

PT1000 Temperature transceiver



The **PT1000 Temperature Sensor** has to been interfaced with PT1000 probes to collect and transmit temperatures for all types of Smart building or industrial applications.

APPLICATIONS

- Industrial processes: monitoring of equipment temperatures.
- Maintenance of building equipment (residential, tertiary): monitoring of the hot water network (DHW), supervision of heating installations.
- Indoor or outdoor environment.

BENEFITS & FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- 1x PT1000 3 wires input
- 1x 9-24 Volts external power supply input
- > 8 years of autonomy
- IP55 enclosure

CERTIFICATION

- RED, RoHS



The PT1000 Temperature transceiver reports temperature measurements from a 3-wire PT1000 probe.

The PT1000 probe must have the following characteristics:

- Class B or A or 1/3B or 1/5B or 1/10B
- Maximum cable length: 5 metres
- cable cross section 0.25mm²
- measuring range from -50°C to +240°C
- accuracy without calibration: $\pm 0.15^{\circ}\text{C}$ in the range -40°C to +200°C
- Resolution: 0.03°C

Installation and commissioning are quick and easy.

The sensor is equipped with:

- a switch (ILS) used for activation or deactivation,
- Buzzer to monitor the configuration and pairing to the network.

Each sensor is identified by a QR code on the label and an NFC tag inside the housing.

Powered by a 3.6V/3600mAh battery, the autonomy of the sensor is at least 8 years, with 1 transmission every hour.




By default, the sensor is configured for standard mode reporting of the temperature every 2 hours.

THE LARGEST IOT PRODUCTS RANGE FOR YOUR PROJECT

WATTECO is a European leader in the design and manufacture of smart IoT devices to suit all remote reading and data collection solutions.

WATTECO is a LoRa Alliance® member.

TECHNICAL DATA

RADIOFREQUENCY	
Frequency	EU: 863-870 MHz
Transmit power	14 dBm
Sensitivity	-140 dBm
FIRMWARE	
Protocol	LoRaWAN®, Class A
Measurement periodicity	From 10 minutes to 24 hours (configurable)
Transmission interval	Immediate following measurement or batch at 30min to 48hrs (configurable)
Data compression	By differential coding (configurable)
Activation method	Activation by Personalization (ABP) or Over-The-Air Activation (OTAA)
Data encryption	AES128
TEMPERATURE MEASUREMENT	
Range	-40°C to +200°C
Accuracy	±0.15°C with 5m cable
Resolution (in nominal range)	0.03°C
ALERTS	
Temperature	Configurable thresholds in the measurement range in 1°C steps
POWER SUPPLY	
Voltage	3.6V / 3600mAh lithium battery (can be replaced after removing the cover) Transmitted battery voltage level (configurable in 0.1V steps)
Autonomy (in a range of +10°C to +25°C)	At least 8 years: batch mode with 1 measurement per hour and 1 transmission every 6 hours
USER INTERFACE	
ILS + LED switch	Monitoring of network pairing & sensor status, visible when sensor is closed
Buzzer	Sound emitted on the configuration and pairing phases
ENCLOSURE	
Size / Weight – IP rating	92 x 92 x 56mm / 200g - IP55
Material	ABS UL94-V0HB
Fastenings	2 screws and 2 dowels (supplied)
ENVIRONMENT	
Operation	-20°C / +50°C
Storage	0°C / +30°C; +0%rH / +60%rH
STANDARDS & REGULATIONS	
Radio Equipment Directive 2014/53/EU, RoHS	  

PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-126	LoRaWAN® PT1000 TRANSCIVER