SOIL MOISTURE SENSORS
EC-5, 10HS, 5TE, 5TM, and GS3

Have a question or problem? Our support team can help.

We manufacture, test, calibrate, and repair every instrument in house. Our scientists and technicians use the instruments every day in our product testing lab. No matter what your question is, we have someone who can help you answer it.

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SOIL MOISTURE SENSORS QUICK START
EC-5, 10HS, 5TE, 5TM, and GS3

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 (metergroup.com/environment/articles/lightning-surge-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. Values are given in % VWC using the factory mineral soils calibration. Sensor values vary less than 1% from one sensor to the next. For more information on performing soil-specific calibrations, please review the article entitled Soil-specific calibrations for METER soil moisture sensors (metergroup.com/environment/articles/how-calibrate-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.

Learn more at metergroup.com

<table>
<thead>
<tr>
<th>Model name</th>
<th>Water</th>
<th>Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC-5</td>
<td>50–60%</td>
<td>Slightly negative</td>
</tr>
<tr>
<td>10HS</td>
<td>50–60%</td>
<td>Slightly negative</td>
</tr>
<tr>
<td>5TE</td>
<td>–98%</td>
<td>Slightly negative</td>
</tr>
<tr>
<td>5TM</td>
<td>–98%</td>
<td>Slightly negative</td>
</tr>
<tr>
<td>GS3</td>
<td>–98%</td>
<td>Slightly negative</td>
</tr>
</tbody>
</table>

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

Field Installation
Proper installation of the sensors is critical for proper operation. The recommended technique is outlined below. Please read the complete user manuals at metergroup.com for more extensive setup and installation instructions. All products have a 30-day satisfaction guarantee.

Installation

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.

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 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.

ATTENTION
The firmware associated with the soil moisture sensors 5TE, 5TM, and GS3 should be kept up-to-date for best results. Please go to metergroup.com/environment/downloads/ to get the most current software or firmware versions for each sensor.
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