

BREATH

Optimising comfort and ensuring the health of occupants

Functions: **PM1, PM2.5, PM10 and TVOC, alert button, dry contact input**



MEASURE

- Periodically monitor :
 - the level of fine particles
 - the level of TVOC
- Count the number of events on the alarm button or dry contact input



ALERT

- And/or trigger an alarm if:
 - high or low threshold(s) are exceeded
 - press the alert button
 - event on the dry contact input

Additional features:



- **User information:** indicator light on the unit
- **Data sending mode:** periodic and/or on events
- **Optimisation of autonomy:** historisation
- **Data accessibility:** redundancy
- **Daily 24-hour summary screen**
- **Error / fault management:** configuration error, fine particle sensor hardware fault
- **Network quality test at start-up (LoRaWAN)**
- **Class C LoRaWAN**



Working environment

Ensuring air quality in the workplace for the comfort and health of users.



Schools, Colleges and High Schools

In response to legislation: monitoring and improving indoor air quality.

TECHNICAL SPECIFICATIONS



LoRaWAN ARF8377AA | Sigfox ARF8377CA

Mechanical specifications

Weight	107,5 g
Dimensions	111 x 61 x 40 mm
Enclosure	IP20, Bayblend® FR3010 (PC/ABS) plastique, blanc
Mounting	Wall or laid flat

Operating conditions

Temperature	0°C / +50°C
Humidity	0 to 85% RH (non-condensing)

Device Power Supply

External power supply included	External 5VDC 1A - Power supply 100-240VAC to 5V USB - supplied
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Device configuration

Local device configuration	IoT Configurator
Remote device configuration	Downlink via the network or via the KARE platform or through the KARE platform
Configuration and firmware update over-the-air	KARE+ compatible
Security	PIN/PUK Code protection

Radio/Wireless

Supported regions	LoRaWAN EU863-870 / Sigfox RC1
Wireless Security	AES-128 data encryption (LoRaWAN only)
Class	LoRaWAN: Class A or C Sigfox: Class 0
Supported LoRaWAN features	OTAA, ABP, ADR, adaptive channel setup
RF transmit power	14 dBm
Sensitivity	-136 dBm LoRaWAN @SF12 <-120 dBm Sigfox

Regulations and certifications

Standard	Directive 2014/53/UE (RED)
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SENSOR- PM		SENSOR - COVT	
Unity	µg/m ³	Unity	µg/m ³
Range	Typi : 0 / 1000 µg/m ³ Max : 65534 µg/m ³	Range	0 / 270 mg/m ³
Accuracy	Range < 100 µg/m ³ : ± 10µg/m ³ max Range 100 – 1000 µg/m ³ : ± 10 % m.v. >1000µg/m ³ not guaranteed	Accuracy	Typ 15% meas. Value Ethanol Calibration
Resolution	1 µg/m ³	Resolution	± 4.5 µg/m ³ (0 to 9036 µg/m ³) ± 27 µg/m ³ (9036 to 49995 µg/m ³) ± 144 µg/m ³ (49995 to 270000 µg/m ³)
Particle size	0,3 µm to 2,5 µm	Dispersion D2D	250% max
		Operating conditions	10 to 40 °C 20 to 80 %RH