

LoRaWAN™ REMOTE TEMPERATURE Sensor 2 PROBES



The Remote Temperature Sensor 2 Probes is dedicated to temperature measurement in buildings, and transmits the data on a public or private radio network LoRaWAN™.

APPLICATIONS

- Industrial processes: supervision of equipment temperatures, water, air and gas piping.
- 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
- 2 Remote temperature sensors (NTC)
- Stainless steel contact probe tip diameter 6mm.
- Measurement of instantaneous temperatures
- Min/max/average temperature measurement over 24 hours (DJU)
- Differential data compression
- >10 years of autonomy (data compression mode)
- IP55

CERTIFICATION

- CE, RoHS

The remote temperature sensor periodically measures and transmits the temperature as well as any alarms for exceeding pre-configured temperature thresholds via a public or private LoRaWAN™ communication network.

It is dedicated to the supervision of hot spots (industrial equipment, multi-fluid piping, ...), cold spots (temperature-controlled rooms, cooling towers, ...) as well as the temperature of buildings (industrial and tertiary). In the boiler room, two-bridge temperature monitoring (flow/return) on the domestic hot water (DHW) network. To be placed under the thermal insulating sheath or in the immersion sleeve.

The sensor is also capable of transmitting temperatures (average, minimum, maximum). measured over a 24-hour period. This makes it possible to calculate Unified Degree Days (UDD), an indicator for monitoring a building's energy consumption.



Installation and commissioning is quick and easy.

- The sensor is equipped with
 - an NFC identification tag (product number, serial number, production batch)
 - a magnetic switch for switching on and off

The measured temperature data can be stored in local memory and compressed before being transmitted over a LoRaWAN™ network. This technique considerably reduces the amount of data emitted while preserving the autonomy of the sensor.

When powered by a 3.6V/3.6Ah battery, the autonomy of the sensor is >10 years (data compression mode) for a configuration performing one measurement per hour and one transmission per day.

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nke Watteco is a leading European designer and manufacturer of intelligent radio frequency sensors and actuators as well as multi-protocol remote sensing and data collection solutions.

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TECHNICAL SPECIFICATIONS

RADIOFRÉQUENCE	
Frequency (MHz)	863-870
Transmitted power (dBm)	+14
Sensitivity (dBm)	-140
FIRMWARE CONFIGURATION - 2 probes	
Protocol	LoRaWAN™, Class A
Periodicity of transmission	10mn, 1h, 12h or specified by the network
Method of activation	Activation by Personalization (ABP) Over-The-Air Activation (OTAA)
Data Encryption	AES128
Alarm detection	Yes or no
Data compression	yes (differential coding) or no
Instantaneous measurements	On / Off
Unified Degree Days (UDD) Measurement	On / Off
Alarm threshold configuration	Min / Max temperature: - 40°C to +90°C in steps of 1°C Battery voltage: 0.1V to 3.6V in steps of 0.1V
TEMPERATURE MEASUREMENT - 2 probes	
Range (°C)	-40 / +90
Accuracy (°C)	+/- 1°C in the range [-30°C;+60°C].
Resolution (°C)	0.2°C
POWER SUPPLY	
Voltage	3,6V / 3600mAh - removable lithium battery on stand
Autonomy in a range of +10°C to +25°C	>10 years: Compressed data / 1 measurement per hour / 1 transmission per day 9 years: Uncompressed data / 1 measurement per hour / 1 transmission per day
INTERFACE	
NFC Tag	Product number, serial number, batch number
Buzzer	Configuration and association on the network
magnetic switch	ON/OFF
ALARMS	
ON/OFF	Instantaneous transmission
Battery voltage	Transmission according to data frame periodicity
Min. and max. temperature	Instantaneous transmission
BOITIER	
Dimension (mm)	84 x 82 x 55
IP Class	IP55
ENVIRONMENT	
Operating temperature (°C)	-20 / +60
Storage: Temperature (°C)	-10 / +30
Humidity (% rH)	<75%rH
STANDARDS & REGULATIONS	
EN, 61000-4-2 EN 300-220-1 V2-4-1, EN 301 489 V1-6-1 CE, RoHS	



PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-139	LoRaWAN™ REMOTE TEMPERATURE SENSOR x 2 REMOTE NTC sensor on 5m cable.