

## Soil Moisture Smart Sensor (S-SMx-M005) Quick Start

### Connecting to a Station

1. Stop the station if it is logging.
2. Plug the smart sensor jack into an open smart sensor port on the station.
3. Start logging. See the station manual at [www.onsetcomp.com/support/manuals](http://www.onsetcomp.com/support/manuals) for details on operating stations with smart sensors.

### Installing the Smart Sensor and Deployment Guidelines

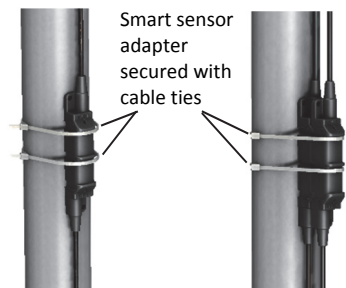
- This sensor measures the water content in the space immediately adjacent to the probe surface. Air gaps or excessive soil compaction around the probe can profoundly influence soil water content readings.
- Do not mount the probes adjacent to large metal objects, such as metal poles or stakes. Maintain at least 8 cm (3 inches) of separation between the probe and other objects. Any objects, other than soil, within 8 cm (3 inches) of the probe can influence the probe's electromagnetic field and adversely affect output readings.
- The S-SMC-005 sensor must be installed at least 3 cm (1.18 inches) from the soil surface and the S-SMD-005 sensor must be installed at least 10 cm (3.94 inches) from the soil surface to obtain accurate readings.
- It is important to consider the particle size of the medium in which you are inserting the sensor because it is possible for sticks, tree bark, roots, or other materials to get stuck between the sensor prongs, which will adversely affect readings. Be careful when inserting these sensors into dense soil as the prongs can break if excessive sideways force is used to push them into the soil.
- Good soil contact with the sensor probes is required.
- Install the sensor probes into undisturbed soil where there aren't any pebbles in the way of the probes.

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### Installing the Smart Sensor and Deployment Guidelines (continued)

- Use a soil auger to make a hole to the desired depth (an angled hole is best) and push the probes into undisturbed soil at the bottom of the hole. Alternatively, dig a hole and push the probes into the side of the hole.
- If the probe has a protective cap on the end, remove it before placing the probe into the hole.
- To push the probe into the soil, use a PVC pipe with slots for the sensor and a longer slot for the cable.
- Thoroughly water the soil around the sensor after it is installed with the hole partially backfilled to settle the soil.
- As the hole is back-filled, try to pack the soil to the same density as the undisturbed soil.
- Secure the smart sensor adapter to the mast with the cable ties as shown. Multiple smart sensor adapters can be stacked as shown in the far right example. Alternatively, mount the smart sensor adapter to a flat surface using two screws (no larger than a #6) and two washers.
- Use conduit to protect the cable against damage from animals, lawn mowers, exposure to chemicals, etc.
- When removing the probe from the soil, **do not pull it out of the soil by the cable!** Doing so may break internal connections and make the probe unusable.



One Smart Sensor Adapter Mounted

Two Smart Sensor Adapters Stacked and Mounted



For more information about this smart sensor, refer to the full product manual. Scan the code at left or go to [www.onsetcomp.com/support/manuals/15081-man-s-sm](http://www.onsetcomp.com/support/manuals/15081-man-s-sm).