COMFORT CO2

adeunis
IOT PRODUCTS & SOLUTIONS

Optimising comfort and ensuring the health of occupants

Functions: **CO2, temperature, humidity, alarm button, dry contact input**

MEASURE

· Periodically monitor :
  · temperature
  · humidity level
  · CO2 concentration
· 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
· **CO2 calibration:** automatic or manual via button or downlink
· **Data sending mode:** periodic and/or on events
· **Optimisation of autonomy:** historisation
· **Data accessibility:** redundancy
· **Alarm repetition** in case of persistent event
· **Error / fault management:** configuration error, low battery
· **Data time-stamping** (LoRaWAN)
· **Network quality test at start-up** (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 ARF8373AB | Sigfox ARF8373CB

Mechanical specifications	
Weight	146 g (battery included)
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	
Battery Type	1 connectorized battery pack

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	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)

Humidity SENSOR		Temperature SENSOR		CO2 concentration SENSOR	
Technology	CMOSens®	Technology	CMOSens®	Technology	NDIR
Resolution type	0.01 %HR	Resolution type	+/- 0.015°C	Measurement range	400 - 5000 ppm
Range	0 à 100 HR%	Range	-40°C / +125°C	Resolution	1 ppm
Typical tolerance of RH over T°	Figure 1	Accurancy	Figure 3	Precision	+/- 30 ppm + 3% de la mesure
Accuracy at 25°C	Figure 2				

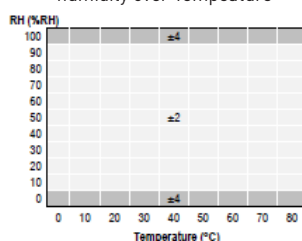Figure 1 Typical tolerance of relative humidity over Tempeature
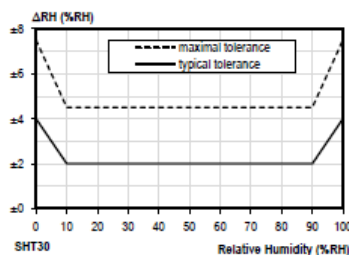

Figure 2 Tolerance of RH at 25°C

Figure 3 Temperature accurancy