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**SIAP+MICROS**  
Environmental Monitoring Solutions

# SOIL MOISTURE PROBE

1003 TRHTC



High precision and long-term stability

Minimal invasiveness in the soil

Designed for: agriculture, hydrology, geology

# Description

The TSM-E probe measures the soil volumetric water content by using a capacitive measurement principle which allows fast measurements in the field and with minimal invasiveness. The volumetric content of water is defined as the ratio between the volume occupied by water in a given portion of soil and the total volume. As a result the measurement can be expressed as a percentage of the water volume with respect to the total volume.

The circuit board is protected inside a housing made of plastic material and sealed with epoxy resin which allows to achieve reliable measurements even in harsh environmental conditions.

The probe is supplied with an RS485 digital output and Modbus-RTU protocol. This solution ensures the use of very long connection cables. The sensor is also supplied with a standard 5m power and signal cable.

## Main Features

- **Protection class IP67**
- **Ease of installation**
- **High long-term stability**
- **Minimal maintenance**

## Technical Specifications\*

### Measurement performance

#### Volumetric water content [%]

Transducer type	Capacitive
Measurement range	0 ÷ 60 VWC
Accuracy	± 0.06 %
Resolution	0.1
Measurement volume	Ø = 100 mm x H = 150 mm

#### Soil temperature [°C]

Measurement range	-40 ÷ 60 °C
Accuracy	0.5 °C

### Operating conditions

Temperature	-40 °C ÷ +60 °C
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### Outputs

RS485-Modbus	Volumetric water content [%]
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### Power supply and consumption

Voltage supply	5 ÷ 30 Vdc		
Power consumption (mA)	Min	Typical	Max
	-	2	15

### Mechanical specifications

Materials	Handle: thermoplastic material and epoxy resin Electrodes: epoxy glass, thickness 2 mm
Protection class	IP67
Weight	150 g

### Ordering codes

t003	PSM-t003m-TRHTC
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