WATTECO

Outdoor Temperature Sensor

LoRaWAN®

The **Outdoor Temperature sensor** measures the outside temperature of buildings and the inside temperature of cold rooms, and transmits the data over a public or private LoRaWAN® radio network.

APPLICATIONS

- Supervision of heating, ventilation and air conditioning installations.
- Positive and negative cold temperature monitoring
- Energy optimisation of buildings (residential and commercial).
- Outdoor environment; indoor if difficult conditions (presence of dust, humidity).

BENEFITS & FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- IP67 waterproof on-board probe; stainless steel tip for improved responsiveness
- Measurement of instantaneous temperatures at regular intervals to calculate minimum/maximum and average temperatures
- IP67
- Up to 8 years of autonomy.

CERTIFICATION

- RED, UKCA, RoHS

CONCEPTION ET FABRICATION · MADE IN FRANCE

The **Outdoor Temperature Sensor** can be used to remotely monitor the outdoor temperature in order to provide climate data, to measure the temperature inside a room in a positive or negative cold temperature environment. Data transmission over the public or private LoRaWAN® network is done periodically or immediately in the event of an 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 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 configured by default significantly reduces the amount of data transmitted while preserving the device's autonomy.

Powered by a 3.6V/3.6Ah battery, the sensor has an autonomy of over 8 years with a configuration of 6 measurements at 10 minutes and 1 transmission per hour.

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®.

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TECHNICAL DATA

RADIOFREQUENCY	
Frequency (MHz)	EU: 863-870
Transmit power (dBm)	14
Sensitivity (dBm)	-140

FIRMWARE	
Protocol	LoRaWAN®, Class A
Measurement periodicity	Configurable from 10 minutes
Transmission interval	Immediate following measurement or configurable batch from 30min to 48hrs
Data compression	By differential coding (configurable)
Activation method	ABP or OTAA
Data encryption	AES128

TEMPERATURE MEASUREMENT	
Range	- 25°C to +55°C (temporarily +70°C max)
Accuracy	± 0.2°C in the nominal range (+12°C +25°C); otherwise ± 0.5°C in the extended range (-25°C +12°C) and (+25°C +55°C)
Resolution (in nominal range)	0.1°C
Temperature	Minimum or maximum thresholds configurable in 1°C steps

POWER SUPPLY	
Characteristics	3.6V / 3600mAh lithium battery (not replaceable) Transmitted battery voltage level (configurable in 0.1V steps)
Autonomy (in a range of +10°C to +25°C)	Up to 8 years: 6 measurements at 10 minutes and 1 transmission per hour

USER INTERFACE	
ILS + LED switch	Network pairing; sensor status indication, visible when sensor is closed

ENCLOSURE	
Size / Weight – IP Rating Material	92 x 92 x 56mm / 150g – IP67 ABS UL94 - V0HB
Fastenings	2 screws and 2 dowels (supplied)

ENVIRONMENT	
Operation	- 25°C / +70°C
Storage	10°C / +30°C; +0% rH / + 60% rH

STANDARDS & REGULATIONS
Radio Equipment Directive 2014/53/EU, RoHS

UK CA C E 🗙 RoHS 2011/65/EU

PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-164	LoRaWAN® OUTDOOR TEMPERATURE SENSOR