NB-IOT

Wireless low temperature logger

SKU: 5906660327790

The logger is equipped with an external, waterproof probe which allows to measure the temperature in points there where the sensor cannot be placed directly. The probe is available in two variants: standard or intended for contact with food, in the form of a sharpened skewer.

Efento NB-IoT sensors transmit the data over cellular network (Narrowband IoT) and do not require any additional devices (router, gateway, etc.). Sensors are also equipped with Bluetooth Low Energy interface, which allows quick and easy configuration with a smartphone. Efento NB-IoT sensors can be integrated with any cloud platform.

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

Temperature sensor
➜ Range: -200 to +200°C
➜ Accuracy up to 0.5°C in +200°C and 1.3°C in -200°C
➜ Resolution: 0.1°C
➜ Drift: <0.1°C / year
➜ Memory size: 40 000 measurements
➜ Measurement interval: 1 minute to 10 days, (configurable by the user)

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)
➜ Transmision period: 1 s

Communication
➜ Protocol: CoAP;
➜ Transmission interval: 5 minutes – 10 days, configurable

NB-IoT
➜ NB-IoT band: 8, 20
➜ 3GPP: Release 13
➜ Power: 23 dBm ±2 dB

Power supply
➜ Replaceable AA batteries 2 x AA, 4200 mAh or 3 x AA, 6300 mAh. Battery operating time: up to 10 years
➜ USB 5V with 1000 mAh rechargeable battery

Mechanical
➜ Dimensions: 26 x 60 x 124 mm
➜ Weight: 140 g (including batteries)
➜ Enclosure: plastic ABS, color white, IP30
➜ 1 m probe

Environmental
➜ Operating
  ◆ Temperature: -55 to 70°C
  ◆ Humidity: 0 to 99% non-condensing
➜ Storage and transportation
  ◆ Temperature: -40° to 70°C

Additional information

Calibration certificate
At the customer's request, each Efento sensor can be supplied with a calibration certificate in accordance with ISO / IEC 17025. The test is performed in an ILAC certified laboratory. The calibration date is saved in the logger's memory and it notifies the user about the suggested date of the next calibration.

Software over the air update (SOTA)
The sensors are equipped with over the air software update mechanism, thanks to which, your fleet of sensors will always have the latest version of software. Moreover, SOTA is based on delta mechanism and only the difference between the current and the new version of the software is sent to the device. This saves both the battery and data transfer.

Integration
We believe that the Internet of Things is about integrating data sources, analysing the data and drawing conclusions based on it. If you want to integrate Efento loggers with your software, cloud platform or mobile application, we will provide you with the necessary documentation, libraries, SDKs and we will gladly assist you.

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.