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 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

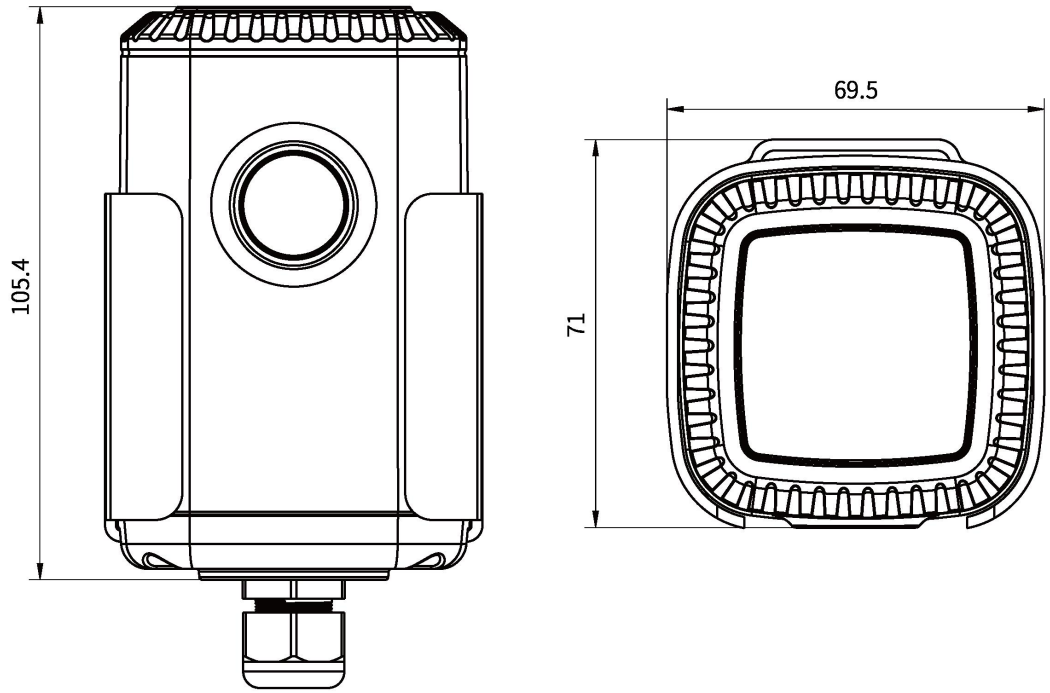
Wireless Transmission	
Technology	LoRaWAN®
Antenna	Internal Antenna
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16dBm(868)/20dBm(915)/19dBm(470)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A
Measurement	
Pressure Type	Vented Gauge
Range	0 ~ 3m/5m/10m (Customizable up to 200 m)
Supported Liquid	H_2O (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 Retrievability, 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

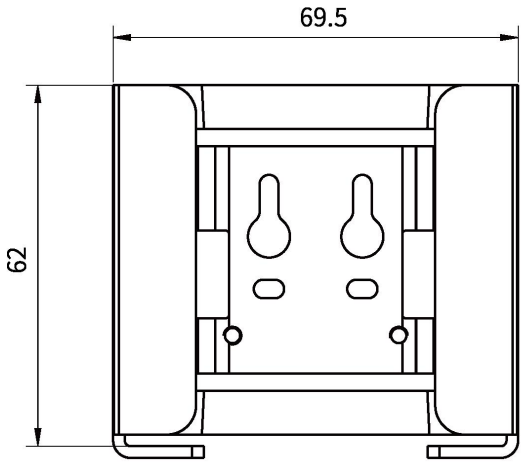
Housing&Color	Transceiver: ABS + PC, Grey Level Sensor: Stainless Steel 304, Silver
Weight	Transceiver: 328g (With Battery and Mounting Bracket) Level Sensor: Differs as cable length
Dimension	Transceiver: 105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in) Level Sensor: 130 × ϕ27 mm (5.1 × ϕ1.1 in)
Installation	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:

