



Perenio® PEHWE20 Two-Channel Mini Relay Installation and Operation Manual

Introduction

The **Perenio[®] PEHWE20** two-channel Mini Relay (hereinafter referred to as the Mini Relay, Relay, Device) is designed for remote control of lighting fixtures in a room. The device is connected to the **Perenio Smart Home & Office** app (hereinafter referred to as the **Perenio Smart**) to monitor and control the energy consumption of light sources. The Mini Relay is designed to operate inside a sub-socket, under a switch, or in another location suitable for power control.

This User Manual contains a detailed description of the device as well as instructions for its installation and operation.

NOTE. The Mini Relay can only operate in conjunction with a **Perenio[®]** Control Gateway / IoT Router. Operation with other automation systems is not guaranteed by the manufacturer.

Copyright

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Responsibility and Technical Support

This document has been prepared in accordance with all necessary legal requirements and contains detailed, complete and comprehensible information on the operation and maintenance of the device. The information is current as of the date indicated in the document. Strict adherence to the instructions contained in this document is a basic requirement for the correct, reliable and safe operation of the device.

Perenio IoT reserves the right to modify the device and to make additions and changes to this document without prior notice and shall not be liable for possible negative consequences resulting from the use of an outdated version of the document or for any possible technical or typographical errors or omissions and incidental or consequential damages that may arise from the transmission of this document or the use of devices.

Perenio IoT makes no warranties with respect to the material herein, including but not limited to the merchantability and suitability of the device for any particular application.

In the event of discrepancies in the language versions of the document, the Russian-language version of this manual shall take precedence.

If you have any technical questions, please contact your local *Perenio IoT* representative or the technical support department at **perenio.com**.

The most common problems encountered are described in Section 7 of this document and on the **perenio.com** where you can also download the latest version of this manual.

Information about the manufacturer:

Perenio IoT spol s r.o./,

Na Dlauhém, 79, 251 01 Říčany-Jažlovice, Česko (Czech Republic).

perenio.com

Conformity to Standards



The device is CE certified and meets the requirements of the following European Union directives:

- Radio Equipment Directive 2014/53/EU.

RoHS

The device meets the requirements of the RoHS Directive 2011/65/EU on the restriction of hazardous substances.



The device has passed all assessment procedures established in the technical regulations of the Customs Union and complies with the norms of the Customs Union countries.



National Mark of Conformity of Ukraine, indicating that the device meets all required technical regulations.



The symbol in the form of a crossed-out waste bin is used to mark electrical and electronic equipment and indicates its separate collection.

The symbol is given in accordance with the Waste Electrical and Electronic Equipment (WEEE) Directive 2012/19/EU and indicates that this equipment requires separate collection at the end of its life and must be disposed of separately from unsorted municipal waste.

To protect the environment and human health, dispose of used electrical and electronic equipment according to approved safe disposal guidelines.



AT	BA	BE	BG	CH	CZ	CY	DE	DK	EE	ES
FI	FR	GR	HR	HU	IE	IT	KZ	LT	LV	LU
MT	NL	NO	PL	PT	RO	RS	SE	SK	SL	UK

Information about the certificates received is given in Section 6 of this document. Copies of certificates and reports can be found in the appropriate section of the website at **perenio.com**.

Limitations and Warnings

Please read the information in this Section carefully before you start installing and operating the device. Failure to follow the recommendations may result in malfunction or danger to your life. *Perenio IoT* is not responsible for any loss or damage resulting from improper installation and/or use of this device.

WARNING! The warnings, precautions and instructions in this document cannot cover all possible hazards. Use common sense when operating the device.

Warning symbols and icons



There may be a risk of electric shock, so use caution.



The device is intended for indoor use only.



Packaging material is graphic cardboard.



Product packaging shall be disposed of in a garbage can.

IP20

The degree of protection of the device enclosure that provides protection against the ingress of solid objects larger than 12.5 mm. There is no protection against moisture entering the device.

Zigbee

The device supports the communication standard for connecting to the Zigbee network.

Safe operation conditions

1. Please observe the transportation, storage and operating conditions of the device as stated by the manufacturer.
2. The device should only be installed on a de-energized section of the power grid.
3. Installation must only be performed by a qualified electrician.
4. Do not connect the device to equipment that exceeds the specified maximum load.
5. The device may be connected only as specified in the User Manual. Any other method of connection may result in damage and/or injury.

6. The device may be used only with a power supply that complies with all applicable regulations. A short-circuit in the mains supply or any appliance connected to the unit can damage it.
7. This device may be connected to and operated by electrical circuits and devices only if they comply with the relevant standards and safety regulations.
8. Do not use the device in cases where malfunction may result in fire, injury, or death (e.g., life support and security systems).
9. Do not drop, throw, disassemble, or attempt to repair the device on your own.
10. Do not expose the device to liquids (do not immerse in liquid, do not splash).
11. To avoid personal injury, do not use the device if there are any signs of external damage, including cracks, dents, or holes.
12. This device is not intended for use by persons under 18 years old or by persons with reduced physical, sensory or mental capabilities, unless they have the necessary experience or knowledge to operate it properly, or unless they are under the supervision of a person responsible for their safety.
13. Do not allow children to use the device without adult supervision and/or play with it.

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1 General Description and Specifications

1.1 General Purpose

The Mini Relay is designed to control lighting fixtures with LED or incandescent lamps. The device is designed so that it can be installed in a box under a switch or in another place suitable for monitoring the electrical load.

The Mini Relay is mounted on a single conductor (neutral or phase) which allows it to be placed in any accessible area of the wiring (under a switch, at the base of a chandelier, etc.).

The Mini Relay supports the operation of two types of switches:

- Conventional (with a fixed position);
- Pulse (bell).

Two control modes are available for each switch type via the **Perenio Smart** app.

To operate the Mini Relay, the following is required:

- Smartphone with Internet access and the **Perenio Smart** app installed;
- **Perenio®** Control Gateway or IoT Router connected via the **Perenio Smart** app account.

See details in par. 2.3 below.

The two-channel Mini Relay device has a number of distinctive features, namely:

- Remote control, monitoring and power setting of lighting devices;
- Built-in Zigbee antenna (supports Zigbee 3.0, incl. Zigbee 1.2);
- Ability to operate as a data repeater;
- Mechanical switch of two channels for a "dry contact";
- Manual and remote connection via the **Perenio®** Control Gateway / IoT Router;
- Manual reset to factory settings;
- Single LED to indicate the connection and reset statuses ("Connected", "Connection process", "Reset");
- Thermal protection;
- Switching to connection mode with one button;
- Data on the radio signal and/or the connection quality;
- Support for pulse (bell) switches.

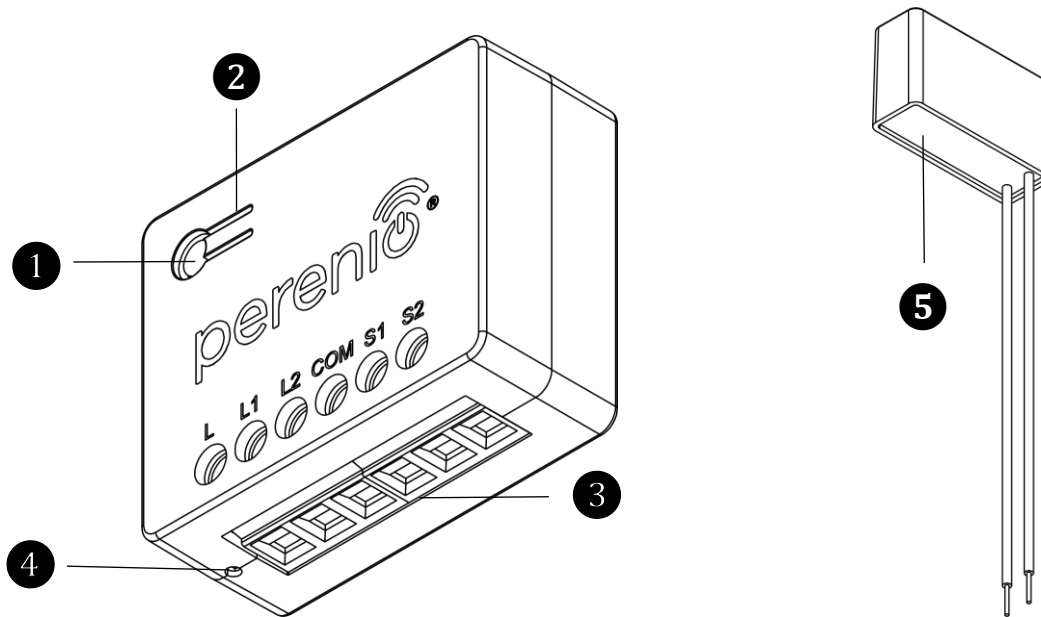


Figure 1 – Appearance

Buttons, Ports and Indicators

1 Connection button

Activation of the process of connecting the Mini Relay via the Perenio Smart app, and/or reset the settings

2 LED indicator

Display of the Mini Relay operation status (connection process, status, reset process)

3 Connectors:

- **L** – Connector for incoming phase
- **L1** – Connector for Channel 1 load
- **L2** – Connector for Channel 2 load
- **COM** – Common line of switches
- **S1** – Connector for Switch 1
- **S2** – Connector for Switch 2

Built-in screw terminal blocks for securing power wires with a 3 mm flat-blade screwdriver (not included in the package). The cross-section of the connected conductor is up to 2.5 mm²

4 Output for external antenna

Not used for this model

5 Bypass

Passive device for connecting devices in parallel to the main load. It is required for normal operation of the Relay with some types of loads, e.g. when using LED lamps of low power

Table 1 – LED Indicator Statuses

Indicator	Status	Description
Blue	On	The device is in active mode and connected to the Zigbee network
	Blinking *	The device is in activation mode in the mobile app
	Fast Blinking **	Device was reset to factory settings
	Off	The device is inactive

* The device indicator is on for 3 s and then off for 0.3 s.

** The device indicator is on for 0.3 s and then off for 0.3 s.

Table 2 – Connection Button Functions

Description	Action
Press and hold for 3 to 9 seconds	Launching activation mode in the mobile app
Press and hold for 10 seconds	Starting the factory reset process

WARNING! All *Perenio IoT* products and the mobile application (including any further proprietary or third-party software and hardware) are not intended for a rapid response to emergency situations and may not be used as a means of firefighting and/or emergency response, including but not limited to fires, floods, gas leaks or explosions, break-ins and theft, and natural disasters and other force majeure events resulting in damage and/or loss incurred by or at the user

1.2 Technical Specification

Table 3 – Basic Technical Specifications

Parameter	Value
Device Features	
Model	PEHWE20
Number of channels	2
LED Indicator	1
Microcontroller	EFR32MG22
Communication protocol	Zigbee 3.0 (IEEE802.15.4)
Frequency range	2,400-2,485 MHz
Coverage area	Up to 30 m indoors Up to 100 m in open area
Power	Entry: 100-240 V (AC) 50/60 Hz Power consumption: 0.5 W max
Maximum voltage	250 B
Maximum load current	1.0 A max 2 × 0,5 A
Maximum power	250 VA, 2 × 125 VA
Antenna	
Antenna operating frequency	2.4 GHz
Transmitter power	<6 dBm
Receiver sensitivity	-102 dBm
Antenna gain	-2 dBi
Operating Conditions	
Permissible cross-section of the wire to be connected	2.5 mm ²
Temperature	0...+50 °C
Humidity	5-75 % (no condensation)
Storage Conditions	
Temperature	-20...+60 °C
Humidity	5-95 % (no condensation)

Parameter	Value
Additional Information	
Protection level	IP20
Case material	Plastic pC UL-94, V-0
Colour	Gray
Size (L x WxH)	43×37×17 mm
Net weight	23 g
Support for voice assistants	Google Home, Amazon Alexa
Warranty period	2 years
Service life	2 years
Certificates	CE, EAC, RoHS

1.3 Package Contents

The **Perenio**® Mini Relay includes the following:

1. PEHWE20 Mini Relay (1 pc.)
2. Bypass (1 pc.)
3. Quick Start Guide (1 pc.)
4. Warranty Card (1 pc.)

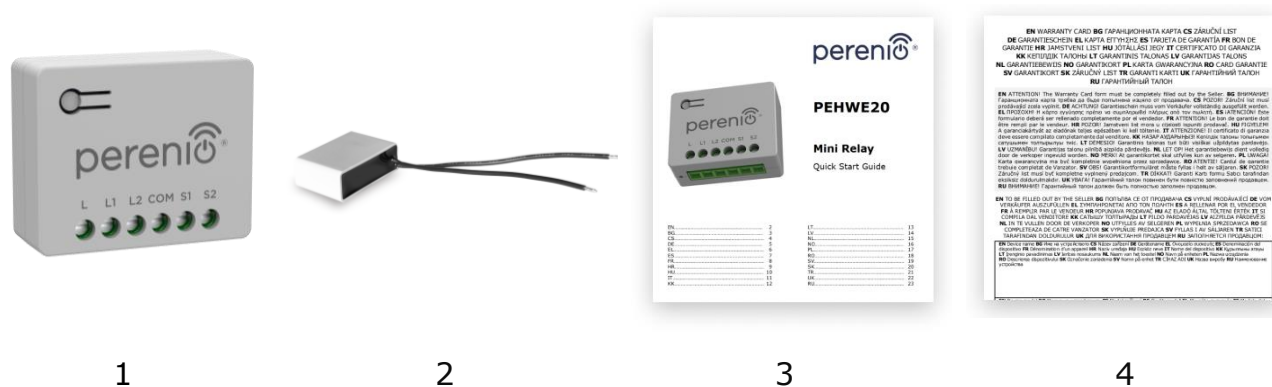


Figure 2 – Package Contents *

* The images of accessories are for reference purposes only.

1.4 Packaging and labeling

The **Perenio[®] PEHWE20** Mini Relay is supplied in an individual cardboard package measuring 95×50×30 mm (L×W×H), containing the full name and marking, list of supplied devices and accessories, main technical specifications, as well as date of manufacture and manufacturer's information.

Weight of the device in the packaging:

- net weight: 23 g;
- gross weight: 66 g.

2 Installation and Setup

2.1 Installation of the Mini Relay

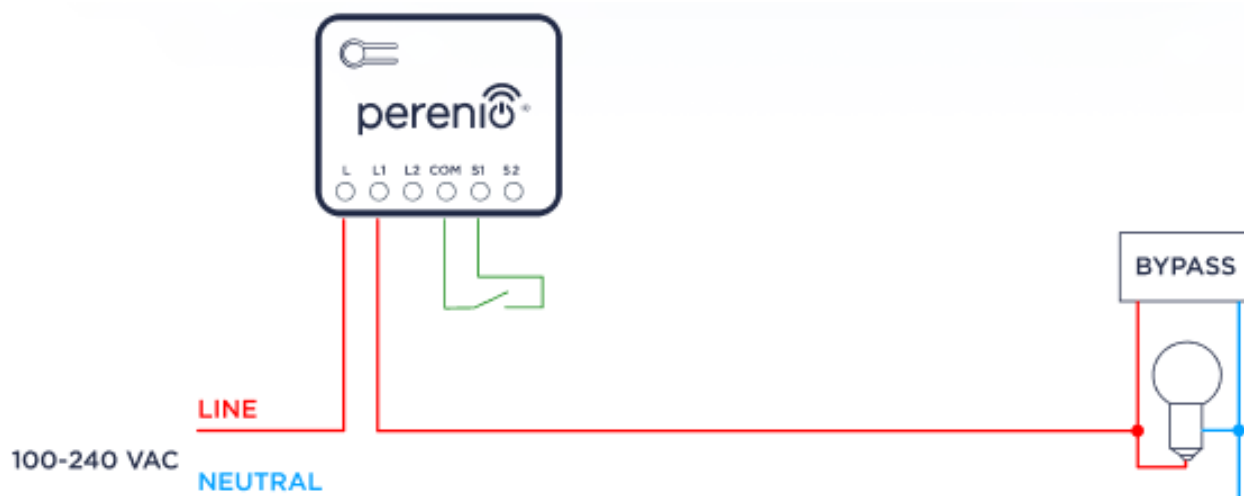


Figure 3 – Example installation of the Mini Relay

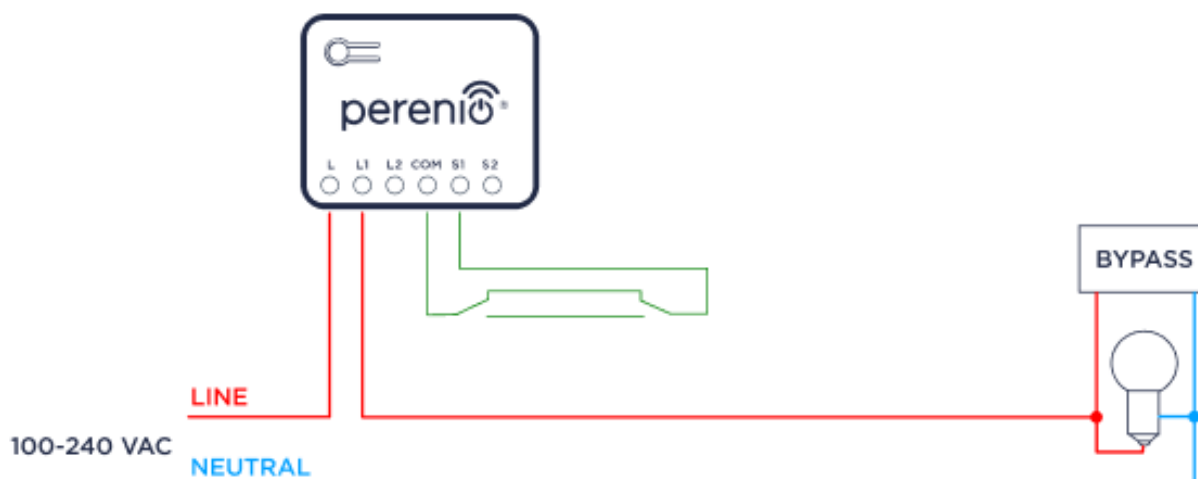
WARNING! To avoid electric shock, the Mini Relay must only be installed by a qualified electrician only, with the mains voltage disconnected. The bypass is intended for use only in conjunction with the Mini Relay.

1. Make sure that the **Perenio®** Control Gateway or IoT Router is pre-installed, connected to the Internet and activated in the **Perenio Smart** mobile app.
2. Unpack the Mini Relay.
3. Disconnect the power at the connection point.
4. Make the connection according to one of the 6 diagrams shown in the figure below.
5. Secure the wires in the connectors using a 3 mm flathead screwdriver (not supplied in the package).
6. Apply voltage to the connection point – the LED will start flashing blue.
7. Activate the device in the mobile app.

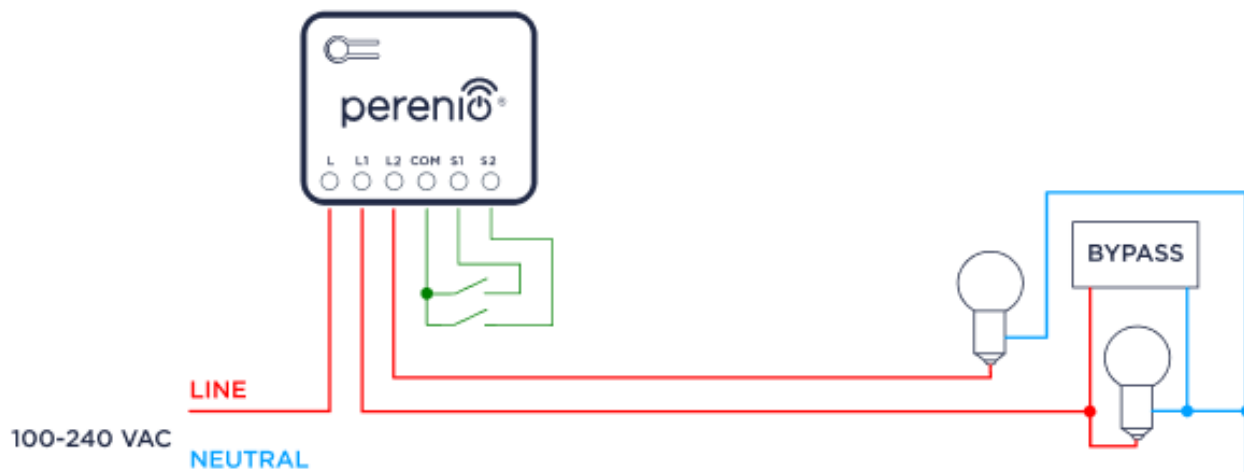
1 Connecting the device to a single pushbutton switch:



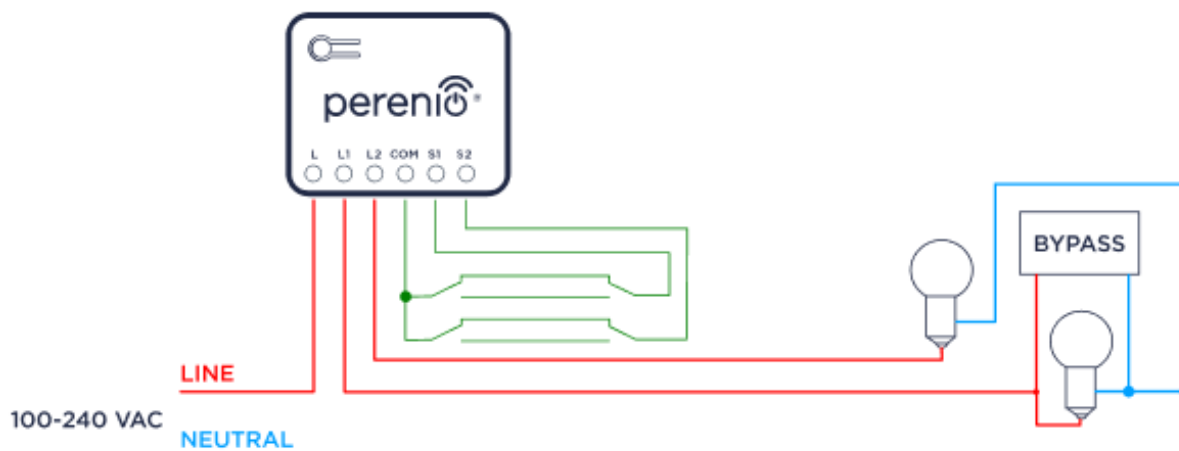
2 Connecting the device to a single bell switch:



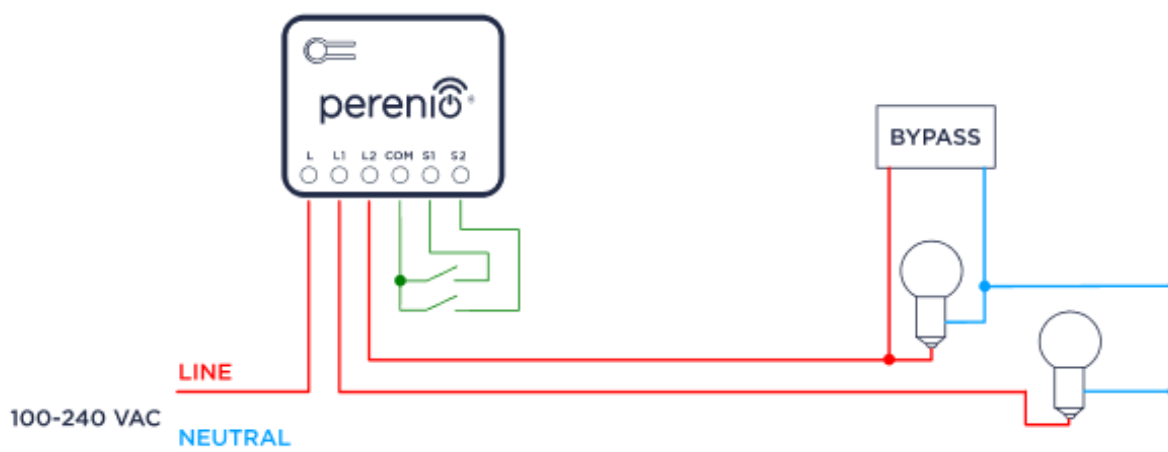
3 Connection of the device to two pushbutton switches (bypass installed on the first line):



4 Connection of the device to two bell switches (bypass installed on the first line):



5 Connection of the device to two pushbutton switches (bypass installed on the second line):



6 Connection of the device to two bell switches (bypass installed on the second line):

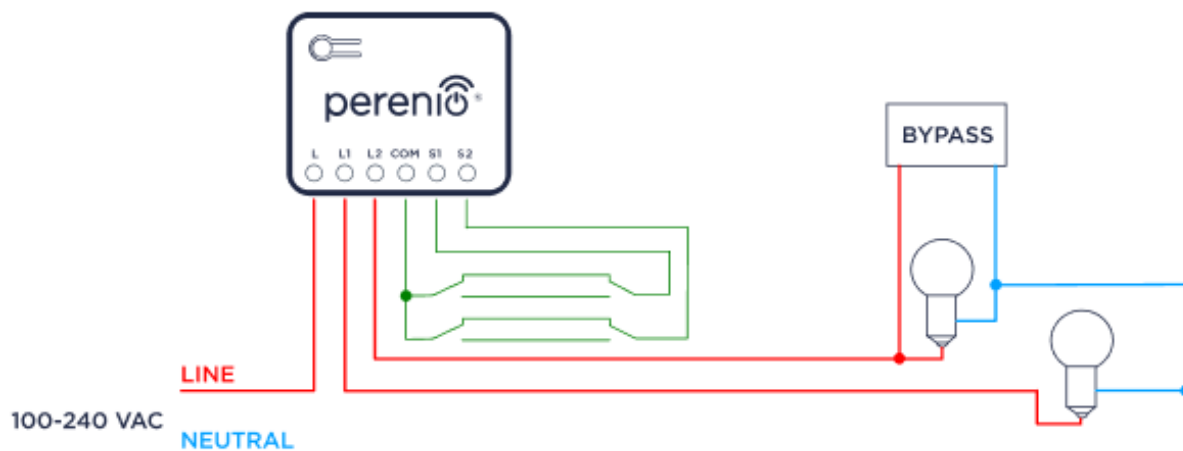


Figure 4 – Wiring diagrams

The bypass can be connected to either line, and the load can be applied on either or both channels.

It is not mandatory to connect the bypass to the mains if it is an incandescent lamp, but it is necessary to connect it to the mains to control LED lights, because otherwise malfunction of the Mini Relay may occur. The element itself, if possible, is recommended to be placed inside the lamp so that it will not be visible and will not spoil the view of the interior.

2.2 Activation in the Perenio Smart Mobile App

To connect the Mini Relay via the **Perenio Smart** app, please follow the below steps:

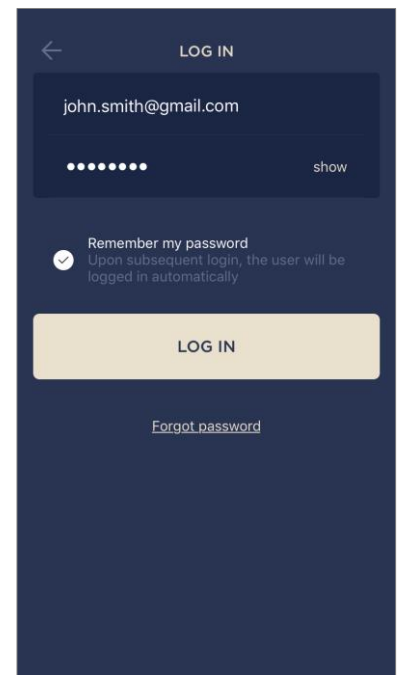
1. Unpack the device and install it according to par. **2.1** above.
2. Sign in to your **Perenio Smart** app account (See par. **A** below).
3. Activate the device in the app (see par. **B** below).
4. Enter the desired Relay name and select the room of installation.

A. LOGIN TO THE EXISTING USER ACCOUNT

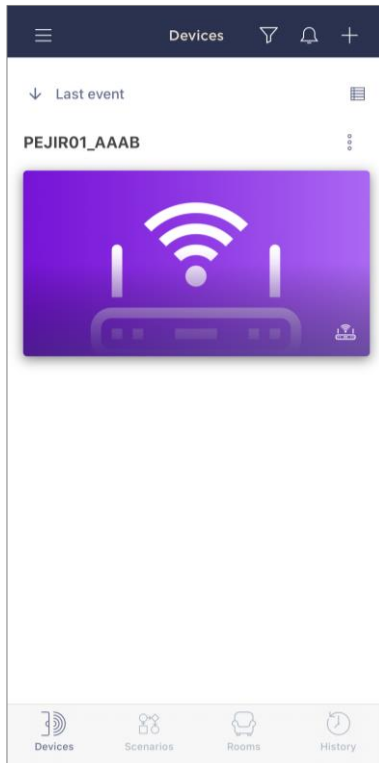
- a. Connect your smartphone to Wi-Fi network;
- b. Enter your e-mail address and password in the login screen;
- c. Click on the **LOG IN** button.

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.



B. CONNECTION TO THE CONTROL GATEWAY/IOT ROUTER

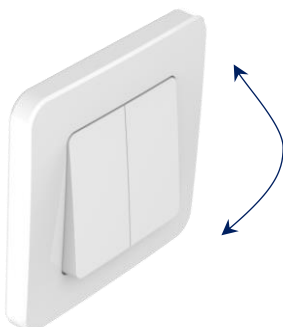
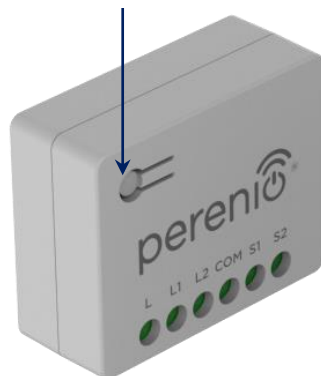


- a. Make sure the Control Gateway/IoT Router is activated and "Online" in the mobile app;
- b. Click on the "+" icon in the upper right corner of the Devices tab, select "Add new device" and then the Mini Relay device in the list;
- c. Select the Control Gateway/IoT Router to which the Mini Relay shall 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**.

- d. Set the device to the activation mode in the application in one of the following ways:

- i. press and hold the connection button on the device until the LED starts flashing (the process of holding the button takes 3 to 10 seconds);



- ii. press the switch connected to the Mini Relay 10 times within 10 seconds, i.e. turn the switch on and off 5 times, then turn it to "On" position.

NOTE. If the Relay is connected to a non-latching switch, you have to press the last one 5 times in 10 seconds.



Activation tips

Using the device's pairing button:

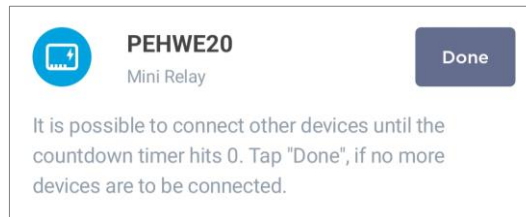
Press and hold the pairing button for 3–10 seconds as shown in the picture above until the device's LED indicator starts blinking. After that, tap "Start search".

Using a switch connected to the device:

Press a switch connected to the Mini Relay 10 times (for switches that latch in the ON position) or 5 times (for non-latching switches) (5 on/off cycles within 10 seconds). Flip the switch to the ON position and tap "Start search" in the app.

Next

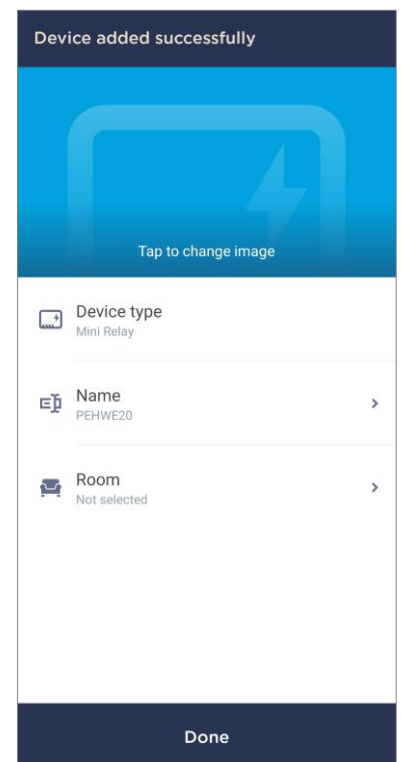
- e. Start the device search;
- f. Wait for the device to be detected by the application and press "Done";



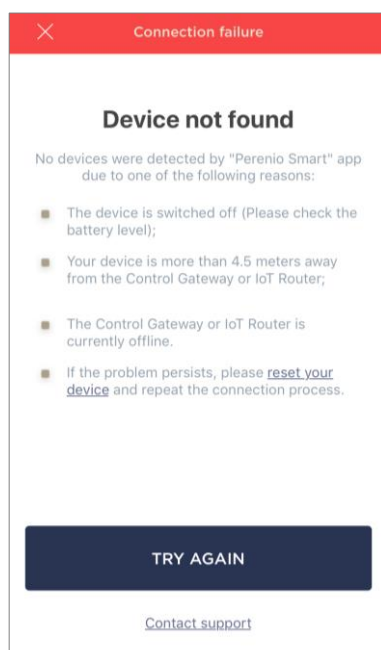
NOTE. Several Mini Relays and other Zigbee devices can be connected to the Control Gateway/ IoT Router at the same time.

- g. To complete the connection, enter the following data:
 - Device name;
 - Installation room;
 - Image.

NOTE. All these data can be entered or changed later in the Mini Relay settings screen.



B.1. CONNECTION ERRORS



The Mini Relay connection may be interrupted for one of the following reasons:

- a. the device has not been turned on or is too far from the Control Gateway (more than 4.5 m);
- b. the Control Gateway is not online;
- c. the indicator light on the device was flashing before the connection began;

NOTE. To clear connection errors, follow the instructions on your smartphone's screen.

You can view the whole process of connecting Mini Relays in the mobile app in the diagram below.

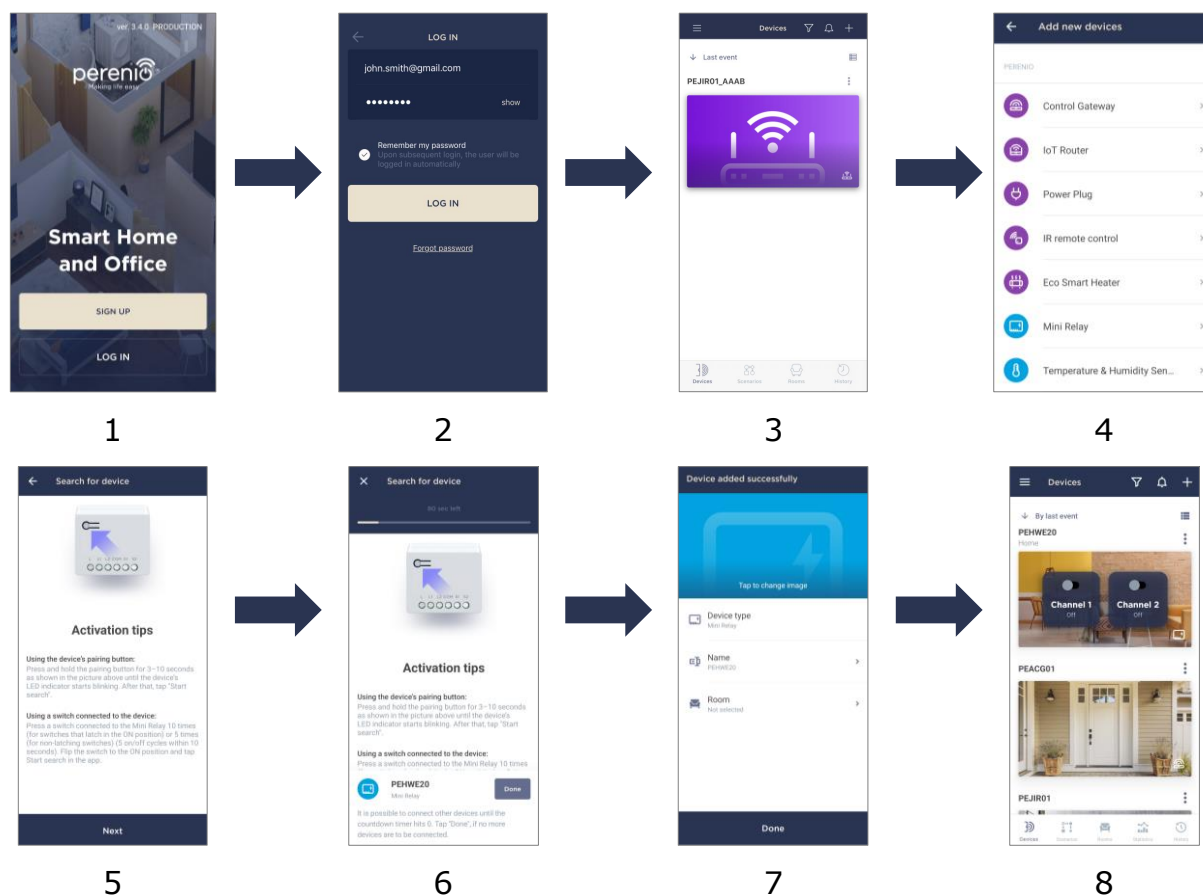
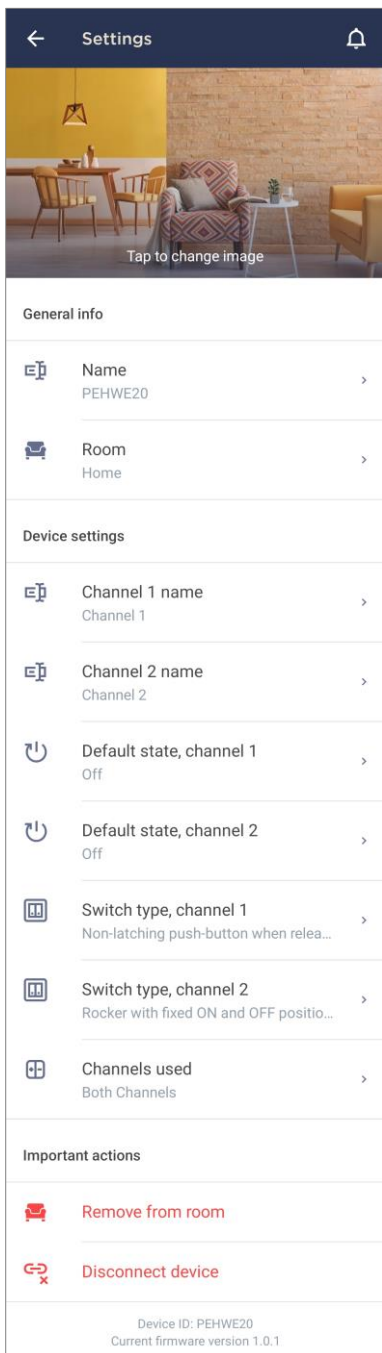


Figure 5 – Process of adding a new device (Mini Relay)

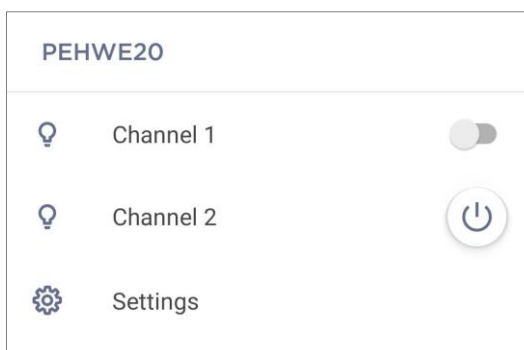
2.3 Additional Mini Relay Settings



Once the device has been activated in the **Perenio Smart** app, the user can remotely make additional settings for the device.

There are two ways to open the settings screen:

1. Click on the three-dot icon in the upper right corner of the Mini Relay image in the app and select "Settings".



2. In the control panel of the Mini Relay, click on the settings icon.

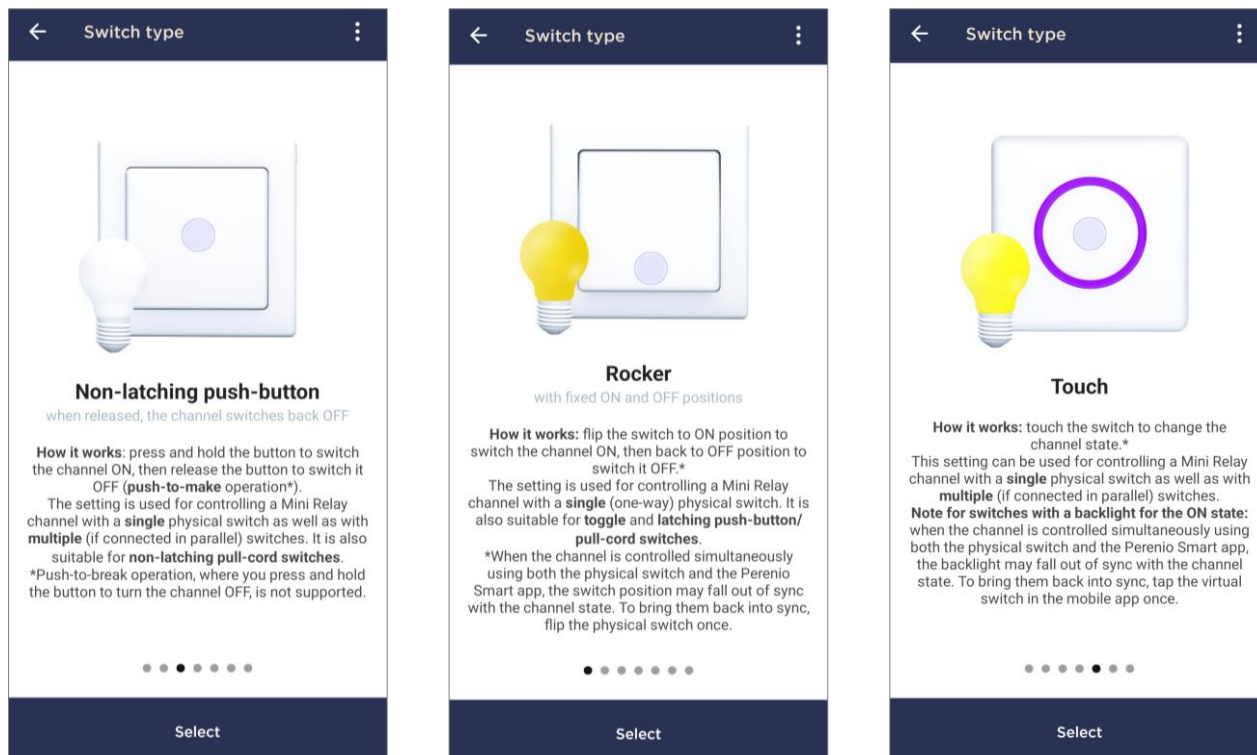


The User is allowed to configure the following settings:

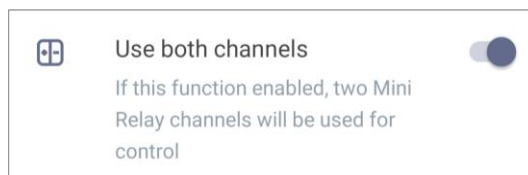
- Change or set the screen saver (image) for the device to make it easier to be identified it in the list of connected devices;
- Change the device name;
- View the Zigbee network data;
- Add the device to the Room or change the installation Room;
- Set a name for each of the channels;
- Select the default channel state;



- Select the type of switch to which each of the channels is assigned;

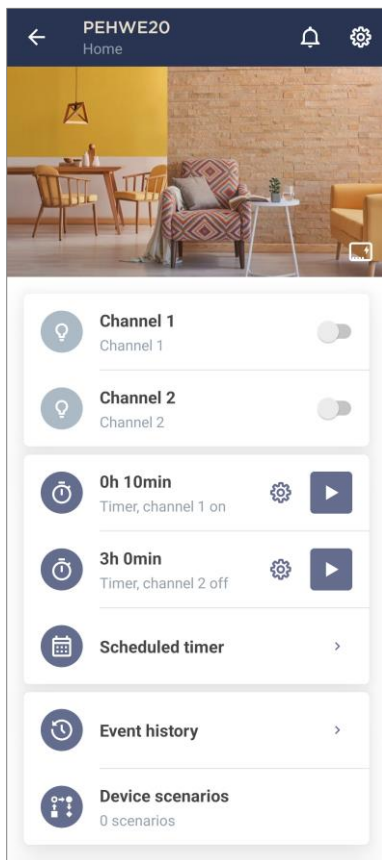


- Select which channel (or channels) to be used;



- Remove the device from the Room or the user's account;
- Find out the current firmware version of the device.

2.4 Mini Relay Control Panel



The Mini Relay control panel is displayed if you click on its image in the list of connected devices in the "Devices" tab.

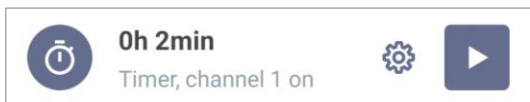
In this control panel, the user can perform the following actions:

- Turn each of the channels on and off individually by moving the slider to the right or left, respectively;
- Set the countdown timer and set the on/off schedule for the device;
- Set the scheduled timer;
- View the history of events;
- Create scenarios with the device.

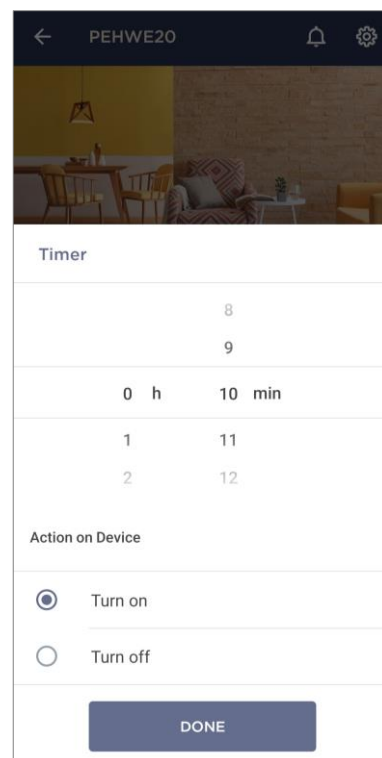
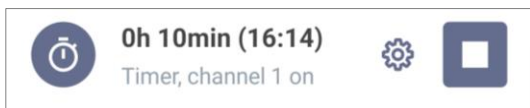
2.4.1 Setting the Countdown Timer

The countdown timer allows you to turn the device on or off automatically after a specified period of time within 24 hours.

To set the timer for the desired channel, click on the ⚙ icon, set the time and select the required channel state (See figure on the right).



By default, the timer is in the off state. When the timer is launched, the on/off time of the selected channel of the device will be displayed in parentheses.



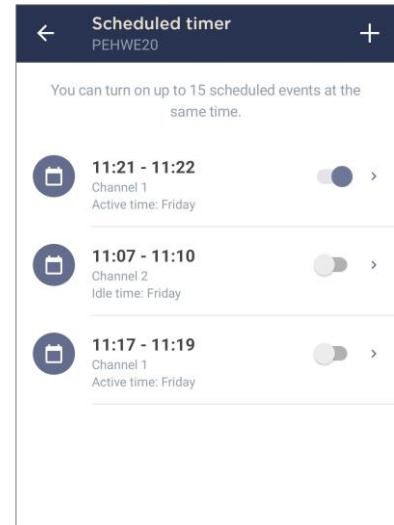
2.4.2 Setting the Scheduled Timer

The Scheduled Timer is designed to automatically turn on and/or off the device at a preset time on specified days of the week.

By default, there are no scheduled timers for the device, so to create a new timer, you should click on the "+" in the upper right corner of the screen.

The setup window will be displayed.

NOTE. The available options for setting timers depend on the selected action for the Mini Relay (on or off).



Creating a new scheduled timer to turn on the Mini Relay

1. On the "Add Scheduled Event" screen, select the channel for which you want to set the timer. You can select both channels at once.

Channel:	
<input checked="" type="radio"/>	Channel 1
<input type="radio"/>	Channel 2
<input type="radio"/>	Both Channels

2. Select "Turn on" power.

Power:	
<input checked="" type="radio"/>	Turn on
<input type="radio"/>	Turn off

3. Select the time to turn on the Mini Relay.

	Turn-on time	
	10:09	
	08	07
	09	08
	10	09

4. Activate and select the turn-off time of the Mini Relay.

Enable Turn-off time ☒

The Mini Relay will turn the power off at a selected time

Turn-off time
14:23

12	21
13	22
14	23

NOTE. It is not obligatory to activate the turn-off time.

5. Select the days of the week during which the Relay is to be turned on.

Select days

Mo Tu We Th **Fr** Sa Su

6. Click the "Save" button.

← Scheduled timer PEHWE20 +

You can turn on up to 15 scheduled events at the same time.

10:09 - 14:23 ☐ >

Channel 1
Active time: Friday

7. Activate the timer in the "Scheduled Timer" tab.
8. If necessary, make changes to the created timer by clicking on it in the "Scheduled Timer" tab.

NOTE. If you make changes to the activated timer, it will be automatically disabled.

A maximum of eight (8) scheduled timers can be activated at the same time.

II Setting the scheduled timer to turn off the Mini Relay


1. On the "Add Scheduled Event" screen, select the channel for which you want to set the timer. You can select both channels at once.

Channel:	
<input type="radio"/>	Channel 1
<input checked="" type="radio"/>	Channel 2
<input type="radio"/>	Both Channels

2. Select "Turn off" power.

Power:	
<input type="radio"/>	Turn on
<input checked="" type="radio"/>	Turn off

3. Select the turn off time-of the Mini Relay.

	Turn-off time	
	13:36	
	11	34
	12	35
	13	: 36

4. Activate and select the turn-on time for the Mini Relay.

Enable Turn-on time		<input checked="" type="checkbox"/>
The Mini Relay will turn the power on at a selected time		
Turn-on time		
14:36		
	12	34
	13	35
	14	: 36

NOTE. It is not obligatory to activate the turn-on time.

5. Select the days of the week during which the Relay is to be turned off.

6. Click the "Save" button.

7. Activate the timer in the "Scheduled Timer" tab.
8. If necessary, make changes to the created timer by clicking on it in the "Scheduled Timer" tab.

NOTE. If you make changes to the activated timer, it will be automatically disabled.

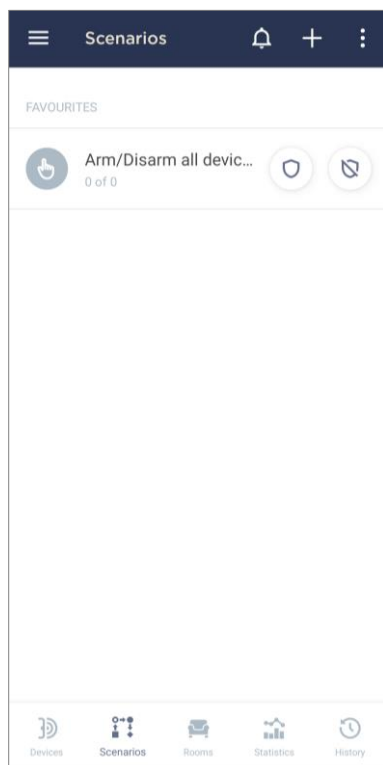
A maximum of eight (8) scheduled timers can be activated at the same time.

III Deleting the scheduled timer

To delete a timer, swipe it from left to right in the "Scheduled Timer" tab and click on the trash can icon.

NOTE. You can only delete a timer that is not launched.

2.4.3 Creating Scenarios with the Device



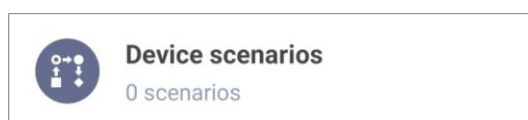
In the "Device Scenarios" tab, the user may perform the following actions:

- Create a manually launched scenario;
- Create an automatically launched scenario;
- Create a scenario from template (as of this document date, templates are available for the Mini Relay device only).

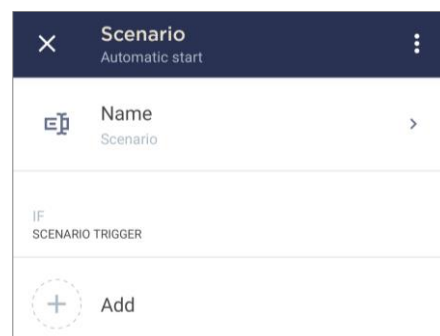
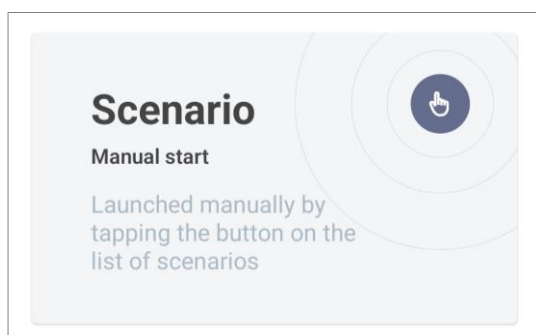
All created scenarios with all devices connected to the user account will be displayed in this tab.

IV Creating a manually launched scenario

1. In the Mini Relay control panel, select "Device Scenarios".



2. Click the "+" icon in the upper right corner of the screen in the "Scenarios" tab.
3. Select the "Scenario. Manual start". The scenario creation form will be displayed.



4. Enter the desired scenario name.
5. In the "SCENARIO TRIGGER" section, click on "Add".
6. Choose one of the following three types of actions:

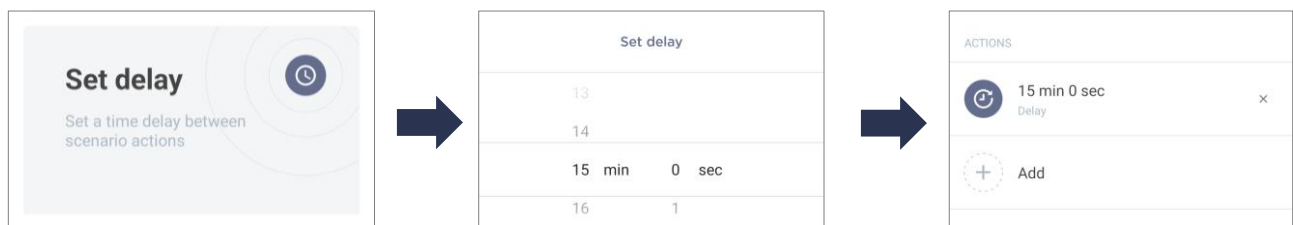
- a. Action with a device: You are allowed to add a specific action from the list, which will be performed by the selected device (Below see an example where the Channel 2 of the Mini Relay is selected to be turned on);



- b. Arm/Disarm: You are allowed to arm or disarm the selected Location (Below see an example where the "Home" Location is selected);

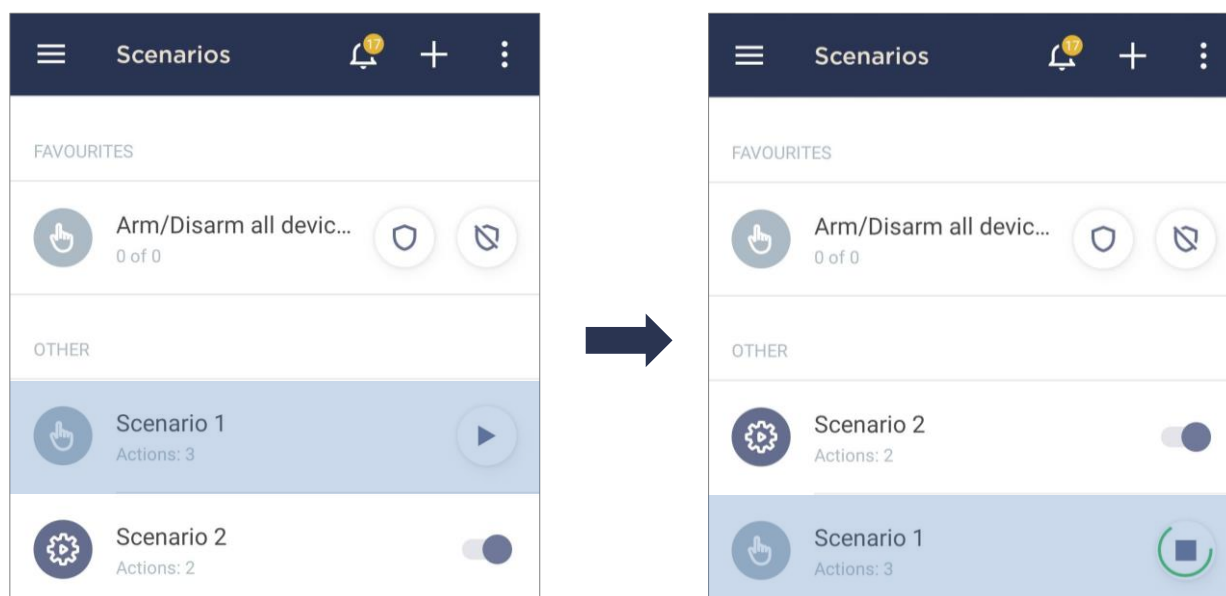


- c. Set delay: You are allowed to set a delay in time before performing the next action or after some previous action for the launched scenario (Below see an example where a delay of 15 minutes is selected).



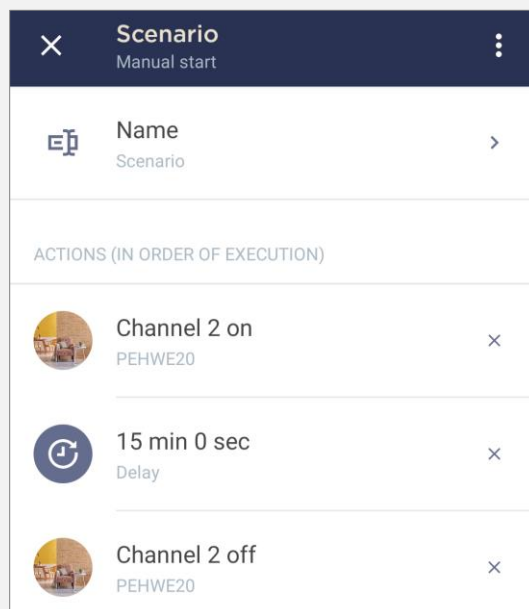
NOTE. A scenario for which a delay is selected must contain at least one additional action.

7. If necessary, select additional actions from the above three actions.
8. Click the "Save" button. The created scenario will be displayed in the list of scenarios.
9. Launch the scenario by clicking the appropriate button in the "Scenario" tab.



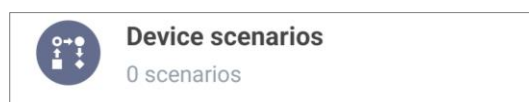
Example of the scenario with manual start for the Mini Relay

Description: You need to turn on the Channel 2 of the Mini Relay immediately after launching the scenario, and then to turn it off in 15 minutes. Scenario implementation shall be as follows:



✓ Creating an automatically launched scenario

1. In the Mini Relay control panel, select "Device Scenario".



2. Click the "+" icon in the upper right corner of the screen in the "Scenarios" tab.
3. Select the "Scenario. Automatic start". The scenario creation form will be displayed.



4. Enter the desired scenario name.
5. In the "SCENARIO TRIGGER" section, click on "Add".
6. Choose one of the following two types of actions:
 - a. Date & Time: You are allowed to add the exact time and date to run the scenario (Below see an example where a single launch of the scenario is selected – tomorrow at 09:50 a.m.);



- b. Event: You are allowed to select the action performed by the device that will trigger the scenario execution (Below see an example where the trigger is selected to turn on Channel 2 of the Mini Relay).



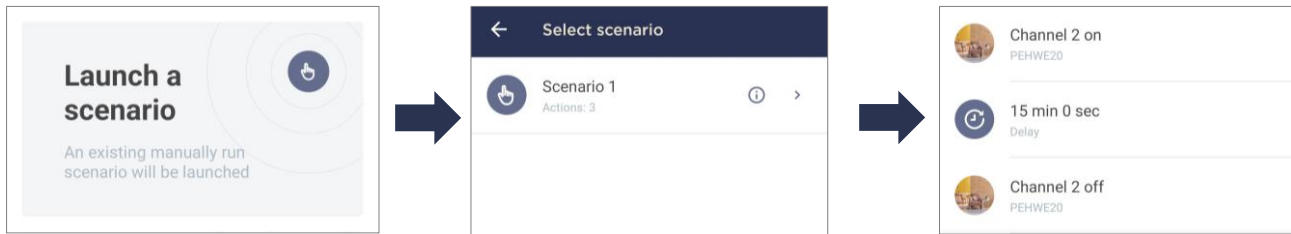
7. If necessary, select additional actions from the two above actions.
8. Click "Add" in the "LIMITING CONDITIONS" section.

NOTE. This section is optional because it limits the trigger, i.e. both the trigger and this limiting condition must be triggered in order to run the scenario.

9. Create a bounding condition similar to step 6 above.
10. In the "ACTION" block, click on "Add".

11. Choose one of the following four types of actions:

- a. Launch a scenario: You are allowed to automatically launch a scenario with manual start (Below see an example where "Scenario 1" is selected, and the "i" icon is used to see performed actions);



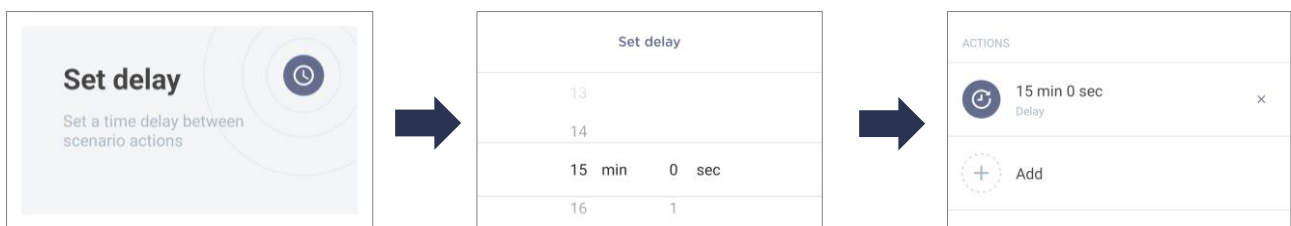
- b. Action with a device: You are allowed to add a specific action from the list, which will be performed by the selected device (Below see an example where the "Channel 2 on" action is selected for the Mini Relay);



- c. Arm/Disarm: You are allowed to arm or disarm the selected Location (Below see an example where the "Home" Location is selected);




- d. Set delay: You are allowed to set a delay in time before performing the next action or after some previous action for the launched scenario (Below see an example where a delay of 15 minutes is selected).



NOTE. A scenario for which a delay is selected must contain at least one additional action.

12.If necessary, select additional actions from the above four actions.

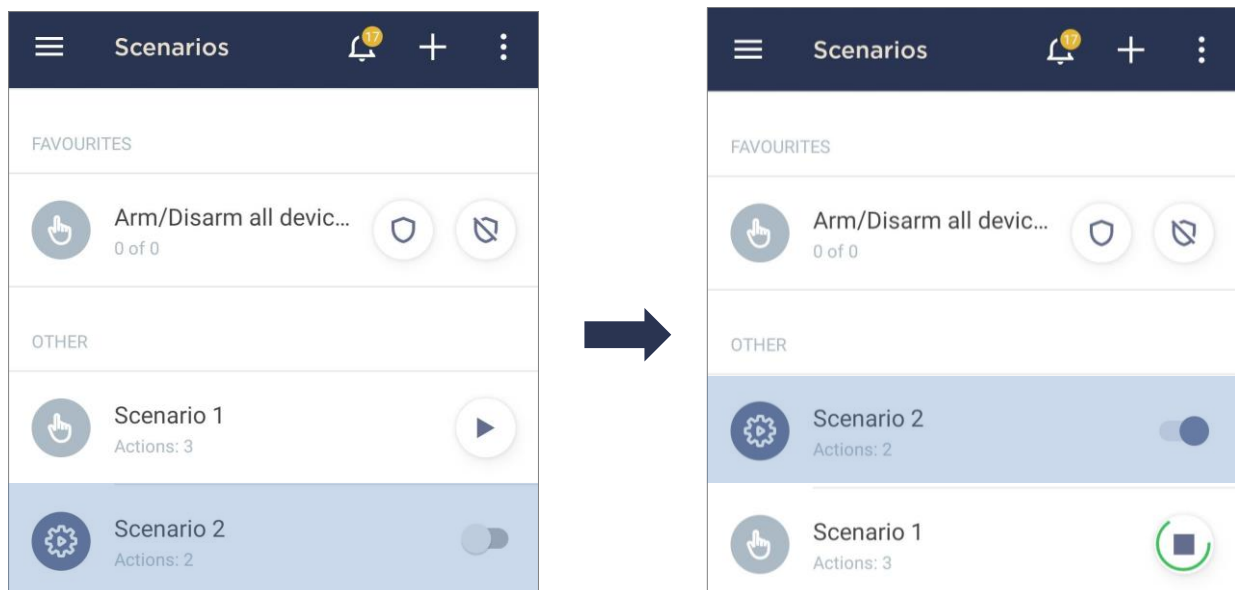
13.If necessary, select the scenario period.

ACTIVE PERIOD	
	From 31 Mar 2023
	To 1 Apr 2023

NOTE. If you do not set the action period, the scenario will be triggered each time after the conditions specified in it occur.

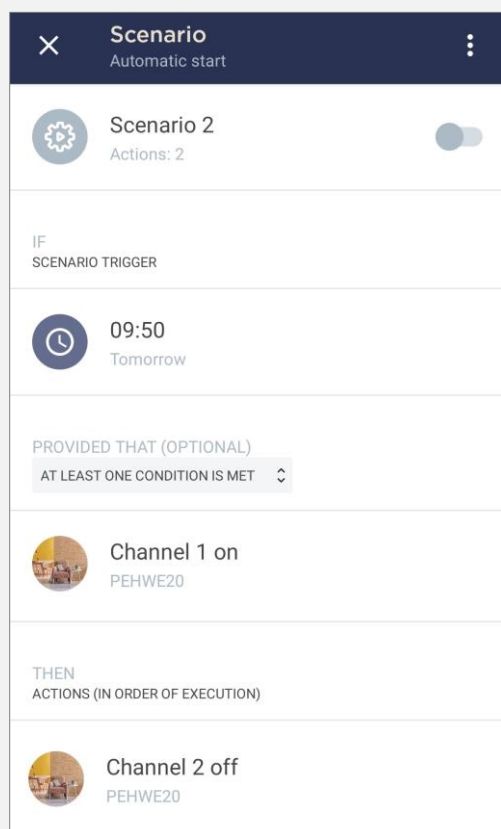
14.Click the “Save” button. The created scenario will be displayed in the list of scenarios.

15.Run the scenario by clicking the appropriate button in the “Scenarios” tab.



Example of the scenario with automatic start for the Mini Relay

Description: You need to turn off the Channel 2 of the Mini Relay every time at 09:50 a.m., if Channel 1 is on at that time. Scenario implementation shall be as follows:



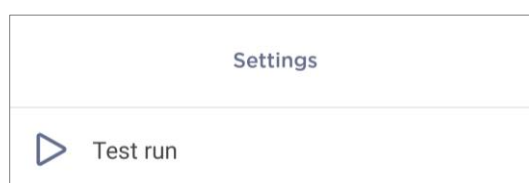
VI Creating a scenario from a template

As of the date of this document, there are no scenario templates for Mini Relays.

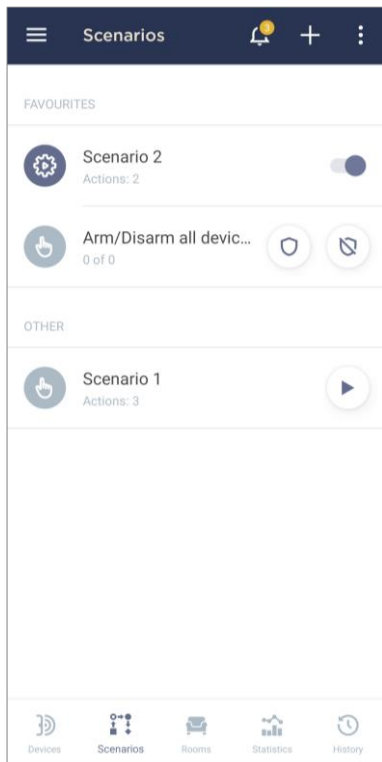
VII Test run of the scenario

The test run function is only available for scenarios with automatic triggering and is designed to test execution of selected actions without waiting for the trigger.

To activate this feature, you should click on the settings icon in the upper right corner of the scenario control panel and select "Test run".



VIII Adding a scenario to Favorites

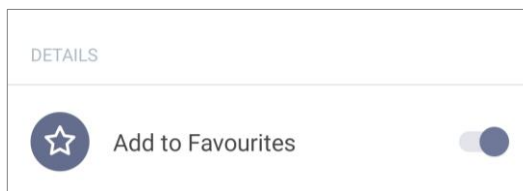


Scenarios for all devices are displayed in a single list in the “Scenarios” tab.

For the user's convenience, it is allowed to add the most important or frequently used scenarios to the “Favorites” section, which allows you to always see them at the very top of the screen.

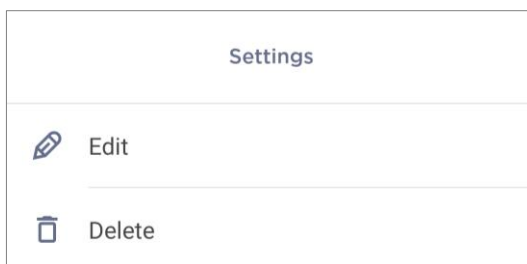
You may add the scenario to Favorites as follows:

- Click on the scenario in the list;
- Switch the corresponding toggle in the “DETAILS” section of the scenario to the active state.



IX Deleting a scenario

To delete the scenario, click on the settings icon in the upper right corner of the scenario control panel, select “Delete” and confirm the action.



NOTE. A deleted scenario cannot be restored, so if it is accidentally deleted, it must be created again.

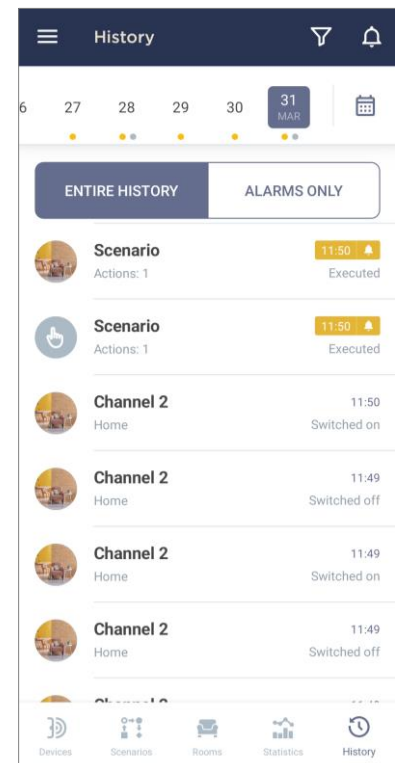
2.4.4 History of Events

In this tab, the user can view the device statuses, as well as the time when this or that event occurred.

Functionality:

- "ENTIRE HISTORY" filter, which allows viewing the following events:
 - change of system statuses ("Switched on", "Switched off");
 - start and end the firmware update.
- "ALARMS ONLY" filter, which displays only the facts of device activation when the security mode is activated;
- filter by date.

NOTE. The number of days available for viewing in the event history depends on the type of subscription (for a free subscription – 7 days).



2.5 Moving the Mini Relay to another Room or Location

When using the Mini Relay device, 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. Disconnect the Mini Relay device from the source of power and move it to another room;
 - b. Connect it to the source of power in a new room;
 - c. Change the Room in Mini Relay 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 Mini Relay device is activated;
 - b. In the Devices tab, select the required Mini Relay device from the list and click on the ⚙️ icon (Settings);
 - c. In the pop-up window, choose "Disconnect device";
 - d. Disconnect the Mini Relay device from the source of power and move it to another location/room;
 - e. Connect it to 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 Mini Relay 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 Mini Relay device from the Control Gateway/IoT Router. To do this, press and hold the Reset button on the Mini Relay device until the LED flashes (It usually takes no more than 5 seconds).

NOTE. To check that the Mini Relay 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 Mini Relay device is disconnected, it will disappear from the list of connected devices.

2.6 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 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 Mini Relay Wi-Fi Smart plug);
- Sudden changes or insufficient voltage, excessive power, temperature and/or consumption (for Mini Relay (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.

Standard events. Various news and other information from *Perenio IoT*, as well as alerts from both the Door&Window Sensor and the Motion Sensor when in the Disarmed mode.

3 Maintenance and repair

The **Perenio[®] PEHWE20** Two-Channel Mini Relay 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:

- Avoid exceeding the current load on the device;
- Comply with the rules for operating the device specified in this document;
- Carry out warranty service of the device in Service Centers only.

The Mini Relay 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[®]** Mini Relay device, please contact your local Company representative or the Tech Support Department at **perenio.com**.

4 Warranty Obligations

General

The warranty period for the main equipment (Mini Relay) is **two (2) years** from the date of sale to the end customer.

You may have other rights under the laws of your country regarding the sale of consumer goods. This limited warranty does not cover such rights.

The warranty card entitles you to warranty service only under the following conditions: all fields of the card must be filled out clearly in handwriting, the seller's seal must be in place, and the seller's details indicated in the card must match the details of the seller.

The warranty card is valid only if it is filled out correctly and completely by the seller. When purchasing the device, please check that the serial number and the model match the information specified in the warranty card.

If the warranty card is incomplete or illegible, it is invalid. If this is the case, it is recommended that you contact your dealer to obtain a properly filled out warranty card. It is also allowed to provide sales and cash receipts or other documents confirming the fact and date of sale of the device. The date of sale is the date indicated on the sales receipt or other appropriate document. If the date of sale cannot be determined, the warranty period is calculated from the date of manufacture of the device.

Perenio® products are covered under warranty in the form of repair or replacement, depending on the product category. This warranty covers the cost of replacement parts and labor to restore the product to full working order.

The manufacturer guarantees the **Perenio®** products to be free from defects in all materials, components and workmanship provided that the product is used properly during the warranty period. The limited warranty is only available to customers who purchased **Perenio®** products from an authorized retailer. If the purchaser sells **Perenio®** products to a third party, this limited warranty is void.

For warranty replacement, the device must be returned to the retailer with the receipt. The **Perenio®** brand products are warranted only in the country of purchase.

The manufacturer makes no warranties, express or implied, beyond the description contained herein, including an implied warranty of merchantability and fitness for a particular purpose. It remains at the discretion of the purchaser to use a faulty, defective and unacceptable device.

Warranty service procedure

If you discover a suspected malfunction or defect in the unit, you should contact an authorized service center before the warranty period expires and provide the following information:

- A device with a suspected malfunction or defect.
- Warranty card, drawn up in accordance with the requirements of current legislation, or the original proof of purchase, with a clear indication of the name and address of the selling company, as well as the date and place of purchase.

The following are not considered defects:

- the smell of new plastic or rubber emitted by the device during the first days of operation;
- change of color shade, gloss of equipment parts during operation;
- noises (not exceeding the sanitary norms) related to the operating principles of the individual components of the product, namely:
 - fans;
 - water valves;
 - electrical relays;
 - electric motors;
 - belts;
 - compressors;
- noises caused by natural wear and tear (aging) of materials, namely:
 - crackling during heating/cooling;
 - creaks;
 - slight knocking of moving mechanisms;
- the need to replace consumables and wear parts that have become unusable as a result of normal wear and tear.

Limitation of liability

Perenio IoT spol s r.o. reserves the right to refuse the warranty service in case of disputable circumstances. Perenio also has the right to make the final decision as to whether an item can be repaired under warranty.

Perenio® products are NOT eligible for free warranty service if the following damage or defects are found:

- damage caused by force majeure, accidents, negligence, intentional or careless actions (omissions) of the buyer or third parties;
- damage caused by the effects of other objects, including but not limited to exposure to moisture, dampness, extreme temperatures, or environmental conditions (or if they change drastically), corrosion, oxidation, ingress of food or liquid and exposure to chemicals, animals, insects, and their products of vital activity;
- if the device (accessories, components) has been opened (the seals are broken), altered or repaired by anyone other than an authorized service centre, or with unauthorized replacement parts;
- defects or damage caused by improper use, misuse, including use contrary to the operating instructions;
- any defects caused by attempts to connect to incompatible software;

- defects caused by normal wear and tear, including bags, cases, battery packs, or user manuals;
- if the serial number (factory stickers), manufacturing date or model name on the device have been removed, erased, damaged, altered or is illegible in any way;
- in case of violation of the rules and conditions of operation, as well as the installation of the device, set forth in the operating manual;
- cracks and scratches as well as other defects resulting from transportation, operation by the purchaser or negligent handling on his part;
- mechanical damage that occurred after the device was handed to the user, including the damage caused by sharp objects, bending, compressing, dropping, etc.;
- damage caused by nonconformity with the standards of power supply, telecommunication and cable networks or similar external factors.

The device is considered defective only if:

- it has been found defective and/or incomplete by a service center authorized by the manufacturer of the goods;
- the service center estimates that the device is not repairable;
- an expert opinion on the goods, carried out by a licensed organization, has shown that the goods have defects and/or deficiencies.

This limited warranty is the exclusive and sole warranty and is in lieu of all other express or implied warranties. The manufacturer makes no warranties, express or implied, beyond the description contained herein, including an implied warranty of merchantability and fitness for a particular purpose. The purchaser may use the defective, defective or unacceptable device at his sole discretion. The manufacturer shall not be liable for damages to any property caused by defects in the device, for loss of use, loss of time, or for any special, incidental, indirect, or consequential damages. The manufacturer's liability also does not extend to punitive damages and losses, including but not limited to commercial damages (including those caused by business interruption and/or business interruption), loss of profits, loss of earnings, loss of confidential and other information due to the device being deemed defective, defective or inadmissible for use.

This limited warranty gives the purchaser certain legal rights. In addition, the purchaser may also have other rights under local consumer protection laws, which may be different from the rights granted by this limited warranty. To fully understand your rights, you need to familiarize yourself with the local law.

NOTE. The manufacturer does not produce products related to critical equipment. Critical equipment includes life-support systems, medical devices and implantable devices, commercial transportation equipment, equipment for nuclear facilities or systems, and equipment for other applications where product failure could result in personal injury or death, or property damage.

5 Storage, transportation and disposal

The **Perenio[®]** Mini Relay 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.

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/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

Declarations	RoHS Declaration of Conformity dated 08.02.2023 CE Declaration of Conformity dated 08.02.2023
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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 Mini Relay device.

Table 4 – Typical Errors and Troubleshooting Methods

#	Problem	Possible Reasons	Solution
1	Indicator is not lit	Relay is not switched on	Make sure that there is electricity in the room/building and that the Relay power line in the switchboard is not disconnected. With the help of a qualified technician, check the wiring diagram of the Relay, the fastening of the conductors in the connectors, and make sure there are no open or short circuits in the network
2	Relay is not displayed when searching for a device	Relay is not connected to the Zigbee network	Press and hold the connection button for 5-10 seconds. As soon as the LED flashes quickly, turn on "Device Search" again
3	Relay suddenly disappears from the mains	Relay out of range of the Zigbee network signal	Provide distance to the Control Gateway / IoT Router within the coverage area of the Relay antenna (up to 30 m indoors, up to 100 m in free space)

8 Glossary

IoT	The Internet of Things is a network of Internet-connected devices capable of collecting data and exchanging data from embedded services.
Zigbee	An open wireless technology standard designed to use low-power digital radio signals for personal networks.
Dry Contact	A contact that is isolated from the control circuit and has no voltage of its own on the terminals.
Perenio Smart Home & Office	Software developed by Perenio IoT for remote device management.

