

# SP1-1000 Single Pair Ethernet Type 1 Shielded Connector

## 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.



## technical information

<b>SP1 Performance:</b>	Exceeds proposed ANSI/TIA 568.5 (draft) SP1-1000 and SP1-400 channel performance requirements with up to 10 connectors per SP1-1000 channel and 5 connectors per SP1-400 channel
<b>Cable compatibility:</b>	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)
<b>IEC Compliance:</b>	IEC 63171-1 Type 1 copper LC style connector
<b>RoHS Compliance:</b>	Compliant
<b>PoDL Compliance:</b>	Support for Power over Data Lines for power up to 52 W
<b>Plug mating cycles:</b>	Rated to 750 mating cycles
<b>UL rated:</b>	UL 1863 (Use as communications circuit accessory)
<b>Operating temperature:</b>	-14°F to +140°F (-10°C to +60°C)
<b>Storage temperature:</b>	-40°F to +185°F (-40°C to +85°C)

## key features and benefits

<b>Simple three-piece assembly</b>	Field friendly, easier to handle during field installation, saving time and reducing termination error
<b>Slim LC-style plug profile</b>	Easily fits in tight port spaces and is compatible with established LC mating footprint
<b>18 AWG termination capable</b>	Works with all commonly used stranded and solid 18 AWG shielded cabling, enabling channel lengths of up to 1,000 meters
<b>Re-termination</b>	Ability to re-terminate up to 20 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 1km 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

### SP1 Single Pair Ethernet Connector

**Shielded Plug Connector (18 AWG):** SP-1LSA22BL

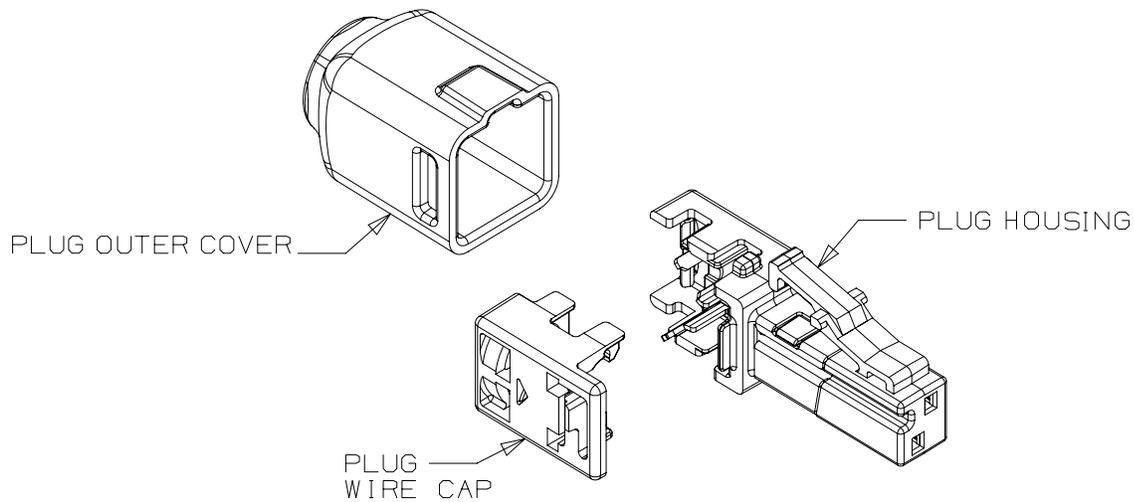
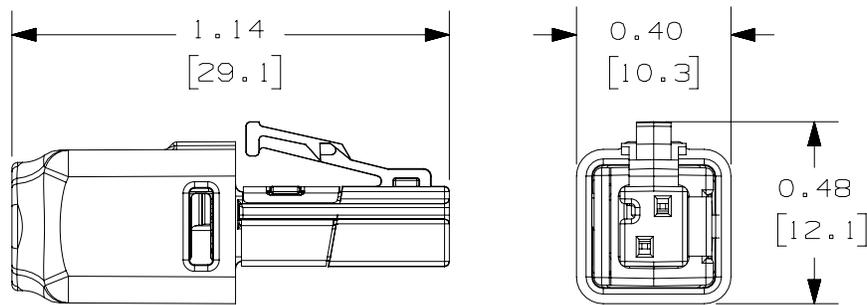
### Related Products

**Field Terminable Plug:** SP-18SA42BL

**Shielded Copper Cable (18 AWG):** SP-SFCS1\*\*-CEG

\*\*For standard colors, replace \*\* in part number with IG (International Gray) or BL (Black). Contact Customer Service for additional color options.

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Dimensions are in inches. (Dimensions in brackets are metric).

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