



# **Installation and Operation Manual for Perenio® Power Link Wi-Fi Devices**

(Article: PEHPL10)



## Introduction

The **Power Link Wi-Fi** device is designed to monitor voltage, current and power of plugged in electrical equipment, as well as to remotely turn it on and/or off. This device can be managed both manually and via the **Perenio Smart** or **Perenio Lite** mobile application, as well as can also be controlled via intelligent voice assistants.

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

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## 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.

*Perenio IoT* reserves the right to modify the device and make corrections or changes to this document without prior notice of the User, and shall not be responsible for any potential negative consequences which may arise from the use of an outdated version of the document, as well as for any possible technical and/or typographical errors, either omitted or accidental, or any related damage that may result from the document transfer or the use of devices.

*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



The device is CE certified and complies with requirements of the following Directives of the European Union:

- 2014/53/EU Radio Equipment Directive (RED);
- 2014/35/EU Low Voltage Directive;
- 2004/30/EC Electromagnetic Compatibility Directive.



The device complies with the UKCA marking requirements for selling the device in the UK



The device has passed all procedures of assessments established in Technical Regulations of the Customs Union and conforms with standards of the Customs Union



The device complies with the requirements of Restriction of the Use of Certain Hazardous Substances in Electronic and Electrical Equipment (2011/65/EU Directive)



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



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**.

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

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## 1 General Description and Specifications

### 1.1 General Purpose

The **Perenio® Power Link Wi-Fi** device is designed to monitor, control and automatically cutoff power consumption of connected electrical equipment.

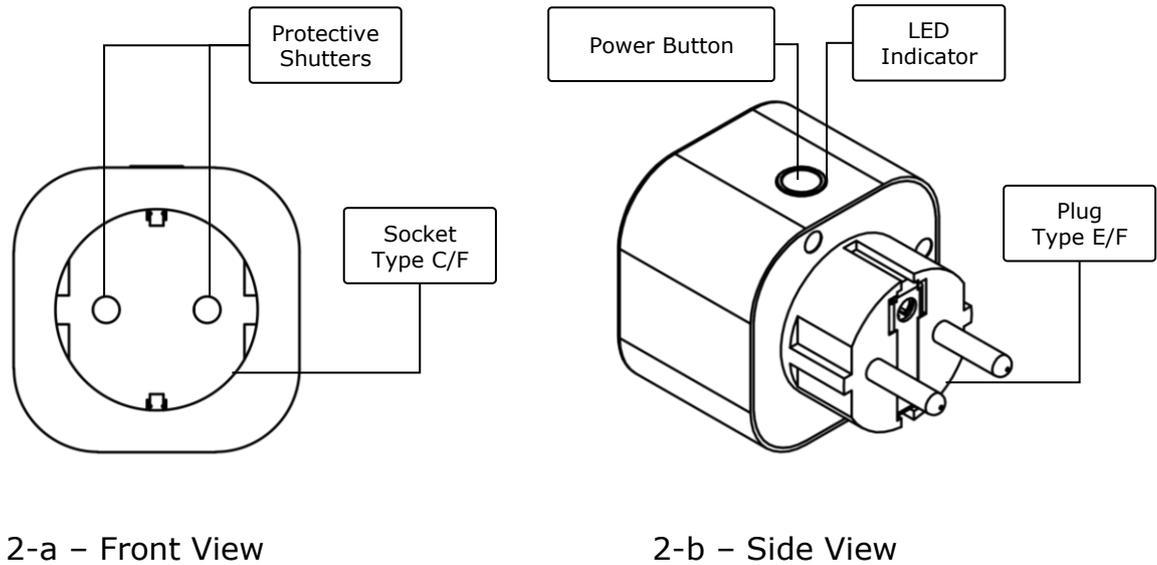
This smart plug is equipped with protective shutters that prevent foreign objects from entering the device openings and in such a way protect children from the electric shock.

The device has a number of distinctive features, namely:

- Support of Wi-Fi;
- Integration with Google Home (Google Assistant), Apple HomeKit (Siri) and Amazon Alexa;
- iOS (12.1 and higher) and Android (5.0 and higher) smartphone compatibility;
- IP20 Protection Class;
- Plug type E/F, socket type C/F;
- Low power consumption of not more than 1 W;
- Peak power of 4,000 W;
- Turn on/off timer;
- Voltage, current and power control;
- Management through a free mobile application;
- Cloud service support.



Figure 1 – Exterior



**Figure 2 – Buttons, Ports and Indicators**

## Buttons, Ports and Indicators

- Protective Shutters** Special plastic covers for the power plug openings that prevent foreign objects from entering therein, which protects children from the electric shock
- Power Button** It is used to power on and off the device, as well as to connect to the Mobile App
- LED Indicator** Light ring around the button perimeter where color changes depending on the power consumption level and various states of the device (See Table 1)
- Socket Type C/F** Compatibility with plug type E/F
- Plug Type E/F** Compatibility with socket type F

Table 1 – LED Indicator statuses

Indicator	Status	Description
Green	Flashing	The device is switched on* and activated or not activated in the mobile app
	Blinking	The device is switched on* and in the process of activation in the mobile app

Indicator	Status	Description
	Flickering	The device is switched on* and in the process of activation in the AP Mode (For Perenio Lite only)
	Off	The device is not connected to the source of power or switched off**

\* "The device is switched on" means that the smart plug is connected to the source of power and supplies energy to an appliance plugged into it.

\*\* "The device is switched off" means that the smart plug is connected to the source of power, but does not supply energy to an appliance plugged into it.

**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	PEHPL10 (white color)
Communication Technology	Wi-Fi (IEEE802.11 b/g/n20/n40)
Compatibility	Android (5.0 and higher) and iOS (12.1 and higher)
Integration	Apple HomeKit, Google Home, Amazon Alexa, Apple Siri
MCU	RTL8710BN
Wi-Fi Antenna	Type: Built-in Operating frequency: 2.400 MHz to 2.4835 MHz

Parameter	Value
	Transmitting Power: 17.5 dBm max Receiver Sensitivity: -91 dBm Antenna Gain: -2 dBi
Server	Remote
Power	Input voltage: 100 VAC to 240 VAC Max current: 16 A Frequency: 50 Hz to 60 Hz Operating power: 3,500 W Peak power: 4,000 W Power consumption: 1 W max
Operating Temperature	0 °C to +40 °C
Operating Humidity	Up to 75 % RH (non-condensing)
Storage Temperature	0 °C to +50 °C
Storage Humidity	Up to 85 % RH (non-condensing)
Степень защиты	IP20
RTC Module	Not available
Installation	Directly into the mains socket. For indoor installation only.
Casing Material	PC945, Class UL94-V0
Color	White
Dimensions (L x W x H)	54 x 76 x 54mm
Weight	90 g
Warranty Period	2 years
Service Life	2 years
Certification	CE, EAC, RoHS, TP.BY
Data Protection	GDPR Compliance

### 1.3 Scope of Delivery

The following items and accessories are supplied within the **Perenio® Power Link Wi-Fi** package:

1. Power Link Wi-Fi device (1 pc.)
2. Quick Start Guide (1 pc.)
3. Warranty Card (1 pc.)
4. Sticker (1 pc.)



**Figure 3 - Scope of Supply\***

\* Images of accessories are provided for informational purposes only

### 1.4 Packaging and Labelling

The **Perenio® Power Link Wi-Fi** device is supplied in a carton Gift Box of 56mm x 56mm x 86mm (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 manufacturing plant of devices.

Weights of the package are as follows:

- Net weight: 90g;
- Gross weight: 120g.

### 1.5 Safe Operation Rules

For the proper and safe operation of **Perenio®** power plugs, 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. Do not plug the device into other smart plugs in the mains.
3. Users shall observe storage/transportation conditions, as well as the operating temperature mode of the device as declared by the Manufacturer. Do not use the device in rooms with high humidity or extreme temperature variations.
4. When installing the device, Users shall provide for a gap of at least 10 cm wide on each side of the device to ensure its adequate ventilation at the place of installation (Do not cover the device with newspaper, tablecloth, curtains, etc.)
5. The device may be plugged into the power source, only if the mains voltage matches the value indicated on the device casing and/or specifications.
6. Do not immerse the device in water or other liquids due to the risk of fire and/or electric shock.
7. Keep the device away from open flame sources and hot surfaces.
8. Users must not drop, throw or bend the device or attempt to repair the device on their own.
9. In order to avoid personal injury, it shall not be allowed to use the cracked or in any other way damaged device.
10. 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.
11. Children shall not be allowed to use the device unsupervised and/or play with it.
12. It is not recommended to use the device by persons with physical or mental disabilities, unless they are under proper supervision or were properly instructed on possible hazards and safe usage of the device.

**ATTENTION!** Faulty wiring and excessive mains voltage can cause electric shock.

There is a danger of burns because the device becomes hot during operation! Let the device cool down completely.

## Warnings related to non-compliance with electrical safety rules when connecting devices

**Perenio® Power Link Wi-Fi** smart plug is designed for use in domestic areas and connection of general-purpose devices thereto.

When several power consumers are plugged into the smart plug at the same time, the following parameters must be considered:

1. Technical specification.

The smart plug shall be plugged into the household electrical outlet of 100 V to 240 V designed for current of no more than 16 A. It means that such an electrical outlet can withstand a maximum power of up to 3,840 W (or 3.8 kW). At the same time, the **Power Link Wi-Fi** device is equipped with a relay that can withstand a peak current of 20 A for no more than 30 seconds.

2. Electric wiring of domestic premises.

One of the important requirements for electrical wiring is the load (power) it must be able to withstand. The maximum allowable power depends on the mains voltage and current. For example, the maximum power shall be 3,520 W (or 3.5 kW) in domestic premises with a standard mains voltage (220 V) and current (16 A).

**NOTE.** The mains voltage may vary from country to country. In Europe and most Asian countries, the voltage ranges from 220 V to 240 V (A socket of a higher voltage (380V) is usually used for connection of powerful household appliances and power tools); in America and Japan, the power ranges from 100 V to 127 V.

The maximum amperage value for an electrical outlet is regulated by relevant documents and industry standards. Modern parameters are suitable for any household equipment installed in an apartment or a house. When such premises are commissioned, the current is increased from 10A to 16A for outlets, and it is very unlikely that outlets of 20A to 32A (such outlets are designed for electric stoves and cooktops) are used in domestic premises.

3. The rated voltage, maximum power and current of the connected load allowed for an extension cord or a T-connector being used.

If several devices are plugged into the single outlet at the same time using an extension cord or a tee, the power in the outlet will be equal to the sum of powers of those devices. Thus, it shall be noted that the total wattage and amperage of connected electrical appliances **MUST NOT** exceed the rating for the outlet stated by

the manufacturer, as well as the values allowed for the extension cord or the T-connector, and the values specified for the particular electrical system. Failure to follow the above rules may cause short circuits or overcurrent, and result in the risk of fire.

**ATTENTION!** Current overload results in a fire-hazardous emergency situation and occurs when high current flows through a power grid element. Inappropriate conductors, conductive parts and connection points are subjected to heat and thermal damage, which in turn leads to a decrease in insulation properties and destruction of components in the power grid, which causes fires.

## 2 Installation and Setup

Installation of the **Perenio® Power Link Wi-Fi** device is not required, since it shall be just plugged into the electrical socket to start operation.

**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.



**Figure 4 - Examples of Installation\***

\* Images are provided for informational purposes only

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

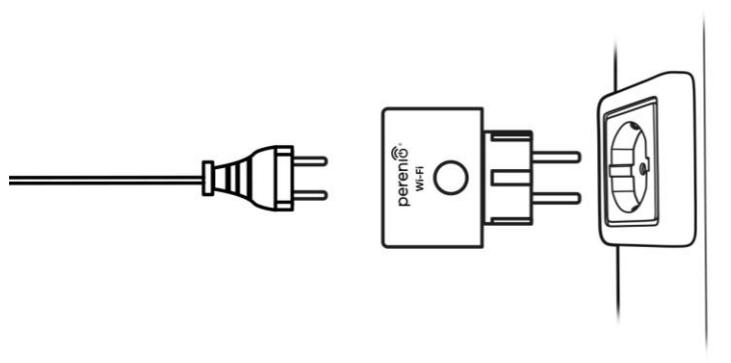
- Insert the Power Link device to the source of power (mains socket);
- Activate the device via the **Perenio Smart** or **Perenio Lite** Mobile App;
- Activate the device in Google Home, Amazon Alexa, Apple Siri or Amazon Alexa, if required (This option is possible only after activation of the device via the **Perenio Smart** or **Perenio Lite** Mobile App).

**NOTE.** The *Perenio Smart Home & Office Mobile App Manual* document is available for downloading at the web-site.

## 2.1 Initial Powering On

To power on the device, it is enough to unpack it, plug into the electrical socket and press the Power Button so that the LED Indicator blinks green.

After that, various home appliances may be connected to the smart plug.



**Figure 5** – Connection to the mains

## 2.2 Selection of the Mobile App for Control

The **Power Link Wi-Fi** device may be remotely managed via one of the following applications:

- **Perenio Smart** mobile app (recommended);
- **Perenio Lite** mobile app.

**NOTE** that the **Perenio Smart** mobile app is recommended because it has more functions and allows for control of all **Perenio<sup>®</sup>** devices.

If third-party (voice assistants) software is used, Power Link Wi-Fi device must be first activated in **Perenio Smart** or **Perenio Lite** mobile app.

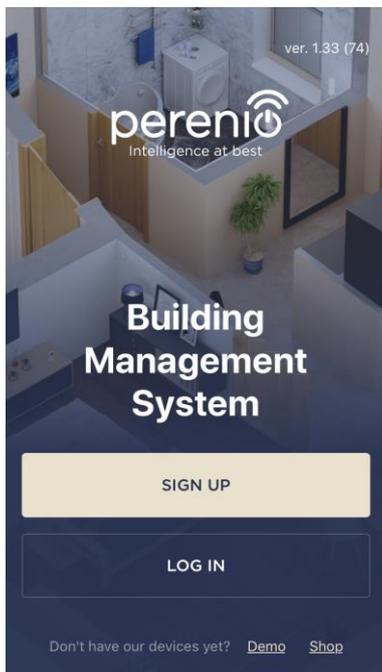
## 2.3 Activation in the Perenio Smart App

To ensure proper installation and operation of the smart plug, the User shall perform the following steps:

1. Unpack the device and connect it to the power source of 220V (See Figure 5 above).
2. Log in to the **Perenio Smart Home & Office** mobile application on your smartphone (See par. **A** below).
3. Activate the device in the mobile app (See pars. **B** and **C** below).
4. Enter the desired device name, Location and Room.

**ATTENTION!** The device firmware update process may be started upon its initial activation in the mobile application. **It is not allowed to power off the device after the firmware update process is started!**

### A. INSTALLATION OF THE PERENIO SMART MOBILE APP



The device shall be managed via a free mobile application available for downloading in Google Play or App Store.

In order to log in to the User Account, follow the steps below:

- a. Connect your smartphone to the Wi-Fi Network and download the **Perenio Smart Home & Office** app from Google Play or App Store;
- b. Register a new User Account (See par. **A.1.** below) or sign in to an existing User Account (See par. **A.2.** below).

## A.1. NEW USER ACCOUNT REGISTRATION

- a.** Fill in your e-mail address, user name and password (8 or more symbols including at least one capital letter and one number), then select the country of residence;
- b.** Agree to General Terms and Conditions, Privacy Policy and provisions for personal data protection (accessible by the link);
- c.** Click on the **SIGN UP** button.  
The User will receive an email to verify the User Account (Follow the link);
- d.** Log in to the User Account.

## A.2. LOGGING IN TO THE EXISTING USER ACCOUNT

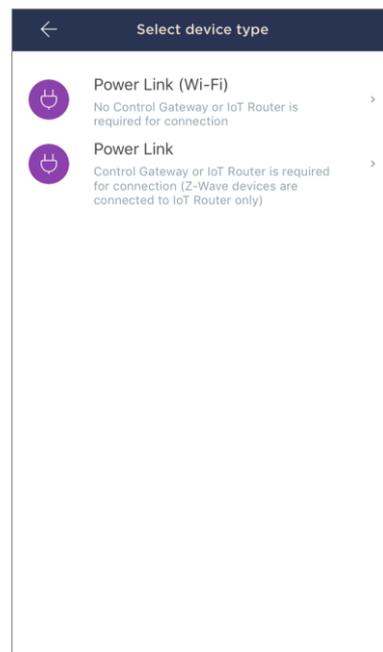
- a.** Enter your e-mail address and password in the login screen.
- b.** Click on the **LOG IN** button.

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

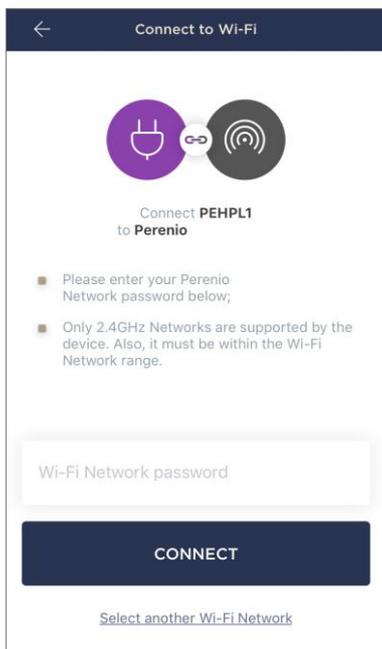
To restore a forgotten password, use the e-mail address linked to your User Account, as instructions on changing the password will be sent thereto.

## B. SELECTION OF THE DEVICE TYPE

- a. After login to the Perenio Smart App User Account, click on the “+” icon in the upper right corner of the “Devices” tab and select the Power Plug in the list (See Figure 6);
- b. Select the device type (Power Link (Wi-Fi));
- c. Confirm the permission to access your camera in the pop-up window (It may not be available for certain smartphone models);



## C. SENDING WI-FI NETWORK DATA TO THE DEVICE



Do as follows after the screen to connect the device to the Wi-Fi Network will be displayed:

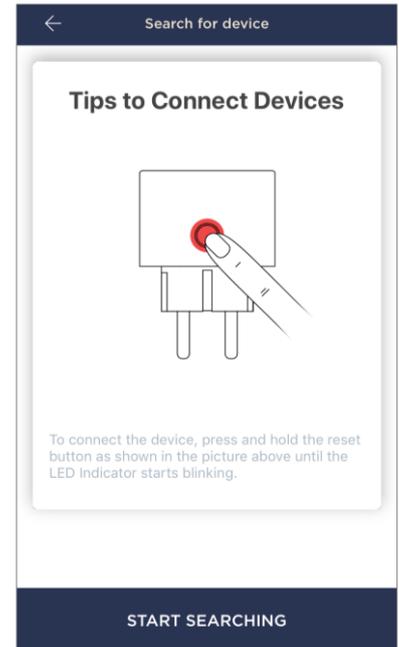
- a. Enter the password from the Wi-Fi Network or select another network;

**NOTE.** The device may be connected to Wi-Fi Network of **2.4GHz** only.

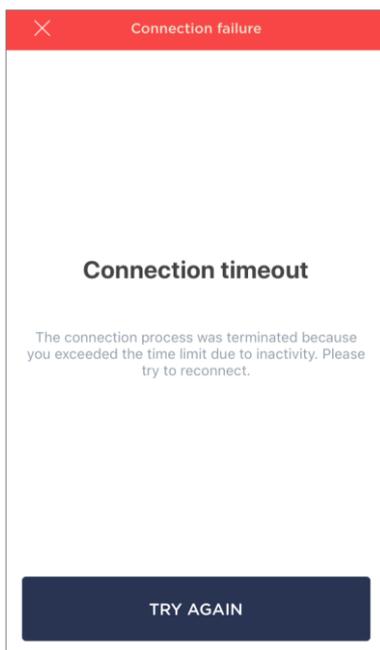
- b. Click on the **CONNECT** button.

**NOTE.** Before connecting, make sure that the smart plug is powered on and that the smartphone is located at a distance of not more than 2 meters from it.

- c. Press and hold the power button until the LED indicator starts blinking;
- d. Click on **START SEARCHING** button;
- e. Wait for the connection process to be completed.



### 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 smartphone;
- b. The device was already activated in the current or some other User Account;
- c. The device ID and/or password or Wi-Fi Network data was entered incorrectly;
- d. Internet Provider failures.

**NOTE.** To eliminate connection failures, follow instructions specified on corresponding screens of the smartphone.

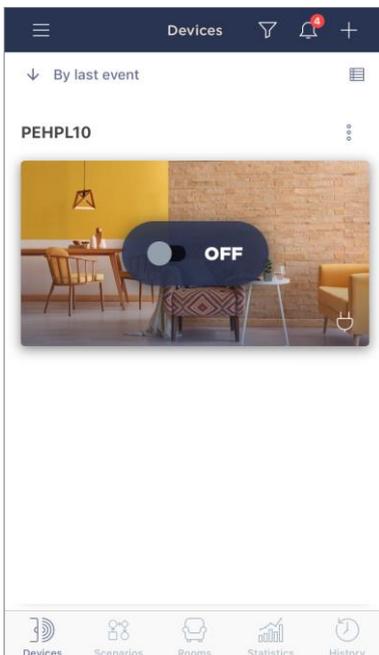
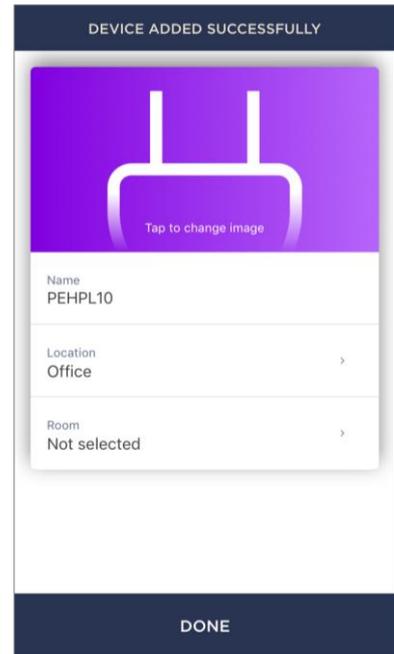
## D. LOCATION AND ROOM SETTING

After successful connection of the device, the User may specify the following:

- a. Image;
- b. Device name;
- c. Device Location;
- d. Room.

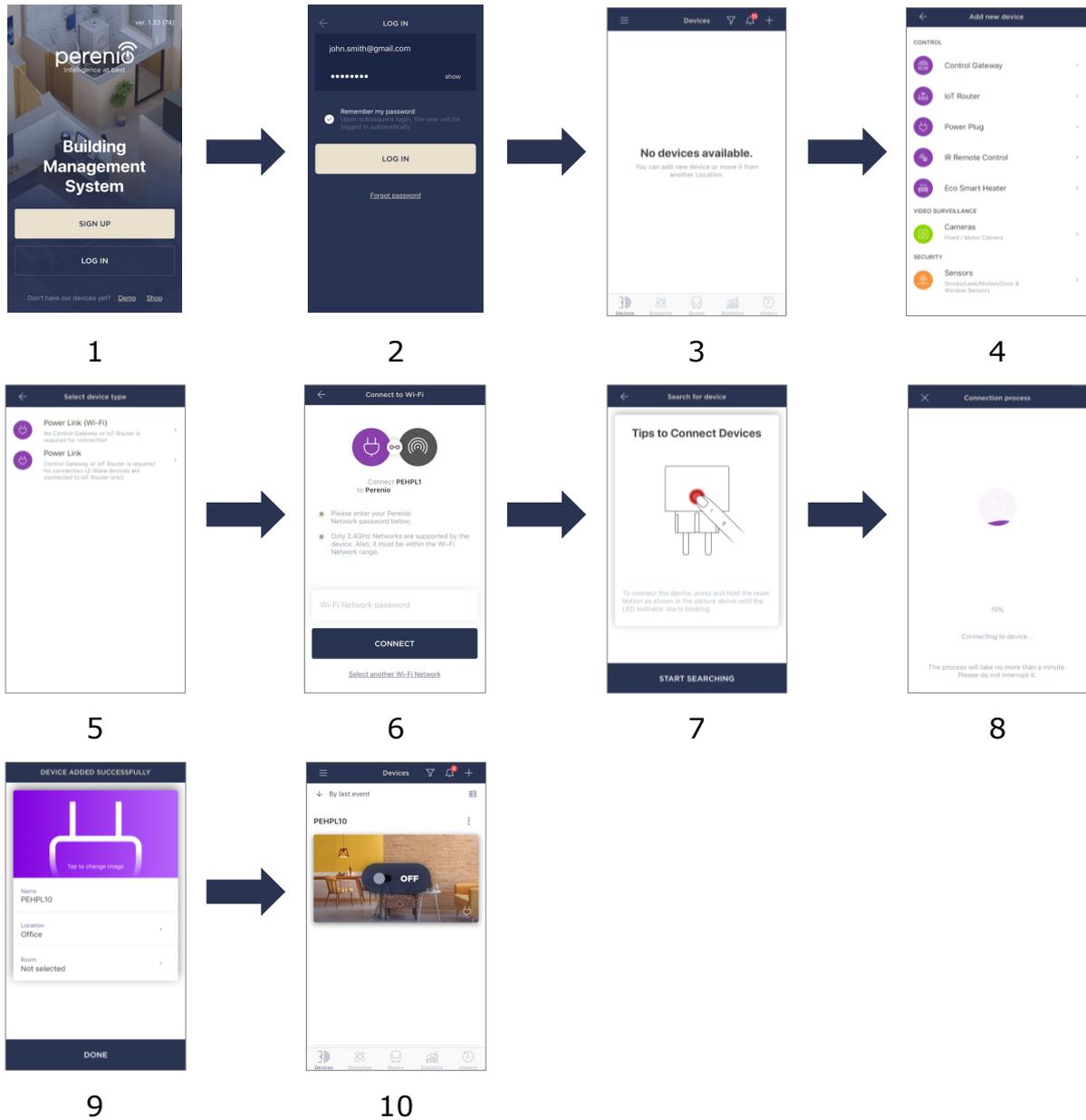
After completion, click on the **DONE** button.

**NOTE** that all the above data may be entered or edited on a later basis in the device control panel.



The smart plug will be displayed in the "Devices" tab.

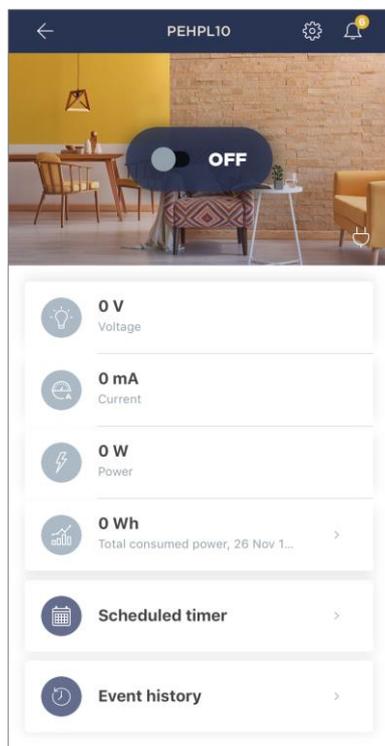
The entire process of the Power Link Wi-Fi connection in the Mobile App is shown below.



**Figure 6 – Add new device procedure (Perenio Smart)**

## 2.4 Management of the Device (Perenio Smart)

### 2.4.1 Control Panel



The Power Link Wi-Fi device control panel is displayed when you click on its image in the list of connected devices in the “Devices” tab.

In this control panel, the User may perform the following actions:

- Turn on and off the smart plug remotely;
- View data on the current mains voltage and power online;
- View statistics of energy consumption of devices connected to the smart plug;
- Set timers;
- View the history of events.

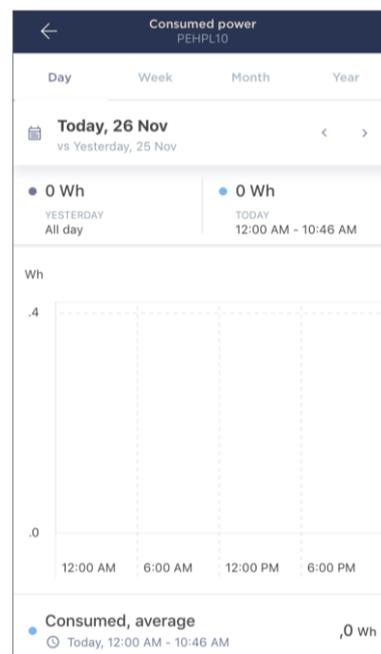
### 2.4.2 Viewing Energy Statistics

To switch to the statistics screen, click on the “Total consumed power” icon in the device control panel.

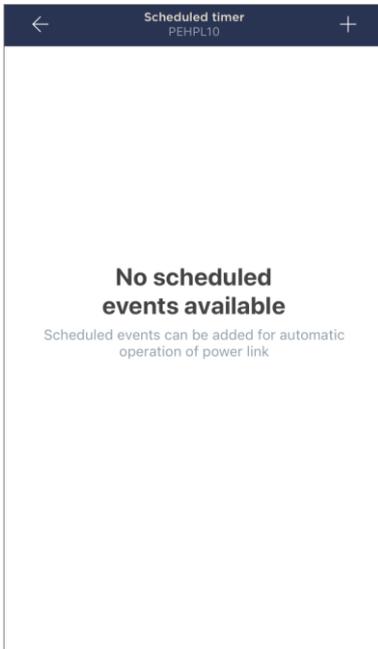
The data is displayed as a chart of the current power consumption in Wh versus yesterday’s data. Also, the User may view energy consumption for other days by clicking the Right/Left arrows on the chart.

Also, the User may view data on consumption over the week, month or year.

**NOTE** that statistics for a month and/or year may be viewed, if a particular Subscription plan is selected (See par. 2.4.6 below).



### 2.4.3 Setting Scheduled Timers



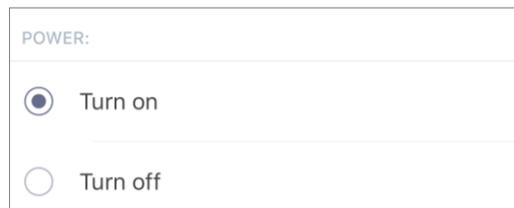
Scheduled timers are used to automatically turn on and/or off the smart plug at a specified time on specified days of the week.

By default, no scheduled timers are available as presets for the device.

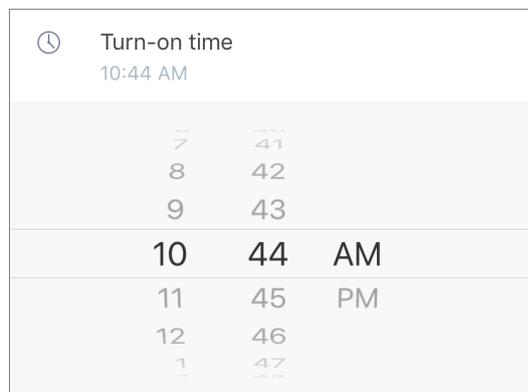
**NOTE** that available options to set timers depend on the selected action for the smart plug (turning on or off).

#### Setting the scheduled timer to turn on the Power Link Wi-Fi

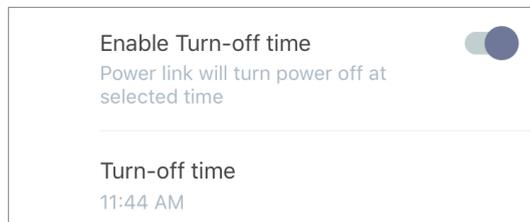
1. Click on the "Scheduled Timer" button in the device control panel. Then, click on the "+" icon in the right upper corner of the screen.
2. In the "Add scheduled event" screen, select the power type – "Turn on".



3. Select the turn-on time for the power plug.



4. Select the turn-off time, if required.



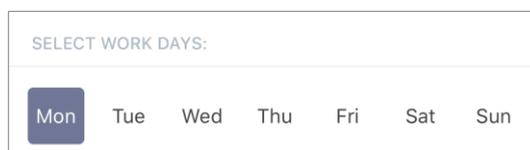
Enable Turn-off time

Power link will turn power off at selected time

Turn-off time  
11:44 AM

**NOTE** that the turn-off time activation is optional.

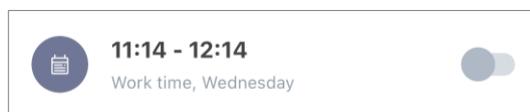
5. Select days of the week when the power plug shall operate according to the timer.



SELECT WORK DAYS:

Mon Tue Wed Thu Fri Sat Sun

6. Click on the "Save" button.
7. Activate the timer in the list.



11:14 - 12:14  
Work time, Wednesday

8. The User may make changes to the created timer by clicking on it in the list of timers.

**NOTE.** If the User shall try to change settings of an activated timer, it will be automatically disabled.

A maximum of fifteen (15) weekly timers can be activated at a time.

### Setting the scheduled timer to turn off the Power Link Wi-Fi

1. Click on the "Scheduled Timer" button in the device control panel. Then, click on the "+" icon in the right upper corner of the screen.
2. In the "Add scheduled event" screen, select the power type – "Turn off".

POWER:

Turn on

Turn off

3. Select the turn-off time for the power plug.

🕒 Turn-off time  
10:44 AM

7	41	
8	42	
9	43	
10	44	AM
11	45	PM
12	46	
1	47	

4. Select the turn-on time, if required.

Enable Turn-on time

Power Link will turn power on at selected time

---

Turn-on time  
12:31 PM

**NOTE** that the turn-on time activation is optional.

5. Select days of the week when the power plug shall operate according to the timer.

SELECT WORK DAYS:

Mon  Tue  Wed  Thu  Fri  Sat  Sun

6. Click on the "Save" button.

7. Activate the timer in the list.

 **11:14 - 12:14**

Work time, Wednesday

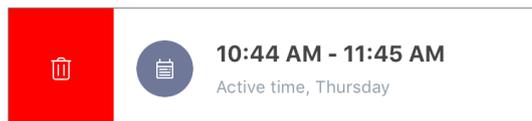
8. The User may make changes to the created timer by clicking on it in the list of timers.

**NOTE.** If the User shall try to change settings of an activated timer, it will be automatically disabled.

A maximum of fifteen (15) weekly timers can be activated at a time.

### Deleting the weekly timer

To delete a timer, the User shall slide a finger over it from left to right in the "Scheduled timer" tab and click on the trash icon.



**NOTE** that the User may only delete a disabled timer.

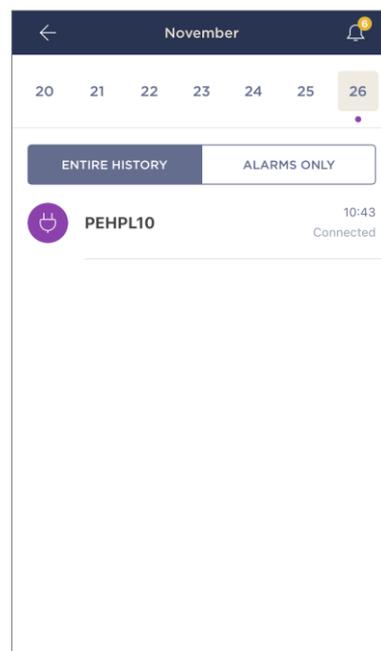
### 2.4.4 Event History

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

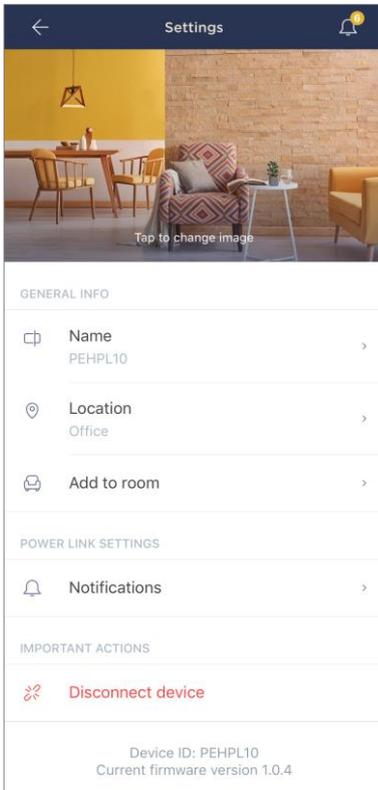
Functions are as follows:

- "ENTIRE HISTORY" filter, which allows viewing the following events:
  - Changes in the security modes ("Connected", "Disconnected");
  - 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).



## 2.4.5 Additional Settings

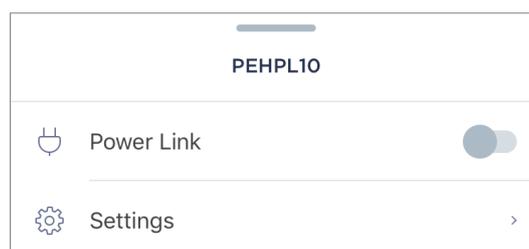


After the smart plug is activated in the **Perenio Smart** app, the User can make the following settings remotely:

- Change or upload the device image for easier identification of the Power Link Wi-Fi in the list of connected devices;
- Change the name of the device;
- Move the device in a new or existing Location;
- Add the device to the Room or change the Room of installation;
- Enable push notifications;
- Remove the device from the mobile application;
- View the device ID;
- View the current firmware version of the device.

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 smart plug image in the mobile application and select "Settings".



2. In the control panel, click on the settings icon.



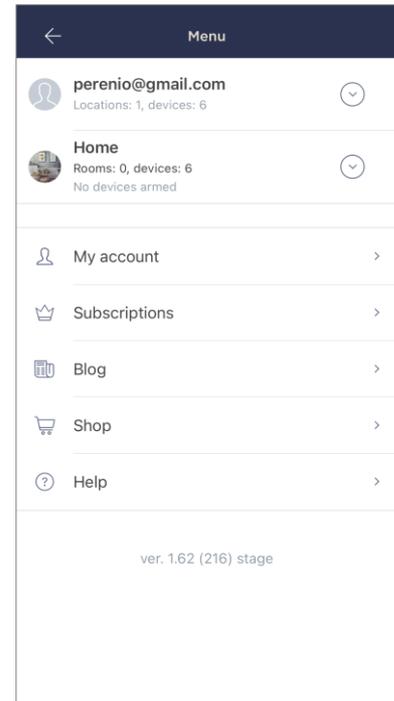
## 2.4.6 Subscriptions

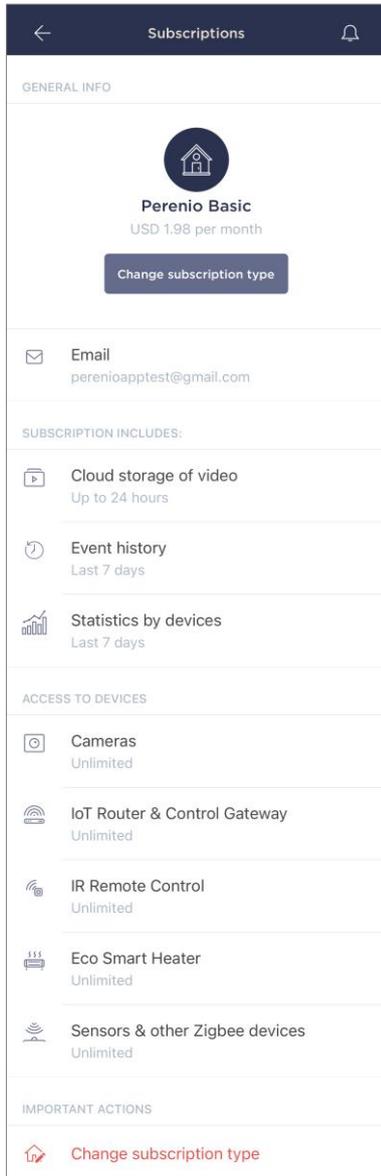
Subscriptions allow the User to increase the storage period of the following information and data in the cloud:

- Videos and images;
- History of events;
- Statistics.

By default, all users of the **“Perenio Smart Home & Office”** Mobile App are subscribed to a free plan with a limited storage period.

To view and change the current type of Subscription, the User shall go to the Side Menu and click on a corresponding button (See Figure on the right).





The following details for the current Subscription type will be displayed:

- Subscription name (Perenio Basic, Perenio Pro or Perenio Extra);
- Subscription (monthly) fee;
- Option to change the type of Subscription;
- Information about the Subscriber (Email address);
- Information about data storage in the Cloud;
- Information about the maximum number of devices that may be connected to the User Account.

To change the type of Subscription, the User shall click on a corresponding button and select the desired tariff plan from the list. Then, confirm the choice.

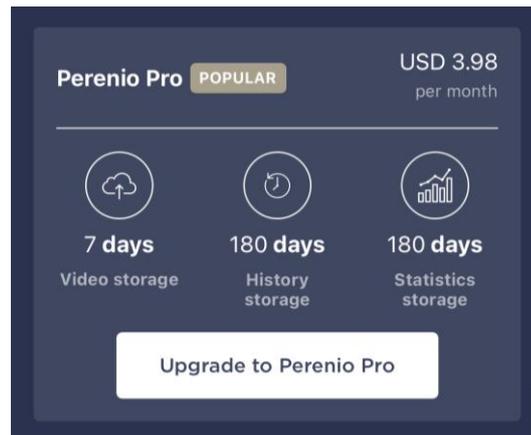


Table 3 – Available subscriptions

Storage	Perenio Basic	Perenio Pro	Perenio Extra
Video	24 hours	14 days	30 days
History	Last 7 days	Last 180 days	Last 365 days
Statistics	Last 7 days	Last 180 days	Last 365 days

## 2.4.7 Changing the Room or Location for the Power Plug

When using the Power Link Wi-Fi device, it may be necessary to change its installation area. The following options are possible:

### 1. Change the Room:

- a. Disconnect the Power Link device from the source of power and move it to another room;
- b. Plug it into the source of power;
- c. Change the Room in power plug settings in the User Account.

### 2. Change the Location:

- a. Sign in to the Perenio Smart app and select the Location where the Power Link device is activated;
- b. In the Devices tab, select the required Power Link device from the list and click on the  icon (Settings);
- c. In the pop-up window, choose "Disconnect device";
- d. Disconnect the Power Link device from the source of power and move it to another location/room;
- e. Plug it into the source of power in a new room;
- f. In the User Account, select the Location where you want to move the device;
- g. Initiate the Power Link search by the Control Gateway/IoT Router through the Perenio Smart application according to par. **B. "CONNECTION TO THE CONTROL GATEWAY/IOT ROUTER"**.

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

**NOTE.** To check that the Power Link device 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 Power Link device is disconnected, it will disappear from the list of connected devices.

### 2.4.8 History and Push Notifications

All notifications and other messages including changes in the status of **Perenio<sup>®</sup>** 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 from 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.

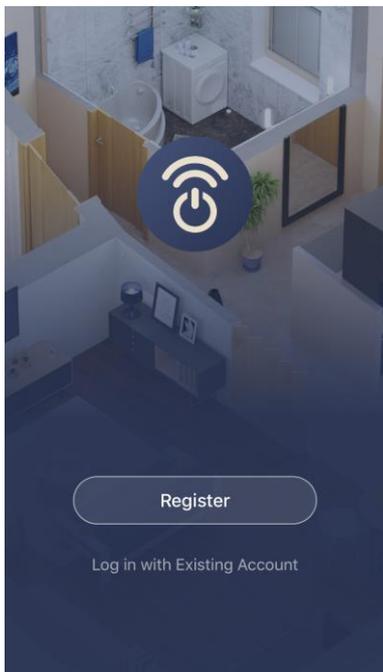
## 2.5 Activation in the Perenio Lite App

To connect the device to the **Perenio Lite** app, the User shall perform the following steps:

1. Unpack the device and connect it to the power source of 220V (See Figure 5 above).
2. Log in to the **Perenio Lite** mobile application on your smartphone (See par. **E** below).
3. Activate the device in the mobile app (See pars. **F** and **G** below).
4. Enter the desired device name and Room.

**ATTENTION!** The device firmware update process may be started upon its initial activation in the mobile application. **It is not allowed to power off the device after the firmware update process is started!**

### E. INSTALLATION OF THE PERENIO LITE MOBILE APP



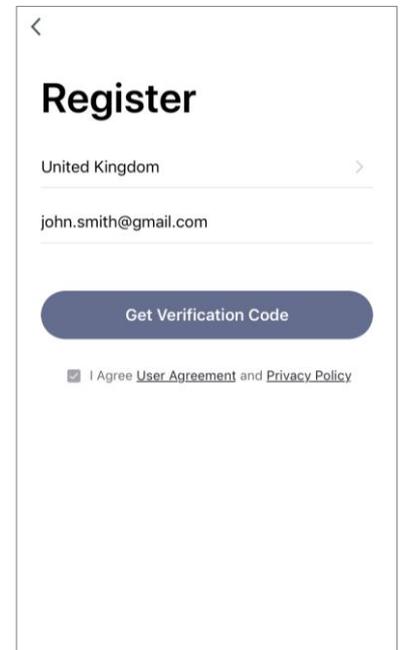
The device shall be managed via a free mobile application available for downloading in Google Play or App Store.

In order to log in to the User Account, follow the steps below:

- a. Connect your smartphone to the Wi-Fi Network and download the **Perenio Lite** app from Google Play or App Store;
- b. Register a new User Account (See par. **E.1.** below) or sign in to an existing User Account (See par. **E.2.** below).

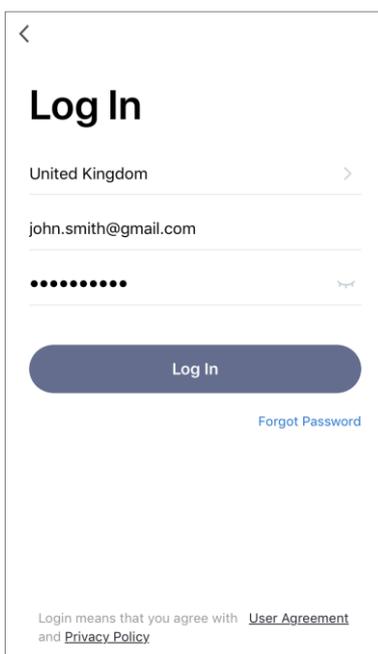
## E.1. NEW USER ACCOUNT REGISTRATION

- a. Agree to General Terms and Conditions, Privacy Policy and provisions for personal data protection (accessible by the link);
- b. Select the country of residence from the list;
- c. Fill in your e-mail address and click on "Get Verification Code";
- d. Enter the code received at the specified email box;
- e. Set the password (6 to 20 symbols including at least one capital letter and one number);
- f. Log in to the User Account.



The screenshot shows a mobile application interface for user registration. At the top left is a back arrow. The title is "Register". Below the title, there is a dropdown menu for "United Kingdom" with a right-pointing chevron. Underneath is a text input field containing "john.smith@gmail.com". A large blue button labeled "Get Verification Code" is centered below the input field. At the bottom, there is a checkbox with the text "I Agree [User Agreement](#) and [Privacy Policy](#)".

## E.2. LOGGING IN TO THE EXISTING USER ACCOUNT



The screenshot shows a mobile application interface for logging in. At the top left is a back arrow. The title is "Log In". Below the title, there is a dropdown menu for "United Kingdom" with a right-pointing chevron. Underneath is a text input field containing "john.smith@gmail.com". Below that is a password input field with a masked password "....." and a right-pointing chevron. A large blue button labeled "Log In" is centered below the input fields. Below the button is a blue link labeled "Forgot Password". At the bottom, there is a small text line: "Login means that you agree with [User Agreement](#) and [Privacy Policy](#)".

- a. Enter your e-mail address and password in the login screen.
- b. Click on the **LOG IN** button.

**NOTE** that if the password is lost, the User can restore it by clicking on a corresponding link on the screen.

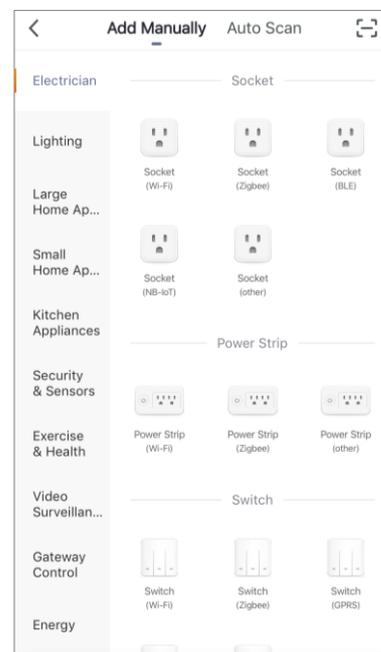
To restore a forgotten password, use the e-mail address linked to your User Account, as instructions on changing the password will be sent thereto.

## F. CONNECTION PROCESS

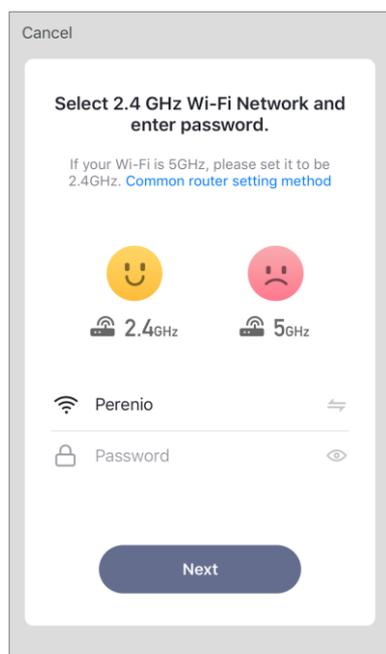
- a. Click on the "+" icon in the "Home" tab;
- b. Select "Socket (Wi-Fi)" in the "Electrician" Section (See Figure on the right);

**NOTE** that if the smart plug is in the connection mode (the LED indicator is blinking), the User can start an automatic search for a device by clicking on the "Auto Scan" tab at the top of the screen (See Figure on the right).

- c. Confirm the permission to access your camera in the pop-up window (It may not be available for certain smartphone models);



## G. SENDING WI-FI NETWORK DATA TO THE DEVICE



Do as follows after the screen to connect the device to the Wi-Fi Network will be displayed:

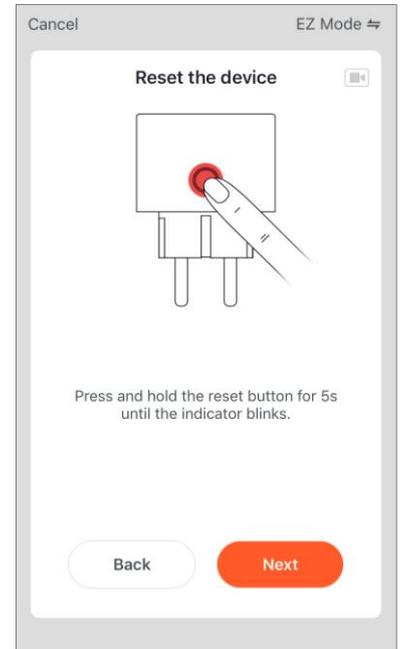
- a. Enter the password from the Wi-Fi Network or select another network;

**NOTE.** The device may be connected to Wi-Fi Network of **2.4GHz** only.

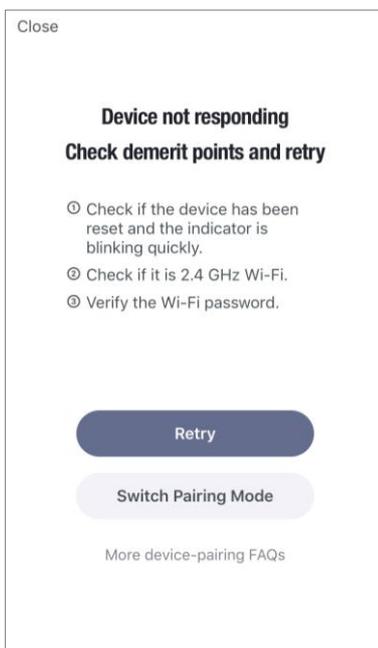
- b. Click on the **CONNECT** button;

**NOTE.** Before connecting, make sure that the smart plug is powered on and that the smartphone is located at a distance of not more than 2 meters from it.

- c.** Disconnect the device from the mains for 10 seconds, then plug it into the mains socket again, and press the "Next" button;
- d.** Press and hold the power button until the LED indicator starts blinking, and press the "Next" button;
- e.** Confirm that the indicator is rapidly blinking by ticking the box, and press the "Next" button;
- f.** Wait for the connection process to complete and click on "Done".



## G.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 smartphone;
- b.** The device was already activated in the current or some other User Account;
- c.** The device ID and/or password or Wi-Fi Network data was entered incorrectly;
- d.** Internet Provider failures.

**NOTE.** To eliminate connection failures, follow instructions specified on corresponding screens of the smartphone.

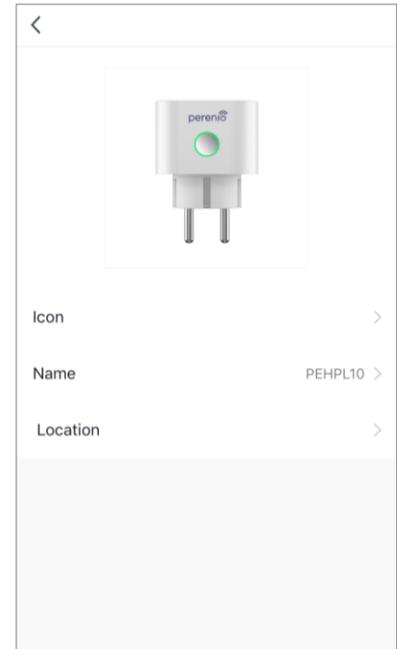
## H. LOCATION AND ROOM SETTING

After successful connection of the device, the User may specify the following:

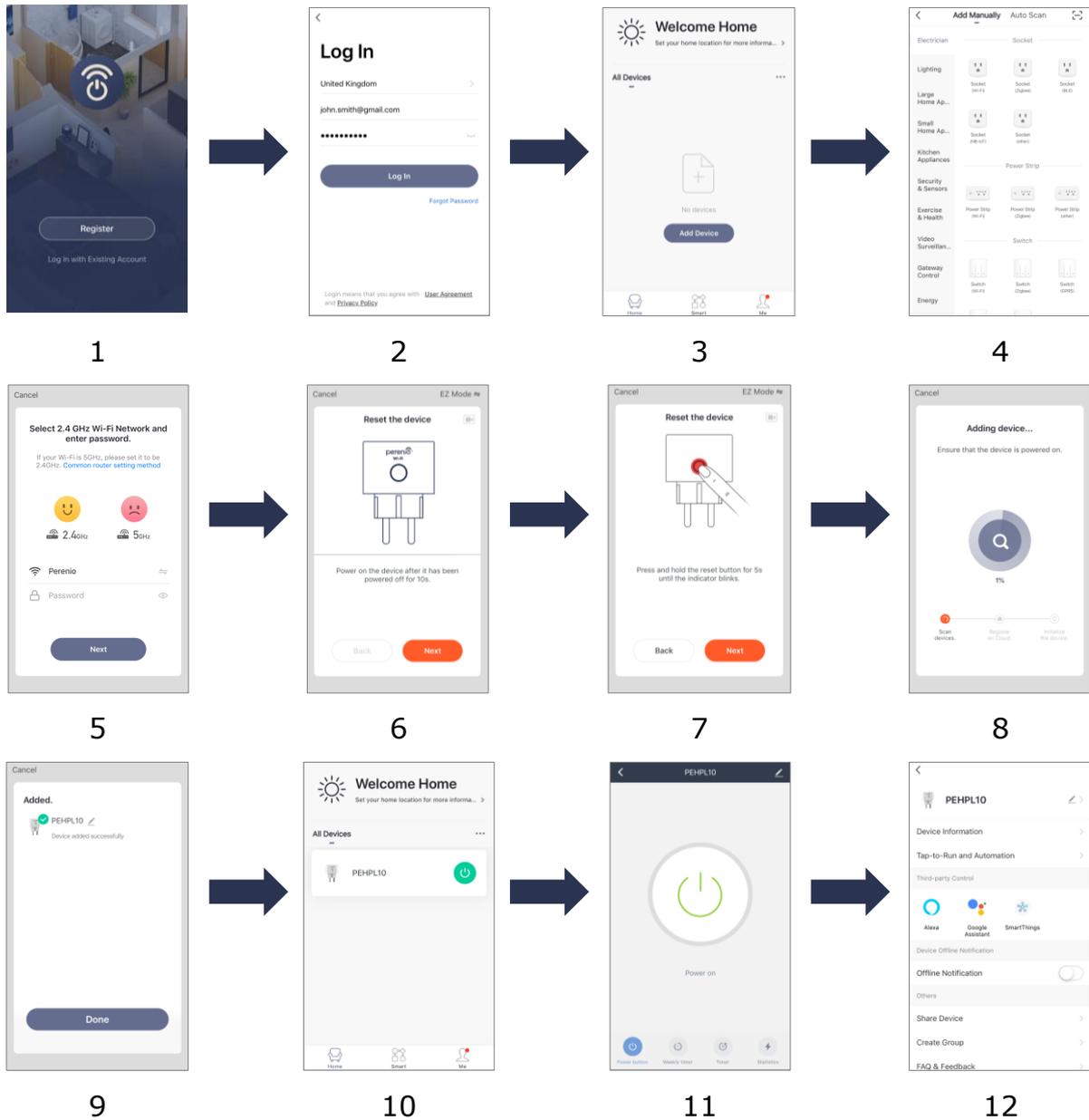
- a.** Image;
- b.** Device name;
- c.** Device Location;
- d.** Room.

To do this, click on the image of the smart plug in the "Home" tab, then click on the "edit" icon in the right upper corner of the device control panel. The smart plug setting screen will be displayed. After that, click on the "edit" icon in the right upper corner of the screen once again.

The smart plug will be displayed in the "Home" tab.



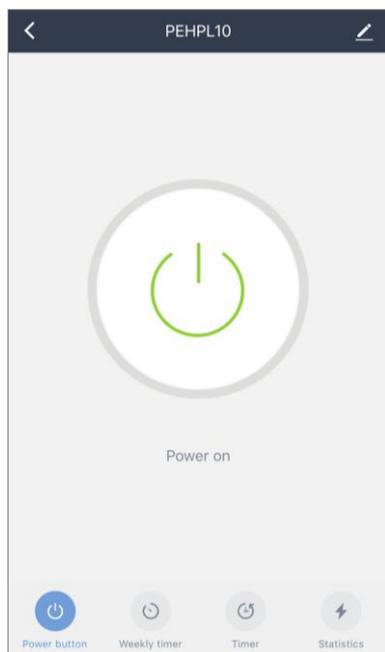
The entire process of the Power Link Wi-Fi connection in the Mobile App is shown below.



**Figure 7 – Add new device procedure (Perenio Lite)**

## 2.6 Management of the Device (Perenio Lite)

### 2.6.1 Control Panel



The Power Link Wi-Fi device control panel is displayed when you click on its image in the list of connected devices in the “Home” tab.

In this control panel, the User may perform the following actions:

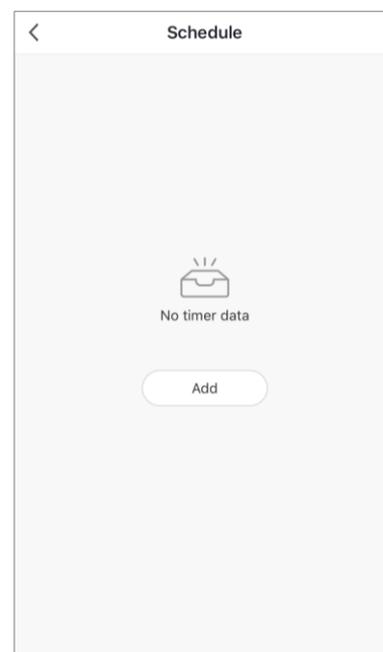
- Turn on and off the smart plug remotely;
- View data on the current mains voltage and power online;
- Set timers.

### 2.6.2 Setting Weekly Timer

The weekly timer is used to automatically turn on and/or off the smart plug at a specified time on specified days of the week.

By default, no weekly timers are available as presets for the device.

To set the timer, the User shall go to the “Weekly timer” tab by clicking on the corresponding icon at the bottom of the smart plug control panel.



## Setting the scheduled timer to turn on/off the Power Link Wi-Fi

1. Click on the "Add Schedule" button in "Weekly timer" tab.
2. Select time to turn on or off the power plug.

12	38
13	39
14	40
15	41
16	42
17	43
18	44

3. Click on the "Repeat" button to select days of the week when the smart plug shall operate according to the timer.

Repeat Once >

4. Enable push notifications for the timer, if required.

Notification

**NOTE** that push notification activation is optional.

5. Select the action to be performed by the timer (turning the device on or off).

Power button ON >

6. Click on the "Save" button.
7. Activate the timer in the list.

**Schedule**

Time variance is ±30s

12:03 PM

Once  
Power button:ON

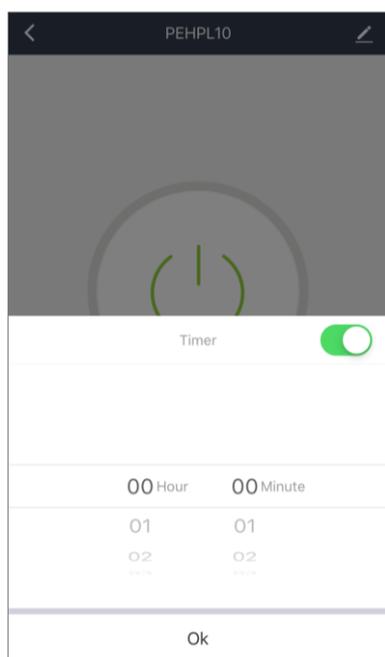
8. The User may make changes to the created timer by clicking on it in the list of timers.

## Deleting the weekly timer

To delete a timer, the User shall slide a finger over it from right to left in the “Weekly timer” tab and click on the trash icon.



## 2.6.3 Setting Countdown Timer



The countdown timer can be set by clicking on the “Timer” icon at the bottom of the smart plug control panel (See Figure on the left).

This timer allows the User to turn on or off the device automatically.

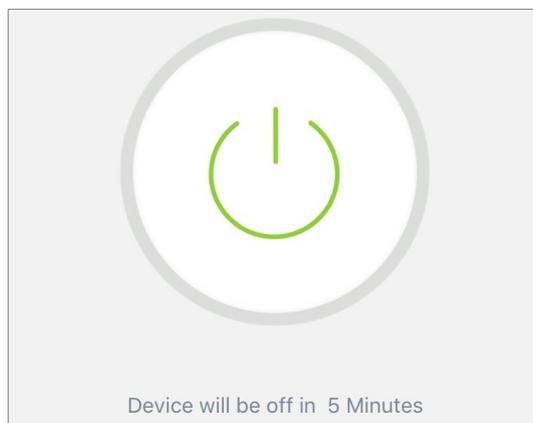
**NOTE** that if the smart plug is turned on and the countdown timer is activated, the device will be turned off after the specified time interval, and vice versa.

The timer is considered activated if the toggle switch is set to the appropriate state.



To save the timer settings, click on the “OK” button.

The device on/off time will be displayed in the control panel.

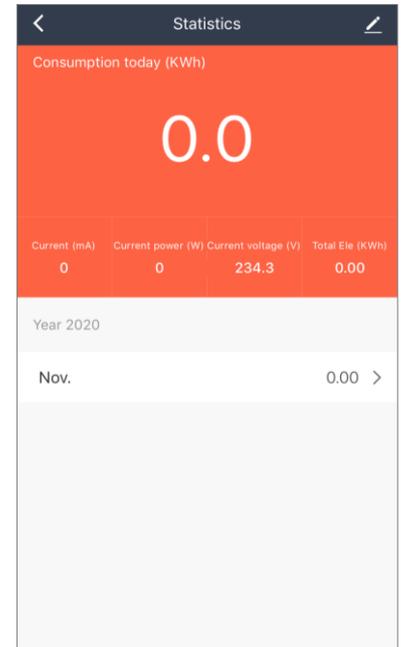


## 2.6.4 Viewing Consumption Statistics

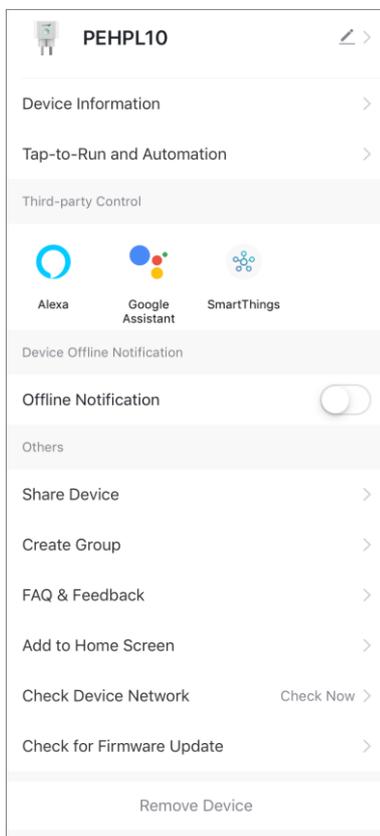
To display the statistics screen, the User shall go to the "Statistics" tab by clicking on the corresponding icon at the bottom of the device control panel.

The data is displayed in the form of a table of current energy consumption, amperage, current voltage and total power.

Also, monthly consumption data may be viewed.



## 2.6.5 Additional Settings



After the smart plug is activated in the **Perenio Lite** app, the User can make the following settings remotely:

- Change or upload the device image for easier identification of the Power Link Wi-Fi in the list of connected devices;
- Change the name of the device;
- Add the device to the Room;
- Set scenarios;
- Enable push-notifications;
- Add options for third-party apps control;
- Share rights for management of the device;
- Create a group of several devices for easier management;
- Remove the device from the mobile application.

**NOTE** that the User can go to the settings screen by clicking on the "Edit" icon in the right upper corner of the smart plug control panel.

## 2.7 Management via Google, Amazon, Apple

To control the smart plug via the Google Home, Amazon Alexa, Apple Siri applications, it must be first activated in the **Perenio Smart** or **Perenio Lite** application.

**NOTE** that when activating the Power Link Wi-Fi in Google Home, Apple Siri and/or Amazon Alexa, the User shall follow instructions specified in corresponding Google applications or uploaded at **[perenio.com/faq](http://perenio.com/faq)**.

### 3 Maintenance and Repair

The **Perenio**<sup>®</sup> Power Link device 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:

- Follow rules of safe operation of the device;
- Clean the device casing from dirt and dust at least once every six months;
- Check for updates of the Perenio Smart app;
- Repair mechanical damages to devices (in Service Centers).

The **Perenio**<sup>®</sup> Power Link device 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**<sup>®</sup> Power Link device, please contact your local Company representative or the Tech Support Department at **perenio.com**.

## 4 Warranty Obligations

The warranty period for the **Perenio®** Power Link device shall be **Twenty-Four (24) months** from the date of sale to the End User.

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

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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.

## 5 Storage, Transportation and Disposal of Devices

The **Perenio**<sup>®</sup> Power Link Wi-Fi device 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	<i>Perenio IoT spol s r.o.</i>
Address	Na Dlouhem 79, Ricany – Jazlovice 251 01, Czech Republic
Contact Info	perenio.com, info@perenio.com

### Importing Company

Name	<i>ASBISc Enterprises PLC</i>
Address	Iapetou, 1, Agios Athanasios, 4101, Limassol, Cyprus
Contact Info	Tel.: +357-25-85-70-00, e-mail: info@asbis.com

### Info on Certificates and Declarations

Certificates	EC-RED Certificate #IP19102934 as of October 22, 2019
Declarations, Reports	EMC Test Report #IP19102934 as of October 22, 2019; LVD Test Report #IP19102934 as of October 22, 2019; RF Exposure Test Report #IP19102934 as of October 22, 2019; Radio Test Report #IP19102934 as of October 22, 2019.

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 Power Link device.

Table 4 – Typical Errors and Troubleshooting Methods

Item No	Problem	Possible Reasons	Solution
1	The LED Indicator does not light up	Power supply failures	Make sure that the power plug is plugged in and switched on, or contact Tech Support Department
2	Timer settings disappeared	Reset to factory settings was performed	Set timers again
3	The power plug changes status to "offline" unexpectedly	Power supply failures, or it is out of Zigbee/Bluetooth coverage	Make sure that the power plug is plugged in and switched on, or reduce the distance to the Control Gateway/IoT Router

## 8 Glossary

<b>Amazon Alexa</b>	A virtual assistant that supports voice communication and control of smart home devices.
<b>Apple Siri</b>	Voice assistant that allows to control “smart home” devices
<b>Google Home</b>	Wireless speaker for managing smart devices with Google Assistant
<b>IoT</b>	The Internet of Things is a system of Internet-connected devices able to collect and exchange data coming from built-in services
<b>IP20</b>	The degree of protection of the device, indicating that the parts inside the case are protected from the penetration of fingers or objects longer than 80 mm and solid bodies larger than 12 mm. No moisture protection
<b>Perenio Lite</b>	Simplified software developed by <i>Perenio IoT</i> for remote device management
<b>Perenio Smart</b>	Software developed by <i>Perenio IoT</i> for remote control of wireless Cameras from smartphones
<b>UL94-V0</b>	A class of plastic that provides for self-extinguishing of the material within 10 seconds on a vertically mounted sample. Formation of droplets from non-combustible particles is allowed
<b>Wi-Fi</b>	Wireless technology with devices based on IEEE 802.11 standards
<b>Location</b>	General term which means a building or a structure in which <b>Perenio®</b> Cameras, Control Gateways/IoT Routers and/or Sensors are installed