100 years
Since 1925

SIAP+MICROS
Environmental Monitoring Solutions

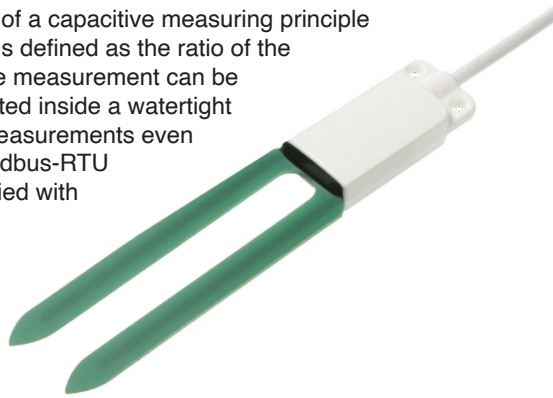
SOIL MOISTURE AND TEMPERATURE PROBE

t003 TRHTC

- High precision and long-term stability
- Minimal invasiveness in the soil
- Designed for: agriculture, hydrology, geology

Descrption

The probe measures the temperature and volumetric content of soil water through the use of a capacitive measuring principle that allows rapid field measurements with minimal invasiveness. Volumetric water content is defined as the ratio of the volume occupied by water in a given portion of soil to the total volume. This implies that the measurement can be expressed as a percentage of water volume to total volume. The electronic board is protected inside a watertight container made of plastic material and sealed with epoxy resin, which allows for reliable measurements even in harsh environmental conditions. The probe is supplied with RS485 digital output and Modbus-RTU protocol, a solution that allows the use of long connection cables. The sensor is also supplied with power and signal cable of standard length 5m.



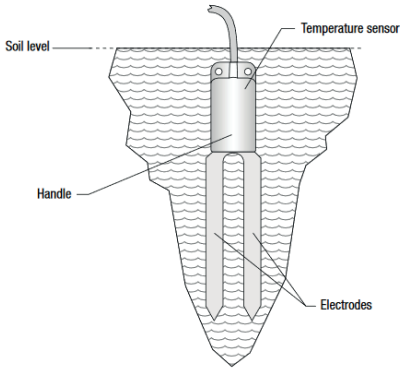
Mean Features

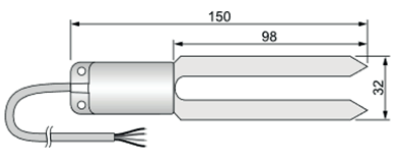
- **Protection class IP67**
- **Ease of installation**
- **High long-term stability**
- **Minimal maintenance**

Technical Specifications*

Measurement performance			
Volumetric water content [%]			
Transducer type	Capacitive		
Measurement range	0 ÷ 60 VWC		
Accuracy	± 3		
Resolution	0.1		
Measurement volume	Ø = 100 mm x H = 150 mm		
Temperature			
Sensing element	NTC 10 kΩ @ 25 °C		
Measurement range	-40…+60 °C		
Resolution	0,1 °C		
Accuracy	± 0,5 °C		
Long-term stability	0,1 °C / year		
Operating conditions			
Temperature	-40 °C ÷ +60 °C		
Outputs			
RS485-Modbus	Volumetric water content [%]; temperature °C		
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			
Modbus	PSM-t003m-TRHTC		

*Changes on technical performances can be applied upon request of specific calibration.





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