

EM500-SMTC

Soil Conductivity Sensor



EM500-SMTC is designed for measuring soil moisture, temperature and electrical conductivity in harsh environments and transmitting data using LoRaWAN® technology. With this low power consumption technology, EM500-SMTC 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-SMTC is widely used for outdoor applications like smart agriculture, smart horticulture, etc.

Features

- > High precision for multiple kinds of soil
- Corrosion resistance and tough probe
- Ultra-wide-distance transmission up to line of sight of 10km
- ➤ IP66 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 | -147dBm @300bps |
| Mode | OTAA/ABP Class A |
| Measurement | |
| Moisture | |
| Range | 0% ~ 100% RH |
| Accuracy | ±2%(0~50%), ±3%(50%~100%) |
| Resolution | 0.5% |
| Temperature | |
| Range | -40°C ~ 80°C |
| Accuracy | ±0.5°C |
| Resolution | 0.1°C |
| Conductivity | |
| Range | 0~20000 μs/cm |
| Accuracy | ±3%(0~10000 μs/cm), ±5%(10000~20000 μs/cm) |
| Resolution | 1 μs/cm |
| Operation | |
| Power On & Off | NFC, power button (Internal) |
| Configuration | Mobile APP(via NFC) or PC software(via USB Type-C) |
| Physical Characteristics | |
| Cable Length | 2 m |
| Power Supply | 19000 mAh Li-SOCL ₂ battery (ER34615) |
| Battery Life* | 4 years (10 min interval, SF12) |
| | >10 years (10 min interval, SF7) |
| Operating Temperature | -30°C to +70°C |
| Relative Humidity | 0% to 100% (non-condensing) |
| Ingress Protection | IP66 (Transceiver)/IP68(Soil Sensor) |
| | Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) |
| Dimension | Soil Sensor: 88 × 68 × 26 mm (3.5 × 2.7 × 1.0 in) |
| | (Probe length: 50mm/1.97 in) |

Installation Pole, wall or DIN Rail Mounting

Fax: +86-0592-5023065

Email: iot.sales@milesight.com



^{*} Tested under laboratory conditions and for guideline purposes only.