



Sensor specifications

Substrate sensor TEROS 12

Measures the volumetric water content (VWC), bulk electrical conductivity (ECb), and temperature of many types of growing media, primarily in greenhouse applications. Using the measured VWC and ECb it calculates the water electrical conductivity (ECw).

Specifications

Operating conditions	Temperature	-40 to 60°C
Structural	Dimensions (L x d)	136 x 25 mm
	Weight	30g
	Material	Plastic (PET), UL94HB approved
	Mounting options	The spikes of the sensor should be inserted in the substrate



Measurement specifications

Volumetric Water Content (VWC)	Range	0.0 to 0.70 m ³ /m ³ (Mineral soil calibration) 0.0 to 1.0 m ³ /m ³ (Soilless media calibration) Apparent dielectric permittivity (ε _a): 1 to 80
	Accuracy	±0.03 m ³ /m ³ (Generic calibration) ±0.01 – 0.02 m ³ /m ³ (Medium specific calibration)
	Resolution	0.001 m ³ /m ³
Temperature	Range	-40 to 60°C
	Accuracy	±0.5°C (from -40 to 0°C) ±0.3°C (from 0 to 60°C)
	Resolution	0.1°C
Bulk Electrical Conductivity (ECb)	Range	0 to 20 dS/m
	Accuracy	±(5% + 0.01 μS/cm) from 0 to 10 μS/cm ±8% from 10 to 20 μS/cm
	Resolution	0.001 dS/m





30MHz Connect

Every 30MHz sensor is powered by the Connect. It acts like the middleman between the sensor and the platform. This casing protects the electronics from greenhouse environment like moisture, dirt, and changing climate conditions.

The connect comes with a universal mounting bracket.



Specifications

Operating conditions	-10 to 55 °C (10 to 45°C while charging)
Dimensions (L x W x H)	Case: 183 x 113 x 107 mm
	Mounting bracket: 165 x 210 x 205 mm
Range	Indoors from 200 to 400 m (depending on Greenhouse layout)
Power source	Rechargeable battery (duration dependent on the sensor connected)
Protection	Water and dust according to IP67

