

# TPS

## Temperature Profile Set

Temperature profile set is designed for easy and accurate measurement of soil temperatures in different profiles at various depths.



Temperature profile set uses 5 highly stable and accurate platinum sensing elements to measure temperature at five different spots.

Temperature sensors are evaluated by waterproof enclosed electronic module. Measured temperature data is transferred via SDI-12 or RS-485 digital interface, reducing need for analog outputs and possible error sources.

Module with PT100 sensors is factory adjusted at points (–20, 0, 20) °C and comes with a factory calibration certificate. The set meets EN61000-6-4 and EN61000-6-2 EMC requirements.



Highly stable  
measurement



Digital output SDI-12,  
RS-485



Meets EN61000-6-4  
and EN61000-6-2 EMC  
requirements



Factory calibrated

### Measurement

Measuring range	–65 °C to +70 °C
Accuracy classes	PT100 1/10 DIN: ±0.05 °C PT100 1/5 DIN: ±0.10 °C PT100 1/3 DIN: ±0.20 °C
Measuring element	100 Ω, α = 0.00385
Long-term stability	< 0.1 °C / year
Resolution	0.001 °C
Measurement period	depends on data logger
Response time	63 % ... < 20 s

### Electrical

Power supply	6 to 17 V DC
Power consumption during measurement	approximately 4 mA
Power consumption during power down mode	approximately 3 µA
Output	SDI-12, RS-485

**Mechanical**

<b>Measuring tip</b>	length 15 mm, diameter 5 mm
<b>Probe housing</b>	length 100 mm, diameter 10 mm
<b>Cable</b>	standard lengths 2 m, 5 m, 10 m (different lengths available on request)
<b>Connector</b>	optional

**Enviromental**

<b>Operating temperature range</b>	–65 °C to +70 °C
<b>Storage temperature range</b>	–65 °C to +70 °C
<b>Operating humidity range</b>	0 to 100 %
<b>Protection rating</b>	IP 68
<b>CE certified</b>	
<b>EMC compliance with EN61326-1997, 98, 2001</b>	

