



IP20 T1 INDUSTRIAL SINGLE-PAIR ETHERNET (SPE) CONNECTORS 6780-000 SERIES

BASIC OVERVIEW

As the Industrial Ethernet market continues to grow, the market continues to look for smaller and faster connectors to fit their needs. In turn, this has driven single pair Ethernet to the forefront of discussion. Single Pair Ethernet (SPE) describes the transmission of Ethernet over only one pair of twisted copper wires. In addition to data transmission via Ethernet, SPE also enables a simultaneous power supply of terminal devices via PoDL - Power over Data Line. Previously, this required two pairs for Fast Ethernet (100MB) and four pairs for Gigabit Ethernet. In addition to space and weight savings with less wire, SPE transmits 1 GBit/s only up to a distance of 40 meters. KYOCERA AVX is a part of the SPE Industrial Partner Network and will offer SPE products to meet the customer and market needs while meeting the standards according to IEC 63171-6 and IEEE 802.3 etc.

APPLICATIONS

- Robotics
- Automation
- Sensor & Actuator Networks
- Control & Monitoring Cameras
- Smart Grid
- Traffic Control
- Transportation Smart Monitoring

GENERAL CHARACTERISTICS

New Single Pair Ethernet (SPE) Connectors is bringing numerous benefits to industrial market:

- Simplified Ethernet connection for continuous communication from the control computer to the sensor
- Transmission speeds from 10Mbit/s to 1Gbit/s
- Power supply and better reliability of terminal devices through Power over Data Line (PoDL) or hybrid
- Transmission ranges up to 1000 meters
- Simplified connectors and cabling saves space and weight
- Time savings when setting up, maintaining and operating industrial networks
- Replacement of analog interfaces, bus systems and other proprietary field level systems
- Reduced complexity of automation networks

KEY SPECIFICATIONS

Styles:

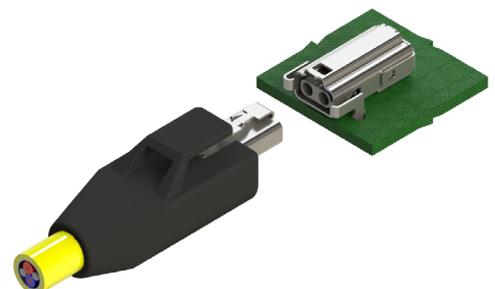
- T1 Industrial Plug IP20 (2P-L)
- T1 Industrial Jack IP20 (2J-L)

Standards:

- IEC 63171-6
- IEEE 802.3

TOP SELLING POINTS / CHARACTERISTICS

- Improved performances in one single twisted pair wires (vs RJ45 4 pairs)
- Smaller form factor
- Simplified networks, eliminates gateways
- New industry standard according to IEC 63171-6
- Operating temperature up to 85°C



KYOCERA AVX ADVANTAGE

KYOCERA AVX Connector Advantages:

- KYOCERA AVX offers reliable cold welded IDC technology for signal wires for simple assembly process and easier automation of cabling process
- KYOCERA AVX includes SMT solder trails for signal wires connection to the PCB

T1 INDUSTRIAL SPE PRODUCT UNDER DEVELOPMENT



IP20 T1 Industrial WTW Coupler



M8 Hybrid T1 Industrial Connector



M12 T1 Industrial Connector

FAQ'S

Q: What wire size can SPE connector terminate to?

A: KYOCERA AVX connectors can accommodate industrial data cable from 18 to 26AWG.

Q: Is there an IPx7 option available?

A: Coming next are M8 Hybrid and M12 SPE Connectors, which is rated IP65/67.

Q: Can KYOCERA AVX offer custom solutions?

A: KYOCERA AVX can offer customizable and flexible solution for specific application.

AVAILABLE SPE PRODUCTS

IP20 Plug & Jack Release Date: May 2024

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