



EC-5/10HS/5TE/5TM/GS3 SOIL MOISTURE SENSORS



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.

Preparation:

The ECH2O EC-5, 10HS, 5TE, 5TM, and GS3 can all be installed using the same installation method. Inspect and verify sensor components. When using the sensors in lightning-prone areas, follow the directions for providing protection for the sensors found in the application note Lightning surge and grounding practices.

Testing Sensors:

Take some measurements with the sensor using a data logger. Keep in mind 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 is done in 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. Sensor values vary less than 1% from one sensor to the next.

Field Installation:

Proper installation of the sensors is critical for proper operation. The recommended technique is outlined below. Please read the complete user manuals.

Functionality in air and water:

Model	Water	Air
EC-5	50–60%	Slightly negative
10HS	50–60%	Slightly negative
5TE	-98%	Slightly negative
5TM	-98%	Slightly negative
GS3	-98%	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.