METER
ENVIRONMENT

SOIL MOISTURE

TEROS 11 + 12

The TEROS 12 soil moisture/temp/electrical conductivity sensor and TEROS 11 soil moisture/temp sensors make your life easier with a large volume of influence, reduced sensor-to-sensor variability, and rugged form factor with a 3-year warranty. These innovations, along with our well-published capacitance technology and accuracy verification standard have combined to generate our most accurate, easy-to-use, highly durable—yet still economical—soil moisture sensor.

KEY FEATURES

- Increased volume of influence (1010 mL)
- Robust, long-life sensor
- Reduced sensor-to-sensor variability
- 3-year long-life guarantee
- Repeatability can be checked with an accuracy verification standard
- Minimized salinity and textural effects by using 70 MHz frequency capacitance technology
- Steel needles cut through the soil for better soil-sensor contact
- SDI-12 communication for non-METER data loggers
- Ferrite core eliminates cable noise

SPECIFICATIONS

- VWC Range: Mineral soil calibration: 0–70% VWC, Soilless media calibration: 0-100% VWC
- Apparent dielectric permittivity (ε_a): 1 (air) to 80 (water)
- Resolution:0.1% VWC
- VWC Accuracy: Generic calibration: ±3.00%, (±1–2% VWC with soil-specific calibration)
- Dielectric measurement frequency: 70 MHz
- **Temperature**
  Range: –40 to 60 °C
  Resolution: ±0.1 °C
  Accuracy: ±0.5 °C from –40 to 0 °C
  ±0.3 °C from 0 to +60 °C
- **Bulk electrical conductivity (ECb) (TEROS 12 only)**
  Range: 0 to 20 dS/m (bulk)
  Resolution: 0.001 dS/m
  Accuracy: +/- (5% +0.01 dS/m) from 0 to 10 dS/m
  +/- 8% from 10 to 20 dS/m

TEROS 10

The TEROS 10 is a ruggedized version of our basic, no-frills soil moisture sensor. Its 70-MHz frequency minimizes salinity and textural effects, making it accurate in most soil or soilless media. With a tough, epoxy body, the TEROS 10 is designed to withstand some of the harshest field conditions, which means problem-free measurements over the longevity of your research. It also has a 430 mL volume of influence, allowing you to measure a larger volume of soil in the field.

KEY FEATURES

- Low-cost, ruggedized soil moisture sensor
- 430 mL volume of influence
- Sharp stainless steel needles are securely fastened and reduce breakage
- 3-year long-life guarantee
- Measure VWC in a harsh environment
- Robust epoxy body means it lasts for 10+ years in the field
- Plug and play with METER data loggers
- Ferrite core eliminates cable noise
- Easy integration with third-party systems

SPECIFICATIONS

- VWC Range: Mineral soil calibration: 0–64% VWC; Soilless media calibration: 0–70% VWC
- Apparent dielectric permittivity (ε_a): 1 (air) to 80 (water)
- Dielectric measurement frequency: 70 MHz
- Supply voltage (VIN to GND): 3.0-15.0 VDC
- Output : 1,000 to 2,500 mV
- Operating temperature range: –40 to +60°C