

Submersible Water Level Sensor

Featuring LoRaWAN®

EM500-SWL



EM500-SWL is designed for measuring liquid level in harsh environments and transmitting data using LoRaWAN® technology. With this low power consumption technology, EM500-SWL 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-SWL is widely used for applications like tank level monitoring, river level monitoring, etc.

◆ Features

- Stainless probe with corrosion resistance
- 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

- Water tank level monitoring
- Water resource level monitoring
- ISO tank level monitoring
- Waste water tank monitoring
- Oil store tank level monitoring

◆ Specifications

| Wireless Transmission | |
|---------------------------------|--|
| Technology | LoRaWAN® |
| Frequency | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 |
| Tx Power | 16dBm(868)/20dBm(915)/19dBm(470) |
| Sensitivity | -137dBm @300bps |
| Mode | OTAA/ABP Class A |
| Measurement | |
| Pressure Type | Gauge Pressure |
| Range | 0 ~ 3m/5m/10m (H ₂ O) (Customizable up to 200 m and for other liquids) |
| Accuracy | ± 0.5% FS |
| Resolution | 0.01 m |
| Long-term Stability | ≤ ± 0.3% FS/year |
| Operation | |
| Power On & Off | NFC, Power Button (Internal) |
| Configuration | Mobile App(via NFC) or PC software(via USB Type-C) |
| Physical Characteristics | |
| Cable Length | At least 1-1.5m longer than measuring range |
| Power Supply | 19000 mAh Li-SOCL ₂ battery (ER34615) |
| Battery Life* | 10 years (10 min interval) |
| Operating Temperature | -30°C to +70°C (Transceiver)/-10°C to +70°C (Level Sensor) |
| Relative Humidity | 0% to 100% (non-condensing) |
| Ingress Protection | IP67 (Transceiver)/IP68(Level Sensor) |
| Dimension | Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) Level Sensor: 140 × φ28 mm (5.5 × φ1.1 in) |
| Installation | Pole, wall or DIN Rail Mounting |
| Approvals | |
| Regulatory | CE, FCC, RoHS |

* Tested under laboratory conditions and for guideline purposes only.