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Installation and Operation Manual
for Perenio® PECMS01
Motion Sensor

July, 2021

Introduction

The Motion Sensor is activated when thermal objects are detected in the area of its installation. It can be used as a part of the **Perenio Smart Building Management System** after being connected via the Control Gateway/IoT Router.

The present Manual contains a detailed description of the Motion Sensor, as well as instructions for its installation and operation.

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Any eventual mentioning of other company names and equipment in the present document is made solely for the purpose of clarifying and describing the device operation and shall not infringe on the third party's intellectual property rights.

Responsibility and Technical Support

The present document is prepared in accordance with all necessary requirements and contains detailed information on the device installation, configuration and control valid as of the date of its issue.

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Perenio IoT shall make no guarantee with respect to any data contained herein including but not limited to the device merchantability and fitness for a particular purpose.

In case of any discrepancies between language versions of this document, the Russian version of this User Manual shall prevail.

For any technical issues, please contact your local *Perenio IoT* representative or the Tech Support Department at **perenio.com**.

The most common problems may be found in Section 7 of the present document and at **perenio.com** where you can also download the latest version of this Installation and Operation Manual.

Manufacturer:
Perenio IoT spol s r.o.
Na Dlouhem 79, Ricany – Jazlovice 251 01, Czech Republic
perenio.com

Conformance to Standards

CE	The device is CE certified and complies with requirements of the following Directives of the European Union: • 2014/53/EU Radio Equipment Directive (RED); • 2004/30/EU Electromagnetic Compatibility Directive.
UKCA	The device complies with the UKCA marking requirements for selling the device in the UK
EAC	The device has passed all procedures of assessments established in Technical Regulations of the Customs Union and conforms with standards of the Customs Union
RoHS	The device complies with the requirements of Restriction of the Use of Certain Hazardous Substances in Electronic and Electrical Equipment (2011/65/EU Directive)
TP BY	The device complies with requirements of the Technical Regulations of the Republic of Belarus TR 2018/024/BY (Telecommunications. Security)
	The national conformity mark of the Ukraine indicating that the device meets requirements of all applicable technical regulations
	The crossed-out trash can symbol is used to label electrical and electronic equipment, and indicates its separate collection. The symbol is given in accordance with the Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE)* and indicates that this equipment requires separate collection at the end of its life and must be disposed of separately from unsorted household waste. To protect the environment and human health, please dispose of used electrical and electronic equipment according to approved safe disposal guidelines

BG	CZ	DE	ES	FR
GR	IT	KZ	LT	LV
NL	NO	PL	RO	RU
SE	SK	TR	UA	UK

Details on available Certificates are specified in Section 6 of the present document. For copies of Certificates and Reports, please visit a corresponding Section at **perenio.com**.

Table of Contents

Figures and Tables

Connection to the Perenio Smart Mobile App

1 General Description and Specifications

1.1 General Purpose

The **Perenio® PECMS01** infrared motion sensor is a PIR device that detects movement of thermal objects in the desired area and sends an alarm to the **Perenio®** Control Gateway/IoT Router.

The **PECMS01 Motion Sensor** has a number of distinctive features, namely:

- Motion detection distance – up to 6 meters;
- Angle of coverage – 110º±10º;
- Connection distance – up to 40 meters;
- iOS and Android smartphone compatibility;
- Support of Zigbee Protocol;
- Impact-resistant casing material;
- Triggering accuracy (PIR Technology);
- Installation using 3M Tape or screws;
- Operation with one battery for up to 2 years;
- Small size and stylish design.

Figure 1 – Motion Sensor Exterior

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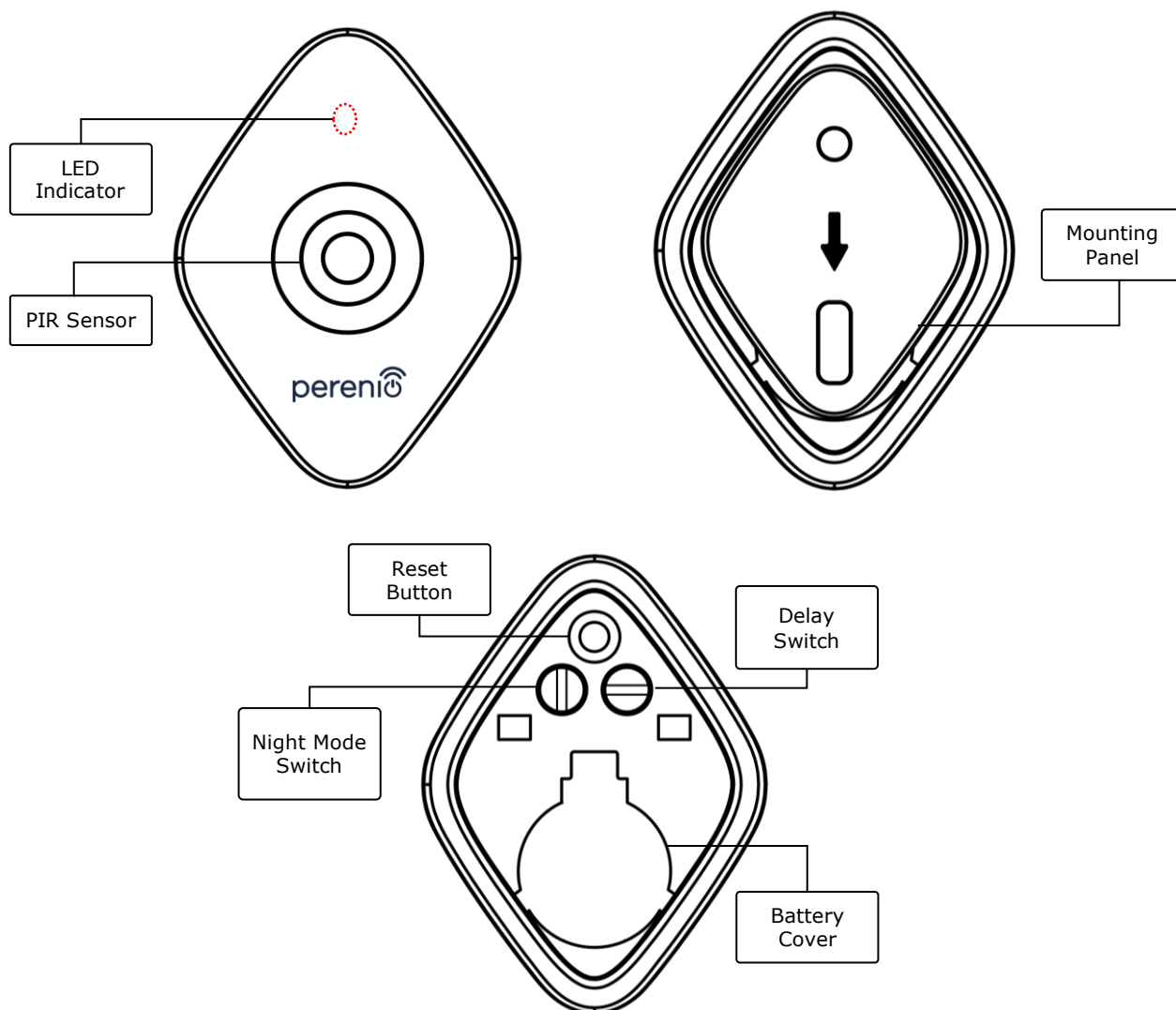
Figure 2 – Motion Sensor Components

Buttons, Ports and Indicators

LED Indicator	The LED will flash every second, if the Sensor does not connect to the Control Gateway/IoT Router. After successful connection, it will go out.
PIR Sensor	Passive infrared sensor that contains a pyroelectric sensitive element that responds to changes in heat emission which provides for high accuracy in detecting movements

Mounting Panel	Removable plate that is attached to the wall and allows the User to replace the battery and detach the Sensor without the need for complete dismantling
Reset Button	It is used to reset Sensor settings, as well as for the Sensor to be detected by the Control Gateway/IoT Router.
	After the button is released, the LED will flash quickly indicating a successful reset.
Night Mode Switch	There are two possible modes of Sensor operation:

- *Vertical position:* The Sensor will be able to activate certain actions such as switching on the light upon motion detection day and night (if smart bulbs connected);
- *Horizontal position:* The Sensor will be able to activate certain actions such as switching on the light upon motion detection at nights only (if smart bulbs connected).

Delay Switch	If the Sensor does not detect any movement for a specified period of time, it may activate certain actions such as switching off the light (if smart bulbs connected).
	The following delay periods are possible:

- 1, 5 or 10 minutes.

Battery Cover	It protects the battery from external effects

Table 1– Light indicator states

| Indicator	State	Description
Red	Blinking slowly	Sensor is on, and the process of connecting to the IoT Router/Control Gateway and activation in the mobile app is started
	Blinking fast	Reset was successful, the sensor was deleted from the mobile app
	Off	The sensor is on, activated in the mobile app, and is in the working order
		Sensor is off

ATTENTION! All Products and the Mobile Application of the Company (including any future software and hardware whether in-house or third-party developed) are not intended for emergency responses and cannot be used as fire-extinguishing equipment and/or for emergency intervention, including but not limited to fires, flooding, gas leaks or explosions, burglary and theft, as well as natural disasters and other force majeure circumstances leading to damage and/or losses incurred by the Client or caused to their estates, personal property and/or other products, devices, personal data and privacy.

1.2 Technical Specification

Table 2 – Basic Technical Specifications

| Parameter	Value
Article	PECMS01
Microprocessor	NXP5169 (Zigbee IC)
Communication Technology	Zigbee HA 1.2 (IEEE 802.15.4)
Operating Frequency	2.4GHz
Detection Technology	PIR (Passive infrared sensor)
Light Sensitivity	Not less than 20 lux
Detection Angle	110º±10º (See Figure 3 below)
Detection Distance	6 meters (Detection Area: 10m x 6m at 110º)
Connection Radius	up to 40 meters (open area)
Zigbee Antenna	Type: Built-in Transmitting Power: 5.5dBm Receiver Sensitivity: -90dBm Antenna Gain: 0.39dBi to 0.90dBi Repeater: N/A
Standalone Operation	N/A
Power Type	CR2450 Battery (600mAh, 3V), 1 pc.
Power Consumption	Standby Mode: not more than 0.0098mA

Parameter	Value
	Alarm Mode: not more than 19mA
Battery Level	Yes (Available in the Mobile App)
Operating Temperature	0°C to +45°C
Operating Humidity	10% to 85% (non-condensing)
Storage Temperature	-10°C to +50°C
Storage Humidity	10% to 95% (non-condensing)
Installation	On a flat vertical surface (for indoor installation only)
Casing Material	ABS/PC
Installation height	2.0m to 2.6 m (recommended)
Color	White
Dimensions (L x W x H)	84.4mm x 63.4mm x 26.3mm
Weight	31.9g (42.4g with accessories)
Warranty Period	24 months
Service Life	24 months
Certification	CE, EAC, RoHS, UA.TR
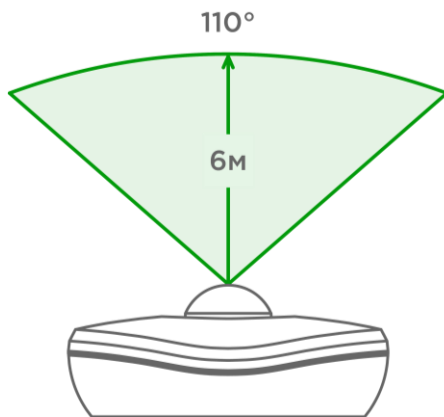
3-a – Detection angle (horizontally)
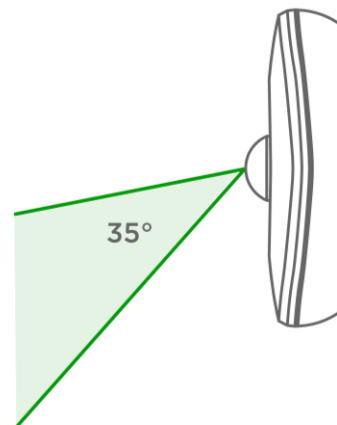
3-b – Detection angle (vertically)
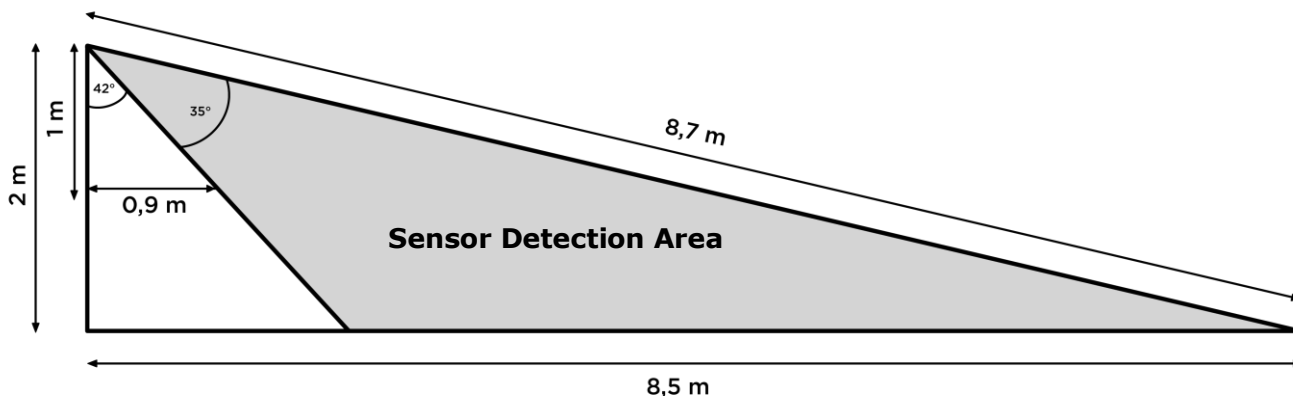
3-c – Details on the vertical detection angle

Figure 3 – Detection Angles of the Motion Sensor

1.3 Scope of Delivery

The following items and accessories are supplied within the **Perenio® PECMS01** Motion Sensor package:

1. PECMS01 Motion Sensor (1 pc.)
2. Battery (CR2450) (1 pc.)
3. Screws and dowels (1 set)
4. 3M tape (1 pc.)
5. Quick Start Guide (1 pc.)
6. Warranty Card (1 pc.)
7. Sticker (1 pc.)
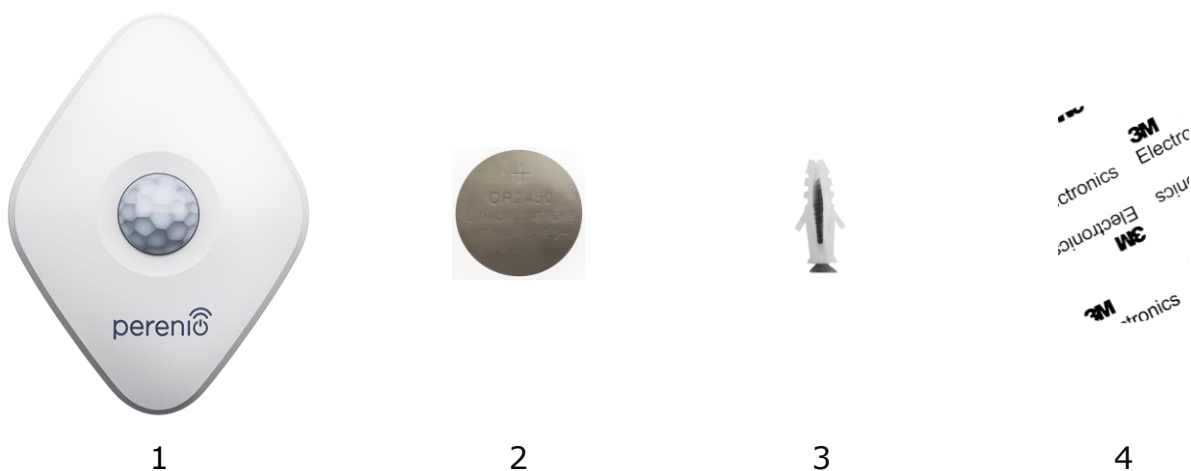
Figure 4 – Scope of Supply*

* Images of accessories are provided for informational purposes only

1.4 Packaging and Labelling

The **Perenio® PECMS01** Motion Sensor is supplied in an individual blister package of 171mm x 126mm x 35mm (L x W x H) containing the full name and marking of the device, the list of accessories provided and basic technical specifications thereof, as well as the date of manufacture and information about the Manufacturer of devices.

Weights of the blister package are as follows:

- Net weight: 33g;
- Gross weight: 60g.

1.5 Safe Operation Rules

For the proper and safe operation of **Perenio®** Sensors, follow the instructions and safety procedures described in the present Manual. The Manufacturer shall not be liable for any damage caused as a result of improper operation of devices.

Safe Operation Conditions

1. The device shall be installed indoors only.
2. The User shall observe storage/transportation conditions, as well as the operating temperature mode of the device as declared by the Manufacturer.
3. The User shall not install the device in the area with high humidity and high content of dust and/or grease, as well as in the immediate vicinity of air conditioners and ceiling fans.
4. The User shall observe recommendations on the Sensor orientation (See Figure 6).
5. The User must not disassemble or attempt to repair the device on their own.
6. The User must not drop, throw or bend the device.
7. In order to avoid personal injury, it shall not be allowed to use the cracked or in any other way damaged device.
8. Use dry cloth or cloth soaked in a small amount of water for cleaning (don't use harsh chemicals/cleaning agents). The device must be powered off before cleaning.
9. Children shall not be allowed to use the device unsupervised and/or play with it.

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1.6 Standalone Operation of Perenio® Sensors

The Control Gateway/IoT Router in not necessarily required for all **Perenio®** Sensors in order to alert Users on potentially dangerous situations.

So, the Motion Sensor cannot be used as a standalone device, i.e. when motion is detected, it will not give any sound signal. Therefore, its operation is arranged by sending notifications to the smartphone. However, to run active scenarios, the User must have an installed **Perenio Smart Building Management System** Mobile App and an activated Control Gateway/IoT Router, as well as unite the above devices in a system.

2 Installation and Setup

Before installation, the User shall select one of the following possible locations and mounting modes for the device:

- On a vertical surface (wall, furniture, etc.);
- Using 3M mounting tape or screws.

Also, make sure that the selected location meets the following requirements:

- No clutter and obstructions in the Sensor detection area;
- Flat and stable surface in the installation site of the Sensor.

NOTE. It is not recommended to install the device in areas with a high level of noise and a high-frequency interference. Reinforced concrete floors may reduce the distance of wireless signal transmission. It is recommended to install the Motion Sensor at a minimum distance from the Control Gateway/IoT Router.

Figures below show possible installation locations for the Sensor:
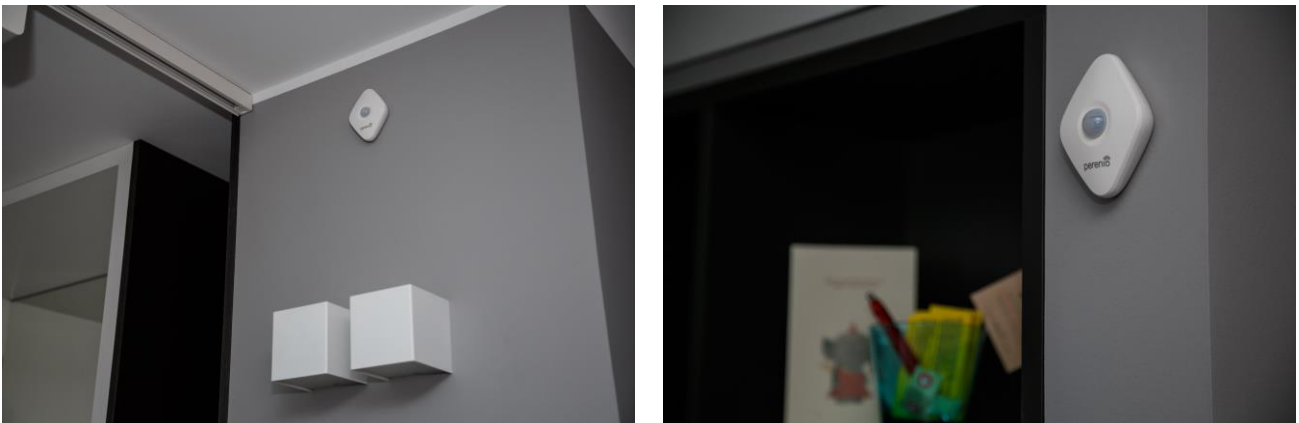
Figure 5 – Examples of Installation*

* Images are provided for informational purposes only

For installation of the Motion Sensor using 3M tape, it is necessary to prepare the surface as follows:

1. Wipe the surface of the Sensor to which the 3M tape will be attached with alcohol and wait until it is dry.
2. Attach the 3M tape to the Sensor surface.
3. Make sure that the place of the Sensor installation is smooth and free from dust, dirt, etc.
4. Wipe the surface to which the 3M tape will be attached with alcohol and wait until it is dry.

5. Attach the device in the place of installation using the 3M tape.

The entire process of setting-up the Sensor can be divided into several key stages:

- Logging in to the User Account of the **Perenio Smart** Mobile App;
- Checking for the availability of the CG/IoT Router connected to the mains and the Internet;
- Connection of the Sensor to the Control Gateway/IoT Router.

2.1 First Installation and Configuration of the Motion Sensor

In order to connect the Motion Sensor to the Control Gateway through the **Perenio Smart** Mobile App, it is necessary to perform the following steps:

1. Unpack the Sensor and switch it on (See par. **A** below).
2. Login in to the **Perenio Smart Building Management System** User Account (See par. **B** below).
3. Connect the Sensor to the Control Gateway/IoT Router (See par. **C** below).
4. Enter the desired Sensor name and select the Room of installation.
5. Install the Sensor in the selected room.

A. SWITCHING ON AND INSTALLATION OF THE MOTION SENSOR

To install the **PECMS01** Motion Sensor**,** follow steps below:

1. Unpack the device.
2. Choose a suitable installation area for the Sensor (e.g., on the wall in the area where intruders are possible).
3. Remove the Sensor mounting plate and open the battery cover (See Figure 2 above) to remove the battery isolation strip and switch on the device. Immediately after switching on, the red LED will flash.
4. Attach the Motion Sensor on the wall using the 3M tape (Recommended installation height is 2.0 m to 2.6 m) so that the red LED is located at the top (See Figure 6 below).
5. Mount the Sensor onto the mounting plate.

NOTE. If the LED starts flashing slowly after removal of the battery isolation film, you can immediately begin connecting it to the Control Gateway/IoT Router and skip **Step d** of par. C. "CONNECTION TO THE CONTROL GATEWAY/IOT ROUTER", i.e. performing the reset.
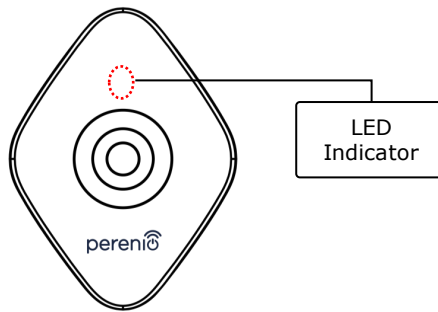
Figure 6 – Motion Sensor orientation during installation

> **NOTE.** The Sensor is designed for installation on the wall or other vertical surface only and is not suitable for installation on the ceiling. The Sensor can be installed using screws (supplied). Do not install the Sensor in areas with extreme temperature changes (near heaters, refrigerators, stoves, etc.).

After the above Steps 1-6 are successfully completed, the Motion Sensor is considered to be installed and ready for operation.

B. LOGIN TO THE EXISTING USER ACCOUNT

**a.** Enter your e-mail address and password in the login screen.

b. Click on the **LOG IN** button.

NOTE. If the password was lost, the User can restore it by clicking on a corresponding link on the screen.

To restore a forgotten password, use the e-mail address linked to your User Account, to which instructions on changing the password will be sent.
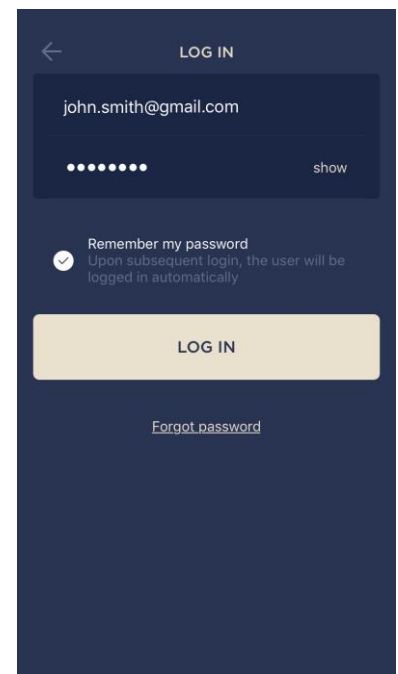
C. CONNECTION TO THE CONTROL GATEWAY/IOT ROUTER
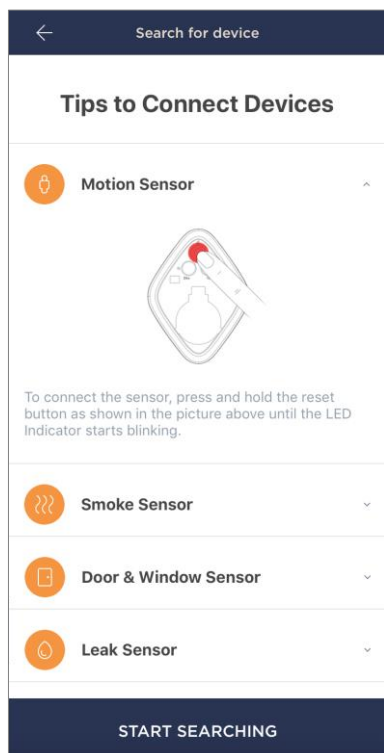
a. Click on the "+" icon in the upper right corner of the Devices tab and select the Sensor in the list;

b. Select the Control Gateway/IoT Router to which the Sensor shall be connected (This screen will be displayed, only if there are several Control Gateways/IoT Routers activated in the User Account).

NOTE. The Control Gateway/IoT Router must be connected to the mains and the Internet, as well as activated in the Perenio Smart App.

c. Start searching for Sensors;

d. If the LED flashes slowly after the first power on of the device, proceed to the **Step e**, otherwise press and hold the reset button as shown in the picture above until the LED Indicator starts blinking.

NOTE. Several sensors may be connected to the Control Gateway/IoT Router at once.

e. After successful connection, enter the Sensor's name and select the Room.

C.1. CONNECTION ERRORS

The connection failure of the device may occur due to one of the following reasons:

a. The device is switched off or at a too long distance from the Control Gateway/IoT Router (4.5 meters);

b. The Control Gateway/IoT Router is offline;

c. The LED Indicator was blinking fast before start of the sensor connection (You should remove the sensor battery and insert it back into the casing).

NOTE. To eliminate connection failures, follow instructions specified on corresponding screens of the smartphone.
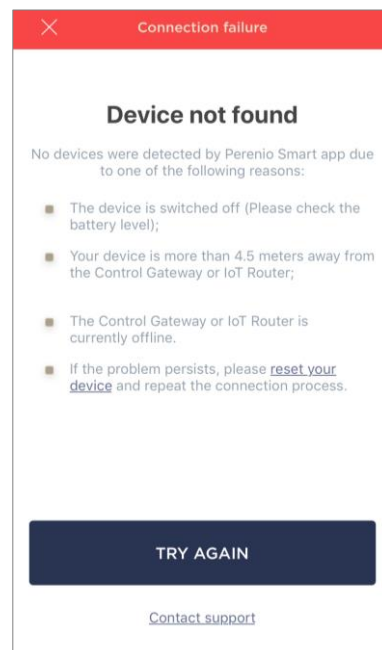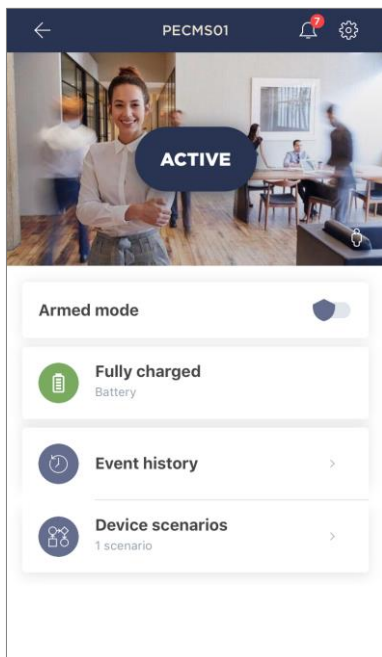
The entire process of the Sensor connection in the Mobile App is shown below.

1	2	3	4
5	6	7	8
9	10	11	12
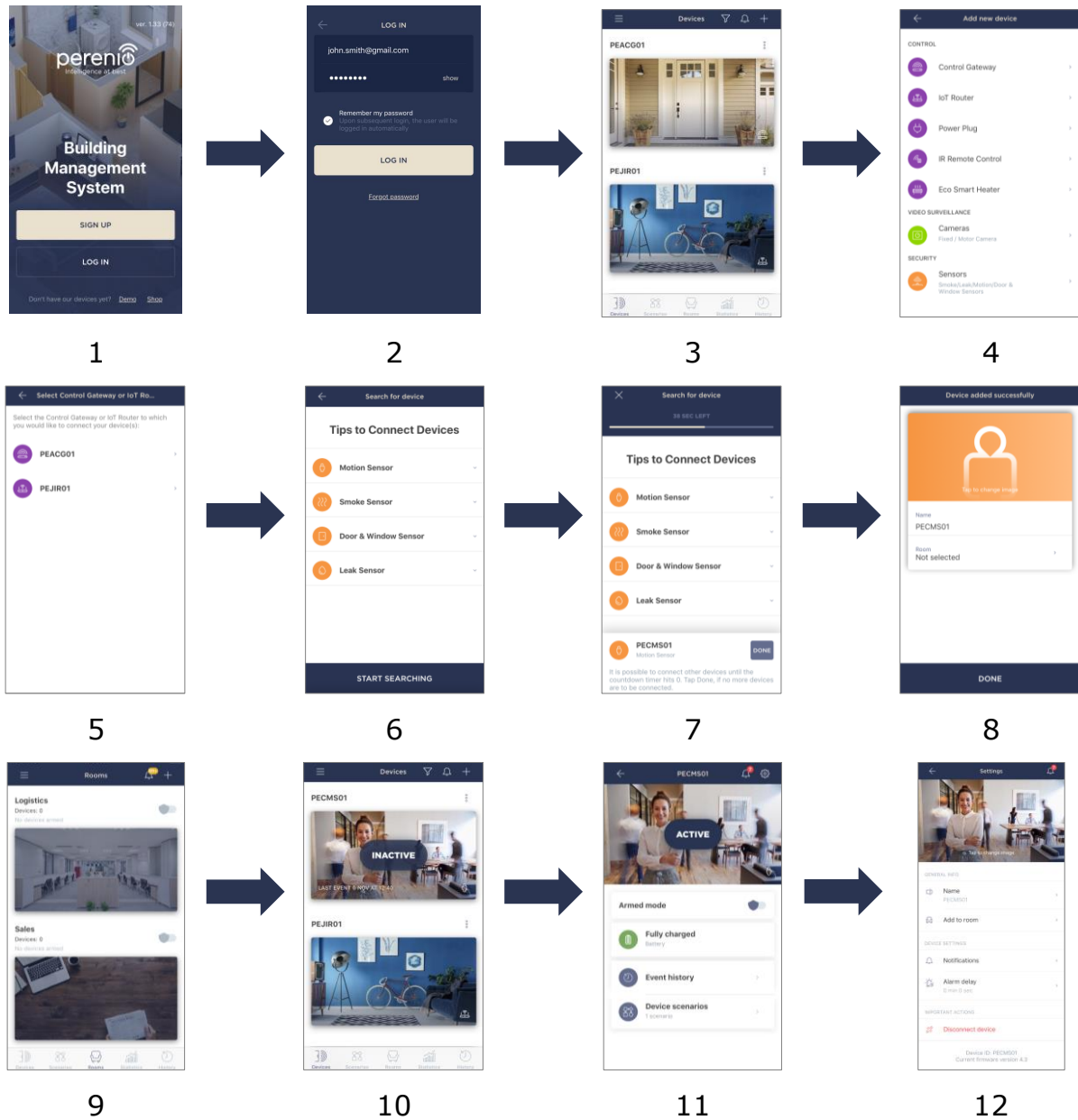
Figure 7 – Add new device (Sensor) procedure

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2.2 Sensor Control Panel

The Motion Sensor control panel is displayed, when you click on its image in the list of connected devices in the "Devices" tab.

The user can perform the following actions in this control panel:

- View the current state of the device;
- Arm and Disarm the sensor;
- View the battery level;
- View the history of events;
- Create, activate, stop and delete scenarios;
- Make additional setting of the sensor.

2.2.1 Armed Mode

The user may Arm the Motion Sensor in order to receive push notifications on their smartphone every time the sensor is actuated.

Also, if there is no need to receive push notifications, the sensor can be Disarmed, so that all changes of its state are saved to the "Event History" tab only.
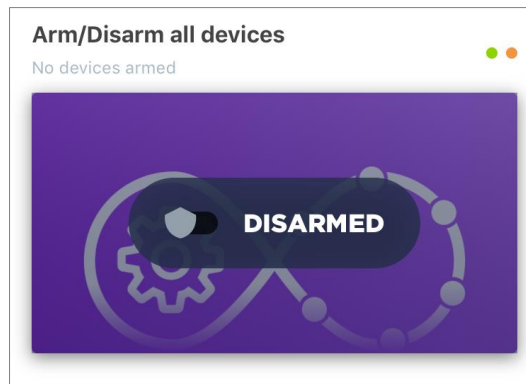
The Armed Mode can be activated and deactivated in two ways as follows:

- Press the corresponding toggle switch in the sensor control panel;

NOTE that in this case, the specified sensor will be Armed only.

- Go to "Device Scenarios" screen and Arm the Location.

NOTE that in this case, the entire Location will be Armed, i.e. not only the above sensor, but also other devices connected in this Location.

2.2.2 Battery Level

The battery level is displayed in the following four (4) levels:

- Fully charged (100% to 95%);
- High level of charge (94% to 75%);
- Average level of charge (74% to 31%);
- Low level of charge (30% to 11%);
- Discharged (10% to 0%).

NOTE that it is recommended to purchase additional batteries in advance to ensure stable operation of the sensors.

2.2.3 Event History

In this tab, the user can view the status of the sensor, as well as the time when the event occurred.

Doc Version: 2.4.1

Functions are as follows:

- "ENTIRE HISTORY" filter, which allows viewing the following events:
  - Changes in the security modes ("Armed", "Disarmed");
  - Device actuation events ("Active", "Inactive");
  - Notifications about low battery level;
  - Start and completion of the firmware update.
- "ALARMS ONLY" filter, which displays device actuation events for the Armed Mode only;
- Filter by date.

NOTE that the number of days available for viewing depends on the Subscription Plan (It is 7 days for free Subscription).
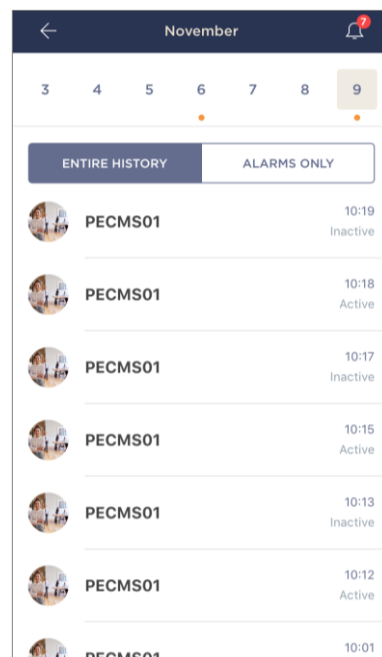
2.2.4 Device Scenarios

The user may use the Motion Sensor in preset scenarios in order to automate the operation of **Perenio®** devices for a specific purpose (e.g., to turn on the night lamp in a room upon motion detection in another room).

> **NOTE** that the scenario to Arm the Location is available for this sensor by default.

Create and Run Scenario

1. Click on the "Device Scenarios" button in the sensor control panel.

Device scenarios
1 scenario
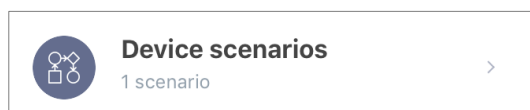
2. In the "Scenarios" tab, click on the "+" icon in the right upper corner of the screen and select a suitable template from the list.

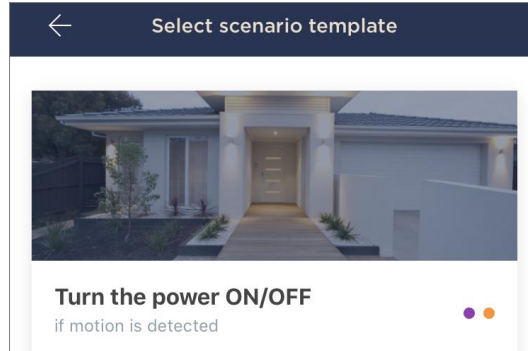**NOTE** that is any devices are missing to operate the scenario, the user will see a corresponding message on the screen.
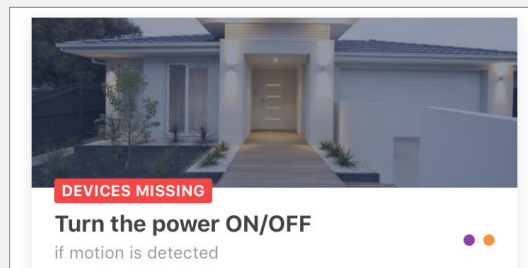
To view the list of devices required to activate a scenario, click on the "Details" button under the scenario description.

3. Select a sensor or sensors from the list that will act as triggers to run the scenario, and click on the "Next" button.
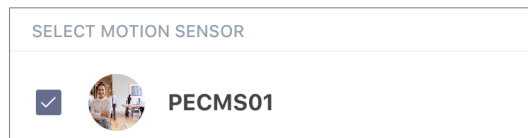
4. Select a device that shall perform the desired action upon actuation of at least one of the sensors selected in the previous step.

SELECT ACTION

◉ Turn on the power

○ Turn off the power

SELECT POWER LINK

☑ 🔌 **PEHPL01**

☐ 🔌 **PEHPL01**

5. Enter the scenario name and click on the "Save" button.

Name
Turn on the lamp

IF THIS EVENT OCCURS:

PECMS01   Motion detected   >

THEN:

🔌 **PEHPL01**   Switch on   >

Save

6. Run the created scenario by clicking on a corresponding button in the "Scenarios" tab.

Turn on the lamp
Devices: 2

▶ **RUN**
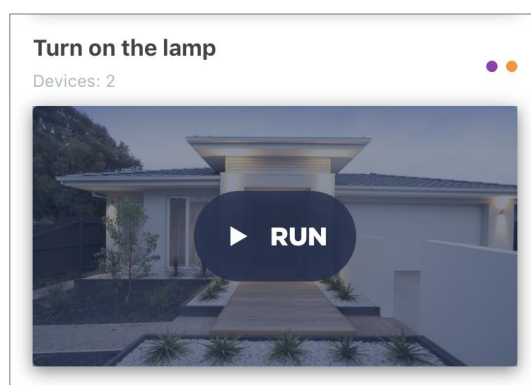
Stop and Delete Scenario
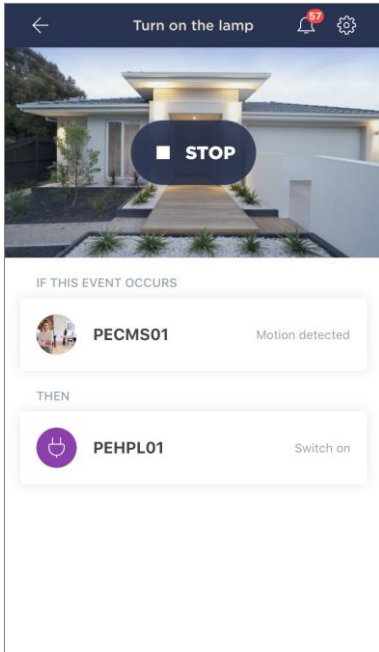
To stop a running scenario, just click on the "Stop" button (See left).

To delete a scenario, click on the settings icon in the right upper corner of the scenario control panel (See left) and click on the "Delete Scenario" button.

NOTE that deleted scenario cannot be recovered, so if you accidentally delete it, you will have to create it again.

2.2.5 Additional Settings

After the Sensor is activated in the **Perenio Smart** app, the user can make the following settings remotely:

- Change or upload the device image for easier identification of the sensor in the list of connected devices;
- Change the name of the device;
- Add a device to the Room or change the Room of installation;
- Turn on the sound of push notifications;
- Set up an alarm delay;
- Remove the device from the mobile application.
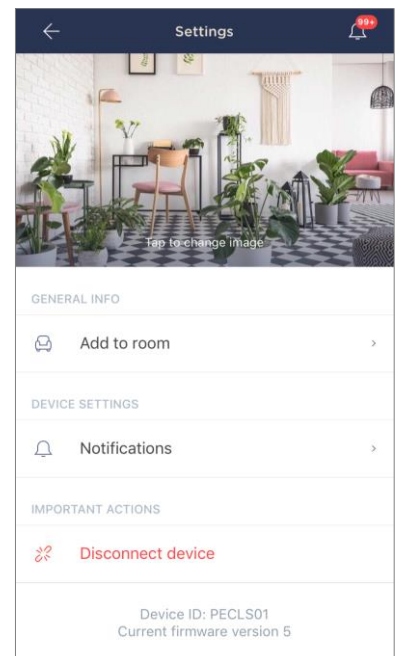
There are two ways to switch to the settings screen, namely:

1. Click on the icon with three dots in the right upper corner of the sensor image in the mobile application and select "Settings".
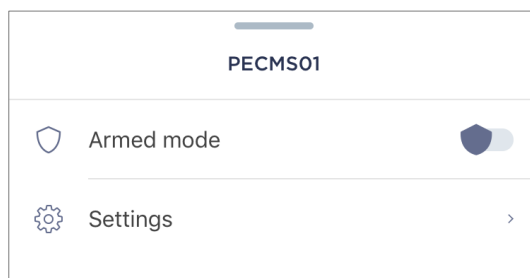
2. In the control panel, click on the settings icon.

Alarm Delay
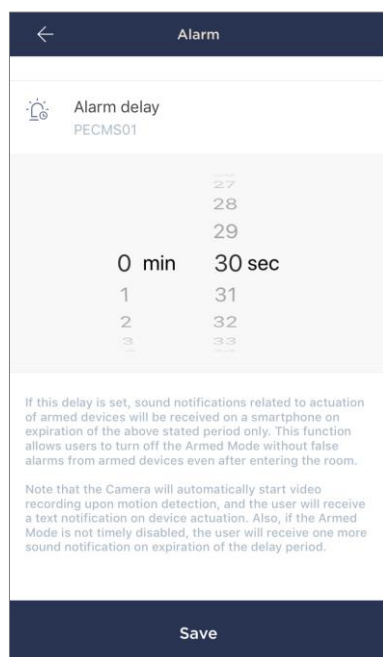
To set the delay period, the user shall click on f corresponding button in the sensor settings screen.

If the alarm delay is set, the sound notification related to the sensor actuation will be received on a smartphone only after a specified period of time.

ATTENTION! The alarm delay can only be set for sensors that are Armed.

This feature allows users to Disarm devices after entering the premises without receiving false alarms.

2.3 Changing the Room or Location for the Sensor

When using the Sensor, it may be necessary to change its installation area. The following options are possible:

1. **Change the room/location** (The CG/IoT Router remains the same) as follows:

    a. Demount the Sensor and move it to another room;

    b. Make sure that the Sensor is at an allowable distance from the Control Gateway/IoT Router;

    c. Install the Sensor in a new room (Use a new 3M tape, if required);

    d. Change the Room in Sensor settings in the User Account.

2. **Change the room/location** (Connection to another CG/IoT Router is required) as follows:

    a. Sign in to the Perenio Smart app and select the Location where the Sensor is activated;

    b. In the Devices tab, select the required Sensor from the list and click on the ⚙ icon (Settings);

    c. In the pop-up window, choose "Disconnect device";

    d. Demount the Sensor and move it to another room/building;

    e. Make sure that the Sensor is at an allowable distance from the Control Gateway/IoT Router;

    f. Install the Sensor in a new room (Use a new 3M tape, if required);

    g. In the User Account, select the Location where you want to move the Sensor;

    h. Initiate the Sensor search by the Control Gateway/IoT Router through the Perenio Smart application according to par. **C. "CONNECTION TO THE CONTROL GATEWAY/IOT ROUTER"**.

NOTE. The User can manually disconnect the Sensor from the Control Gateway/IoT Router. To do this, press and hold the Reset button on the Sensor until the LED flashes (It usually takes no more than 5 seconds).

To check that the Sensor was successfully disconnected, you should update the list in the Devices tab (Pull the screen down until the progress icon appears and the data is updated). If the sensor is disconnected, it will disappear from the list of connected devices.

2.4 History and Push-Notifications

All notifications and other messages including changes in the status of **Perenio®** devices are displayed in the "History" tab. The most important messages can be viewed online in the "🔔" notification window in your account.

The following types of notifications are available:

- (Critical) alarms (They always come as push notifications to your smartphone, and are also displayed in the notification window, as well as in the "History" tab of the mobile app; The indication color is red);
- Important messages (They are always displayed in the notification window and the "History" tab; The indication color is yellow);
- Typical events (They are displayed in the "History" tab only; The indication color is not available).

Alarms. These are the most important messages, which include notifications about the following events:

- IoT Router battery charging is low;
- The IoT Router runs on battery;
- Motion detection by the camera;
- There is not enough space on the SD card to continue recording video;
- Change of the camera status to "Offline";
- Sensor triggering in the armed mode, including all alarms fro smoke and leak sensors (even when the Location is in the disarmed mode);
- Disabling the sensor armed mode;
- Failure to perform the scenario;
- Connection of a dangerous device, and overloading the network (for the Power Link Wi-Fi Smart plug);
- Sudden changes or insufficient voltage, excessive power, temperature and/or consumption (for Power Link (ZigBee) Smart plug);
- Falls and/or overheats of the Eco Smart Heater, or sudden changes in voltage;
- Important updates.

Important messages. These are notifications on launches and completion of the camera and the Control Gateway firmware update, as well as notifications about low battery level of the sensor and changing the armed mode for the Location.

Typical Events. Various Perenio IoT newsletters, as well as messages about triggering Door & Window/Motion sensor in the disarmed mode.

2.5 Battery Replacement

The Motion Sensor can operate with one battery for a period of up to two (2) years. The battery level can be controlled via the Mobile App (Motion Sensor panel). Also, the Motion Sensor will send light and sound signals if the battery level becomes too low.

In order to properly replace a discharged battery, the User observe the following rules:

- Make sure that the new battery is the same as the original (supplied with the Sensor);
- When replacing the battery, the User shall observe the polarity (See below).
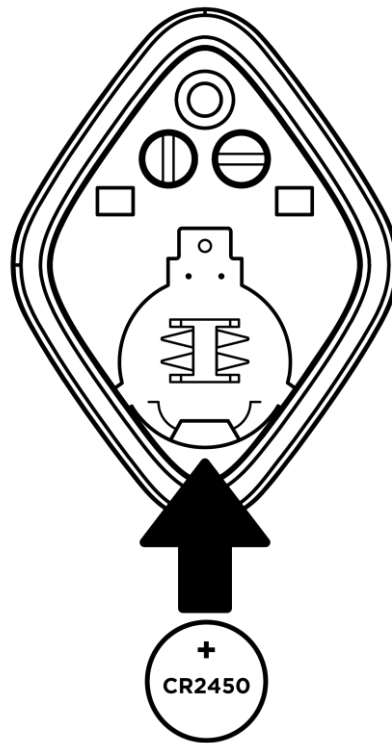
Figure 8 – Positioning of the battery in the Motion Sensor

After battery replacement, the LED of the Sensor will blink.

Doc Version: 2.4.1

3 Maintenance and Repair

The **Perenio® PECMS01** Motion Sensor does not require special maintenance in the normal course of operation. However, in order to maintain the proper state and stable operation of the device it is recommended to perform the following actions from time to time:

- Clean the device casing from dirt and dust at least once every six months;
- Check and adjust the Sensor position periodically;
- Check for updates of the Perenio Smart app;
- Check for battery condition and replace it in a timely manner;
- Repair mechanical damages to devices (in Service Centers).

The **Perenio®** Motion Sensor repairs shall be carried out in Service Centers, because casings will have to be opened in the case of any element failure.

In the case of warranty repairs or replacement, the User shall provide the Seller with the sales receipt and the purchased device.

For details on the replacement and repairs of the **Perenio®** Motion Sensor, please contact your local Company representative or the Tech Support Department at **perenio.com**.

4 Warranty Obligations

The warranty period for the Motion Sensor shall be **Twenty-Four (24) months** from the date of sale to the End User. General-purpose batteries (such as AAA, CR123A, CR2450, etc.) shall not be covered by the warranty of the Manufacturer of IP Cameras, the Smart Hub and sensors.

The Warranty Card shall be deemed valid provided that it is correctly and completely filled in by the Seller. Upon the purchase, the Customer shall check that both the Serial Number and the Model name of the device correspond to those indicated in the Warranty Card.

Incomplete or illegible Warranty Card shall be deemed not valid. In this case, it is recommended to contact the Seller and ask for a duly filled in Warranty Card. It shall be also allowed to provide the original of the sales/cashier's receipt or such other documentary evidence of the fact and the date of sale of the device. The date of sale shall be the date indicated on the sales/cashier's receipt or other relevant document. If the date of sale is not possible to be determined, the start of the warranty period shall be the date of manufacture of the device.

The Manufacturer shall guarantee that all materials, components and assemblies of **Perenio®** devices are free from defects under normal operation within the warranty period. The limited warranty shall be applied to the first End Customer of **Perenio®** devices only and cannot be transferred to a subsequent customer.

For warranty replacement, the device must be returned to the Seller along with its receipt. Warranty obligations for **Perenio®** devices shall be provided in the country of their purchase only.

WARRANTY SERVICE PROCEDURE

In the case of any alleged defect or deficiency of the device detected, the Customer shall contact the Authorized Service Center before the warranty period expiration and provide the following:

1. The device with an alleged defect or deficiency.
2. The Warranty Card filled out in accordance with the applicable legal requirements, or the original of the document confirming the purchase of the device, including clear indication of the name and the address of the Seller, as well as the date when this device was sold.

LIMITATION OF LIABILITY

Perenio® devices SHALL NOT BE SUBJECT TO a free warranty service in the case of identification of at least one of the following damages or defects:

- Any damage caused by force majeure, accidents, and willful or careless acts (omissions) of the Customer or third parties;
- Any damage caused by the impact of other objects including but not limited to exposure to moisture, dampness, extreme temperatures or environmental conditions (or jumps in such conditions), corrosion and oxidation, as well as penetration of food or liquid, and the effects of chemicals, animals, insects and byproducts thereof;
- In the event when the device (accessories and/or components) was unsealed (the seal integrity was violated), modified or repaired by any party other than the Authorized Service Center, including repair works using unauthorized spare parts;
- Any defects or damage caused by improper or unintended use of the device, including operation contrary to available manuals;
- Any defects caused by attempts to connect to incompatible software;
- Any defects caused by natural wear and tear of Products, including bags, casings, batteries or Installation and Operation Manuals;
- In the event when the Serial Number (Name Plates), the date of manufacture or the Model name on the device casing was in any way removed, erased, affected, altered or made illegible;
- In the case of violation of operating procedures and conditions, as well as the device installation instructions described in relevant Manuals;
- Cracks, scratches and other defects caused as a result of transportation and/or operation of the device by the Customer or acts of negligence on their part;
- Mechanical damages that occurred after transferal of the device to the Customer including damage caused by sharp objects, bending, squeezing, falling, etc.;
- Any damage caused by non-conformity with the standards of power supply, telecommunication and cable networks or similar external factors.

THE PRESENT LIMITED WARRANTY IS AN EXCLUSIVE AND THE ONLY PROVIDED GUARANTEE THAT SHALL REPLACE ANY OTHER EXPRESS AND IMPLIED GUARANTEES. THE MANUFACTURER SHALL PROVIDE NO GUARANTEES, WHETHER EXPRESS OR IMPLIED, BEYOND THE DESCRIPTION CONTAINED IN THE PRESENT DOCUMENT, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE CUSTOMER MAY USE DEFECTIVE OR INAPPLICABLE DEVICE AT HIS/HER OWN DISCRETION. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR DAMAGE TO OTHER PROPERTY CAUSED BY DEVICE DEFECTS, THE LOSS OF USABILITY OR TIME OR FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGE OR LOSS INCLUDING BUT NOT LIMITED TO COMMERCIAL

LOSS, LOSS OF PROFITS, LOSS OF CONFIDENTIAL OR OTHER INFORMATION, AS WELL AS DAMAGES CAUSED BY BREAKS IN COMMERCIAL OR PRODUCTION ACTIVITIES DUE TO THE FACT THAT THE DEVICE WAS RECOGNIZED AS FAULTY, DEFECTIVE OR NOT ALLOWED FOR USAGE.

The present limited warranty shall provide the Customer with certain legal rights. The Customer may also have other rights in accordance with the local consumer protection laws that vary from country to country and may not coincide with this limited warranty. For full understanding of the Customer's rights, you shall read local acts.

NOTE. The Manufacturer does not produce equipment for *Vital Tasks*. Vital Task Products shall include life support systems, medical equipment, implantation-related medical devices, commercial transportation, nuclear equipment or systems, and any other fields of application where equipment failures may do harm to a humans' health or cause their deaths, as well as result in a property damage.

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5 Storage, Transportation and Disposal of Devices

The **Perenio®** Motion Sensor may be shipped by any kind of covered vehicles (by rail, or road or in sealed heated airplane compartments, etc.) in accordance with the requirements of current regulatory documents applicable to fragile goods sensitive to moisture.

Similar conditions shall apply to the device storage at the Seller's warehouse.

In accordance with the Waste Electrical and Electronic Equipment (WEEE)* regulations, all electrical and electronic products must be collected separately at the end of their service life, and cannot be disposed of together with unsorted household waste.

Parts of worn out devices must be separated and sorted by the material type. In this way, every user can contribute to reuse, recycling and other forms of recovery of waste electrical and electronic equipment. Proper collection, recycling, and disposal of such devices will help avoid potential environmental and health impacts from the harmful substances they contain.

To dispose of the device, it must be returned to the point of sale, or to a local waste collection and recycling company recommended by the state or local authorities. Disposal is carried out in accordance with the applicable laws and regulations of the respective country.

For more details on how to properly dispose of your used device, please contact your device supplier, your waste disposal service or the local authorities responsible for waste disposal.

> **NOTE.** The User must comply with the temperature and humidity conditions of storage and transportation specified in the Table of technical specifications of the present Installation and Operation Manual.

* Waste Electrical and Electronic Equipment, or WEEE, means used electrical or electronic equipment, including all components, assemblies, consumables that are part of the equipment at the time it is taken out of service (including supplied batteries (if any), components containing mercury, etc.).

6 Other Information

Manufacturer

Name	*Perenio IoT spol s r.o.*
Address	Na Dlouhem 79, Ricany – Jazlovice 251 01, Czech Republic
Contact Info	perenio.com, info@perenio.com

Importing Company

Name	*ASBISc Enterprises PLC*
Address	43 Kolonakiou Street, Diamond Court, Ayios Athanasios, 4103 Limassol, Cyprus

Quality Claims Acceptance and Warranty Service Company

Name	*ASBISc Enterprises PLC*
Address	43 Kolonakiou Street, Diamond Court, Ayios Athanasios, 4103 Limassol, Cyprus

Czech Republic

Name	*ASBIS CZ, s.r.o.*
Address	Obchodní 103, Čestlice, 25101

Info on Certificates and Declarations

Declarations, Reports	Declaration of Conformity to RoHS and REACH as of April 19, 2018; Test Verification of Conformity #GFT-OP-11b as of March 7, 2017

Addresses of Service Centers are available at **perenio.com** in the "Support" Section.

7 Troubleshooting

Table below shows typical errors and problems that may occur in the process of connection and configuration of the Motion Sensor.

Table 3 – Typical Errors and Troubleshooting Methods

Item No	Problem	Possible Reasons	Solution
1	The sensor triggers unexpectedly	Low battery level of the sensor or heat emission in the sensor field of vision	Replace the battery or remove thermal objects from the sensor area of detection
2	The sensor does not connect to the CG/IoT Router	Too long distance or obstacles between the sensor and the CG/IoT Router	Remove obstacles or reduce the distance between the sensor and the CG/IoT Router
3	Reset to factory settings doesn't work	Low battery level	Replace the battery

8 Glossary

3M Tape	Double-sided mounting tape which is a rubber or acrylic adhesive applied on both sides of the foam. It is used in order to avoid drilling holes and using fasteners
ABS	Modern synthetic polymer with a high level of impact resistance and elasticity
CG	The **Perenio®** PEACG01 Control Gateway
DSP	The Digital Signal Processor is a special microprocessor designed to ensure digitized signal handling (usually, in real time mode)
IoT	The Internet of Things is a system of Internet-connected devices able to collect and exchange data coming from built-in services
Location	General term which means a building or a structure in which **Perenio®** Cameras, Control Gateways/IoT Routers and/or Sensors are installed
Perenio Smart	Software developed by *Perenio IoT* for remote control of wireless Cameras from smartphones
PIR Sensor	Passive infrared sensor that contains a pyroelectric sensitive element that detects changes in heat emission
Viewing Angle	The area that falls into the field of viewing of the Sensor
Zigbee	A network protocol designed for secure transmission of data at low speeds, which is recognized for an extremely low power consumption

Doc Version: 2.4.1