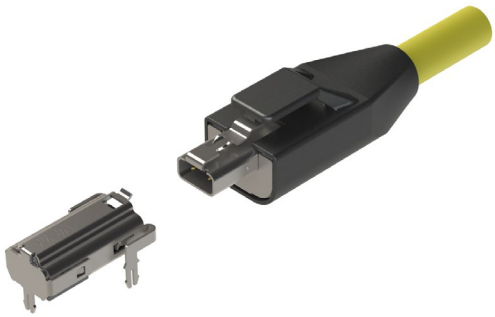
SINGLE-PAIR ETHERNET (SPE) CONNECTOR

T1 Industrial Jack & Cable IP20: 6780-000



As the Industrial Ethernet market continues to grow, there is an increasing demand for smaller, faster connectors. Consequently, Single Pair Ethernet has emerged as a key topic of discussion. SPE describes transmitting Ethernet over only one pair of twisted copper wires. In addition to Ethernet data transmission, SPE enables simultaneous power supply to terminal devices via PoDL (Power over Data Line). Previously, two pairs were required for Fast Ethernet (100 MB) and four pairs for Gigabit Ethernet. SPE not only saves space and weight with fewer wires, but also transmits 1 GBit/s up to 40 meters. KYOCERA AVX is part of the SPE Industrial Partner Network and will offer SPE products that meet customer and market needs while adhering to IEC 63171-6 and IEEE 802.3 standards.

As a member of the SPE Industrial Partner Network, KYOCERA AVX will actively contribute to the ongoing development of SPE standards and compatible connectivity products. The company will also promote the significant space- and weight-saving advantages of SPE for applications in industrial, process, and building automation systems; smart city networks; and transportation systems.

APPLICATIONS

- Robotics
- Automation
- Sensor & actuator networks
- Control & monitoring cameras
- Smart grid
- Traffic control
- Transportation Smart Monitoring
- Product Specification: Refer to 210-01-253
- Application Notes: Refer to 210-01-254

FEATURES AND BENEFITS

- Improved performance over one single twisted pair of wires
- Simplified networks, eliminated gateways
- Industry standard acc. IEC 63171-6
- Transmission speeds from 10Mbit/s to 1GBit/s
- Transmission ranges up to 1000 meters
- Reliable cold welded KYOCERA AVX IDC technology for signal wires for simple assembly process and easier automation of cabling process
- SMT solder tails for signal wires connection to the PCB

ELECTRICAL

- Current rating: 4 Amps @60°C
- Voltage rating: 60 VAC (RMS) or DC equivalent
- Voltage proof: 1000V DC (contact to contact) & 2250V DC (contact to shield)

ENVIRONMENTAL

- Operating Temperature: -40°C to +85°C
- Storage Temperature: -40°C to +60°C
- IP degree protection: IP20

MECHANICAL

- Mating force: 20N max
- Durability: 1000 cycles / MPL1000
- Polarization force: 50N min
- Pull out force: 20N min

SPE IP20 Product performances comply with IEC 63171-6 requirements

HOW TO ORDER – T1 INDUSTRIAL JACK IP20

20	6780	002	000	006
Prefix	**Series**	**Number of Ways**	**Sub-Series Identifier** 000 = Horizontal/Right-Angle SMT connector	**Plating Option** 006 = Gold plating on mating end



SALES DRAWINGS
CLICK TO DOWNLOAD

HOW TO ORDER – T1 INDUSTRIAL CABLE ASSEMBLY IP20

10	6780	002	020	YYY
Prefix	**Series**	**Number of Ways**	**Wire Size** 020 = AWG22	**Cable Length**

Code	Application	Tolerence (mm)
010	1 Meter	+40/-0
030	3 Meters	+40/-0
050	5 Meters	+40/-0
100	10 Meters	±100

Other lengths available upon request

RoHS compliant

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

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