

# SOIL MOISTURE SENSOR



- ① measures soil and substrate moisture
- ② built-in temperature & EC meter
- ③ up to 10 year battery life
- ④ IP68 casing
- ⑤ data transmission every 1, 2, 5, 10 minutes

battery-powered, wireless soil moisture sensor with built-in temperature and EC meter for effective monitoring of irrigation and nutrient delivery to plants

## Soil Moisture EC and T Sensor Datasheet

Measurements	Soil Moisture and Electrical Conductivity (EC) and Temperature	
Line of Sight Range	3km / 1.9mi	
Operating environment	Indoor and Outdoor use	
Transmitter power	14 dBm	
Frequency	Depends on base station instructions	
Volumetric Water Content (VWC)	Range	0.00–0.70 m <sup>3</sup> /m <sup>3</sup> (Mineral Soil), 0.0–1.0 m <sup>3</sup> /m <sup>3</sup> (Soilless media)
	Resolution	0.001 m <sup>3</sup> /m <sup>3</sup> (0.1%)
	Accuracy*	±0.03 m <sup>3</sup> /m <sup>3</sup> typical in mineral soils @ EC < 8 mS/cm ±0.01–0.02 m <sup>3</sup> /m <sup>3</sup> in any porous medium
Apparent dielectric permittivity	Range	1 (air) - 80 (water)
	Resolution	0.01
	Accuracy*	1–40, ±1 (unitless) 41–80, 15% of measurement
Temperature	Range	–40 to 60 °C
	Resolution	0.1 °C
	Accuracy*	±1 °C
Bulk Electrical Conductivity	Range	0–20 mS/cm (bulk)
	Resolution	0.001 mS/cm
	Accuracy**	±5% of measurement (<10 mS/cm)
Data Transmission	1, 2, 5, 10 minutes	
Data Protection	Data encryption	
Power options	1 AA Alkaline battery (Zn/MnO <sub>2</sub> ) / 1 AA Lithium battery (Li/FeS <sub>2</sub> )	
Battery life @20°C / 68°F	Up to 7 years with Alkaline battery / Up to 10 years with Lithium battery	
Operating temperature for Sensor body	–20°C to 55°C/ –4°F to 131°F with Alkaline battery –40°C to 60°C/ –40°F to 140°F with Lithium battery	
Operating humidity	0% to 100%	
Dimensions	35mmØ x 120mm / 1.4"Ø x 4.7" Sensor body 94mm x 24mm x 75mm (3.7" x 0.95" x 2.95") Probe incl. Needles 55mm (2.17") Length of needles	
Weight	320g (11.3oz) w Alkaline battery / 312g (11.0oz) w Lithium battery	
Construction	ASA Plastic (Sensor body)	
Protection class	IP68	
Marking	CE, FCC	
Compatible base stations	Aranet PRO (from sw v1.4)	
Cable length	5m (16.4ft)	
Included	1 AA Alkaline battery, string	

\* Dependent on the media the sensor is calibrated to. A custom calibration can improve the accuracy.

\*\* For >10 mS/cm, please consult Aranet sales representative.



Tlf: 67 150 250 Faks: 67 150 251

Mail: [post@instrumentteam.no](mailto:post@instrumentteam.no)

Web: [www.instrumentteam.no](http://www.instrumentteam.no)