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
- 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 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®, Milesight D2D
Antenna	Internal Antenna
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)
Resolution	0.1°C
Others	
LED	1 × LED Indicator (Internal)
Button	1 × Power/Reset Button (Internal)
USB	1 × USB Type-C(Internal) for Configuration and Console
Software	
Power On & Off	NFC, power button (Internal)
Configuration	Mobile App (via NFC), PC software(via USB Type-C), Downlink
Advanced Feature	Data Storage (1,000 entries), 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
Housing&Color	ABS + PC, Grey
Weight	362.7g (With battery, mounting bracket and probe)
Dimension	105.4 × 71 × 69.5 mm (4.1 × 2.8 × 2.7 in)

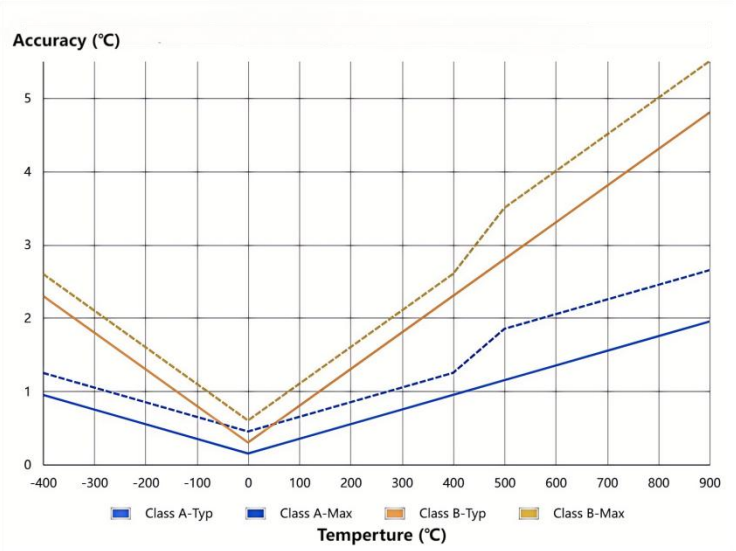
Installation	Pole, Wall or DIN Rail Mounting
Sensor Physical Characteristics	
Probe Type	Straight tube (Customizable)
Cable Length	1.5 m (Customizable)
Installation	Contact
Approvals	
Regulatory	CE, FCC, ISED, ICASA, Telec
Environmental	RoHS

* Tested under laboratory conditions and for guideline purposes only.

◆ Ordering Information

Model	PN	Sensor Description				
		Range	Accuracy Class	Accuracy	Probe	Cable
EM500-PT100	T050	-200 °C~50 °C	B	Typ.[Note]: ± 0.5°C (-40°C~40°C), ± 1°C (-140°C~50°C), ±1.5°C (-200 °C~-140 °C)	304 Stainless Steel, Φ4*30 mm, IP30	Teflon, -200 °C~290 °C
	T200	-50 °C~200 °C	A	Typ.[Note]: ±0.6°C (-50 °C~200°C)	304 Stainless Steel, Φ4*30 mm, IP67	Teflon, -200 °C~290 °C
	T500	-50 °C~500 °C	A	Typ.[Note]: ± 0.5°C (-50°C~170°C), ± 1.2°C (170°C~-500°C)	304 Stainless Steel, Φ4*30 mm, IP30	Fiberglass, -50 °C~500 °C
	T800	-50 °C~800 °C	A	Typ.[Note]: ±0.5°C (-50°C~170°C) ±1°C (170°C~420°C) ±2°C (420°C~800°C)	316 Stainless Steel, Φ5*50 mm, IP30	Fiberglass, -50 °C~800 °C

Note: Accuracy corresponding to the temperature.



◆ Dimensions(mm)

