


## M 23 Fast Ethernet PoE



## Product Overview

**Housings** page 44



**Inserts** page 46



**Accessories** page 51



## Technical Data


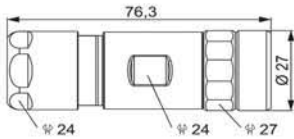

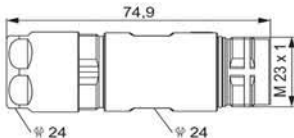

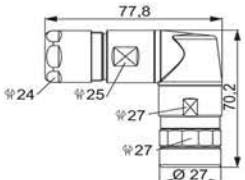

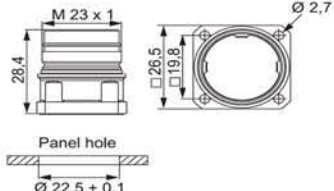
### M 23 Fast Ethernet PoE Connectors

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")

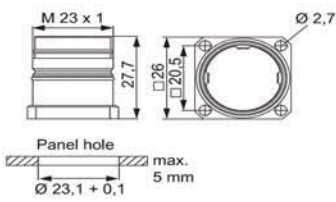

Electrical Data		
Number of positions	20 (4x2 + 12)	
Number of contacts	4x2	12
Contact-Ø [mm]	0,6	1
AWG [mm <sup>2</sup> ]	0,08 – 0,34	0,14 – 1 / 1,5
Nominal current <sup>1)</sup> [A]	2	8 <sup>1)</sup>
Nominal voltage <sup>2)</sup> [V~] degree of protection 2 <sup>4)</sup>	160	320
Nominal voltage <sup>2)</sup> [V~] degree of protection 3 <sup>4)</sup>	60	160
Test voltage (Breakdown voltage) <sup>3)</sup> [V~]	500	1500
Insulation resistance [MΩ]	> 10 <sup>6</sup>	> 10 <sup>6</sup>
Max. contact resistance [mΩ]	3	3
Impedance [Ω] (at 100MHz)	100	-

<sup>1)</sup>, <sup>2)</sup>, <sup>3)</sup>, <sup>4)</sup> See Technical Information page 14 <sup>1)</sup> for single contacts even 10A 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, rotating		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			

## M 23 Fast Ethernet PoE Connectors / Housing

Type	Part Number	Panel Connector, Rear Mounting
4 x holes $\varnothing$ 2,7 mm (.11") ..7.468.000.000 Flange 26 x 26 mm		
Inserts page 46 • Assembly instructions page 49		

## M23 Fast Ethernet PoE Connectors / Inserts / Pinouts / Contacts

Inserts (4 x 2) + 12	Type	Part Number	
		Pins	Sockets
 <p>Insert pin mating view</p>	Insert without contacts .....	7.003.920.101 .....	7.003.920.102
	Insert with dip solder contacts .....	7.001.920.107 .....	7.001.920.108
 <p>Insert socket mating view</p>	<b>Required Contacts</b>		
	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	
	Crimp pin 0,6 mm, machined....	0,08 – 0,34 mm <sup>2</sup> .....	7.010.980.641
	Crimp socket 0,6 mm, machined....	0,08 – 0,34 mm <sup>2</sup> .....	7.010.980.602
	Crimp pin 1 mm, machined.....	0,14 – 1 mm <sup>2</sup> .....	7.010.901.049
		0,75 – 1,5 mm <sup>2</sup> .....	7.010.901.045
	Crimp socket 1 mm, machined...	0,08 – 0,56 mm <sup>2</sup> .....	7.010.901.012
		0,34 – 1 mm <sup>2</sup> .....	7.010.901.002
		0,75 – 1,5 mm <sup>2</sup> .....	7.010.901.022
		1 – 1,75 mm <sup>2</sup> .....	7.010.901.046

Please see assembly instructions on page 47

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

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

## M23 Fast Ethernet PoE Connectors / Assembly Instructions

**Straight Connector Male / Female Thread**

**1.** Strip the cable jacket by  $x = 17\text{ mm}$ .

**2.** Strip the outer jacket by  $y$ .

**3.** Strip the individual wires by  $z$ , with a maximum length of  $4,5\text{ mm}$ .

**4.** Strip the individual wires by a maximum of  $4\text{ mm}$ .

**5.** Crimp the wires.

**6.** Crimp the wires.

**7.** Click the wires into the connector.

**8.** Click the connector onto the cable.

**9.** Crimp the connector housing. Part number: 7.000.900.906.

**10.** Align the connector with the cable, matching the code and position.

**11.** Push the connector onto the cable.

**12.** Click the connector into place.

**13.** Click the connector into place. (Note: A green checkmark indicates correct alignment, and a red X indicates incorrect alignment.)

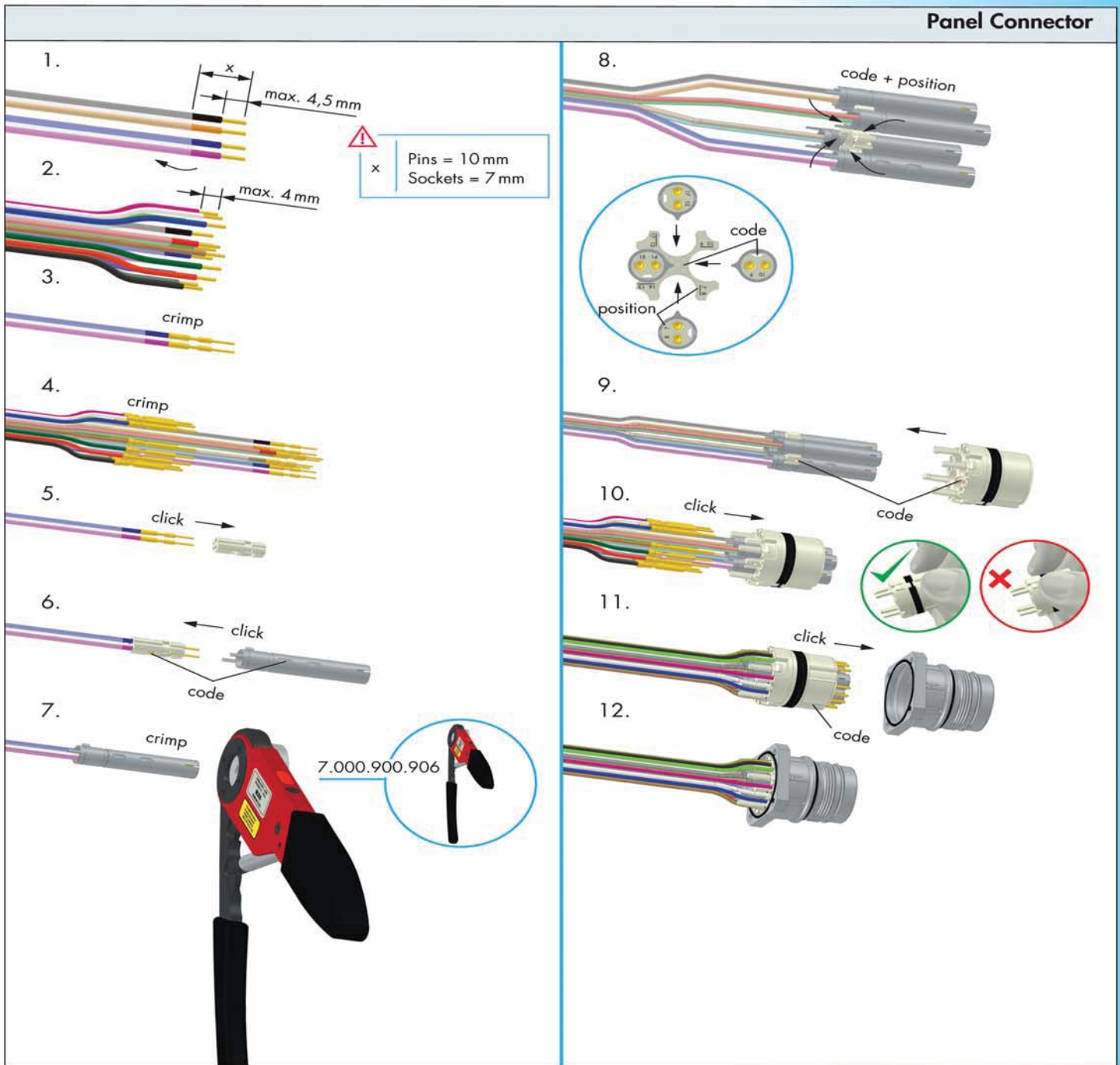
**14.** Push the connector onto the cable.

**15.** Push the connector onto the cable.

**16.** Tighten the connector housing with a  $24\text{ mm}$  wrench.

<b>x</b>	Pins = 41 mm Sockets = 37 mm
<b>y</b>	Pins = 7 mm Sockets = 0 mm
<b>z</b>	Pins = 10 mm Sockets = 7 mm

## M 23 Fast Ethernet PoE Connectors / Assembly Instructions



## M 23 Fast Ethernet PoE Connectors / Assembly Instructions

### Right Angle Connector

1. Cable with dimensions 80 mm and 55 mm.
2. Stripping the cable jacket.
3. Stripping individual wires with dimension 'y' (max. 4,5 mm).
4. Stripping individual wires with dimension 'x' (max. 4 mm).
5. Crimping wires.
6. Crimping wires.
7. Clicking the wire onto the connector.
8. Clicking the wire onto the connector.
9. Crimping wires with tool 7.000.900.906.
10. Wire arrangement with 'code + position' labels.
11. Pin/sockets diagram with 'code' and 'position' labels.
12. Sliding the connector onto the wires.
13. Clicking the connector onto the wires.
14. Connector assembly with 'code' label.
15. Tightening the connector with wrench 27.
16. Tightening the connector with wrench 27.
17. Final assembly with wrenches 24, 25, and 27.

**x** Pins = 7 mm  
Sockets = 0 mm







**y** Pins = 10 mm  
Sockets = 7 mm

see page 48, step 12

## M 23 Fast Ethernet PoE Connectors / Accessories

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 .....	7.010.950.783	
Length 100 mm .....	7.010.951.083	
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 .....	7.010.900.143
	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