NB-IoT

Motion / occupancy sensor

SKU: 5906660327950

Motion sensor detects movements based on a PIR sensor. Depending on the configuration, the sensors can be used to detect any movements (e.g. unauthorised access to restricted areas) or monitor room occupancy (conference rooms, shared spaces, etc.). Based on this data, users can get insights on office spaces utilisation.

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

➔ **Long battery life**
Loggers have been designed to work for up to 10 years on batteries. You do not have to remember about changing the batteries frequently or troublesome batteries 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.

➔ **Any cloud platform**
Standard communication protocols allow integration with any cloud platform or mobile application. Logger works with Efento Cloud out of the box.

➔ **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.

➔ **Remote configuration and updates**
All logger settings can be configured remotely from the cloud platform. Moreover, logger's software can be updated remotely.

TECHNICAL DATA

Pressure sensor
➜ Sensor type: PIR
➜ Detection zones: 68 beams
➜ Detection distance: up to 12 meters
➜ Field of view: 40°×105°
➜ Detection conditions: the temperature difference between the target and the surroundings must be higher than 4℃; movement speed: 1.0m/s; target concept: human body with an approx. size of 700×250mm; target moving direction: crossing the detection beam
➜ Memory size: 40 000 measurements

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

Bluetooth Low Energy
➜ Communication: Bluetooth Low Energy
➜ Radio module frequency: 2,4 GHz
➜ Power: 2,5 mW (4 dBm)
➜ Range: up to 100 m (LOS)
➜ Transmision period: 1 s

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

Software updates
➜ Over the air (with delta mechanism); Over Bluetooth Low Energy

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: 28 x 60 x 124 mm
➜ Weight: 140 g (including batteries)
➜ Enclosure: plastic ABS, color white
➜ Enclosure IP rating: IP30

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

ADDITIONAL INFORMATION

Motion / occupancy detection
User can configure the device to detect every single movement (act as a regular motion sensor used in alarm systems) or count the number of detected movements in the set time periods in order to detect the room occupancy (e.g. if the sensor detected 10 movements in 5 consecutive 1 minute periods, the room is occupied). The device can store the data in its memory and send it to the server on the set transmission intervals or send the data to the server on each change of state

Large detection zone
PIR sensor with 40°×105° field of view detects movements of human size objects in the distance of 0-12 meters from the device. The device is designed to be mounted on walls, in the rooms corners and cover the whole rooms areas.

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.

Full remote configuration
All the settings of the NB-IoT sensors can be changed remotely in a secure way. This allows you to easily reconfigure thousands of the deployed devices, no matter how far they are located.

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.