

## Indoor Temperature Sensor



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).

### BÉNÉFICES & CARACTÉRISTIQUES

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

### CERTIFICATION

- RoHS, CE.



*Sensors delivered neutral face without marking nke WATTECO*

The sensor measures the ambient temperature indoors. Data transmission on the public or private LoRaWAN® network is done periodically or immediately in case of alert:

- Exceeding of thresholds Minimum or maximum temperature.
- Sensor unclipped from its wall mounting.

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

- a switch (ILS) for activation and deactivation,
- 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.

The 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 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 per 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.

### WE HAVE THE RIGHT SENSORS FOR YOUR NEEDS

nke WATTECO is a leading European designer and manufacturer of intelligent radio frequency sensors and actuators as well as multi-protocol remote reading and data collection solutions. nke WATTECO is a member of the LoRa Alliance®.

## TECHNICAL CHARACTERISTICS

RADIOFREQUENCY		
Frequency	EU: 863-870 MHz	
Emitted power	+14 dBm	
Sensitivity	-140 dBm	
FIRMWARE		
Protocol	LoRaWAN®, Class A	
Measurement periodicity	10mn à 24h (configurable)	
Transmission interval	Immediate following measurement or batch 30mn to 48h (configurable)	
Data compression	by differential coding (configurable)	
Activation method	Activation by Personalization (ABP) ou Over-The-Air Activation (OTAA)	
Data encryption	AES128	
ALARMS		
Temperature	Mini or Maxi thresholds configurable from 0°C to 50°C in steps of 1°C; by default mini = 14°C maxi = 28°C	
Alert	On removal of the sensor (unclipping the sensor from its wall mount)	
TEMPERATURE MEASUREMENT		
Range	+0°C until +55°C	
Accuracy	± 0,2°C between +12°C et +25°C; otherwise ± 0,5°C	
Resolution (in nominal range)	0,1°C	
SUPPLY		
Voltage	Lithium battery 3,6V / 2600mAh on holder (battery can be changed after removing the cover) Battery voltage level transmitted (configurable) in 0.1V steps	
Battery life (in the range of +10°C to +25°C) with 85% of the battery capacity used	10 years: 1 measurement per 10 minutes - 1 transmission per hour (SF9) > 8 years: 1 measurement per 10 minutes - 1 transmission per hour (SF12)	
USER INTERFACE		
ILS + LED switch	Association on the network; signaling of the sensor status visible through the openings	
BOX		
Dimensions/weight - Sealing	80x80xép.25mm / 95grs – IP30	
Attachment	2 screws and 2 dowels (supplied)	
TEMPERATURE		
Operation	+0°C / +55°C	+0%rH / +95%rH (non-condensing)
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
50-70-167	LoRaWAN® Room Temperature Sensor