The SM300 measures soil moisture and temperature with research grade accuracy:
- Soil moisture and temperature
- Dependable accuracy ± 2.5%
- Good temperature and salinity stability
- Easy data logger connection (0-1V)

Research Grade Sensor

The market leading SM300 offers outstanding performance in normal and saline soil conditions, and is stable across wide ranges of temperature and salinity. Its construction uses industrial grade connectors and high specification materials throughout to produce a soil moisture sensor of outstanding quality. The built-in temperature sensor simplifies soil temperature measurement and achieves 0.5°C accuracy.

SM300 Improvements

The SM300 incorporates the following improvements over the earlier SM200 design:
- Improved accuracy (± 2.5%)
- Temperature sensor included
- M12 connector and cabling system
- Enhanced lightning protection

Specifications

| Volumetric water content sensor | Accuracy | ±2.5% vol over 0 to 50 % vol and 0-60°C *
| Measurement range | 0 to 100% vol with reduced accuracy**
| Salinity error | ≤3.5% vol over 50 to 1000 mS/m and 0-40% vol
| Output signal | 0-1V differential = 0 to 60% nominal
| Output compatible with | GP1, DL6, DL2e, HH2
| Temperature sensor | SM300 must be fully dried to accurately measure soil temperature
| Sensor accuracy | ±0.5°C over 0-40°C*
| not including logger or cabling error
| Output | Resistance: 5.8kΩ to 26kΩ*
| Output compatible with | GP1, DL6* DL2e
| Cabling error contribution (to temperature reading) | 0°C for GP1 & DL6 (any cable length)
| 0°C for DL2e (with 5m cable).*
| Maximum cable length | 100m (GP1 & DL6 data loggers)
| 100m (DL2e: water content measurement)
| 25m (DL2e: temperature measurement)
| Power requirement | 5-14VDC, 18mA for 1s
| Operating range | -20 to +60°C
| Environment | IP68*
| Sample volume | 55 x 70mm diameter
| Dimensions/Weight | 143 x 40mm diameter/0.1 kg

Ease of Use

- Versatile cabling solutions
- Easy installation at depth
- Minimal soil disturbance
- Compact – can be used in plant pots

The SM300 minimizes soil disturbance, preserving the original soil structure around the measurement rods. It is easy to insert and install whether at the soil surface or at depth. The SM300’s circular shape facilitates installation in augered holes – extension tubes are available.

The SM300 is a dual-purpose probe – it can be used both with the HH2 hand-held Moisture Meter for instant moisture readings, or left in situ for data logging of moisture and temperature.

Calibration

The SM300 is provided with general calibrations for mineral and organic soils. A two-point soil specific calibration can be performed for greater accuracy if required.

Applications

- Soil science
- Agriculture & Horticulture research
- Irrigation

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