

VENTIL'O



VENTIL'O measures air vacuum pressure in a Continuous Mandatory Ventilation (CMV) system or Air Handling Unit (AHU). Periodically or upon exceeding a configured threshold, **VENTIL'O** uploads its data via a LoRaWAN® network.

APPLICATIONS

- Supervision of CMV or AHU

BENEFITS & FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- Differential data compression
- Autonomy > 10 years
- Depression measurement
 - Measuring range: 0 / + 500Pa
 - Accuracy: ± 10 Pa from 0 to 200Pa; $\pm 5.5\%$ beyond this range
 - Resolution: 1 Pa
- Room temperature measurement
 - Measuring range: -20°C to $+60^{\circ}\text{C}$
 - Accuracy: $\pm 2^{\circ}\text{C}$ between -10°C and $+60^{\circ}\text{C}$
 - Resolution: 0.1°C
- IP55
- Optional digital input to monitor equipment status

CERTIFICATION

- RED, RoHS



The **VENTIL'O** device is a battery-powered IoT sensor that allows the monitoring of a Continuous Mandatory Ventilation (CMV) system or Air Handling Unit (AHU) by periodically taking vacuum pressure measurements.

The following data is periodically transmitted over the LoRaWAN® network:

- Average of vacuum pressures measured,
- Minimum and maximum vacuum pressure measured,
- Low battery voltage
- Trigger input (if option used)

In the event of a threshold being exceeded, an alarm is transmitted.

Powered by a battery, the autonomy of the sensor is greater than 10 years for a configuration with a vacuum pressure measurement every 15 minutes and a transmission every 6 hours.

The sensor should be installed away from direct sunlight, rain and temperature variations so as not to affect these measurements.

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

- 2 tubes of 200cm and 2 pipettes for connection to the housing or duct,
- a magnetic switch to activate or deactivate the sensor,
- an NFC identification tag (product code, serial number, batch number).

VENTIL'O+ can be connected to an external equipment using an additional input. With this option, a trigger forces an additional measurement. Typically, it monitors a mechanical vacuum pressure switch.

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.

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TECHNICAL DATA

RADIOFREQUENCY	Frequency (MHz)	Transmit Power (dBm)	Receiver Sensitivity (dBm)	
	EU: 863-870	+14	-140	
FIRMWARE				
Protocol	LoRaWAN®, Class A.			
Activation method	Activation by Personalization (ABP) or Over-The-Air Activation (OTAA)			
Data encryption	AES128			
Application layer	ZCL (ZigBee Cluster Library) – to be interpreted by the remote server			
Measurements & Transmission cycles	Configurable from 10 minutes to 24 hours			
Data compression	Yes (differential coding)			
MEASUREMENTS	Vacuum pressure	Temperature		
Range	0 ... 500 Pa	-20 ... +60 °C		
Accuracy	± 10 Pa from 0 to 200 Pa ± 5.5 Pa from 200 to 500 Pa	± 2°C from -10 to +60 °C		
Resolution	1 Pa	0.1 °C		
POWER SUPPLY				
Voltage	3.6V / 3600mAh – Replaceable lithium battery			
Autonomy in a range of +10°C to +25°C	> 10 years: 1 measurement / 15 minutes - 1 transmission / 6 hours			
USER INTERFACES				
NFC Tag	Product code, serial number, batch number			
Buzzer	Configuration and network pairing			
Magnetic switch	Reset, ON/OFF			
ENCLOSURE	Size (mm)	Fastenings	IP rating	Fire resistance
	92 x 92 x 56	Supplied screws and anchors	IP55	UL94-V0HB
ENVIRONMENT	Operating temperature		Storage conditions	
	-20°C to +50°C		+10°C to +30°C +20%rH to +60%rH	
DIRECTIVES & STANDARD				
Radio Equipment Directive 2014/53/EU, RoHS			  	

PRODUCT NUMBER

REFERENCE	DESCRIPTION
50-70-101	LoRAWAN® VENTIL'O SENSOR
50-70-064	LoRAWAN® VENTIL'O+ SENSOR - EXTERNAL MECHANICAL VACUUM PRESSURE SWITCH INPUT