

ISP10

In-line Surge Protector

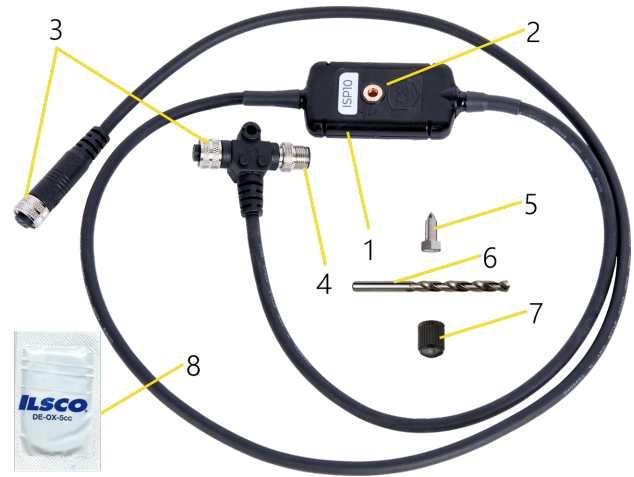


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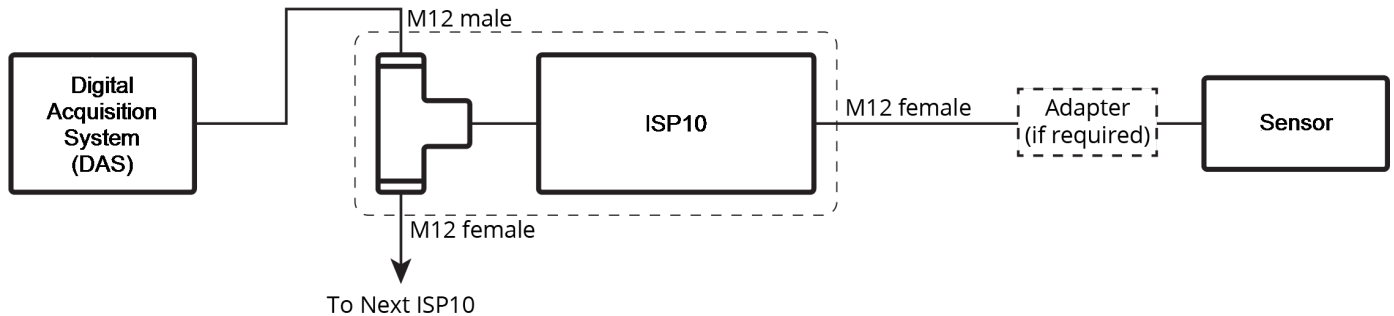
ISP10 components



- 1 ISP10 in-line surge protector
- 2 Ground/mounting hole
- 3 M12 female connector
- 4 M12 male connector
- 5 Self-tapping mount screw
- 6 Drill bit
- 7 43656 Male protective cap (ordered separately)
- 8 Oxide inhibitor grease

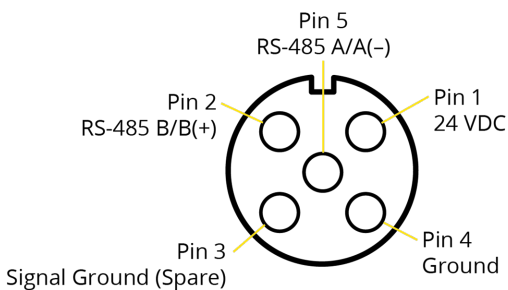
Function

The ISP10 in-line surge protector connects the cable from the Digital Acquisition System (DAS) to system sensors. Two cables extend from the ISP10 housing: one with a T-connector that includes a male input and a female pass-through output, and another with a single female output for connecting the protected sensor. The cable shield is connected to earth ground on the sensor side. The cable shield is passed through the T-connector but is not connected to earth ground of the ISP10.



The ISP10 pinout matches many commonly used sensors. Refer to the sensor manual to confirm pinout compatibility.

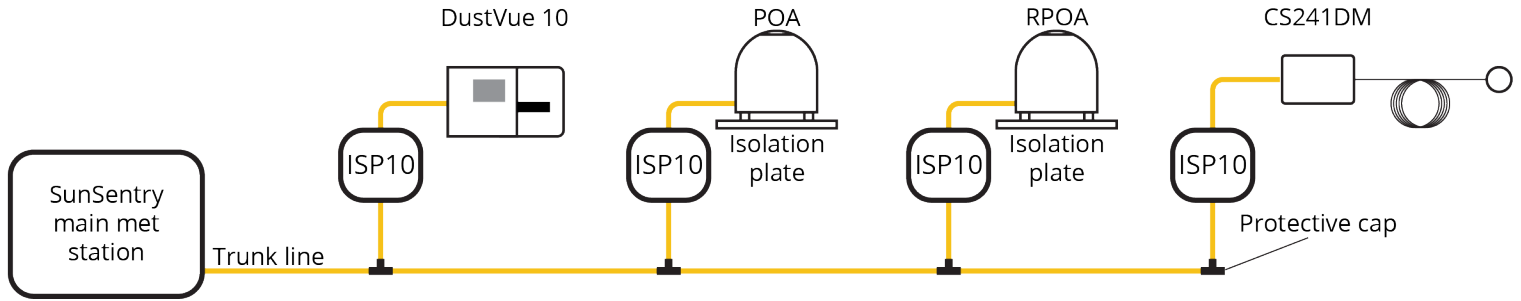
M12 male pinout



Adapter cables are available for sensors with different pin configurations.

Function	Adapter P/N
EKO	44338
Atonometric	44339
CS241DM v1	44340
SMP10/12	44489

Each sensor should be installed with an isolation plate. If a sensor is connected directly to a grounded surface, it may be exposed to surge energy present on that surface. The ISP10 provides a safe path to earth ground.

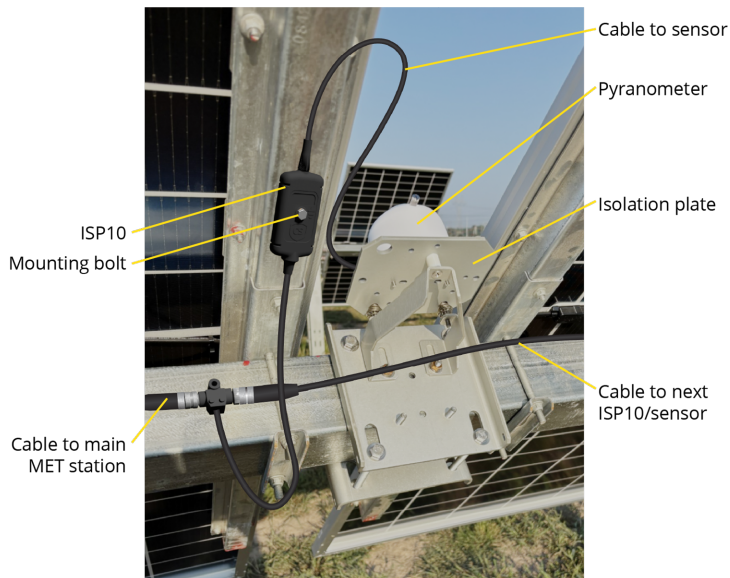


The ground/mounting hole on the ISP10 serves a dual purpose—for earth ground connection and for mounting. The metal standoff is electrically connected to the ground circuit, and the internal circuitry is bonded to the mounting surface when the screw is tightened.



Installation

The ISP10 can be mounted to any metal surface that is electrically grounded to earth.



1. Use the 4.4 mm (#17 or 11/64 in) drill bit provided to pre-drill a mounting hole for the ISP10 as close to the sensor as possible. Less than 1 meter is recommended.
2. Thoroughly clean the mounting surface to ensure a proper ground connection. The area must be free of rust, dirt, oil, paint, or other contaminants. Scrape, sand, or grind at least 2 cm (3/4 in) around the mounting hole. Do not remove galvanization or anodizing material.
3. Apply a thin film of the provided oxide inhibitor grease to the cleaned area.

4. Use the self-tapping screw provided with the ISP10 to mount the ISP10 to the clean surface. The self-tapping screw must hold the ISP10 firm (40 to 50 in-lb). The ISP10 should not rotate under normal forces once tightened. Do not overtighten, as this may damage the molding seal. Ensure the exposed metal on the ISP10 is in solid contact with the cleaned metal surface.
5. Connect the cable with the single female connector to the sensor.
6. On the cable end with the T-connector:
 - Connect the male plug to the cable originating at the main MET station or to a nearby ISP10 or cable in the daisy chain.
 - Connect the female plug to the next ISP10 or cable in the daisy chain.
 - If this is the last ISP10 in the chain, cover the female connection with a protective cap (ordered separately).

CAUTION:

Do not attempt to drive the provided self-tapping screw with an impact driver! Use a drill on slow speed to insert the self-tapping screw. The screw threads will strip when using an impact driver or a drill at fast speeds. This is especially important when attaching the ISP10 to the steel frame components.

The screw provided will not work on the I-beam piles. Use a standard self-drilling screw when it is advantageous to mount on the I-beam piles.