

Wireless TEMP + HUM + VOC Sensor

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Our wireless temperature, humidity, and air quality sensor is engineered to monitor indoor or in vehicle climate conditions effectively. It measures air quality by detecting volatile organic compounds (VOCs) and uses a patented algorithm to calculate the Indoor Air Quality (IAQ), which indicates the air quality within a defined space. Additionally, the device tracks both the temperature and relative humidity, providing a comprehensive overview of environmental conditions.

This device utilizes a Narrowband IoT (NB-IoT) connection to transmit data directly over the cellular network, eliminating the need for additional hardware such as routers or gateways. It is also equipped with Bluetooth Low Energy technology for effortless configuration via a smartphone (if needed). The sensor's versatile design allows for easy integration into any Enterprise system.



Reliability Redefined

Experience constant monitoring, alerting, and sensing, providing real-time insights for informed decision-making.



Application

Seamlessly integrate with secure Cloud and Telematics platforms for unparalleled connectivity and data protection. Easy setup with pre-configured sensors ready to be deployed



Sustainable Performance

Enjoy up 5-year battery life, ensuring long-term reliability and performance. NB IOT wireless sensors cut costs with low data volumes, leveraging Cellular mobile networks.



Versatile Innovation

Our sensors measure Temperature and Humidity using proven measurement methods and can adapt to diverse environments to report.

Temperature, humidity and air quality sensors

Air quality: 0-500 IAQ
 Temperature: -15 to +70°C, accuracy up to 0.4°C
 Humidity: 0 to 99% RH, accuracy 4% in the range of 0 to 80%
 Hysteresis: +/- 1 %RH
 Measurement period: 1 minute – 10 days

Memory size 40,000 measurements

Bluetooth Low Energy interface

Radio module frequency: 2,4 GHz
 Power: 2,5 mW (4 dBm)
 Range: up to 100 m (LOS)
 Transmission period: 1 s

Communication

NB-IoT bands - default: B8 and B20
 3GPP: Release 13
 Power: 23 dBm ±2 dB

Power supply

Package of 3 x AA, 6300 mAh (replaceable)
 Battery operating time: up to 5 years
 USB 5V with 1000 mAh rechargeable battery

Mechanical

Dimensions: 26 x 60 x 124 mm
 Weight: 0,13 kg (including batteries)
 Enclosure: plastic ABS, color white, IP30

Environmental

Operating Temperature: -15° to 70°C
 Humidity: 0 to 99% non-condensing
 Storage and transportation
 Temperature: -40° to 70°C

ADDITIONAL INFORMATION

Edge analytics

Devices analyse the data and send it our platform when needed. This allows to decrease the number of cellular transmissions and increase the battery lifetime. There are several types of analyses that can be performed by the sensor: from a simple comparison of the measured value to the threshold to more complex mathematical operations.

Measures Indoor Air Quality

The device measures air quality based on the concentration of volatile organic compounds (VOC) and calculates IAQ (Indoor Air Quality) representing air quality in the room based on the Bosch patented algorithm (see chart below)

IAQ index	Air quality
0-50	Good
51-100	Average
101-150	Little bad
151-200	Bad
301-500	Worse
500+	Very bad