

M 23 FAST ETHERNET PoE

This connector is able to transfer data up to Gigabit range. The M 23 Fast Ethernet PoE is robust, safe and compact. It is designed for use in rough industrial environments.

- // Hybrid connectors for single cable solution
- // Four Twinax-Inserts for data transfer
- // Five separate shieldings prevent cross talk
- // Highest density within M 23 housing



Product overview



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 (0,25 µm)
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 [mm ²]	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 [Ω]	> 10 ⁶	> 10 ⁶
Max. contact resistance [mΩ]	3	3
Impedance [Ω] (at 100MHz)	100	–

^{1), 2), 3), 4)} See Technical Information page 18 // * for single contacts even 10A possible



Housings

Straight Female Connector

Cable-Ø	Part Number
11-17 mm	7.108.600.000

Straight Connector, Male Thread

Cable-Ø	Part Number
11-17 mm	7.208.600.000

Right Angle Connector, Female Thread, rotatable

Cable-Ø	Part Number
11-17 mm	7.308.600.000

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	

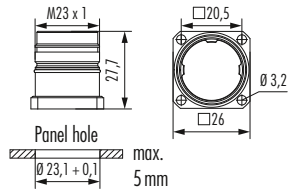
Housing without inserts and contacts

Panel Connector, Rear Mounting

Type

Part Number

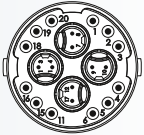
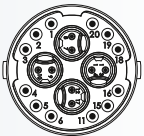
4 x holes $\varnothing 3,2$ mm (.13")7.468.000.000
Flange 26 x 26 mm







Housing without inserts and contacts



Inserts / Pinouts / Contacts

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

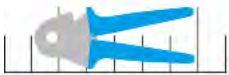
Contacts	Type	Crimp Range	Part Number
	Crimp pin 0,6 mm, machined	0,08 – 0,34 mm ²	7.010.980.641
	Crimp socket 0,6 mm, machined.....	0,08 – 0,34 mm ²	7.010.980.602
	Crimp pin 1 mm, machined	0,14 – 1 mm ²	7.010.901.049
		0,75 – 1,5 mm ²	7.010.901.045
	Crimp socket 1 mm, machined.....	0,08 – 0,56 mm ²	7.010.901.012
		0,34 – 1 mm ²	7.010.901.002
		0,75 – 1,5 mm ²	7.010.901.022
		1 – 1,75 mm ²	7.010.901.046

Accessories	Type	Part Number
	Plastic protective cap for connectors with male thread	7.000.900.101
	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 Poleon DN 12	7.010.900.205
	Poleon DN 14	7.010.900.207
	Poleon DN 17	7.010.900.209
	Adaptor flange for Straight Connectors	7.010.900.128
	Adaptor 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
	Multi-Bus I, Female Thread, Pins, 17pole Multi-Bus II, Male Thread, Sockets	7.010.900.144



Accessories

Accessories	Type	Part Number
	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	7.000.900.906
	Manual Crimp tool for turned contacts M 23 Fast Ethernet	7.000.900.907
►108		



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

Part Number	Crimp Contact	Cross Section (mm ²)	AWG	Crimp Tool Setting mm	Locator Setting
7.010.980.641	Crimp pin 0,6 mm (0,08 – 0,34 mm ²)	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 ²)	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 ²)	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 ²)	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 ²)	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 ²)	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 ²)	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 ²)	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.



Assembly Instructions

Straight Connector Male/Female Thread

1. x 17 mm

2. y

3. z max. 4,5 mm

4. max. 4 mm

5. crimp

6. crimp

7. click

8. click code

9. crimp

7.000.900.906

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

10. code + position

11. code position

12. click code

13. click

14. code

15. code

16. 24 24



Panel Connector

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

⚠ x Pins = 10 mm
Sockets = 7 mm

7.000.900.906

- 8.
- 9.
- 10.
- 11.
- 12.



Assembly Instructions

Right Angle Connector

1. Strip the cable jacket to 80 mm and the braided shield to 55 mm.
2. Prepare the shield and conductors.
3. Strip the conductors to a maximum length of 4.5 mm (y).
4. Strip the conductors to a maximum length of 4 mm (x).
5. Crimp the conductors.
6. Crimp the shield.
7. Click the conductors into the connector housing.
8. Click the shield into the connector housing.
9. Crimp the connector housing with a crimping tool (7.000.900.906).
10. Prepare the second cable with the same length and shield preparation.
11. Match the code and position of the second cable to the first.
12. Click the second cable into the connector housing.
13. Click the second shield into the connector housing.
14. Tighten the connector housing with a 27mm wrench.
15. Trim the excess cable with scissors.
16. Tighten the connector housing with a 24mm wrench.
17. Tighten the connector housing with a 25mm wrench.

x Pins = 7 mm
Sockets = 0 mm

y Pins = 10 mm
Sockets = 7 mm