

Outdoor Temperature Sensor



The **Outdoor Temperature sensor** measures the outdoor temperature and transmits data over a public or private LoRaWAN® radio network.

APPLICATIONS

- Supervision of heating, ventilation and air conditioning installations.
- 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.
- Waterproof for outdoor environment (to be placed in the north and protected from bad weather: direct sun, prevailing wind).
- Up to 8 years of autonomy.

CERTIFICATION

- CE, RoHS



The **outdoor temperature sensor** allows the outdoor temperature to be remotely recorded in order to have data on the climate. Data transmission on the public or private LoRaWAN® network is done periodically or immediately in the event of an alert following the exceeding of minimum or maximum temperature thresholds.

Installation and commissioning is quick and easy. The sensor is equipped with :

- a switch (ILS) to activate and deactivate
- LEDs to monitor the configuration and association on the network.

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

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

Batch mode 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 144 measurements and 24 transmissions per day.




The battery voltage level can be monitored regularly remotely.

THE LARGEST IOT PRODUCTS RANGE FOR YOUR PROJECT

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

nke WATTECO is a LoRa Alliance®.

TECHNICAL CHARACTERISTICS

RADIOFREQUENCY	
Frequency (MHz)	EU: 863-870
Emitted 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 30mn to 48h
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	Lithium battery 3,6V / 3600mAh (battery not changeable) Transmitted battery voltage level (configurable in 0.1V steps)
Autonomy (in a range of +10°C to +25°C)	8 years with SF12, 144 measurements and 24 transmissions per day
USER INTERFACE	
ILS + LED switch	Association on the network; visible sensor status indication closed sensor
CASING	
Dimensions / weight - Sealing	92x92xw,56mm / 150grs - IP67
Material	ABS UL94 - V0HB
Attachment	2 screws and 2 dowels (supplied)
TEMPERATURE	
Operation	- 25°C / +70°C
Storage	10°C / +30°C; +0% rH / + 60% 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
50-70-164	LoRaWAN® OUTDOOR TEMPERATURE SENSOR