IoT Wireless Temperature, Relative Humidity and CO2 Sensor, powered by Sigfox

code: W6810



The device measures the temperature, relative humidity, dew point and CO_2 from built-in sensors.

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
- battery power (C size - 3.6 V) with low battery indication (battery life up to 3.5 year)
- input for external power
- remote setting of the device from COMET Cloud (maximum once a day)
- IP20
- 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.

Optional CO_2 measuring range extension from the standard 0 to 5,000 ppm up to 0 to 10,000 ppm (available at extra cost):

- **Extended measuring range:** 0 to 10 000 ppm
- **Accuracy in extended range:** 100 ppm + 5% of the measured value at 25 °C and 1013 hPa

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)
HUMIDITY SENSOR	
Measuring range	0 to 100 % RH

Accuracy	±1.8 % RH from 0 to 90 % at 23 °C
Resolution	0.1% RH
DEW POINT	
Measuring range	-60 to +60 °C
Accuracy	±1.5 °C at ambient temperature T <25 °C and RH >30 %
Resolution	0.1 °C
CO2 SENSOR	
Measuring range	0 to 5000 ppm
Accuracy	±(50ppm +3% from reading) at 25°C and 1013hPa
Resolution	1 ppm
GENERAL TECHNICAL DATA	
Operating temperature	-20 to +60 °C
Channels	internal sensor for temperature, humidity and CO₂
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	IP20
Number of battery slots	1
Dimensions	179 x 134 x 45 mm
Weight (including batteries)	350g
Warranty	3 years