

EnviroPro Soil Moisture Probe for Solo

The EnviroPro Soil Moisture Probe measures soil moisture, temperature, and optionally, electrical conductivity (EC) along its length in increments of 4" (10 cm). This Tech Note highlights various EnviroPro features and provides guidance on the probe's installation.

Application

The EnviroPro Soil Moisture Probe is suitable for a wide range of perennial and annual crops. Used in combination with Observant Global, it allows agronomists and growers to identify and manage the water delivered to the plant's primary root zone during each growth stage. Measurements at 4" (10 cm) intervals allow observation of water infiltration into the soil profile and active uptake during active growth. EC measurements can be used to infer salinity or the concentration of some fertilizers. The probe is fully sealed, mechanically robust, and features a 5-year manufacturer's warranty.

Ordering

All probes come with a 30 ft (10 m) cable. The Solo Sensor Accessory Pack is required to connect the probe to the Solo and contains a 15 ft (5 m) cable and a junction for joining the two cables. The overall cable length can be shortened from 45 ft (15 m) by cutting the probe cable to a more suitable length.

Product code	Imperial	Metric	Description
10124			Solo Sensor Accessory Pack
01282	16"	40 cm	4 sensor moisture/temperature probe
01238	32"	80 cm	8 sensor moisture/temperature probe
01285	48"	120 cm	12 sensor moisture/temperature probe
01286	64"	160 cm	16 sensor moisture/temperature probe
01550	16"	40 cm	Upgrade pack to enable EC on 40 cm probe
01525	32"	80 cm	Upgrade pack to enable EC on probes 80 cm and longer

The components above may not have all the tools and consumables necessary for installation (such as conduit and associated fittings).

Recommended procedure

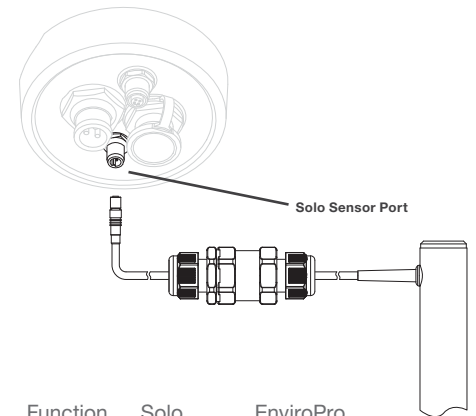
This section provides an overview of the installation process. Refer to the EnviroPro manual for a detailed guide.

- Select the probe position. Consideration should be given to the root zone of the crop and the location of any nearby drip-irrigation emitters.
- Drill a 1.5" (36–38mm) hole for the probe. Retain the removed site soil if you don't intend to use a bentonite/sand slurry.
- Test the probe placement within the hole. It should be below the surface, typically by no more than 4" (10 cm).
- Create a slurry to seal the probe within the hole. If using site soil, mix it with just enough water to create a smooth, soup-like consistency. Alternatively, combine 3.5 oz (100 g) of Bentonite with 32 oz (900 g) of fine sand, add 0.25 gallon (1 L) of water, and allow 30 minutes for the bentonite to absorb the water and swell. Probes installed with the bentonite/sand slurry are often easier to remove.
- Pour the slurry into the hole until it is about half full. Insert the probe until it is no more than 4" (10 cm) below ground level. If the slurry does not reach the surface, remove the probe and add more. Avoid excessive force; if you experience more than 30 lb (15 kg) of resistance, the slurry mixture may need more water. Add up to 5% extra and repeat.
- Connect the probe to the Solo unit as per the wiring diagram.
- Protect all cabling that would otherwise be exposed to weather. Cover the ground level cabling and probe with soil. We recommend rigid plastic or steel conduit and direct-burial, UV stable cable.
- If possible, log into Observant Global prior to leaving the site, and verify that the sensor is operating correctly.

Optional accessories

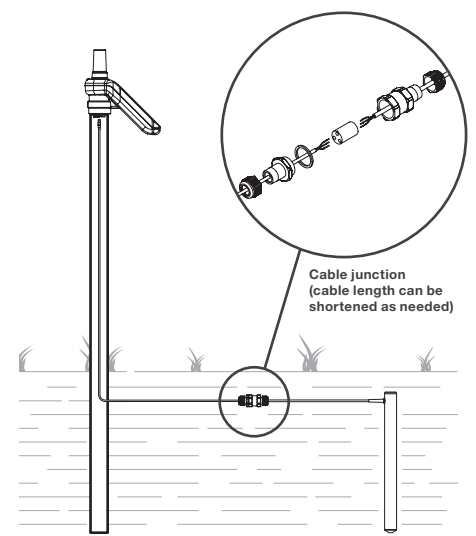
Product code	Description
01150	Removal Clamp
01149	Installation Kit

OBS-USR-TN005-R1



Function	Solo	EnviroPro
Power	Brown	Red
SDI-12	Blue	Blue
Ground	Black	Black

Electrical connection



Example Installation