Industrial Temperature Sensor

Featuring LoRaWAN®

EM500-PT100



EM500-PT100 resistance temperature sensor is designed for measuring wide range of temperature in harsh environments and transmitting data using LoRaWAN® technology. With this low power consumption technology, EM500-PT100 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-PT100 is widely used for temperature monitoring applications like industrial machines, ovens, pipes, etc.

◆ Features

- Corrosion resistance cable and multiple probe options
- 3 wire connection for high precision
- 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

- Liquid or gas monitoring
- Industrial machine monitoring
- Oven and cooking monitoring
- Chimney and boiler temperature monitoring
- Medical or laboratory use

◆ Specifications

Wireless Transmission	
Technology	LoRaWAN®
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16dBm(868MHz)/20dBm(915MHz)/19dBm(470MHz)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A
Measurement	
Connection Type	3-wire connection
Range	T050: -200 °C~50 °C T200: -50 °C~200 °C T500: -50 °C~500 °C T800: -50 °C~800 °C (Customizable from -200 °C~ 800 °C)
Accuracy	±0.5°C
Resolution	0.1°C
Operation	
Power On & Off	NFC, power button (Internal)
Configuration	Mobile App (via NFC) or PC software(via USB Type-C)
Advanced Feature	Data Storage, Data Retransmission, Data Retrievability, Threshold Alarm, Change Alarm, Milesight D2D Controller
Transceiver Physical Characteristics	
Power Supply	1 × 19000 mAh ER34615 Li-$SOCL_2$ Battery
Battery Life*	10 years (10 min interval, 25 °C)
Operating Temperature	-30°C~70°C
Relative Humidity	0% to 100% (non-condensing)
Ingress Protection	IP67
Dimension	105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in)
Installation	Pole, wall or DIN Rail Mounting
Sensor Physical Characteristics	
Probe Type	Straight tube (Customizable), 304 Stainless Steel
Cable Length	1.5 m (Customizable)
Cable Material	Teflon
Cable Operating	-200 °C~290 °C

Temperature	
Approvals	
Regulatory	CE, FCC, ISED, ICASA, Telec
Environmental	RoHS

* Tested under laboratory conditions and for guideline purposes only.