

## M 23 HYBRID



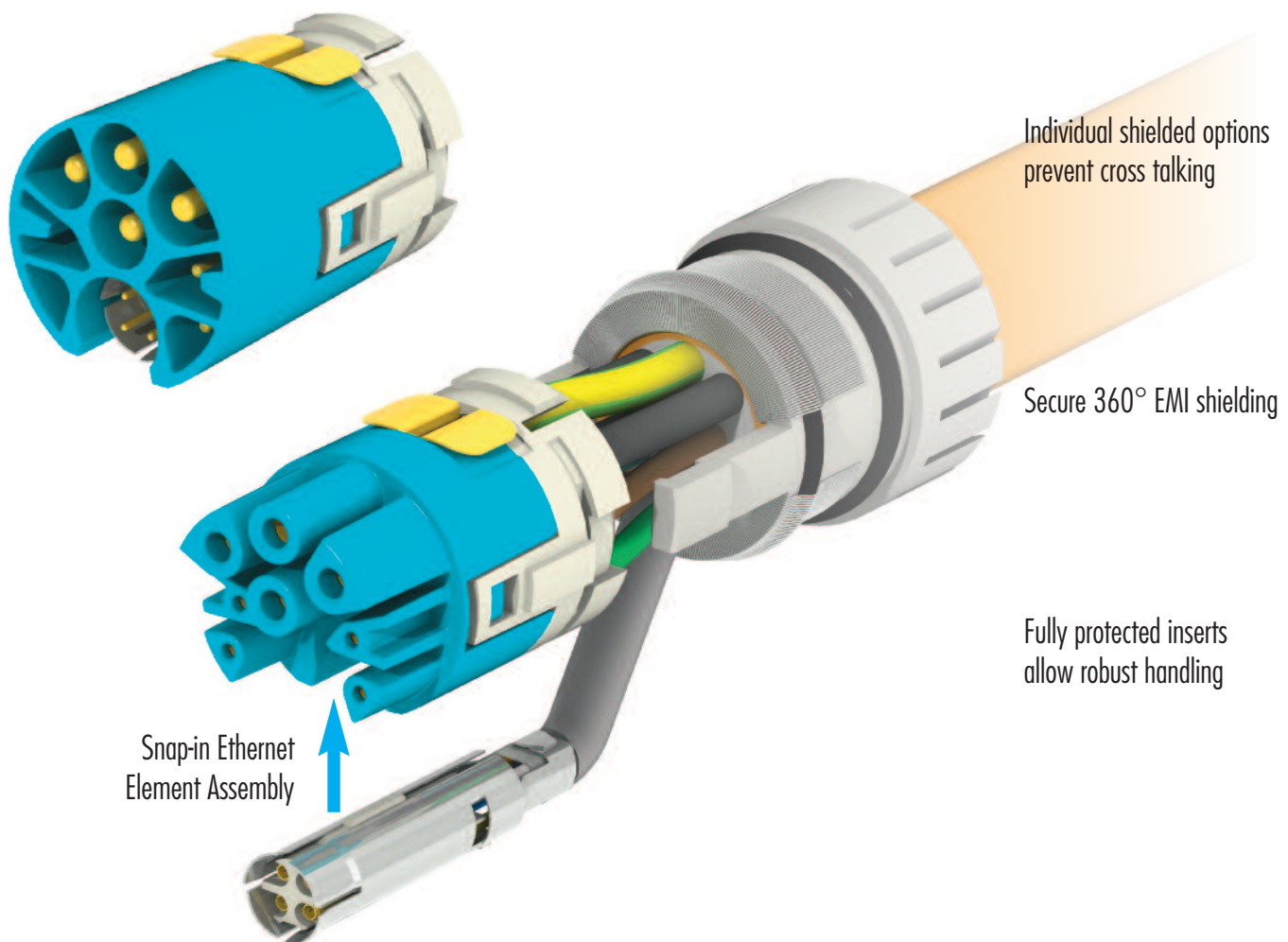
THE HYBRID CONNECTOR FOR SINGLE CABLE SOLUTIONS

## State-of-the-art Industrial Ethernet Solution

The all-in-one compact M 23 Hybrid allows transmitting of Power, Signals and Ethernet. This connector permits transmitting high speed data per CAT 5e standards. Hybrid M 23 is the ideal single-cable solution for the Automation and Robotics Industry.

- // Fully integrated solution for Industrial Ethernet applications
- // Fits perfect for HIPERFACE® DSL, BiSS and EnDat 2.2 use
- // High Performance
- // Full modularity with Nickel Plated Brass and Stainless Steel Shells
- // TWILOCK quick connect system

Simple & cost effective assembly



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)
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 69K per EN 60 529 (connected), NEMA 4x
Cable diameter range	3 – 17 mm, multi holes seals on request

\*) HUMMEL to HUMMEL connector

Electrical Data	4 + 4 + 3 + PE		
	Power	Signal	Ethernet
Number of positions			
Number of contacts	4	4	4
Contact-Ø [mm]	2	1	0,6
AWG [mm <sup>2</sup> ]	0,75 – 4	0,14 – 1	0,08 – 0,34
Nominal current <sup>1)</sup> [A]	28	8	2
Nominal voltage <sup>2)</sup> [V~] Degree of Protection 3 <sup>3)</sup>	600	300	60
Test voltage (Breakdown voltage) 4) [V~]	4000	2500	500
Insulation resistance [Ω]	> 10 <sup>8</sup>	> 10 <sup>8</sup>	> 10 <sup>8</sup>
Max. contact resistance [mΩ]	< 3	< 3	< 3

### Technical Information

**Nominal Current:** 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.



Don't connect or disconnect HUMMEL Connectors under load.

# CONNECTOR SOLUTIONS TO TRANSMIT INDUSTRIAL ETHERNET

For Industrial use: robust, reliable, compact // Protection rating: IP 67 NEMA 4X & IP 69K // Most reliable Cable Strain Relief

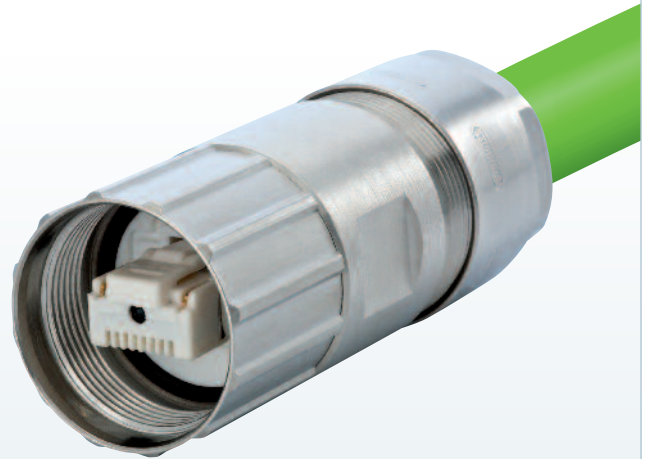
## M 23 Hybrid

- // Power, Ethernet and Signals for Single-Cable-Solutions
- // Data transmission up to 500 Mbit/s



## M 23 RJ45

- // Design for terminated patch cables



## M 23 Profinet

- // Data transmission up to Gigabit, Multi-bus II capability
- // Five separate shield potentials available



## M 16 (10pole)

- // Low profile option



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