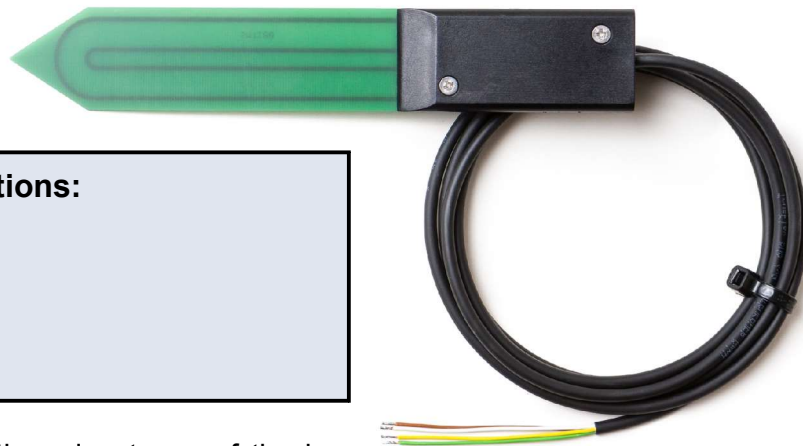


## Soil Moisture Sensor SMT100



### Available Output Options:

- RS485 TBUS
- RS485 MODBUS
- RS485 ASCII
- SDI-12
- Analogue 0...10V

The SMT100 combines the advantages of the low cost FDR sensor system with the accuracy of a TDR measurement. Like a TDR, it measures the travel time of a signal to determine the dielectric constant of the soil. The resulting frequency (>100 MHz) is high enough to operate well and produce excellent results in clayey soils.

Compact, functional und robust: The glass fibre reinforced PCB is the basis for the economic design and thanks to its blade shape installation is made simple. Naturally, casing and cable are both water sealed.

Different communication protocols are available, as well as analogue output.

The SMT offers a wide measurement range. It is maintenance free and frost resistant. Both its short response time and low interference by salinity make it the perfect choice for long-term surveys.

### Features

- Highly accurate volumetric soil moisture measurement
- Integrated temperature measurement
- Suitable for any soil type
- Digitale RS-485 interface with TBUS, Modbus and ASCII
- Optional SDI-12 or analogue interface
- Easy installation and low cost

### Specifications:

#### Volumetric Water Content (VWC)

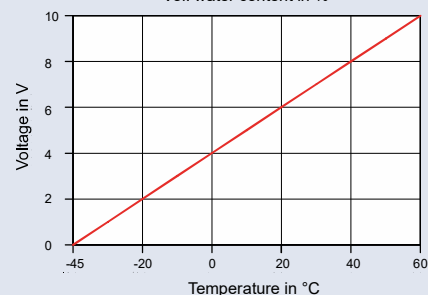
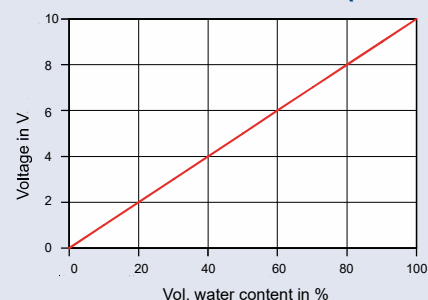
Range: 0...60% volumetric water content (up to 100% VWC with reduced accuracy)  
 Accuracy: up to  $\pm 3\%$  (VWC) in mineral soils with moderate salinity from 0...50% VWC  
 Resolution: 0.1% volumetric water content or better

#### Temperature

Range:  $-40...+80^{\circ}\text{C}$   
 Accuracy: Typical  $\pm 0.2^{\circ}\text{C}$ , max.  $\pm 0.4^{\circ}\text{C}$  over full range  
 Analogue version  $\pm 0.8^{\circ}\text{C}$   
 Resolution:  $0.01^{\circ}\text{C}$  or better (analogue version  $0.2^{\circ}\text{C}$ )

Power: 4...24VDC, up to 40mA during measurement  
 Analogue 12...24VDC for 0...10V output  
 Cable length: 10m  
 Sensor dimensions: ca. 18.2 cm x 3 cm x 1.2 cm

### Characteristic curves (analog):



Subject to technical changes without notice. SMT50/V1.0