

BLUETOOTH LOW ENERGY**Wireless nitrogen dioxide (NO₂) logger**

SKU:



Wireless nitrogen dioxide (NO₂) logger measures and transmit gas concentration over Bluetooth Low Energy. On top of nitrogen dioxide concentration in the air, the sensor measures temperature and humidity. You can use a free mobile application to configure the device and read the data from its memory. If you add Efento Gateway, you can build a remote monitoring system for objects which need supervision such as smart cities, public buildings, workshops, assembly halls, industrial companies, etc.

Key features

- **Works with Efento Cloud**
Together with Efento Cloud, the sensors enable constant monitoring, alerting about exceeding safe limits, generating reports and analyzes.
- **Long battery life**
Loggers have been designed to work for up to 5 years on battery. You can forget about changing the battery frequently or troublesome battery charging.
- **Lower costs**
Choosing wireless sensors and a cloud platform reduces the installation and maintenance costs.
- **Wide range of sensors**
Efento sensors can measure various physical and chemical values. If you decide on one sensor today, you can expand your sensors fleet to another types anytime you want.
- **Integration**
Standard communication protocols allow integration with any cloud platform or mobile application.
- **Easy set up**
All you need to set up a logger is a smartphone with a free mobile application. The whole configuration takes no more than 15 minutes.

Technical data

Gas sensor

- Range: 0-4 ppm (4 000 ppb)
- Accuracy: at: -20°C (% output at -20°C/output at 20°C) at 2ppm NO₂ 50 to 80, at: 50°C (% output at 50°C/output at 20°C) at 2ppm NO₂ 115 to 130
- Memory size: 60 000 measurements
- Measurement interval: 1 minute to 10 days, (configurable by the user)

Temperature sensor

- Range: -35° to 70°C
- Accuracy up to 0.25°C in the -20°C to +70°C range and 0.5°C in the -35°C to -20°C range
- Resolution: 0.1°C
- Drift: <0.1°C / year
- Measurement interval: 1 minute to 10 days, configurable
- Memory size: 60 000 measurements

Humidity sensor

- Humidity: 0 to 100% RH
- Accuracy: 4% in the range of 0 to 80% and 7% in the range of 81 to 99%

Battery

- Battery: 3,6 V, size AA, capacity 2 700 mAh (replaceable)
- Battery operating time: at least 5 years (measurement interval: 15 min)

Bluetooth Low Energy interface

- Communication: Bluetooth Low Energy (BLE)
- Radio module frequency: 2,4 GHz
- Power: 2,5 mW (4 dBm)
- Range: up to 100 m (LOS)
- Communication standard: Bluetooth Smart (Bluetooth Low Energy, Bluetooth 4.0)
- Transmission period: 1 s

Mechanical

- Dimensions: 27 x 71 x 71 mm
- Weight: 80 g (including batteries)
- Enclosure: plastic ABS, color white
- Enclosure IP rating: IP30, IP42 with a dedicated silicone cover

Environmental

- Operating
 - ◆ Temperature: -35° to 70°C
 - ◆ Humidity: 0 to 99% non-condensing
- Storage and transportation
 - ◆ Temperature: -40° to 70°C

Additional information

Gas sensor calibration

The gas sensors are pre-calibrated at the factory. If needed, user can independently calibrate the device using mobile application and a gas tank with a known gas concentration. The user places the gas sensor near the tank with a known gas concentration and specifies the concentration level using a free mobile application, the sensor measures the concentration and corrects the parameters based on the concentration of the gas in the tank.

Data security

Data transmitted wirelessly between the sensor and smartphone / Efento Gateway can be encrypted. Thanks to that, unauthorized persons cannot hijack the communication between sensors and other devices. Efento sensors' software can be updated over the air, which will allow you to easily install any security patch that is released.

Integration

If you want to integrate Efento loggers with your software, cloud platform or mobile application, we will provide you with the necessary documentation, libraries and / or SDKs.

Sensor's passport

Sensor's passport documents the entire lifecycle of a device. By accessing the data on Efento Cloud platform, the user can check all information about the sensor: date of sale, warranty status, date of calibration, information on all service activities. In addition, the user can download all documents regarding the device – a duplicate of calibration certificate or service protocols.