



METER

# TEROS 11 + TEROS 12

## ADVANCED SOIL MOISTURE SENSING



# TEROS 11/12 QUICK START

## Preparation

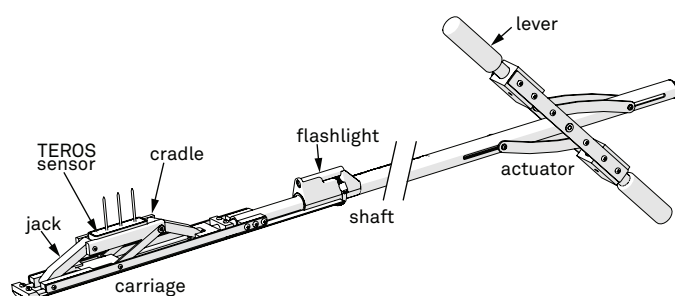
Inspect and verify the sensor components (TEROS 11 Soil Moisture and Temperature or TEROS 12 Soil Moisture, Temperature, and Electrical Conductivity). To validate sensor-to-sensor variability as well as logger functionality, take a sensor measurement in air and water. The TEROS 11/12 will read  $\sim 0.70 \text{ m}^3/\text{m}^3$  in water and a slightly negative value in air.

NOTE: The sensors are optimized to read in soils, therefore the sensor will not read 100% in pure liquid water.

## Installation Tool

Proper installation of the sensors is critical for proper operation. Refer to the [TEROS 11/12 User Manual](#) for details.

For easy installation, use the borehole installation tool. The installation tool (shown below) is available for rent from METER Group. Contact [Customer Support](#) for more information.



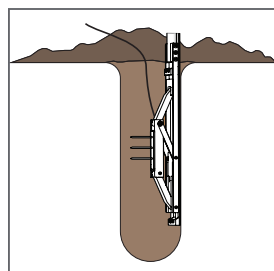
## Installation

### 1. Insert Sensor

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

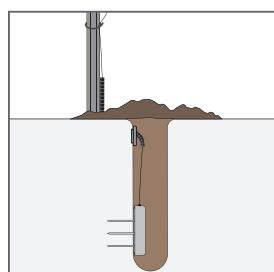
When using the borehole installation tool, load the TEROS 11/12 as shown above.

Lower the tool into the hole or trench with the back of the tool supported by the far wall. Pull on the lever to activate the jack and insert the sensor into hole wall.



### 3. Repack Soil and Protect Cables

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



## What is soil moisture?

Soil moisture is a key variable in controlling the exchange of water and heat energy between the land surface and the atmosphere through evaporation and plant transpiration.

[Learn more at metergroup.com](http://metergroup.com)

## ⚠ ATTENTION

TEROS 11/12 requires the most current software and firmware versions. Please make updates as necessary.

**ZL6/EM60** firmware version 2.02 or higher

**Em50** firmware version 2.29 or higher

**ProCheck** firmware version 1.70 or higher

**ZENTRA Utility** version 1.14 or higher

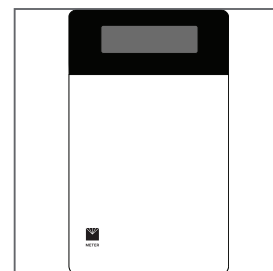
**ECH20 Utility** version 1.83 or higher

**DataTrac 3** version 3.17.2 or higher

Go to [metergroup.com/environment/downloads/](http://metergroup.com/environment/downloads/) to find the current software or firmware version for the data logger being used.

### 2. Check Sensor Operation

Plug the sensor into the data logger and use the SCAN function in the software to do a quick check of sensor operation before backfilling.



### 4. Plug Sensor In 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.

