

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 Development Platform 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
- Store historical records locally and support retransmission
- Equipped with NFC for easy configuration
- Compliant with standard LoRaWAN® gateways and network servers
- Quick and easy management with Milesight IoT Cloud and Milesight Development Platform solution

◆ Applications

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

◆ Specifications

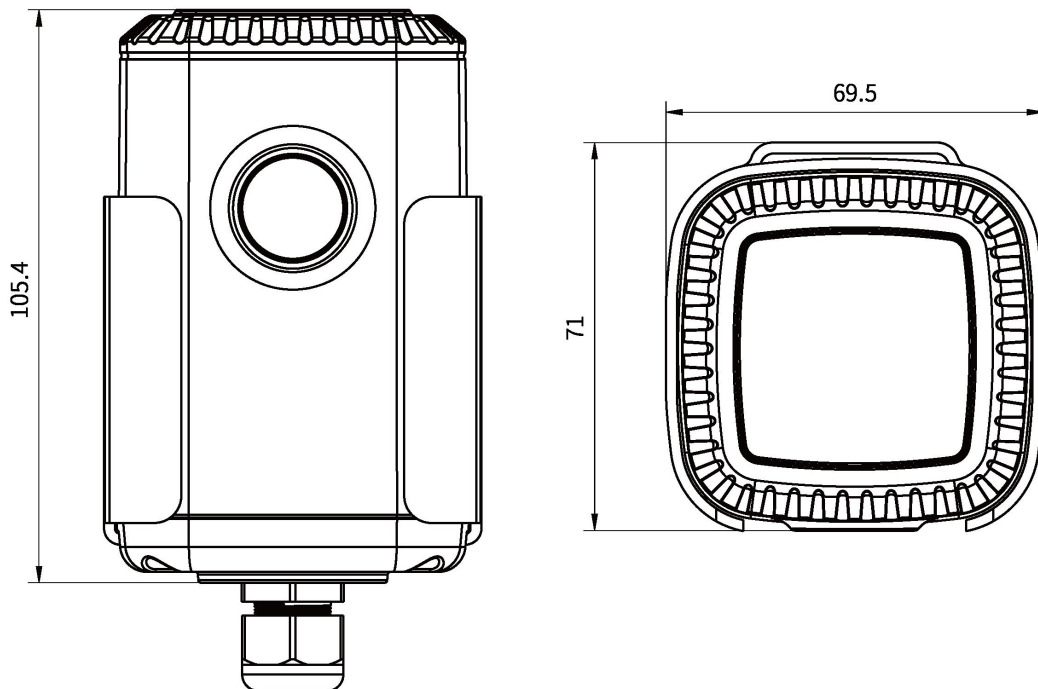
| Wireless Transmission | |
|--------------------------------------|------------------------------------------------------------------------------------------|
| Technology | LoRaWAN® |
| Antenna | Internal Antenna |
| Frequency | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 |
| Tx Power | 16dBm(868)/20dBm(915)/19dBm(470) |
| Sensitivity | -137dBm @300bps |
| Mode | OTAA/ABP Class A |
| Measurement | |
| Pressure Type | Vented Gauge |
| Range | 0 ~ 3m/5m/10m (Customizable up to 200 m) |
| Supported Liquid | H ₂ O (Customizable for other liquids) |
| Accuracy | ± 0.5% FS |
| Resolution | 0.01 m |
| Long-term Stability | ≤ ± 0.3% FS/year |
| Others | |
| LED | 1 × LED Indicator (Internal) |
| Button | 1 × Power/Reset Button (Internal) |
| USB | 1 × USB Type-C(Internal) for Configuration and Console |
| Operation | |
| Power On & Off | NFC, Power Button (Internal) |
| Configuration | Mobile App(via NFC), PC software(via USB Type-C), Downlink |
| Advanced Feature | Data Storage (1000 entries), Data Retransmission, Data Retrievalability, Threshold Alarm |
| Physical Characteristics | |
| Cable Length | At least 1-1.5m longer than measuring range |
| Power Supply | 1 × 19000 mAh Li-SOCL ₂ battery (ER34615) |
| Battery Life*(10 min interval, 25°C) | 10 years(SF7&SF10, EU868) 10 years (SF7, US915) Around 9 years (SF10, US915) |
| Operating Temperature | Transceiver: -30°C~70°C Level Sensor: -20°C~70°C |
| Relative Humidity | 0% to 100% (non-condensing) |
| Ingress Protection | Transceiver: IP67 Level Sensor: IP68 |

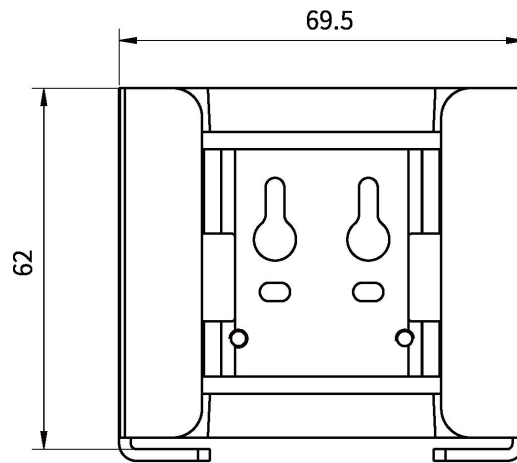
| | |
|------------------|------------------------------------------------------------------------------------------------------------------|
| Housing&Color | Transceiver: ABS + PC, Grey Level Sensor: Stainless Steel 304, Silver |
| Weight | Transceiver: 328g (With Battery and Mounting Bracket) Level Sensor: Differs as cable length |
| Dimension | Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) Level Sensor: 130 × ϕ 27 mm (5.1 × ϕ 1.1 in) |
| Installation | Pole, Wall or DIN Rail Mounting |
| Approvals | |
| Regulatory | CE, FCC, ICASA, ISED, Telec |
| Environmental | RoHS |

* Tested under laboratory conditions and for guideline purposes only.

◆ Dimensions(mm)

Transceiver:





Level Sensor:

