

Remote Temperature – 2x Probes



The **Remote Temperature – 2x Probes** is dedicated to temperature measurements in buildings, and transmits data over a public or private LoRaWAN® radio network.

APPLICATIONS

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

BENEFITS & FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- 2 remote temperature probes; IPx7 waterproof probe; stainless steel tip for better reactivity; diameter less than 6mm, blue and red colour markings.
- Waterproof for protected indoor or outdoor environments
- 12 years of autonomy.

CERTIFICATION

- RED, RoHS



Sensors delivered without WATTECO marking

The **Remote Temperature – 2x Probes** sensor allows remote temperature reading at two points in a boiler room, DHW production, cooling tower or cold room installation. The sensors can be placed against the pipes (and insulated with insulating tape) or inserted in the immersion sleeve.

Data transmission over the public or private LoRaWAN® network is done periodically or immediately in case of alert when the minimum or maximum temperature threshold is exceeded.

Installation and commissioning are quick and easy.

The sensor is equipped with:

- a switch (ILS) used for activation or deactivation,
- LEDs 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 used is up to 12 years, with 1 transmission every 2 hours.

By default, the sensor is configured for batch mode reporting of the temperature of probe 1 and probe 2 every hour with a measurement every 10 minutes.




The battery voltage level is monitored and remotely updated every 7 days.

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 +90°C (temporarily +110°C) |
| Accuracy | ±0.2°C in the range from +6°C to +97°C ±0.5°C in the range from -15°C to +5°C ± 1°C in the extended range from -30°C to -16°C Otherwise ± 1.5°C |
| Resolution (in nominal range) | 0.1°C |
| ALERTS | |
| Temperature | Configurable thresholds in the measurement range in 0.1°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) | Up to 12 years: batch mode with 1 transmission every 2 hours |
| USER INTERFACE | |
| ILS + LED switch | Monitoring of network pairing & sensor status Visible when sensor is closed |
| Temperature sensors | To be installed in a thermopocket or against a pipe under insulating cover |
| ENCLOSURE | |
| Size / Weight – IP rating | 92 x 92 x 56mm / 200g - IP55 (IPx7 for probes) |
| 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 |
|-----------|--------------------------------------|
| 50-70-163 | LoRaWAN® REMOTE TEMPERATURE 2 PROBES |