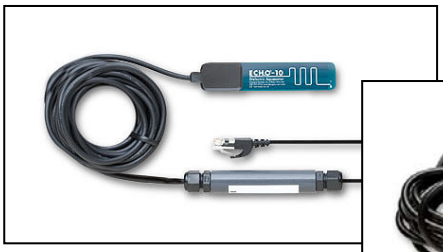


S-SMB-M005

S-SMC-M005

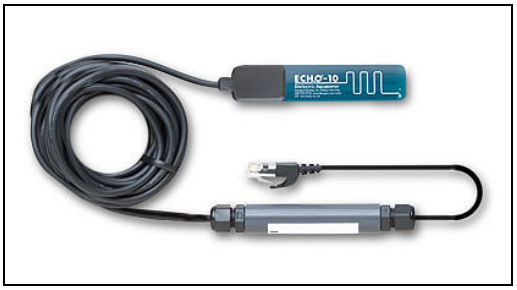
S-SMD-M005

HOBO® Data Loggers

S-SMB-M005, S-SMC-M005, and S-SMD-M005 Soil Moisture Smart Sensors

S-SMB-M005 Soil Moisture Smart Sensor

Measure soil water content with this affordably-priced Soil Moisture Smart Sensor. This sensor integrates the field-proven ECH$_2$O™ Sensor and a 12-bit A/D, providing ±4% accuracy in typical soil conditions, and ±2% accuracy with soil-specific calibration. The sensor's thin profile and 10 cm probe length make the sensor easy to install, while measuring a representative cross-section of soil. Readings are provided directly in volumetric water content.



Measurement Range in soil: 0 to 0.450(m³/m³)
Extended range: -0.376 to 1.964 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.

Accuracy: ±0.041 m³/m³ (±4%) typical 0 to 50°C; ±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 ±0.04 m³/m³ typical (±0.02 m³/m³ soil specific) plus the smart sensor adapter accuracy of ±0.001 m³/m³ at 25°C. 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: ±0.0006 m³/m³ (±0.06%); **Soil Probe Dimensions:** 152 x 32 x 1.0 mm; **Weight:** 190 g
Decagon ECH2O Probe Part No.: EC-10

Sensor Operating Temperature: 0° to 50°C
While the sensor probe and cable can safely operate at below-freezing temperatures (to -40°C) and up to 75°C, the soil moisture data collected at these extreme temperatures is outside of the sensor's accurate measurement range. Bits per Sample: 12; Volume of Influence: 0.13 litre; Sensor Frequency: 5 MHz

Number of Data Channels: 1 (A single smart sensor-compatible HOBO logger can accommodate 15 data channels and up to 100 m of smart sensor cable (the digital communications portion of the sensor cables)

Measurement Averaging Option: No
Cable Length Available: 5 m; Length of Smart Sensor Network Cable: 0.5 m **CE Compliancy: Contact Sales Office**

Tempcon Instrumentation Ltd.
Unit 19, Ford Lane Business Park, Ford Lane
Ford, Nr. Arundel, West Sussex. BN18 0UZ
Tel: ++44 (0) 1243 558270 Fax: ++44 (0) 1243 558288
Email: info@tempcon.co.uk Web site: www.tempcon.co.uk

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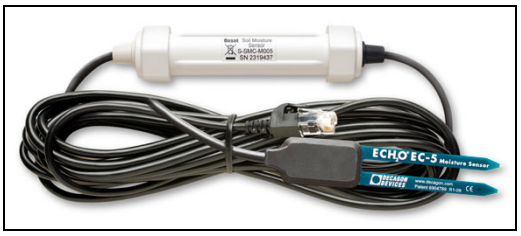
S-SMC-M005 Soil Moisture Smart Sensor

Measure soil water content with the affordably-priced EC-5 Soil Moisture Smart Sensor; this sensor integrates the field-proven ECH$_2$O™ Sensor and a 12-bit A/D, providing ±3% accuracy in typical soil conditions, and ±2% accuracy with soil-specific calibration. The sensor's two-tine design makes the sensor easy to install. Readings are provided directly in volumetric water content. This sensor's high frequency design gives it a relatively low sensitivity to salinity and textural effects and a wide measurement range.

Features:

- Measures a 0.3 litre volume of soil
- Sensor uses a high-frequency (70 MHz) circuit that provides good accuracy even in high-salinity and sandy soils.
- Compatible with Onset standalone and web-based weather stations



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 the Operation section below for more details.
Accuracy: ±0.031 m³/m³ (±3%) typical 0 to 50°C; ±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.

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;

Weight: 180 grams

Decagon ECH2O Probe Part No.: EC-5

Sensor Operating Temperature: 0° to 50°C

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

Volume of Influence: 0.3 litre
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 of smart sensor cable (the digital communications portion of the sensor cables)
Measurement Averaging Option: No

Cable Length Available: 5 m
Length of Smart Sensor Network Cable: 0.5 m

CE Compliancy: Contact Sales Office

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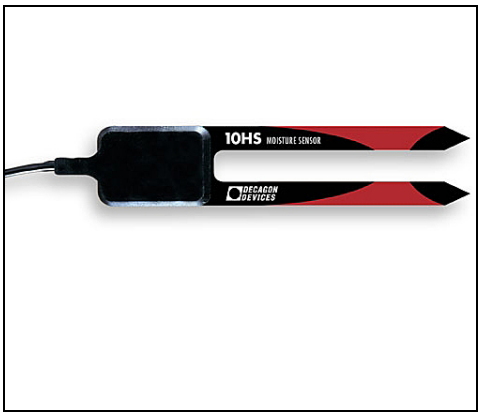
Unit 19, Ford Lane Business Park, Ford Lane
Ford, Nr. Arundel, West Sussex. BN18 0UZ
Tel: ++44 (0) 1243 558270 Fax: ++44 (0) 1243 558288
Email: info@tempcon.co.uk Web site: www.tempcon.co.uk

S-SMD-M005 Soil Moisture Smart Sensor

Measure soil moisture over a large volume of soil with the affordably-priced S-SMD-M005 Soil Moisture Smart Sensor. This sensor integrates the field-proven 10HS Sensor and a 12-bit A/D, providing ±3% accuracy in most soils conditions, and ±2% accuracy with soil-specific calibration. The 10cm probes measure soil moisture over a larger volume of soil which helps to average out any soil variability. Readings are provided directly in volumetric water content. This sensor's high frequency design gives it a low sensitivity to salinity and textural effects and a wide measurement range.

Features:

- Measures a large 1-liter volume of soil, providing a more accurate picture of average soil moisture
- Provides data directly in volumetric water content
- Sensor uses a high-frequency (70 MHz) circuit that provides good accuracy even in high-salinity and sandy soils.
- Compatible with Onset standalone and web-based weather stations



Measurement Range:
In soil: 0 to 0.570 m^3/m^3 (volumetric water content)

Accuracy: ±0.033 m^3/m^3 (±3%) typical 0 to +50°C for mineral soils up to 10 dS/m
±0.020 m^3/m^3 (±2%) with soil specific calibration

Resolution: ±0.0008 m^3/m^3 (±0.08%)

Soil Probe Dimensions: 160 x 32 x 2 mm

Weight: 190 grams

Decagon Probe Part No.: 10HS

Sensor Operating Temperature:
0° to +50°C. Although the sensor probe and cable can safely operate at below-freezing temperatures (to -40°C/F) and the smart sensor tube (the white portion of the sensor cable that houses the electronics) can be exposed to temperatures up to +70°C, the soil moisture data collected at these extreme temperatures is outside of the sensor's accurate measurement range. Extended temperatures above +50°C will decrease logger battery life when using for the S-SMD-M005 smart sensor.

Volume of Influence: 1 litre

Sensor Frequency: 70 MHz

Bits per Sample: 12

Number of Data Channels: 1

Measurement Averaging Option: No

Cable Length Available: 5 m

Length of Smart Sensor Network Cable: 0.5 m

CE Compliancy: Contact Sales Office

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