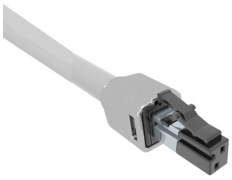
SP1-1000 Single Pair Ethernet Type 1 Shielded Connector

PANDUIT®
SPECIFICATION SHEET

SPECIFICATIONS

The Single Pair Ethernet Shielded Connector shall provide simple field-termination to 18 AWG 1-pair shielded copper cable that is compliant with ANSI/TIA-568.5 draft SP1 and IEC 61156-13 and -14 draft standards. The plug shall comply with IEC 63171-1 “Type 1” standard and be provide IP20 performance according to IEC SC48B standard. The plug shall be comprised of three loose pieces – a plug housing, a wire cap and an outer metal cover – and shall provide positive cover engagement and a proven repeatable latching mechanism. The plug shall terminate to the cable without needing a custom tool.



SP1 Single Pair Ethernet Connector	
Shielded Plug Connector (18 AWG):	SP-1LSA22BL

TECHNICAL INFORMATION

SP1 Performance:	Exceeds proposed ANSI/TIA 568.5 draft SP1-1000 and SP1-400 channel performance requirements with up to ten connectors per SP1-1000 channel and five connectors per SP1-400 channel
Cable compatibility:	Compatible with 1-pair, 18 AWG stranded or solid twisted pair cable with maximum conductor insulation diameter of 0.098 in. (2.5mm) and overall cable jacket diameter of 0.280 in. (7.1mm)
IEC Compliance:	IEC 63171-1 Type 1 copper LC style connector
RoHS Compliance:	Compliant
PoDL Compliance:	Support for Power over Data Lines for power up to 52 W
Plug mating cycles:	Rated to 750 mating cycles
UL rated:	UL 1863 (Use as communications circuit accessory)
Operating temperature:	-14˚F to +140˚F (-10°C to +60°C)
Storage temperature:	-40°F to +185°F (-40°C to +85°C)

KEY FEATURES AND BENEFITS

Simple three-piece assembly:	Field friendly, easier to handle during field installation, saving time and reducing termination error
Slim LC-style plug profile:	Easily fits in tight port spaces and is compatible with established LC mating footprint
18 AWG termination capable:	Works with all commonly used stranded and solid 18 AWG shielded cabling, enabling channel lengths of up to 1,000 meters
Re-termination:	Ability to re-terminate up to twenty times with no additional parts, providing convenience and cost-savings in cases when plug must be re-terminated to cable

APPLICATIONS

Single Pair Ethernet copper cabling and connector solutions provide reliability and high performance as an integral component of the end-to-end solution for industrial SP1-1000 communication systems. This communications system includes copper cabling and connectivity for a variety of application environments and enables edge devices to be efficiently added to the ethernet network using only 1-pair cabling rather than the 2- and 4-pair cabling systems formerly available. This system allows for Power over Data Line (PoDL) power delivery and up to 10 Mb/s bandwidth over channels up to 1 km in length and supports standards in development for 100 Mb/s and 1 Gb/s bandwidths at shorter channel lengths. This will drive ethernet convergence in the following applications:

- Process Automation Sensors and Valves
- Logistics Automation VFDs and Conveyors
- Upgrades from analog to intelligent Sensors
- Building Automation upgrades to BACnet/IP

TAA Compliant

All listed part numbers are compliant with the U.S. Trade Agreements Act (TAA) for purchases shipped to customers in the United States.

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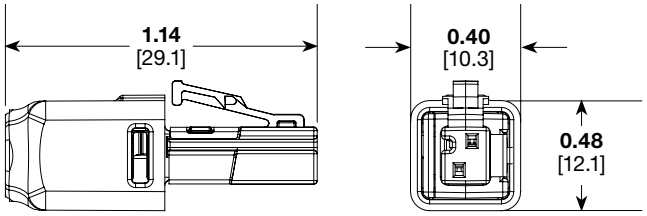
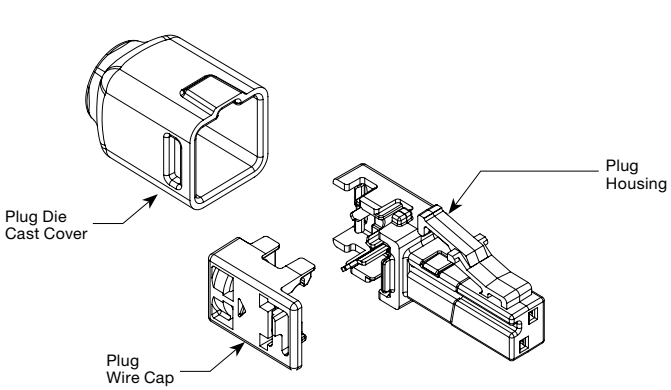
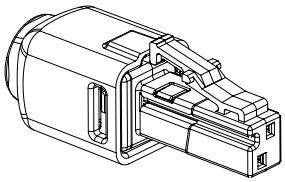
ENGINEERING DRAWINGS







Dimensions are in inches. [Dimensions in brackets are metric].

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