



Resumen

The ISP10 is a surge protection device for Modbus RTU sensors. The ISP10 provides protection that meets the IEC 61000-4-5, level 4 (4 kV, 2000 A) surge protection standard. It incorporates a T-junction that allows a sensor to be connected inline. The five-pin M12 connectors are configured to match the SunSentry system's trunk-line cable

pinout, which is compatible with the [RS485CBL 24 AWG RS-485 Cable with M12 Five-Pin Connector](#).

The ISP10 ties the sensor connector to earth ground via cable shielding. The trunk line cable shield passes through the T-junction untouched by the ISP10 and should be terminated separately at the main meteorological (met) enclosure.

Ventajas y características

- › Inexpensive surge protection for any digital sensor
- › Surge protection to IEC 61000-4-5, level 4 (4 kV, 2000 A) standard
- › Sensor cable shield termination to ground while passing trunk-line shield to a single point
- › Common shorting of signal lines to ground after a powerful surge event, enabling easy line troubleshooting and repair
- › Easy installation or replacement

Descripción detallada

The ISP10 uses a standard A-coded, five-pin M12 connector with shield termination via the coupling nut. The T-junction uses one plug M12 connector (for the incoming trunk line) and two socket M12 connectors (one for the continuing trunk line and one for the sensor port). Various pin adapters are available to change the pinouts of common sensors for compatibility with the ISP10 and the standard Campbell Scientific pinout.

One ISP10 can be connected directly to another ISP10 side by side without cabling when sensors are close to one

another. Alternatively, the RS485CBL-Xm-M can be used to daisy-chain one sensor or ISP10 to another.

A hole in the middle of the ISP10 is used for grounding and mounting with the included #10 screw. Mount the ISP10 to an earth-grounded, conductive part for proper surge protection.

The ISP10 is shipped with the following items:

- › #17 high-speed steel drill bit for pilot hole required for the self-tapping screw

- Self-tapping screw (#10-32 x 1 410SS hex washer head thread cutting screw)
- 5 cc packet protective oxide-inhibitor grease

Pinout Description for ISP10

| M12 Pin Number | Function |
|----------------|---------------|
| 1 | V+ |
| 2 | Signal |
| 3 | Signal Ground |
| 4 | V Ground |
| 5 | Signal |
| Coupling Nut | Cable Shield |

Especificaciones

| | |
|------------------------------|--|
| Operating Temperature Range | -40° to +85°C |
| Maximum DC Operating Voltage | 60 Vdc |
| Maximum Load Current | 4 A (@ 25°C) |
| Surge Protection | IEC 61000-4-5 Surge Standard (4 kV, 2000 A) |
| Maximum Line Current | 4 A |
| Maximum Data Rate | 115,200 baud |
| Connection to Network | M12, five-pin, A-coded plug and socket connectors |
| Cable Configuration | Five-wire cable with shield - 1 data channel (1 twisted pair + G for 100 ohm impedance) + power (pwr + gnd) + shield |

| | |
|-------------------------|---|
| Mounting and Grounding | Inline with cable, center mounting hole is connected to the earth ground. Self-tapping screw provided to secure the body to a grounded surface. |
| Enclosure Rating | IP67 |
| Number of Surge Events | 10 maximum (replacement frequency based upon frequency of lightning in the region) |
| Environmental Standards | RoHS 3 Directive 2015/863 |
| Total Length | 1.45 m (57.0 in.) |
| Cable Length to Sensor | 0.95 m (37.0 in.) |
| Cable Length to Tee | 0.45 m (17.0 in.) |
| Weight | 152 g (5.4 oz) |

