



Mod. **SM.2**

High Precision Soil Temperature and Moisture Sensor

Highlighted specs

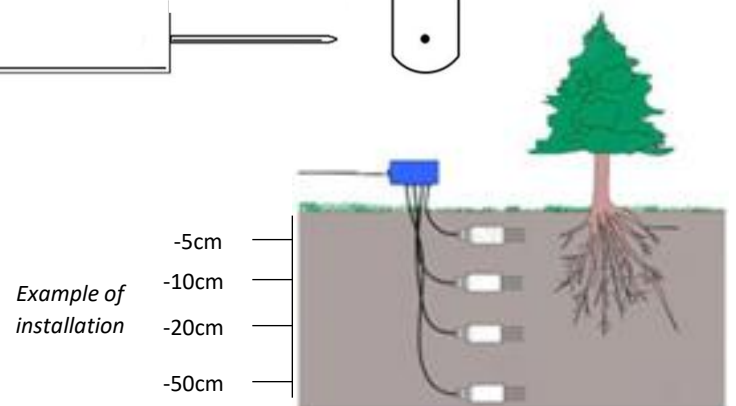
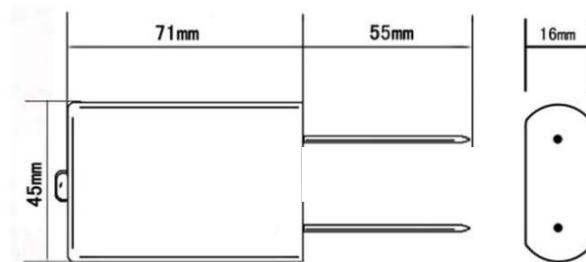
- High precision
- IP68 waterproof
- No corrosion from fertilizers
- AISI 316L electrodes
- WMO standards compliant
- High dynamic response (VWC)
- Available with various signal output
- According to **CE** norms

The SM-2 soil moisture sensor is a very precise sensor which integrates **temperature and soil moisture** measurements in a **single instrument**. The operating principle is based on the FDR (Frequency Domain Reflectometry 70MHz) system for a precise measurement of the soil dielectric constant and therefore to measure the volume of soil moisture content. For the temperature part it uses a PT100 thermo-resistance sensor. Steel spikes are placed into the surface of the ground or in a section for a quick measurement of the ground parameters. It can be left permanently in the ground or used to make quick and accurate measurements. This sensor is built according to the WMO standards.

Measure	Humidity (VWC)	Temperature
Range	0-100% m ³	-40°C ÷ +80°C
Accuracy	± 3% (0-50%)	± 0.2°C
Resolution (m³/m³)	<0.002 m ³ /m ³	<0.05°C
Signal Output	4÷ 20mA, 0÷2V, (ModBus RS485 optional)	
Response time	< 1s	
Power supply and consumption	12÷24Vdc (max 12mA ÷ 60mA)	
Measure area	7-10cm ray around probe	
Made of	ABS	
Size	71 x 45 x 16mm (spikes Ø4 x 55mm) 5m cable	
Operative range	-30 ÷ +70°C	
Protection	IP68	
Spikes	Inox 316L	

Size and connections

Wire	Analog output	Modbus RS485 output
Red	+ 12/24 Vdc	+ 12/24 Vdc
Black	GND common	GND common
Blue	Out temperature °C	N.C.
Brown	Out humidity Rh%	N.C.
Yellow	N.C.	RS485A
White	N.C.	RS485B



Order Code

Sensor	High Precision Soil Temperature and Moisture Sensor	SM.2	
Output	0÷2Vdc 4÷20mA RS485 - Modbus		A B C
Accessories	CS05 – Cable 5m sensor-datalogger CS10 – Cable 10m sensor-datalogger CSxx – Cable xx* m length, sensor-datalogger – to be specified at order		05 10 xx

*specify the length for no standard measures

example of order code

SM.2

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