

SIGFOX™ VENTILATION SENSOR



The VENTILATION sensor is a SIGFOX™ wireless sensor operating on battery that measures and transmit over long distance air depression in buildings ventilation chambers

APPLICATIONS

- HVAC (Heating, Ventilating and Air Conditioning)
- Outdoor/indoor environment
- Building management and maintenance

BENEFITS & KEY FEATURES

- SIGFOX™
- Easy to use and deploy
- Up to 12 years autonomy
- Pressure and Temperature (optional) measure
 - ✓ Range : 0 / +10kPa ;
 - 20°C / +60°C (embedded probe)
 - 40°C / + 90°C (remote probe)
 - ✓ Resolution: 15Pa ; 0,2°C
- IP55, outdoor

QUALITY & RELIABILITY

- RoHS compliant
- CE Compliant



The VENTILATION sensor from nke Watteco is an easy-to-use wireless sensor operating from any wireless network using the SIGFOX™ protocol.

The sensor is typically installed on the buildings roof, sufficiently close but higher than the ventilation chamber. It should be protected from direct sunlight and rain. A plastic air tube (internal diameter: 6mm) is connected to the ventilation chamber and the sensor

The wireless sensor has the following alarm capabilities:

- ON/OFF
- Low battery voltage
- Min & Max air de-pressure
- Min & Max temperature from embedded or remote NTC probe (optional)

The unit has the optional capability to report 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. In this mode, the average pressure over 24 hours is also transmitted

The VENTILATION 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

Powered through a 3.6V/3600mAh Lithium battery, it allows an autonomy up to 12 years when measuring pressure 1 times per hour and 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 frame radio-transmission periodicity, alarms threshold values.

NKE WATTECO, YOUR PARTNER IN SMART SENSORS & ACTUATORS

We are the European leader in designing and manufacturing highly reliable and low power consumption smart sensors, actuators and multiprotocol remote data solutions.

TECHNICAL CHARACTERISTICS

RF TRANSCEIVER	
Frequency (MHz)	EU: 868-870
Transmit Power (dBm)	+14
Receiver Sensitivity (dBm)	-126
FIRMWARE	
Protocol	SIGFOX™
Data encryption	AES128
Measurement cycles	From 1h to 48h in 1h step
Measurement frame transmission cycles	From 6h to 48h in 1h step
Alarm detection	yes or no
Unified degree days measurement	Activate / de-activate
Alarm level	Battery level: 0,1V to 3,6V by 0,1V step Pressure min and max: 0 to +10kPa by 1Pa step Temperature (optional) min and max: <ul style="list-style-type: none"> • -20°C to +60°C by 1°C step (embedded NTC probe) • -40°C to +90°C by 1°C step (remote NTC probe)
PRESSURE MEASURE	
Range (kPa)	0 / +10
Resolution (Pa)	15
TEMPERATURE MEASURE (optional)	
Range (°C)	-20 / +60 (embedded probe) ; -40 / +90 (remote probe)
Resolution (°C)	0,2
POWER	
Power supply	3,6V / 3600mAh lithium battery
Battery Autonomy	12 years: Pressure only / 1 measure per hour / 1 transmit per day 10 years: Pressure & temperature / 1 measure per hour / 1 transmit per day
INTERFACE	
NFC Tag	Part number, serial number and manufacturing number
Buzzer Indicator	Network pairing / unpairing & configuration
Magnetic Switch	ON/OFF
ALARMS	
ON/OFF	Transmitted instantaneously
Low battery	Transmitted at data frame rate
Pressure & Temperature	Transmitted at data frame rate
MECHANICAL FEATURES	
Dimension (mm)	84x82x55
IP Class	IP55
ENVIRONMENTAL	
Operating temperature (°C)	-20 / +60
Storage temperature (°C ; rH)	-10°C / +30°C ; <75%rH
DIRECTIVES & STANDARD	
EN, 61000-4-2 EN 300-220-1 V2-4-1, EN 301 489 V1-6-1 CE, RoHS recommendation compliant	



ORDERING INFORMATION

REFERENCE	MODEL DESCRIPTION
50-09-034	SIGFOX™ VENTILATION SENSOR
50-09-042	SIGFOX™ VENTILATION SENSOR with embedded NTC probe
50-09-066	SIGFOX™ VENTILATION SENSOR with remote NTC probe , 5m cable