

# Soil Moisture Sensor

Featuring LoRaWAN®

## EM500-SMT



EM500-SMT is designed for measuring soil moisture in harsh environments and transmitting data using LoRaWAN® technology. With this low power consumption technology, EM500-SMT can work up to 10 years with 19000 mAh battery. Combining with Milesight LoRaWAN® gateway and Milesight IoT Cloud solution, users can manage all sensor data remotely and visually.

EM500-SMT is widely used for outdoor applications like smart agriculture, smart horticulture, etc.

### ◆ Features

- High precision for multiple kinds of soil
- Ultra-wide-distance transmission up to line of sight of 10km
- IP67 waterproof enclosure for harsh environment applications
- Built-in 19000 mAh replaceable battery and work for 10 years without replacement
- Equipped with NFC for easy configuration
- Compliant with standard LoRaWAN® gateways and network servers
- Quick and easy management with Milesight IoT Cloud solution

### ◆ Applications

- Irrigation Control
- Greenhouse control
- Smart agriculture
- Smart horticulture
- Golf course maintenance

## ◆ Specifications

Wireless Transmission	
Technology	LoRaWAN®
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
Tx Power	16dBm(868)/20dBm(915)/19dBm(470)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A
Measurement	
Range	0% to 100% RH
Accuracy	±2%
Resolution	0.01%
Operation	
Power On & Off	NFC, Power Button (Internal)
Configuration	Mobile App (via NFC) or PC Software(via USB Type-C)
Physical Characteristics	
Cable Length	5 m
Power Supply	19000 mAh Li-SOCL <sub>2</sub> battery (ER34615)
Battery Life*	10 years (10 min interval)
Operating Temperature	-30°C to +60°C
Relative Humidity	0% to 100% (non-condensing)
Ingress Protection	IP67
Dimension	Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) Soil Sensor: 89 × 18 × 7 mm (3.5 × 0.7 × 0.3 in) (Probe length: 50mm/1.97 in)
Installation	Pole, wall or DIN Rail Mounting
Approvals	
Regulatory	CE, FCC, RoHS

\* Tested under laboratory conditions and for guideline purposes only.