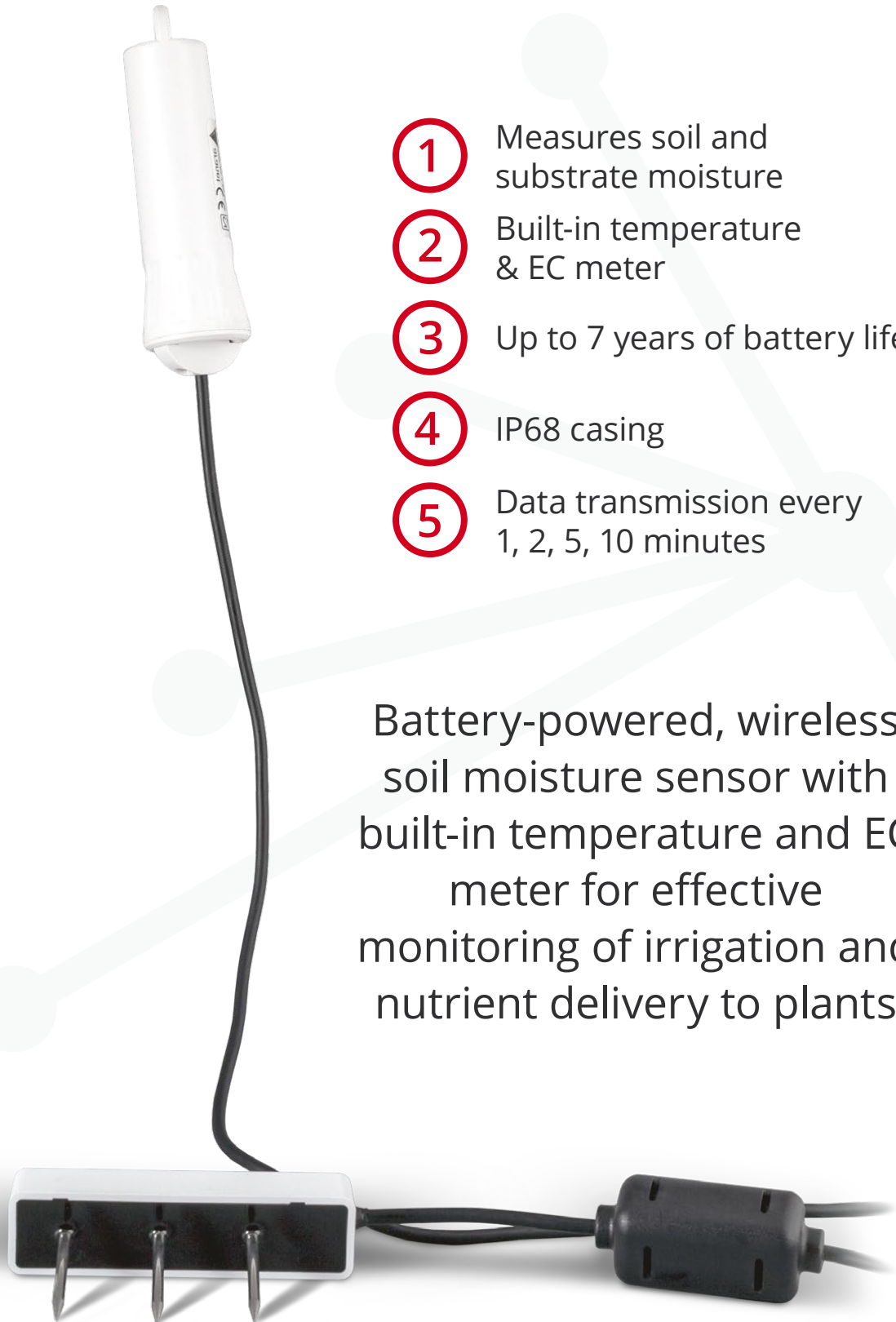


# Aranet Soil VWC, EC and T sensor



- 1 Measures soil and substrate moisture
- 2 Built-in temperature & EC meter
- 3 Up to 7 years of 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

## Aranet Soil VWC, EC and T sensor datasheet

Measurements	Soil Moisture and Electrical Conductivity (EC) and Temperature	
Line of Sight Range	3 km / 1.9 mi	
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)	
Battery life @20 °C / 68 °F	Up to 5 years with Alkaline battery / Up to 7 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	35 mmØ x 120 mm / 1.4"Ø x 4.7" Sensor body 94 mm x 24 mm x 75 mm (3.7" x 0.95" x 2.95") Probe incl. needles 55 mm (2.17") Length of needles	
Weight	320 g (11.3 oz) w Alkaline battery / 312 g (11.0 oz) w Lithium battery	
Construction	ASA Plastic (Sensor body)	
Protection class	IP68	
Marking	CE, FCC	
Compatible base stations	Aranet PRO (from v1.4.0)	
Cable length	5 m (16.4 ft)	
Included	1 AA Alkaline battery, string	
Part number	TDSPHE02 (EU), TDSPHEU2 (NA), TDSPHER2 (RU)	

\* 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.