

# EM500 series

## Environment Monitoring Sensors



### ► Introduction

EM500-PT100 resistance temperature sensor is a long range wireless sensor compatible with standard LoRaWAN protocol. Combining with the advanced LoRa technology and 19000mAh battery make it a low power consumption product with years-long use life. It offers excellent accuracy over a wide temperature range from -200°C to 800°C to suit most applications.

## ► Features

- Large measurement range of multiple temperature detection applications
- Up to 11km communication range
- Standard LoRaWAN protocol
- Easy Configuration via NFC
- Ursalink Cloud and third-party platform compliant
- Low power consumption with 19000 mAh replaceable battery

## ► Applications

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

## ► Specifications

LoRaWAN	
Frequency	EU433/CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923
Tx Power	20dBm
Sensitivity	-147dBm @300bps
Mode	OTAA/ABP Class A
Antenna	Integrated ceramic antenna
Temperature Measurement	
Range	EM500-PT100-T50: -200 °C to +50 °C EM500-PT100-T200: -50 °C to +200 °C EM500-PT100-T500: -50 °C to +500 °C EM500-PT100-T800: -50 °C to +800 °C (Customizable from -200 °C to +800 °C)
Accuracy	±0.5°C
RTD Type	3-wire connection
Physical Characteristics	
Probe Length	1.5m (Customizable)
Probe Type	Straight tube (Customizable)
Power Supply	19000 mAh Li-SOCL <sub>2</sub> battery

Battery Life	6 years (10 min interval, SF12) >10 years (10 min interval, SF7)
Operating Temperature	-20°C to +70°C
Ingress Protection	IP66 (IP67 as required)
Dimension	105.4 × 71 × 69.5 mm (Probe and cable are not included)
Mounting	Pole, wall, DIN rail
<b>Operation</b>	
Power On & Off	NFC, power button (Internal)
Configuration	Mobile APP or PC software via NFC: Configuration and Firmware Upgrade

## ► Order Information

Model	Measuring Range
EM500-PT100-T50	-200 °C to +50 °C
EM500-PT100-T200	-50 °C to +200 °C
EM500-PT100-T500	-50 °C to +500 °C, non-waterproof
EM500-PT100-T800	-50 °C to +800 °C, non-waterproof

## ► Probe Type



**Straight Tube (Default)**  
Apply for plug-in applications



**Pressure Ring**  
Apply for vibration equipment or pipe



**Magnet**  
Apply for surface of object