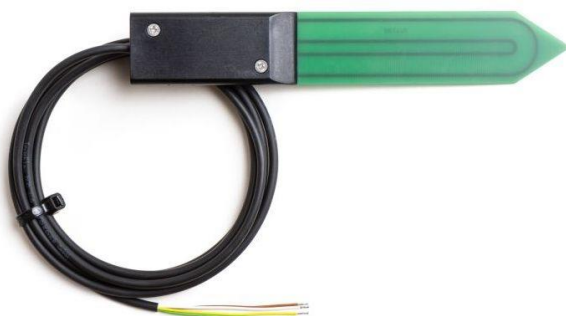


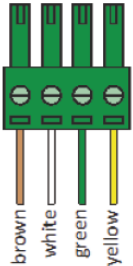
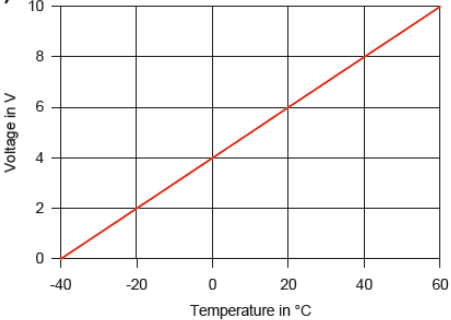
SMT-100 Sensor for Soilmoisture and -temperature

Technical Data

Accuracy:	<p>Soil volumetric water content (VWC)</p> <ul style="list-style-type: none"> » Using factory calibration up to $\pm 3\%$ (VWC) in mineral soils with moderate salinity from 0 to 50% VWC » Using medium specific calibration up to $\pm 1\%$ (VWC) <p>Temperature</p> <ul style="list-style-type: none"> » Typical $\pm 0.2^\circ\text{C}$, max. $\pm 0.4^\circ\text{C}$ over full range » Analog version $\pm 0.8^\circ\text{C}$ <p>Additional output</p> <ul style="list-style-type: none"> » Raw measurement data » Dielectric permittivity
Resolution:	<p>0.1% volumetric water content or better 0.01°C or better (analog version 0.2°C)</p>
Range:	<p>0 to 60% volumetric water content (up to 100% volumetric water content with limited accuracy) Temperature: -40 to +80°C (analog version -40 to +60°C)</p>
Interface options:	<p>RS485 with TBUS RS485 with Modbus RS485 with ASCII SDI-12 Analog: 0 - 10 V (other voltage ranges on request)</p>
Power:	<p>4-24 V DC, up to 40 mA during measurement (analog version 12 - 24 V DC for 0 - 10 V output) Measurement time digital versions: less than 50 ms Measurement time analog versions: less than 500 ms</p>
Cable length:	10 m
Sensor dimensions:	ca. 18,2 cm x 3 cm x 1,2 cm
Data logger compatibility:	<p>Any logger capable of appropriate power excitation and RS-485 (TBUS, Modbus, ASCII), SDI-12 or analog input Free PC logger software available on request</p>



Instructions

<p>Wiring color code</p>	<p>RS-485 version Brown: +Vbat (power supply) White: GND (ground) Green: RS-485 A Yellow: RS-485 B</p> <p>SDI-12 version Brown: +Vbat (power supply) White: GND (ground) Green: SDI-12 data</p> <p>Analog version Brown: +Vbat (power supply) White: GND (ground) Green: Voltage output temperature Yellow: Voltage output soil moisture</p>
<p>Connector pin assignment</p>	<p>RS-485 version</p>  <p>brown = +Vbat white = GND green = RS-485 A yellow = RS-485 B</p>
<p>Characteristic curves</p>	<p>Analog version (0-10 V)</p> <p>Temperature</p>  <p>Soil moisture</p> 