

Outdoor Temperature Sensor



The SIGFOX® Outdoor Temperature is an autonomous sensor operating on battery that radio transmits over long distance and in real time air temperature measurement.

APPLICATIONS

- HVAC (Heating, Ventilating and Air Conditioning)
- Outdoor/indoor environment
- Data centre / IT server room

BENEFITS & KEY FEATURES

- SIGFOX®
- Integrated CTN probe
- Instantaneous measurement
- Min./Max/average temperature value over 24h for unified degree days computation
- Easy to use and deploy
- Differential data compression for efficient batch transmission
- Autonomy up to 12 years
- IP55, Outdoor

QUALITY & RELIABILITY

- CE Compliant
- RoHS compliant



*Photo not contractual

SIGFOX® Outdoor Temperature from nke Watteco is a narrow-band, long range, low power consumption, high performance and high quality wireless sensor transmitting temperature from a NTC probe.

The Outdoor Temperature sensor is ideal to supervise air temperature. It provides connection to any wireless network using the SIGFOX® protocol. The transmission is done on regular basis and by threshold alert.

The unit reports every 24 hours the average, minimum, maximum temperature measured that is useful to compute unified degree days which is a typical indicator of energy consumption and costs for heating or cooling.

The Outdoor Temperature sensor is easy to use, deploy and maintain:

- NFC tag for identification (Part number, serial number and manufacturing number)
- Magnetic switch to activate/de-activate the sensor

The measured temperature can be locally stored, concatenated and compressed. This unique batch mechanism significantly reduce the amount of data transmission for demanding applications and drastically increase the autonomy.

Powered through a lithium battery, in data-compressed mode it allows an autonomy of up to 12 years when measuring one time per hour and radio transmitting data one time per day.

The configuration of the transmitter can be done at factory or on-site allowing the choice of measurement cycle, measurement, information frame radio-transmission periodicity, alarms threshold values, data compression mode

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®.



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TECHNICAL CHARACTERISTICS

RF TRANSCEIVER	
Frequency (MHz)	EU: 868-870
Transmit Power (dBm)	+14
Receiver Sensitivity (dBm)	-126
FIRMWARE CONFIGURATION	
Protocol	SIGFOX®
Data encryption	AES128
Measurement cycles	From 1h to 48h in 1h step
Measurement frame transmission cycles	From 2h to 48h in 1h step
Information frame transmission cycles	From 0 day to 30 days in 1day step
Alarm detection	yes or no
Data compression	yes (differential coding) or no
Instantaneous measurement	Activate / de-activate
Unified degree days measurement	Activate / de-activate
Alarm level	Temperature Min / Max: -20°C to +60°C by 1°C step Battery level: 0,1 to 3,6V by 0,1V step
TEMPERATURE MEASURE	
Range (°C)	-20 / +60
Accuracy (°C)	+/- 1°C over the range [-20°C ; +40°C]
Resolution (°C)	0.2°C
POWER	
Power supply	3,6V / 3600mAh lithium battery
Autonomy within a +10°C to +25°C temperature range	12 years: Data compressed / 1 measure per hour / 1 transmission per day 9 years: Data not compressed / 1 measure per hour / 1 transmission per day
INTERFACE	
NFC Tag	Part number, serial number and manufacturing order
Buzzer Indicator	Network pairing / unpairing & configuration
Magnetic Switch	ON/OFF
ALARMS	
ON/OFF	Transmitted instantaneously
Low battery	Transmitted at information frame rate
Temperature min. and max.	Transmitted instantaneously
MECHANICAL FEATURES	
Dimension (mm)	84 x 82 x 55
IP Class	IP55
ENVIRONMENTAL	
Operating temperature (°C)	-20 / +60
Storage (°C ; rH)	-10 / +30 ; <75%rH
DIRECTIVES & STANDARD	
EN, 61000-4-2 EN 300-220-1 V2-4-1, EN 301 489 V1-6-1 CE and RoHS recommendation compliant, 2014/53/UE (RED)	  

ORDERING INFORMATION

REFERENCE	MODEL DESCRIPTION
50-09-039	SIGFOX® OUTDOOR TEMPERATURE SENSOR