AMBIENT TEMPERATURE SENSOR

LoRaWAN

The sensor measures the ambient temperature in buildings, flats, houses, etc.
The sensor is equipped with a detection system that detects the removal of its wall base, and an alert is sent immediately to remove any doubt about the temperature measurement. The data is transmitted via a public or private LoRaWAN® radio frequency network.

APPLICATIONS

- Supervision of heating, ventilation and air conditioning installations.
- Energy optimisation of buildings (residential, tertiary).

BENEFITS & FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- 10 years of autonomy
- Pull-out detection
- Temperature measurement
    - Range: +0°C to +55°C
    - Accuracy: +/-0.2°C
    - Resolution: 0.1°C

CERTIFICATION

- RED, RoHS

CONCEPTION ET FABRICATION — MADE IN FRANCE

nke WATTECO

Sensors delivered without WATTECO marking

The sensor measures the indoor ambient temperature. Data transmission over the public or private LoRaWAN® network is done periodically or immediately in case of an alert:
- Minimum or maximum temperature threshold exceeded.
- Sensor unclipped from its wall mounting.

Installation and commissioning are quick and easy. The sensor is equipped with:
- a switch (ILS) for activation and 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.

Measurement data is transmitted individually or aggregated and compressed (batch mode) before being transmitted over the LoRaWAN® network.

Batch mode significantly reduces the amount of data transmitted while preserving the sensor's autonomy.

Powered by a 3.6V/2600mAh battery, the autonomy of the sensor with 85% of the battery capacity used and configured for 1 measurement every 10 minutes and 1 transmission per hour is more than 8 years in SF12 and 10 years in SF9.

The battery voltage level can be regularly monitored remotely.

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.

AMBIENT TEMPERATURE SENSOR

TECHNICAL DATA

RADIOFREQUENCY	
Frequency	EU: 863-870 MHz
Transmit power	14 dBm
Sensitivity	-140 dBm
FIRMWARE	
Protocol	LoRaWAN®, Class A
Measurement periodicity	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
ALARMS	
Temperature	Minimum or maximum thresholds configurable from 0°C to 50°C in steps of 0.1°C
Alert	On sensor removal (unclipping the sensor from its wall mount)
TEMPERATURE MEASUREMENT	
Range	0°C to +55°C
Accuracy	0.2°C between +12°C and +25°C; otherwise ± 0.5°C
Resolution (in nominal range)	0.1°C
POWER SUPPLY	
Voltage	3.6V / 2600mAh lithium battery (can be replaced after removing the cover) Transmitted battery voltage level (configurable in 0.1V steps)
Battery life (in the range of +10°C to +25°C)	Up to 10 years: 1 measurement every 10 minutes - 1 transmission per hour (SF9) Up to 8 years: 1 measurement every 10 minutes - 1 transmission per hour (SF12)
USER INTERFACE	
ILS + LED switch	Network pairing; signalling of sensor states, visible through the openings
BOX	
Size / Weight – IP rating	80 x 80 x 25mm / 95g - IP30
Fastenings	2 screws and 2 dowels (supplied)
ENVIRONMENT	
Operation	0°C / +55°C; +0%rH / +95%rH (non-condensing)
Storage	10°C / +30°C; +0%rH / +60%rH
STANDARDS & REGULATIONS	
Radio Equipment Directive 2014/53/EU, RoHS	CE ⊠ RoHS

PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-167	LoRaWAN® AMBIENT TEMPERATURE SENSOR