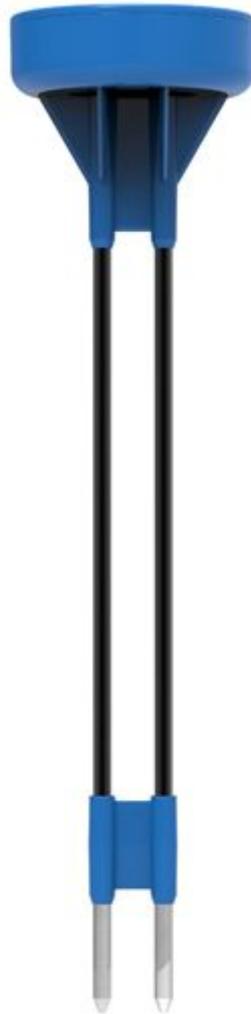


Sensoterra

Matrix VII, Science Park 106
1098XG Amsterdam
The Netherlands



Single depth soil moisture probe Installation Guide

Version 1.0

General

You've received your Sensoterra sensors and are ready to start measuring soil moisture data. That's great! Before you begin, we'd like to point out some tips for installing and caring for your Sensoterra sensors.

If you need to set up a LoRa gateway, please do that first.

1. Download the Sensoterra app. Available for [iOS](#) and [Android](#) (search for "Sensoterra in the app stores).
2. Open the app and [create an account](#). This is the account you will register the sensors under and receive notifications on for soil moisture levels.
3. Make an installation plan. Consider how you'd like the sensors distributed over your land, and what soil type they are going to be used in. We recommend 5-6 probes per irrigation loop.
4. Go to the installation location for the first sensor, open the Sensoterra app, open the tab "SET UP", "Add a new device" and follow the instructions
5. Wake the sensors and insert. Wake the sensor by turning it upside down for 2 seconds and turning it upright again.
6. You can usually push the sensor in the soil. In tougher terrain, use a rubber hammer to tap the sensor into the soil. You can insert into the ground up to the blue housing



7. Repeat steps 4 and 6 for other sensors
8. After 1 hour check the Sensoterra app or the [web monitor](#) for soil moisture data. If the wake up step is missed, it can take up to 48 hours to connect.

Normal Use

With proper use and care, the sensors should last 3 years. To get the most out of your sensors, please keep these tips in mind:

Push the sensors into the soil or tap them in using a rubber hammer. Do not use a steel hammer on the casing! Directly hit the top of the sensor in the raise disc area.

Soil contact is important so should you feel an obstruction or resistance beneath the ground, try to find another spot to place the sensor.

Placement of sensors is key! - Place sensors in a general line of sight of the gateway. Do not place sensors near any large (metal) structures like a grain silo, electricity tower, or water tower. Place at least 20 meters (65 feet) away to avoid interference.

Remove the sensors prior to any mechanical harvesting.

The default setting is for measurements once per hour. It is possible to increase the frequency, however uses more battery and will decrease the expected life.

WARNING: When not in use, remove the sensors from the ground and store them in a dry place.

This is particularly important when your gateway is turned off. Do not leave the sensors in the soil with no LoRa coverage as they will continue to try to find a LoRa connection. This puts unnecessary strain on the battery and will reduce the battery life of the sensor.

Storing the sensors upside-down in a cool (not freezing), dry place puts them into stock mode and will prolong the battery life. Make sure that the bare metal ends are not in contact with each other

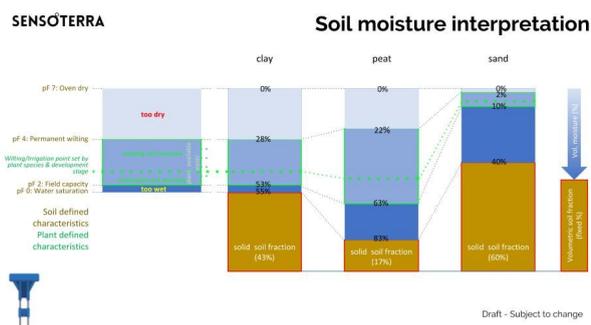
Moving a sensor to a new location is easy

If you want to move a sensor to a new location, repeat steps 4 through 6 above. Make a note of the sensor you are moving so you are aware when reviewing the data. The sensor is locked to the first user account the sensor is linked to, which means you cannot add the device to another account. This is a protection feature in case somebody else tries to read out your sensors.

Soil Calibration

Sensoterra sensors can be calibrated to five different soil types: Clay; Clay-loam; Peat; Saline clay; Sand.

Soil moisture levels will be reported as a percentage level. We can recommend a healthy range for maintaining good soil moisture. There are represented in the image below.



[Soil moisture interpretation.jpg](#)

Date	Revision	Author	Summary of changes
2019-3-14	1.0	CFB	Initial version