

S-SMC-M005

EC5 Soil Moisture Smart Sensor

Small area of influence

An affordable soil moisture smart sensor with a two-tine design for easy installation; integrates the field-proven ECH2O™ EC-5 Sensor and a 12-bit A/D. An affordable soil moisture smart sensor with a two-tine design for easy installation; integrates the field-proven ECH2O™ EC-5 Sensor and a 12-bit A/D.



Supported Measurements

Soil Moisture

Features

- Measures a 0.3-liter volume of soil
- Smaller measurement volume for use in containers or measuring at multiple depths
- High-frequency (70 MHz) circuit provides good accuracy even in high-salinity and sandy soils
- Compatible with Onset stand-alone and web-based weather stations

Contact Us

Sales (8am to 5pm ET, Monday through Friday)

- Email sales@onsetcomp.com
- Call 1-508-759-9500
- In U.S. toll free 1-800-564-4377
- Fax 1-508-759-9100

Technical Support (8am to 5pm ET, Monday through Friday)

- Contact Product Support www.onsetcomp.com/support/contact
- Call 1-508-759-9500
- In U.S. toll free 1-877-564-4377

Onset Computer Corporation
470 MacArthur Boulevard
Bourne, MA 02532

EC5 Soil Moisture Smart Sensor (S-SMC-M005) Specifications

Measurement Range

In soil: 0 to 0.550(m³/m³)

Extended range: -0.401 to 2.574 m³/m³ (full scale)

The sensor is capable of providing readings outside the standard volumetric water content range. This is helpful in diagnosing sensor operation and installation. See User Manual for additional information.

Accuracy: ±0.031 m³/m³ (±3.1%) typical 0 to 50°C (32° to 122°F); ±0.020 m³/m³ (±2%) with soil specific calibration.

This is a system-level accuracy specification and is comprised of the ECH2O probe's accuracy of ±0.03 m³/m³ typical (±0.02 m³/m³ soil specific) plus the smart sensor adapter accuracy of ±0.001 m³/m³ at 25°C (77°F). There are additional temperature accuracy deviations of ±0.003 m³/m³ / °C maximum for the ECH2O probe across operating temperature environment, typical <0.001 m³/m³ / °C. (The temperature dependence of the smart sensor adapter is negligible.)

Resolution: 0.0007 m³/m³ (0.07%)

Soil probe dimensions: 89 x 15 x 1.5 mm (3.5 x 0.62 x 0.06 in.)

Weight: 180 grams (6.3 oz)

Decagon ECH2O probe part No.: EC-5

Sensor operating temperature: 0° to 50°C (32° to 122°F).

While the sensor probe and cable can safely operate at below-freezing temperatures (to -40°C/F) and up to 75°C (167°F), the soil moisture data collected at these extreme temperatures is outside of the sensor's accurate measurement range.

Volume of influence: 0.3 liter (10.1 oz)

Sensor frequency: 70 MHz

Bits per sample: 12

Number of data channels: 1

Note: A single smart sensor-compatible HOBO logger can accommodate 15 data channels and up to 100 m (328 ft) of smart sensor cable (the digital communications portion of the sensor cables)

Measurement averaging option: No

Cable length available: 5 m (16 ft)

Length of Smart Sensor network cable: 0.5 m (1.6 ft)



- The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)