

Soil thermal profile

TP32MTT.03... SERIES PROBES FOR SOIL THERMAL PROFILE MEASUREMENT

INTRODUCTION

Designed to meet the stringent requirements of the World Meteorological Organization (WMO), the **TP32MTT** temperature probes offer precision, durability, and ease of use for accurate soil temperature measurements. Ideal for agriculture and geothermic studies, these probes provide reliable data at multiple soil depths with minimal invasiveness.

Whether you need the 7-level TP32MTT.03 or the 6-level TP32MTT.03.1, these probes are engineered for top performance in a variety of environmental monitoring applications, agriculture as well as geothermic studies.

FEATURES

High Accuracy and Stability

Equipped with Pt100 1/3 DIN sensors to ensure consistent, precise measurements over time.

WMO Compliance

Designed according to the World Meteorological Organization standards for accuracy and reliability.

Durable and Waterproof Design

The fiberglass tube provides superior impermeability and thermal insulation, ensuring longevity and accuracy even in harsh conditions (IP68 protection).

Easy Connectivity

Features an M12 connector for simple cable attachment, with optional cable lengths of 5 or 10 m.

CONFIGURATION & MEASUREMENT

Multi-Level Temperature Measurement

TP32MTT.03 measures at 7 levels (+5 cm, 0, -5 cm, -10 cm, -50 cm, -1 m), while TP32MTT.03.1 measures at 6 levels (+5 cm, 0, -5 cm, -10 cm, -20 cm, -50 cm).

RS485 Digital Output

MODBUS-RTU protocol support enables long-distance data transmission, making it ideal for remote monitoring.

Wide Power Supply Range

Operates on a 6–30 Vdc power supply for flexible integration into existing systems.



ACCURATE MONITORING AT MULTIPLE SOIL DEPTHS

Measures temperature at 6 or 7 specific soil levels for precise environmental analysis



TRUSTED STANDARD FOR ENVIRONMENTAL MONITORING

Fully meets World Meteorological Organization (WMO) guidelines, ensuring reliability and accuracy



SEAMLESS LONG-DISTANCE DATA COMMUNICATION

Equipped with RS485 digital output and MODBUS RTU protocol for easy data integration over long distances



WATERPROOF AND DURABLE DESIGN

With IP68-rated fiberglass construction, the probe is fully protected against water and harsh conditions



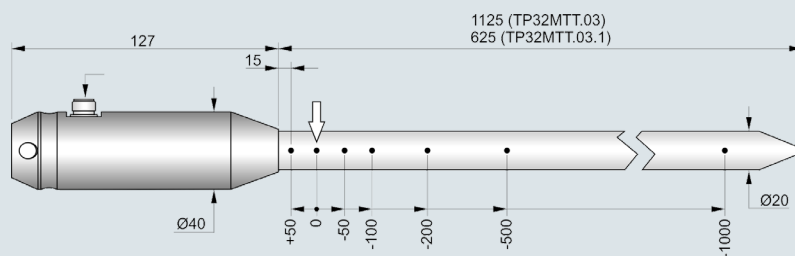
WIDE VOLTAGE RANGE FOR VERSATILE USE

Power supply from 6 to 30 Vdc allowing flexible installation in different systems

General specifications

Sensors	Pt100 1/3 DIN
Resolution	0.01 °C
Accuracy	± 0.1 °C @ 0 °C
Operating temperature	Stem: -40...+125 °C Hand grip: -40...+85 °C
Temperature drift	0.003 %/°C @ 20 °C
Power supply	6...30 Vdc
Consumption	5 mA @ 12 Vdc
Output	RS485 Modbus-RTU
Connection	8-pole M12 male connector
Materials	Tube: fiberglass Tip: stainless steel Handle: anodized aluminium alloy with stainless steel top end
Protection Degree	IP 68

Dimensions



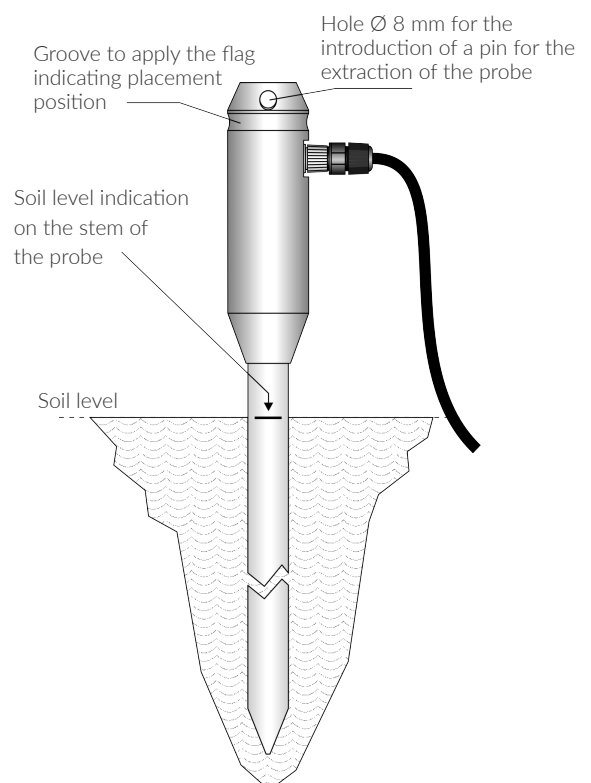
Ordering codes

TPMTT.03

Blank = 7 sensors
.1 = 6 sensors

Installation

- Use an appropriate accessory to create a hole in the soil deep enough to fit the probe's stem. Important: Do not use the probe itself to create the hole, as this may cause mechanical damage.
- After the hole is prepared, insert the probe's stem into the soil, ensuring that the zero-level indicator aligns with the soil's surface. The probe must be securely positioned in a vertical orientation.
- Fill any gaps between the soil and the stem with finely powdered soil. For accurate measurements, it is essential that the soil makes good contact with the probe's stem.
- Mark the location of the probe to avoid any damage during activities such as lawn mowing, plowing, or mechanized harvesting.
- To remove the probe, insert a pin into the 8mm hole at the top of the handle and gently pull upwards. Be sure to lift the probe vertically, avoiding any tilting or rotation that could damage the stem during extraction.



V 1.0