IoT Wireless Temperature, Atmospheric Pressure and CO2 Sensor, powered by Sigfox

code: W8861

Sensor power by Sigfox with internal temperature and atmospheric pressure sensor and input for external CO2 concentration probe (1% or 5%).
The device measures the temperature, atmospheric pressure from the internal sensors and CO_2 from attachable and replaceable external probe on the cable - you can choose it from an optional accessory.

The measured values are sent in an adjustable time interval (10 min to 24 h) by radio transmission in the Sigfox network to the COMET Cloud, from which the user can view them using a personal computer or mobile device.

The instrument can monitor up to 2 alarm limits of the measured variable. Exceeding these limits is indicated by sending an emergency message. COMET Cloud transmits this alarm message via e-mail to the selected user. The device is suitable for applications that tolerate the delay of information delivered by Sigfox (max. 10 min).

Highlights:

- wireless transmission of measured values and alarm states
- two slots for batteries for longer operation time
- battery power (C size 3.6 V) with low battery indication (battery life up to 7 years)
- remote setting of the device from COMET Cloud (maximum once a day)
- IP65 for usage of device on outside applications
- Traceable calibration certificate in accordance with EN ISO / IEC 17025

The availability of Sigfox network in a particular location

Check your Sigfox network availability before you buy your device. COMET devices in the Sigfox network can be used anywhere in the RC1 zone. Learn more about Sigfox (RC) Radio Zones.

Technical data

TEMPERATURE SENSOR	
Measuring range	-20 to +60 °C
Accuracy	±0.4 °C
Resolution	0.1 °C
Response time t90 of temperature measurement (temperature step 20°C, air flow approximately 1m/s)	t90 < 8 min (temperature change 20 °C)
CO2 SENSOR	
Measuring range	0 to 10 000 ppm
Accuracy	100 ppm + 5% of the measured value at 23 °C a 1 013 hPa
Measuring range	0 to 50 000 ppm
Accuracy	±(1,5 % from full scale +2% from the measured value)

Resolution	1 ppm
External probe cable length CO2	1, 2 or 4 meters
ATMOSPHERIC PRESSURE SENSOR SENSOR	
Measuring range	600 to 1100 hPa
Accuracy	±1.3 hPa at 23 °C from 800 to 1100 hPa
Resolution	0.1 hPa
GENERAL TECHNICAL DATA	
Operating temperature	-20 to +60 °C
Channels	internal sensor for temperature, humidity and atmospheric pressure + 1x external CO_2 sensor
Message transmission interval	adjustable 10 minuteses, 20 minutes, 30 minutes,1 hour, 3 hours, 6 hours, 12 hours, 24 hours
Operating frequency	868 MHz
Maximum transmission power	25mW
Sigfox radiation class	0U
Radio configuration zone	RC1 (operation is possible in Europe, Iran, Oman and South Africa)
Typical range of transmitter	50 km in the field, 3 km in the city
Power	Lithium battery 3.6 V, C size, capacity 8.5 Ah
Protection class	IP54 electronics, IP65 sensor CO2
Number of battery slots	2
Dimensions	179 x 134 x 45 mm
Weight (including batteries)	340g
Warranty	3 years