



METER

EC-5

Soil Moisture Sensors



SOIL MOISTURE SENSORS QUICK START

EC-5

Preparation

Inspect and verify sensor components. In lightning-prone areas, review the application note: [Lightning surge and grounding practices](https://meter.ly/lightning-surge-grounding-practices) (meter.ly/lightning-surge-grounding-practices).

Set up and test the system (sensors, reader or data logger) in a lab or office. Verify the reader or data logger is using up-to-date firmware and software.

NOTE: EC-5 is an analog sensor and not automatically detected in ZENTRA Utility!

To avoid errors collecting data, connect the sensor(s) to the data logger and the data logger to a computer.

1. Open ZENTRA Utility.
2. Locate the port number the sensor is connected to and click or select the port.
This will open the Sensor Configuration tab.
3. In the Sensor Configuration tab, use the drop-down menu next to **Sensor Type** to find the specific sensor.
4. Select EC-5 to match the sensor in use and then select OK.

Testing Sensors

Take some measurements with the sensor using a data logger. Remember that sensors will not necessarily read 100% VWC in water and 0% in air. The sensors are optimized to read soils, and the factory mineral calibration uses real soils, not air and water. It is important to check the sensor functionality in air and water (see Functionality in air and water table). Values are given in % VWC using the factory mineral soils calibration.

For more information on performing soil-specific calibrations, please review the article entitled [Soil-specific calibrations for METER soil moisture sensors](https://metergroup.com/expertise-library/video-how-to-calibrate-meter-soil-moisture-sensors) (metergroup.com/expertise-library/video-how-to-calibrate-meter-soil-moisture-sensors).

Functionality in air and water		
Model name	Water	Air
EC-5	50–60%	Slightly negative

Values are given in % VWC using the factory mineral soils calibration. The container must be large enough to encompass the sensor's measurement volume.

ATTENTION

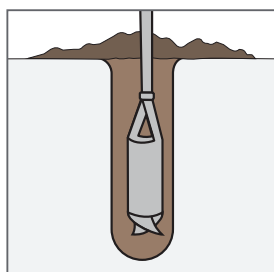
The firmware associated with the soil moisture sensors should be kept up-to-date for best results. Please go to metergroup.com/environment/downloads/ for current software or firmware versions for each sensor.

Field Installation

The EC-5 sensors are all installed using the same method. Proper installation of the sensors is critical for proper operation. Refer to the user manuals at metergroup.com for details.

1. Backfill Hole and Protect Cables

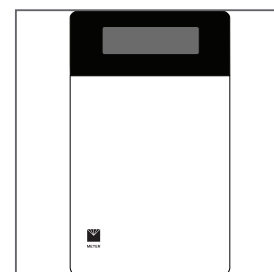
Secure and protect cables with PVC casing or flexible conduit and backfill the trench or hole.



2. Check Sensor Operation

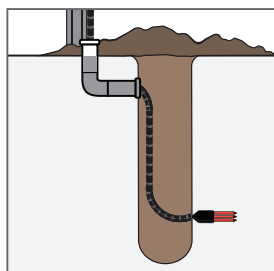
Use the data logger to make sure the sensor is reading properly.

The EC-5 is an analog sensor and do not auto-configure on the logger. Be sure to set the **Sensor Type** in ZENTRA Utility before completing installation.



3. Insert Sensor

Auger or trench a hole to the desired sensor depth. Insert the sensor into the undisturbed soil vertically or horizontally.



4. Plug in Sensor and Configure Logger

Plug the sensor into the data logger. Use data logger software to apply appropriate settings to the sensors plugged into each data logger port.

