

Submersible Water Level Sensor

Featuring LoRaWAN®

EM500-SWL

Milesight



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
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* Tested under laboratory conditions and for guideline purposes only.