



S-SMD-M005 Sensor

10HS Soil Moisture Smart Sensor

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

Also available in a wireless model for use with the HOBOnet Field Monitoring System.



Supported Measurements:

Soil Moisture

Key Advantages:

- Measures a large 1-liter volume of soil, providing a more accurate picture of average soil moisture
- Provides data directly in volumetric water content
- 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

S-SMD-M005 Sensor Specifications

Measurement range in soil: 0 to 0.570 m /m (volumetric water content)

Accuracy:

±0.033 m /m (±3.3%) typical 0 to +50°C (+32° to +122°F) for mineral soils up to 10 dS/m

±0.020 m /m (±2%) with soil specific calibration

Resolution: 0.0008 m /m (0.08%)

Soil probe dimensions: 160 x 32 x 2 mm (6.5 x 1.25 x 0.08 in.)

Weight: 190 grams (6.7 oz)

Decagon probe part no.: 10HS

Sensor operating temperature:

0° to +50°C (+32° to +122°F). 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 (+158°F), the soil moisture data collected at these extreme temperatures is outside of the sensor's accurate measurement range. Extended temperatures above +50°C (+122°F) will decrease logger battery life when using for the S-SMD-M005 smart sensor.

Volume of influence: 1 liter (33.8 oz)

Sensor frequency: 70 MHz


Bits per sample: 12

Number of data channels: 1

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)