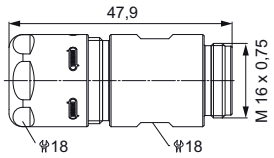
Straight Connector, Female Thread



Cable-Ø	Part Number
3 – 6 mm (.12" – .24")	7.814.300.000
5 – 9 mm (.20" – .35")	7.814.400.000
8 – 11 mm (.31" – .43")	7.814.500.000

Contacts and inserts page 22

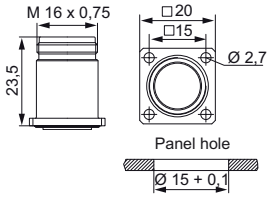
Straight Connector, Male Thread



Cable-Ø	Part Number
3 – 6 mm (.12" – .24")	7.824.300.000
5 – 9 mm (.20" – .35")	7.824.400.000
8 – 11 mm (.31" – .43")	7.824.500.000

Contacts and inserts page 22

Panel Connector, Male Thread

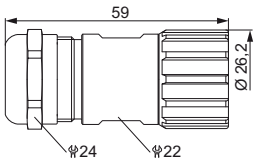


Type	Part Number
4 x holes Ø 2,7 mm (.11")	7.840.400.000
Flange 20 x 20 mm	

Contacts and inserts page 22 • Assembly instructions page 38

Dimensions and specifications may be changed without prior notice

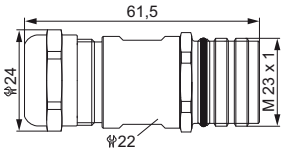
Cable-Ø	Part Number	Part Number EMC	Straight Connector, Female Thread
3 – 7 mm (.12 – .28“)	7.140.300.000	7.141.300.000	
5 – 10 mm (.20 – .39“)	7.140.400.000	7.141.400.000	
7 – 12 mm (.27 – .47“)	7.140.500.000	7.141.500.000	
10 – 14 mm (.39 – .55“)	7.140.600.000	7.141.600.000	



Contacts and inserts page 74 • Assembly instructions page 163

Assembly tool 7.010.900.127 is required

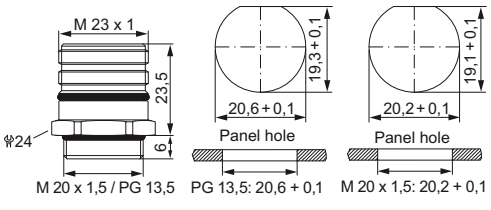
Cable-Ø	Part Number	Part Number EMC	Straight Connector, Male Thread
3 – 7 mm (.12 – .28“)	7.240.300.000	7.241.300.000	
5 – 10 mm (.20 – .39“)	7.240.400.000	7.241.400.000	
7 – 12 mm (.27 – .47“)	7.240.500.000	7.241.500.000	
10 – 14 mm (.39 – .55“)	7.240.600.000	7.241.600.000	



Contacts and inserts page 74 • Assembly instructions page 164

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted
Front mounting for male inserts		
Thread M 20 x1,5	7.420.400.000	

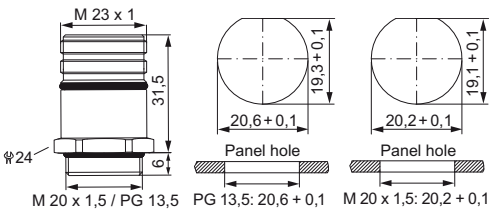
FOR MALE INSERTS ONLY



Contacts and inserts page 74 • Assembly instructions page 91

Type	Part Number	Panel Connector, Male Thread, Single Hole Mounted
Front mounting for female inserts		
Thread M 20 x1,5	7.421.400.000	

FOR FEMALE INSERTS ONLY

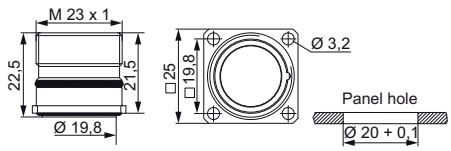


Contacts and inserts page 74 • Assembly instructions page 92

Signal- / Power Connectors M23 / Stainless Steel (INOX)

Panel Connector, Male Thread

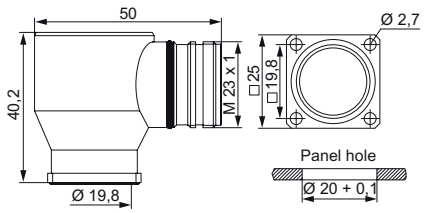
Type	Part Number
With anti-vibration O-Ring	
4 holes Ø 3,2 mm (.13“)	7.410.400.000



Contacts and inserts page 74 • Assembly instructions page 91 / 92

Right Angle Panel Connector, Male Thread

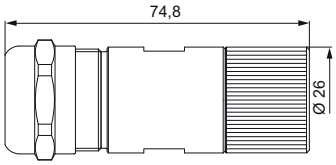
Type	Part Number
4 holes Ø 2,7 mm (.11“)	7.430.400.000



Contacts and Inserts page 74

Straight Connector, Female Thread

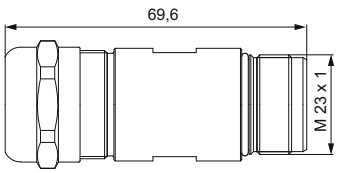
Cable-Ø	Part Number
7 – 12 mm (.27 – .47“)	7.554.500.000
11 – 17 mm (.43 – .67“)	7.554.600.000



Contacts and inserts page 113 • Assembly instructions page 121

Straight Connector, Male Thread

Cable-Ø	Part Number
7 – 12 mm (.27 – .47“)	7.564.500.000
11 – 17 mm (.43 – .67“)	7.564.600.000

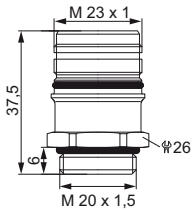


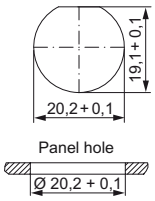
Contacts and inserts page 113 • Assembly instructions page 121

Dimensions and specifications may be changed without prior notice

Panel Connector, Male Thread, Single Hole Mounted

Type	Part Number
Front mounting	
Thread M 20 x1,5	7.621.400.000

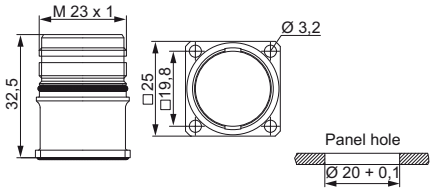




Contacts and inserts page 113 • Assembly instructions page 126

Panel Connector, Male Thread

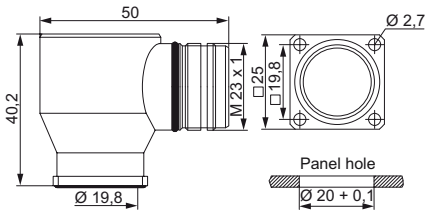
Type	Part Number
For front mounting	
4 holes Ø 3,2 mm (.13")	7.601.400.000
Optional:	
Flat gasket	



Contacts and inserts page 113 • Assembly instructions page 123

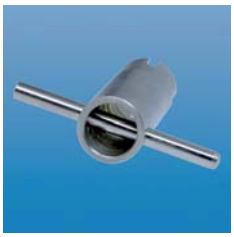
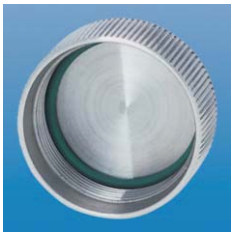
Right Angle Panel Connector, Male Thread

Type	Part Number
4 holes Ø 2,7 mm (.11")	7.630.400.000

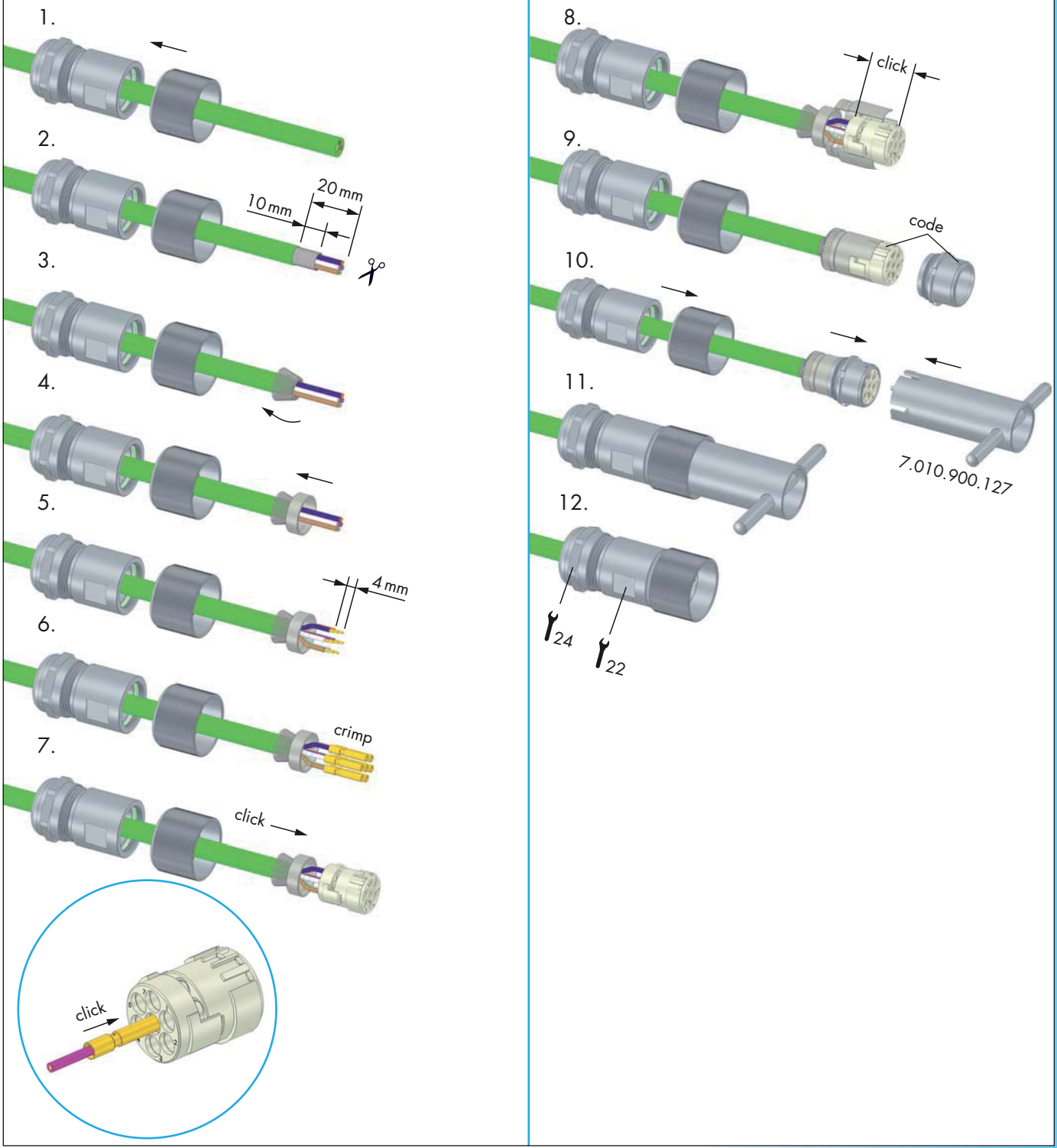


Contacts and Inserts page 113

Stainless Steel Connectors (INOX) / Accessories

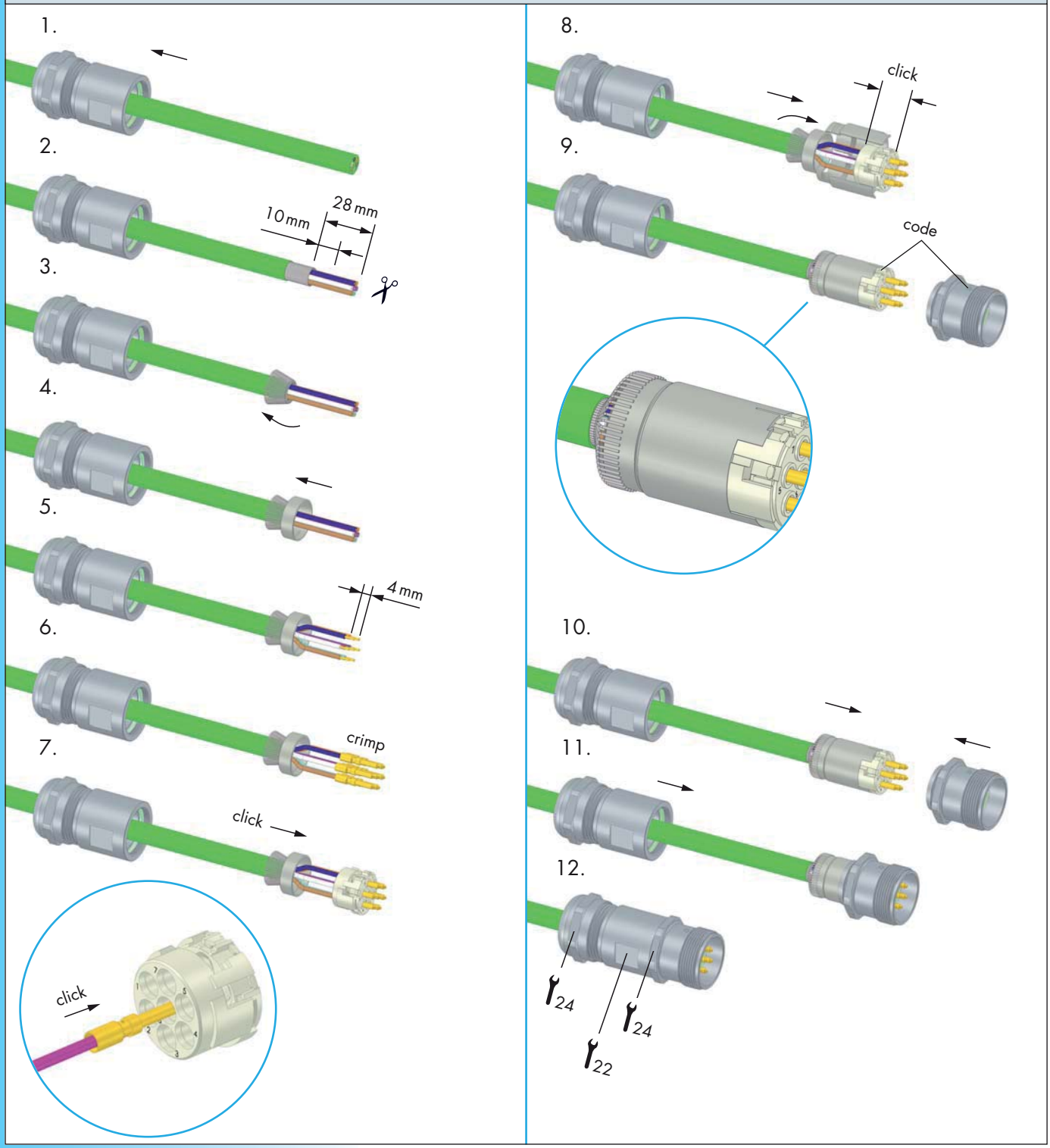
Accessories	Type	Part Number
	Assembly tool	7.010.900.127
	Plastic protective cap for connectors M 16 with male thread for connectors M 16 with female thread for connectors M 23 with male thread for connectors M 23 with female thread	 7.000.980.161 7.000.980.162 7.000.900.101 7.000.900.102
	Stainless steel protective cap for connectors with female thread Stainless steel protective cap with rope for connectors with female thread ..... Length 100 mm	 7.010.904.103 7.010.9S4.103
	Stainless steel protective cap for connectors with male thread Stainless steel protective cap with rope for connectors with male thread ..... Length 100 mm	 7.010.904.102 7.010.9S4.102
	Crimp tool for manual crimping of machined crimp contacts for signal connectors Operating instructions on page 85	 7.000.900.901
	Crimp tool for manual crimping of machined crimp contacts for signal connectors M 16 and M 23 Operating instructions on page 31	 7.000.900.904

Straight Signal Connector, Female Thread



Stainless Steel Connectors (INOX) / Assembly Instructions

Straight Connector, Male Thread



Dimensions and specifications may be changed without prior notice

Moulded Cordsets

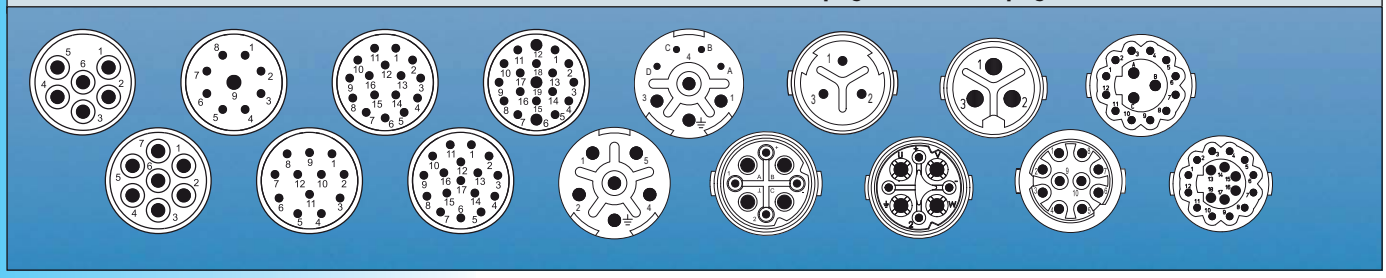
Product Overview

Moulded connector cordsets

page 168

Inserts

page 22, 74 and page 113



Accessories

page 29, 82 and page 115

Dimensions and specifications may be changed without prior notice

Moulded Connector Cordsets

Mechanical Data	Materials and Technical Data	
Housing	Copper-Zinc alloy Die Casting	
Moulded strain relief	Polyurethan	PUR
Housing surface	Nickel plated brass, black strain relief	
Inserts (for contacts)	Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT	Fire protection class V-0
Contacts	Brass Alloy	
Contact surface at point of contact	Nickel and gold plated (0,25 µm Au)	
Minimum mating cycles	> 1000	
Seals / O-Rings	Buna-N standard optional Viton® (Viton is a registered trademark of DuPont)	
Temperature range	-40° C – 125° C (-40 °F – 257 °F)	
Type of contacts	Crimp	
Protection	IP 67 / IP 69 K per EN 60 529 (connected), NEMA 4x	
Cable style	Cable specifications available upon request	
Labelling	HUMMEL logo as standard, other options available upon request	

Additional Information

Electrical data see standard program

Connectors M 16	page 17
Signal Connectors M 23	page 65
Power Connectors M 23	page 107

Inserts and contacts see standard program

Connectors M 16	page 22
Signal Connectors M 23	page 74
Power Connectors M 23	page 113

We do not recommend disconnecting or connecting HUMMEL Connectors under load.

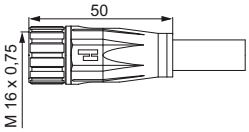
Other versions

Moulded connector cordsets are also available as Stainless-Steel (Inox)-Versions.

Moulded Connector Cordsets M 16

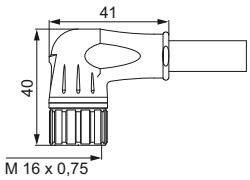
Straight Connector, Female Thread

Type	Inserts
Standard / EMC	Pins or sockets



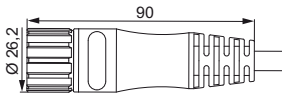
Right Angle Connector, Female Thread

Type	Inserts
Standard / EMC	Pins or sockets

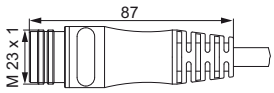


Dimensions and specifications may be changed without prior notice

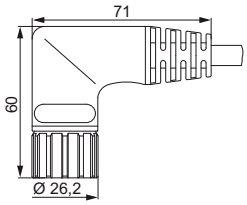
Type	Inserts	Straight Connector, Female Thread
Standard / EMC	Pins or sockets	



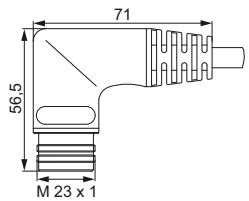
Type	Inserts	Straight Connector, Male Thread
Standard / EMC	Pins or sockets	



Type	Inserts	Right Angle Connector, Female Thread
Standard / EMC	Pins or sockets	



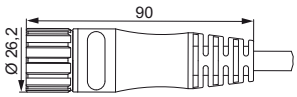
Type	Inserts	Right Angle Connector, Male Thread
Standard / EMC	Pins or sockets	



Moulded Connector Cordsets M 23

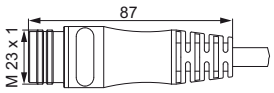
Straight Connector, Female Thread

Type	Inserts
Standard / EMC	Pins or sockets



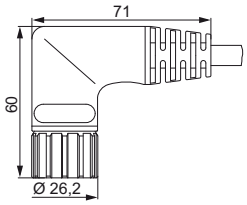
Straight Connector, Male Thread

Type	Inserts
Standard / EMC	Pins or sockets



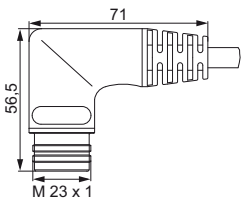
Right Angle Connector, Female Thread

Type	Inserts
Standard / EMC	Pins or sockets

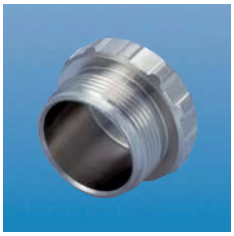
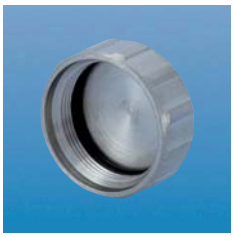


Right Angle Connector, Male Thread

Type	Inserts
Standard / EMC	Pins or sockets



Dimensions and specifications may be changed without prior notice

Type	Part Number	Accessories
Plastic protective cap		
for connectors M 16 with male thread	7.000.980.161	
for connectors M 16 with female thread	7.000.980.162	
for connectors M 23 with male thread	7.000.900.101	
for connectors M 23 with female thread	7.000.900.102	
Brass protective cap		
for connectors M 16 with female thread	7.010.900.163	
for connectors M 23 with female thread	7.010.900.103	
for connectors M 23 with female thread	7.010.900.183	
Brass protective cap		
for connectors M 16 with male thread	7.010.900.162	
for connectors M 23 with male thread	7.010.900.102	
Brass protective cap with chain		
für Steckverbinder M 16 with female thread	Length 70 mm 7.010.9S0.705	
for connectors M 23 with female thread	Length 70 mm 7.010.9S0.703	
	Length 100 mm 7.010.9S1.003	
for connectors M 23 with female thread	Length 70 mm 7.010.9S0.783	
	Length 100 mm 7.010.9S1.083	
Brass protective cap with chain		
for connectors M 16 with male thread	Length 70 mm 7.010.9S0.704	
for connectors M 23 with male thread	Length 70 mm 7.010.9S0.702	
	Length 100 mm 7.010.9S1.002	

Hybrid Connector for Compressed Air

To place lines for compressed air and electrical signals in one single connection, a hybrid connector M23 combines different types of contacts in one insert.

Bulkhead Connector

Bulkhead connectors accept plugs on both sides. They are rugged, liquid tight and available in all number of poles.

Simple EMI / RFI shielding

An integrated metalized EMI clamping insert grounds to the braid signifficantly simplifying the assembly of the elbow connector.

MULTI Seal Connector

A large selection of standard MULTI seal inserts allow strain relief of several individual conductors on one single connector.

Dimensions and specifications may be changed without prior notice

Flexible Cable Protection

In addition to the integrated strain relief, the flex nut adds kink protection to a cable - available for all connector sizes.

Adaptor flange

To secure loose connections, an adaptor flange can be attached to a straight connector.

12-point hex and knurled nut

This special nut makes connection simple by eighter tightening the connector manually (knurled nut) or with a wrench (12-point hex).

Conduit Attachment

Flexible corrugated conduit can be attached to a connector with an adapter offering strain relief and cable protection as well.

Connector with specific pull-out resistance

After reaching a certain pull-out force the connection releases preventing damage to the device (apparatus).

Bulkhead Fitting

This fitting with oversized flange is commonly used in the ship building industry where Signal Connections have to be maintained under extreme conditions.

Captive Protective Cap

The metal protective cap is secured to a cable by a safety ring and stays attached in open connections.

ANACONDA Conduit Adapter

HUMMEL offers custom adapters for ANACONDA conduit systems in hazardous locations.

Dimensions and specifications may be changed without prior notice

Distibution-box

Distribution-boxes are known as important components for applications in automation. Robust and fully wired they are done according to customers specification.

Coloured Overmould

Completing a design or showing technical functions, overmould could be made in different colours too (e.g. DESINA green RAL 6018).

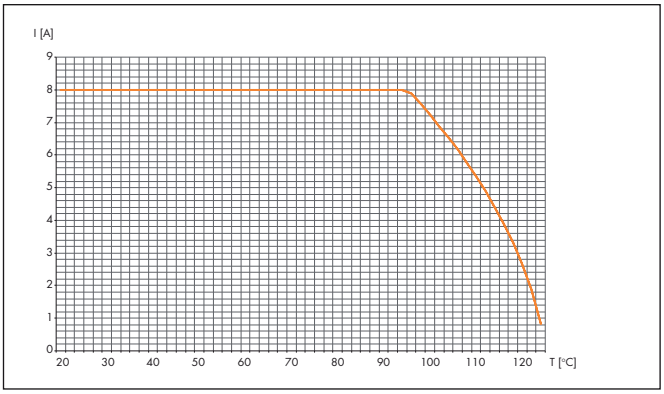
High temperature applications

For high temperature applications HUMMEL offers connectors with special inserts able to stand temperatures up to 160 °C (320 °F).

Derating

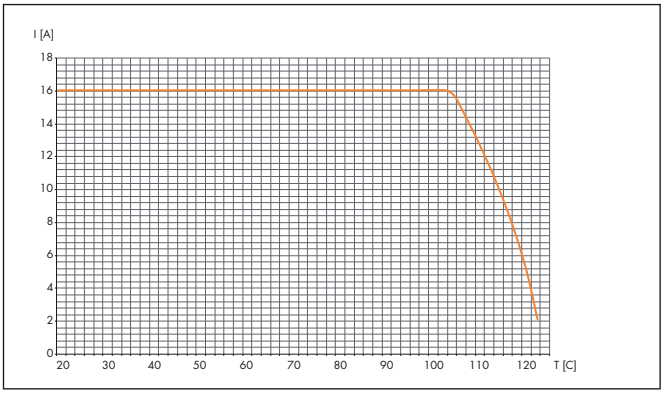
Derating M 16

Straight connectors male + female, 10 pole,
wires 10 x AWG 18



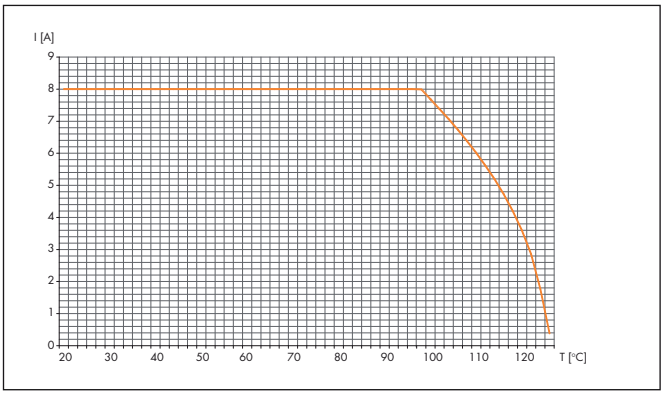
Derating M 16 TWINTUS

TWINTUS and straight connector female M 16
4+3+PE, wires AWG 14 (Power)
10pole, wires AWG 26



Derating M 23 Signal

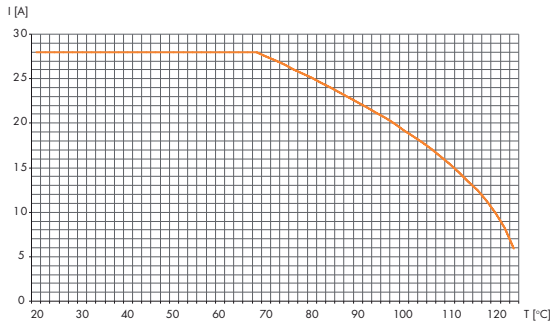
Straight Connectors male + female,
wires 12 x AWG 17



Dimensions and specifications may be changed without prior notice

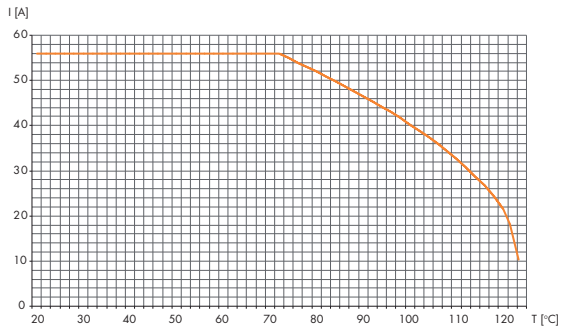
Derating M 23 Power

Straight connectors male + female M 23, 5 + PE,
wires 5 x AWG 12



Derating M 40 (Size 1,5)

Straight connectors male + female,
wires 3 x AWG 6



Page Finder

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Page Finder

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7.000.848.102	30
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7.000.900.151	138
7.000.900.152	138
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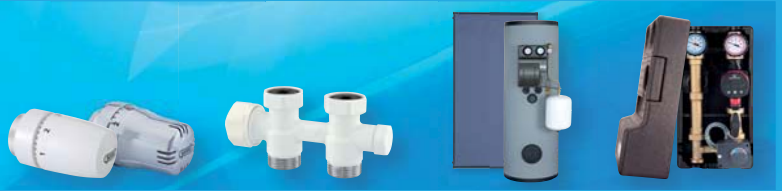

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