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T1 Industrial Single-Pair Ethernet (SPE) Connectors and Cable Assemblies >

Provides the standard T1 industrial interface and single-twisted-pair cabling to make Ethernet connectivity easy and affordable, including the transmission of data from the cloud to devices and sensors, while supporting miniaturization.

FEATURES AND ADVANTAGES

Plug, jack and cable assembly with IP65/IP67

Designed to provide protection against dust and water ingress in accordance with IEC 60529

Preassembled cable assemblies available

Reduces implementation time with plug-and-play connectivity. Eliminates the need to source cable assembly or invest in tooling. Avoids the need for cable testing.





Halogen-free, oil-resistant, flame-retardant off-theshelf cable assemblies Withstands harsh industrial environments

Plug, jack and cable assembly with IP20

Enables easy-to-implement wireto-board connectivity. Shielding ensures superior signal integrity performance

> Cable assemblies enable the transmission of data using only two wires and the simultaneous power supply for terminals via PoDL up to 50W Provides faster data speeds

End-to-End TCP/IP-Based Communication Permits a barrier-free connection of equipment, and sensor/actuator technology



T1 SPE M12 IP65/67 1x2x22 AWG/19 PUR

Cable Assemblies use only one twisted-pair with a gauge as small as 26 AWG and 22 AWG Facilitates miniaturization so that the customers have an easier time routing the small, flexible cable assemblies. They also weigh less and cost less

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MARKETS AND APPLICATIONS

Industrial Automation

Smart sensors Valves Actuators Drives Control panel Process automation and control Factory automation Machine-to-machine communication Robotics

Internet of Things

Building automation Intelligent lighting systems / networks Lift / escalator control systems Security / access control systems Fire alarm systems





Robotics

Factory Automation

Commercial Vehicle Railway

SPECIFICATIONS

Electrical Performance

Rated current: $4.0A@60^{\circ}C / 1.5A@85^{\circ}C$ Rated voltage: 60V DC Test voltage UDC (voltage proof): 1.0KV DC (pin-topin), 2.25kV DC (pin-to-pin) Contact resistance: ≤ 20 m Ω Shielding resistance: ≤ 100 m Ω

Mechanical Performance

Number of contacts:2 industrial pin-socket contact design for high reliability and mating security.(2 contact points per contact)

Mating cycles:

Minimum 1.000 mating cycles for the core element and the IP20 version. For the M8 and M12 versions >500 mating cycles based on the locking mechanism

MICE3 Performance

Temperature range: -40 to +85°C Degree of protection acc. to IEC 60529: IP20 (IP20) & IP65 / IP67 mated condition (M12) EMC resistance: acc. to E3 for all connector versions Shock and vibration resistance: acc. to IEC 61373 Category 1B (Railway Standards)

www.molex.com/link/spe.html