

EM500-PP

Pipe Pressure Sensor



EM500-PP is designed for measuring pipe pressure in harsh environments and transmitting data using LoRaWAN® technology. With this low power consumption technology, EM500-PP 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-PP is widely used for outdoor applications like smart agriculture, urban lighting, etc.

◆ Features

- High precision and corrosion resistance
- 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

- Pipes and tanks pressure monitoring
- Oil & Gas monitoring
- Water leak detection
- Pump monitoring

◆ Specifications

Wireless Transmission

Technology	LoRaWAN®
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
Tx Power	16dBm(868)/20dBm(915)/19dBm(470)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A

Measurement

Pressure Type	Gauge Pressure
Range	0 - 1600 kPa (16 Bar)
Accuracy	± 0.5% FS
Resolution	1 kPa (0.01 Bar)
Overload	150% FS
Long-term Stability	± 0.3% FS/year
Process Connection	G 1/4" Female

Operation

Power On & Off	NFC, power button (Internal)
Configuration	Mobile APP(via NFC) or PC software(via USB Type-C)

Physical Characteristics

Cable Length	1.5 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)/IP65(Pressure Sensor)
Dimension	105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in)
Installation	Pole, wall or DIN Rail Mounting

* Tested under laboratory conditions and for guideline purposes only.





LoRaWAN® Sensor/Controller
LoRaWAN® Gateway
Industrial 4G/5G Router

LoRaWAN® CERTIFIED 5G-AIoT

Industrial Cellular Router



LoRaWAN® Sensor



LoRaWAN® Gateway



Compact Controller



LoRaWAN® Controller



Solenoid Valve Controller



Picture	Model	Measuring Range	Descriptions
	EM500-UDL-915M-W050	0.3 ~ 5m	Ultrasonic Distance/Level Sensor 19000 mAh Li-SOCl2 battery Resolution: 1 mm NFC enabled IP66 rated
	EM500-UDL-915M-W100	0.5 ~ 10m	
	EM500-PT100-915M-T50	-200~50°C	Temperature Sensor - PT100 19000 mAh Li-SOCl2 battery NFC enabled IP66 (IP67 as required) The default sensor head type is straight tube, other types include armored, SMT, threaded, and magnet. *Customizable cable length, default 1.5m *Customizable temperature (-200~800 °C)
	EM500-PT100-915M-T500	-50~500°C	
	EM500-PT100-915M-T800	-50~800°C	
	EM500-SWL-915M-L003	3m	Submersible Water Level Sensor 19000 mAh Li-SOCl2 battery NFC enabled IP66 rated Customizable measuring range up to 200m, cable should be 1-1.5m longer than measuring range.
	EM500-SWL-915M-L005	5m	
	EM500-SWL-915M-L010	10m	
	EM500-LGT-915M-RF	0 ~ 100000 lux	Light Sensor 19000 mAh Li-SOCl2 battery NFC enabled IP66 rated
	EM500-SMT-915M-ECS	Moisture 0% ~ 100% RH	Soil Sensor 19000 mAh Li-SOCl2 battery NFC enabled IP66 rated
	EM500-SMTC-915M-MEC20	Temperature -40°C ~ 80°C Moisture 0% ~ 100% RH Electrical Conductivity 0 ~ 20000 µS/cm	
	EM500-CO2-915M	CO2 400 ~ 8000 ppm Temperature -40°C ~ 70°C Humidity 0% ~ 100% RH Barometric Pressure 300 ~ 1100 hPa	CO2 Sensor (H in 1) 19000 mAh Li-SOCl2 battery NFC enabled IP66 rated Built-in temperature, humidity and barometric pressure sensors.
	EM500-PP-915M-G1/4F-4780	0 ~ 1.6 MPa	Pipe Pressure Sensor 19000 mAh Li-SOCl2 battery NFC enabled IP66 rated

Remark:

~915M~, ~868M~, ~470M~ in the model refers to different LoRaWAN Frequency in option for different countries/regions. (e.g.)

~915M~: EIR2020/AS23/HAU12/US925

~868M~: RU864/IN864/UK868

~470M~: CN470

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