WATTECO

SMART BUILDING

TEMP'O

LoRaWAN®

The **TEMP'O** is a compact LoRaWAN® temperature sensor for indoor air monitoring use case.

APPLICATIONS

- HVAC (Heating, Ventilation and Air Conditioning)
- Building management
- Logistics / storage
- Data centre / IT server room

BENEFITS & KEY FEATURES

- LoRaWAN®, Class A
- Easy to use and deploy
- Up to 10 years autonomy
- Temperature measurements
  - Range : 0 °C / +55 °C
  - Accuracy: ± 0.2 °C
  - Resolution: 0.1 °C
- Data compression with batch report

CERTIFICATION

- RED, UKCA, RoHS

MADE IN FRANCE

LoRaWAN CERTIFIED™

The sensor measures the temperature and relative humidity indoors. Data transmission over a public or private LoRaWAN® network is done periodically or immediately in case of alert:

- Minimum and maximum temperature thresholds exceeded,

- Sensor unclipped from its wall mounting.

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

- a magnetic switch 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.

The 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 sensor's autonomy is over 8 years with a configuration of 1 measurement every 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® member.

TECHNICAL DATA

RADIOFREQUENCY	Frequency (MHz)	Transmit Power (dBm)	Receiver Sensitivity (dBm)
	EU: 863 - 870	+14	-140

FIRMWARE	
Protocol	LoRaWAN®, Class A
Measurement periodicity	From 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) ou Over-The-Air Activation (OTAA)
Data encryption	AES128

MEASUREMENTS	Temperature
Range	0°C to +55°C
Accuracy	0.2 °C between +5 °C and +55 °C; otherwise ± 0.3 °C
Resolution (in nominal range)	0.1 °C
Calibration	Each temperature measurement chipset is factory calibrated. Sensirion uses transfer standards for the calibration. These transfer standards are themselves subject to a scheduled calibration procedure. The calibration of the reference itself used for the calibration of the transfer standards is performed by an ISO/IEC 17025 accredited laboratory. Calibration certificate available HERE.

ALARMS	
Temperature	Minimum and maximum thresholds configurable from 0 °C to 55 °C in steps of 0.1 °C
Alert	On motion detection using an on-board accelerometer

POWER SUPPLY	
Voltage	3.6V / 2600 mAh lithium battery (can be replaced after removing the cover) Transmitted battery voltage level (configurable in 0.1 V steps)
Autonomy (in a range of +10°C to +25°C)	> 10 years: 2 measurements and 2 transmissions per day > 8 years: 1 measurement per 10 minutes - 1 transmission (batch) per hour

USER INTERFACE	
magnetic switch + LEDs	Network pairing; signalling of sensor states; visible through the openings

ENCLOSURE	Size (mm)	Weight (g)	Fastenings	IP rating	Material	Fire resistance
	74 x 74 x 25	71	Wall mounting thanks to screws or adhesive tape (not supplied)	IP20	Recycled ABS (50%)	UL94-HB

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	UK CA CE ⌧ RoHS 2011/65/EU

PRODUCT NUMBER

REFERENCE	HS Code	MODEL DESCRIPTION
50-70-231	85 17 62	TEMP'O - LoRaWAN® EU868