



**User Guide
Of Home Automation System**

Houseper

version 1.0

www.houseper.com

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1 Introduction

Houseper smart home is a solution that allows you to monitor and manage your home and enables the construction of a complete home automation system. You can add a variety of smart devices to the system, manage, reconfigure and connect them to zones and scenes, create connections between devices, receive and configure notifications in cases of emergency such as fire, flood, burglary, etc. You can also control and optimise your electricity costs and track consumption statistics with graphical presentation for temperature, humidity, pressure, etc. The Houseper system also connects remotely and manages all smart devices via a mobile app.

The main elements comprising the home automation system include:

1.1 The Houseper Controller

The Houseper controller is the major and most important element of the system. It represents a multimedia Android TV box, with a built-in Zigbee home automation module, reserved power supply and optional GSM module. It can also be used as a WiFi router to build a hotspot and start it automatically in cases of restart. The controller comes with a wireless air mouse and keyboard and also a built-in rechargeable lithium-ion battery, to keep the controller operational in cases of power interruption.

Controller parameters:

- Amlogic S905X Quad-Core 64-bit Cortex-A53 up to 1.5GHz;
- Penta-Core Mali-450 Up to 750Mhz +;
- 16GB EMMC;
- 2GB DDR3;
- WiFi 802.11 ac / a / b / g / n;
- Ethernet 10 / 100M, standard RJ-45;
- 4G LTE optional;
- USB mouse (AIR mouse) with keyboard;
- HDMI 2.0, CVBS LR Stereo audio interface, 2 x USB 2.0, TF card reader;
- DC 5V / 2A;
- Android 7.1;
- Zigbee 3.0;

1.2 The Houseper Application (App)

The Houseper application operates with the Houseper controller and is responsible for creating, configuring and managing your home automation system. It facilitates the following functionalities:

- Communication between the built-in Zigbee module and all other Zigbee devices;
- Communication with IP cameras;
- Configuration of alarm notifications, time periods and prices for the electricity consumption report, automatic clearance of old data;
- Statistic data collection for graphical reports;
- Calculation of electricity costs;
- Database;
- Performs access authorisation and control for smartphones and tablets, with the possibility of unilateral termination of access for a phone / tablet and control for sending notifications to all/some of them.

1.3 The Houseper Mobile Application (App)

You can install the [Houseper Mobile](#) app on your smartphone or tablet for constant access, supervision and control of your home automation system. The mobile app has the ability to connect to a variety of Houseper controllers, which is very convenient if you have more than one property using the Houseper smart home system.

The app is currently available for Android devices only.

1.4 Zigbee Devices

Zigbee devices communicate wirelessly with your Houseper controller providing a variety of services such as device switching on/off, temperature monitoring, fire or flood alarms, open and/or closed doors and windows, etc. Devices continue to operate and exchange data between themselves even if they have no connection to the controller.

Each Zigbee device may contain one or more logical devices. The temperature and humidity device for example, is a physical device, but it contains two logical devices - one for temperature measuring and another for humidity measuring.

In addition, some devices can extend the Zigbee network. These devices are called "routers" and are typically powered by the electric network, thus increasing (extending) the Zigbee network coverage and system capacity.

Supported versions are Zigbee 3.0 and Zigbee 1.2 with additional Houseper compatibility settings. All devices offered on this site are compatible with the Houseper smart home system.

1.5 IP Cameras

IP cameras can generate notifications in cases of movement/sound depending on their characteristics in a similar way to other devices. They allow for video recording storage on a remote server. Both local and remote control real-time monitoring are supported.

All supported IP cameras can be found in the IP Cameras section of our website.

1.6 Houseper Cloud Services

Cloud Services are optional and allow for:

- Managing your devices remotely via a smart Android phone;
- Receiving notifications on your email;
- Receiving notifications on your smartphone;
- Storing and reviewing IP Camera recordings;
- Real-time camera surveillance.

2 Setup

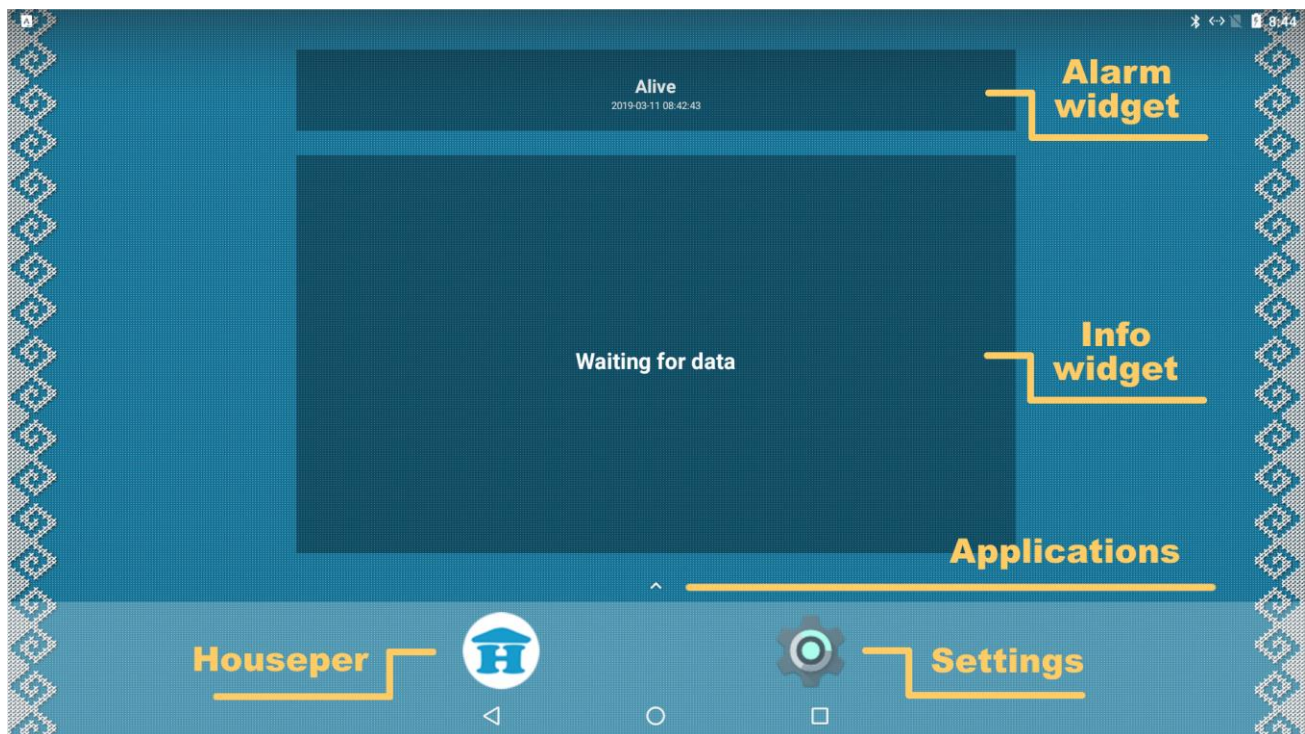
To start your own home automation system, you must first switch on and configure the controller. In case that your controller has a built-in 4G LTE module and you want to use a mobile internet connection, install the SIM card first:

1. Remove the bolts from the lower battery cover;
2. Place your SIM card in the designated slot;
3. Close the cover and screw the bolts back on to the battery cover.

2.1 Switching the Houseper Controller On

1. Connect the HDMI cable to the Houseper controller port and to a free port on your TV/monitor.
2. Connect the Air Mouse USB Module to a USB Port on the Houseper controller (the air mouse is not charged, you will need to use the USB cable included to charge it first).
3. Connect the power adapter to the Houseper controller and then plug it into the mains.

Your Houseper controller should be displaying the following screen at the initial start:



- Alarm widget - current alarms information.
- Info widget - information on the current statuses of the devices.
- Applications - open page with all installed applications.
- Houseper - Houseper application icon.
- Settings - Settings icon.


3 Controller Setup

Once your controller has been successfully started, you will need to connect it to the Internet. Make sure you do not miss this step, because when you first start the Houseper application it will connect to a server to make the initial configuration of the controller.

3.1 Network Configuration

Depending on your choice for internet connectivity, you can choose from one of the following options:

3.1.1 LAN Configuration

1. Connect the LAN port of the controller to a free port on your router.
2. The controller uses DHCP by default. In order to change the settings, start the  Box Settings application, select Network, Ethernet.

3.1.2 WiFi Configuration

1. Select Wi-Fi from Settings from Wireless & Networks;
2. Turn on WiFi service;
3. Select a Wi-Fi network from the list, enter the password (if any) and click Connect.

3.1.3 3G/4G Configuration

This method is applicable only for controllers with a built-in 4G LTE module. To install the SIM card follow these steps:

1. Turn the power off from the Houseper controller (if its batteries are charged, it will continue to run);
2. Remove the bolts from the lower battery cover;
3. Disconnect the battery;
4. Place your SIM card in the designated slot;
5. Connect the battery;
6. Close the cover and screw the bolts back on to the cover;
7. Turn the power supply on for the Houseper controller.
8. From Settings, Wireless & Networks select More and configure Cellular Networks:
 - If you are in roaming, turn Data Roaming on;
 - Select Preferred Network type;
 - Select Network Operators;

- Enter the Access Point Names menu and configure the APN according to the information provided by your network operator.

Your network has now been successfully configured and you are connected to the Internet. Before proceeding with the Houseper app, please review the settings below and configure the ones that you will need.

3.2 Settings


3.2.1 Time Zone

1. Select Date & Time in Settings from the System section;
2. Turn Automatic Time Zone off;
3. Choose your time zone in the Select Time Zone section.

3.2.2 Language

1. Select Languages & Input in Settings from the Personal section;
2. To add a language choose Add from the Languages section;
3. To remove a language, select Remove from the navigation bar, mark the languages you want to remove, and then click the Delete icon.

3.2.3 Extend/Shrink Screen

1. Start the  Droid Settings application;
2. Enter the Display menu;
3. Enter the Screen position menu;
4. Use Zoom In to shrink the screen and Zoom Out to extend the screen.

3.3 Add Device

Start the Houseper app. When launching for the first time:

1. Wait for the initial configuration to complete.

2. Email Configuration dialogue - Enter the email where you would like to receive information from your controller. If you do not want to receive emails, leave the email box blank and select "Do not ask me again". You can skip this dialogue and leave it for later. For advanced setup, select E-mail Settings from the Settings tab.
3. Controller Input dialogue - If you are planning to connect to your home automation system using a smartphone/tablet, enter a name and leave the Remote Access checked. If you choose to skip this configuration, you can do it later from the Remote Control option in the Settings tab.

3.3.1 Add Device

Please, review the device instructions for each separate device that you would like to add. Different devices join in different ways - it could be by pressing and holding a button for a while, repeatedly switching on and off the power, removing and putting the battery, etc. Most often, when the device is new and has never been added to the Zigbee network, it is simply enough just to switch it on.

Once you have carefully read the device instructions follow these steps:

1. If the device is battery-operated, make sure the batteries are properly installed.
2. If the device has been previously added to other Zigbee networks, you will need to reset it. If there are no explicit instructions for reset in your device's manual, follow the steps for leaving the network. This is usually enough to reset the device.
3. Select Add Device in the Houseper or Houseper Mobile application from the Settings tab - the controller will open your Zigbee network for new devices to join in within the next 60 seconds.
4. Follow the Join Network instructions of your device.
5. After the device is successfully added to the controller a "New device found!" notice will appear on the Houseper application screen.
6. Please, wait until the controller discovers the full functionality of the device. Undiscovered devices remain at the top of the list in the Houseper apps section. In the discovering process, you can track how the device name and information changes depending on the information collected by the controller. You can also monitor the appearance of more than one device when the physical appliance contains more than one logical device.
7. Once the device is fully discovered, it will appear in the Houseper mobile application.

The device being successfully joined to the Zigbee network, you can now access its detailed information, change its name, set a room, and test its features. You can find additional information in the Devices section of the current User Guide.

3.3.1.1 *Unsuccessful Device Discovering*

Here are some possible reasons for unsuccessful device discovering:

1. Sleeping device - some devices are not in constant communication with the controller. In case that the device "falls asleep" before it is completely discovered, you can try to wake it up and restart the procedure with the discovery button.
2. Adding multiple devices at once - adding multiple devices simultaneously slows down the process. Try adding the device separately.
3. The device does not follow the full Zigbee specification.
4. The device is not compatible with Houseper. Supported Zigbee versions are 3.0 and 1.2 with some additional Houseper compatibility settings. All devices offered on this site are compatible with the Houseper smart home system.

3.4 Add Camera

First you will need to check whether the IP camera is supported by the Houseper system. Read the camera manual and if needed perform Factory Reset to return it to factory settings. Follow these steps:

1. Follow the camera manual to switch it on and set up its network. Make sure the IP camera is configured on the same network as the controller.
2. Select Add Camera in the Houseper app from the Settings tab.
3. Wait until the controller scans your network and display lists the cameras.
4. Use the Add button to join the camera.
5. Enter username and password. (If you don't know the username and password, you can find the default credentials in the camera manual). Confirm with OK.
6. The correct username and password will take you to the next step - password change (optional step for better security). Enter your old and new passwords and click OK to change or select Cancel to skip this step.

Now that your Camera has been successfully added, you can further proceed with the next steps, if you have any left on the list. More information about cameras can be found in the Devices section of this manual.

3.5 Smart Phone Connection

The initial connection of a smartphone/tablet to the controller can only be done if both devices are located in the same network.

1. From the controller: select  Remote Control in the Settings tab of the Houseper application and make sure that your Local access is enabled and running.
2. From the smartphone/tablet: download the Houseper mobile application from Google Play and install it on your smartphone/tablet.
3. From the smartphone/tablet: start the Houseper mobile app and make sure your phone is connected to the same network as the controller.
4. From the smartphone/tablet: select  Remote control in the Settings tab of the Houseper mobile application.
5. From the smartphone/tablet: the phone application will start scanning your network to find an active Houseper controller. Once found, it will be displayed. (Please note, that in certain cases this may take some time).
6. From the controller: select Bind Smartphone/Tablet .
7. From the smartphone/tablet: select Register from your phone to your controller.
8. From the controller: your controller will ask for a confirmation to connect your smartphone/tablet. Confirm the connection by selecting Yes.
9. From the smartphone/tablet: finalise the process from your smartphone by selecting the type of remote connection you accept for auto-connect - Remotely via WiFi connection and/or Remotely via mobile (3G/4G) connection.


3.5.1 Remote Control (Houseper app)



The Remote Control function of the Houseper app provides for connecting mobile devices to the controller. It facilitates the initial registration of mobile devices, permission settings and access control. There are two types of access:

- Local - when the mobile device and the controller are connected directly without using of a remote server.
- Remote - when the mobile device and the controller are connected via a remote server.

3.5.1.1 Authorised Devices

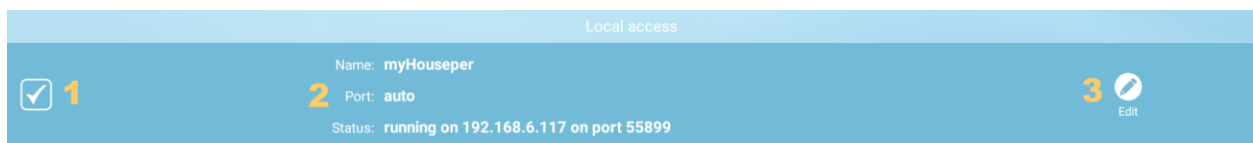
This section contains a list of all authorised mobile devices and the button  Bind smartphone/tablet that launches the initial authorisation procedure.

Each authorised device is displayed with the following characteristics:

1. Name - when the device is connected, the name appears in green.
2. Android Number - unique mobile device ID.
3. Remote Access Marker - allows/disables the connection of the mobile device to the controller, both locally and remotely. A very useful option for temporary restriction of access to a particular mobile device.
4. Send Notifications option - Enables/Disables notifications to the corresponding mobile device.
5. Remove Device button - permanently removes the device from the list of authorised mobile devices so that it can no longer connect to the controller. In order to recover the access of a device that has already been removed, it will need to pass the initial authorisation procedure again, following the steps above.

3.5.1.2 Local Access

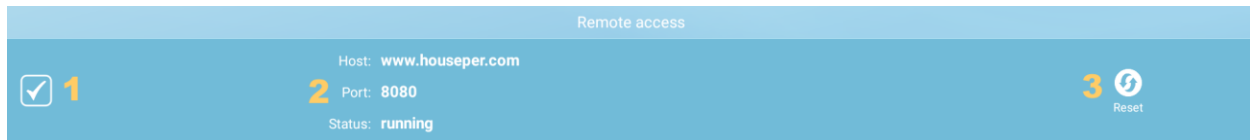
Local access allows you to connect directly a mobile device to the controller without using a remote server. For this purpose, the mobile device and the controller must be in the same network.



1. Enable/Disable local access.
2. General information of local access displayed:
 - Controller name;
 - Connection port;
 - Current status.
3. Edit button - allows you to change the name and port. Entering a value of 0 for a port means that the port will be automatically selected.

3.5.1.3 Remote Access

Enables connection to the controller from mobile devices via a remote server. This ensures uninterrupted access to the system, no matter where and how far the mobile device is located from the controller.



1. Enable/Disable remote access.
2. General information of remote access displayed:
 - Remote server;
 - Port on which it listens to the remote server;
 - Current status.
3. Reset button - reinitialises the connection.

3.5.1.4 Hotspot

Selecting the "Autostart Hotspot" option in the Hotspot section forces the start of a configured Hotspot (if any) when the controller is restarted.

3.5.2 Remote Control (Houseper mobile app)






The Remote Control function of the Houseper mobile app handles the process of connecting the mobile device to the controller.

3.5.2.1 Configured Network

This section contains information about the controller to which the mobile application is currently connected or trying to connect.



1. Connection indicator. Possible displays:
 - As shown in the picture - when the mobile device is connecting;

-  - When the mobile application is locally connected to the controller;
 -  - When the mobile application is connected to the controller via a remote server.
2. Controller name.
 3. Disconnect button.
 4. When a successful connection is made, an  info button is displayed giving access to detailed information - the option to reconfigure or delete the connection. Once deleted, only authorising the mobile device again from the beginning can restore the connection to the controller.

The Houseper mobile app has a Current Connection Indication button located in the upper control bar (upper right corner of the application). The connectivity indicator may show no connection, connecting, local connection and remote connection. The indicator button provides a quick link to the Remote Control option in the Settings tab.



3.5.2.2 Choose a Network...

This section contains a list of all available controllers. Two controllers can be seen on the picture below. The first one is a controller that has already been registered and can be connected at any time, while the second one is still unavailable and waiting to be registered by performing the initial connection procedure.



1. Controller name.

2. Remote Connection button – it has an Active and Inactive status indicating the option to connect remotely.
3. Local Connection button – it has an Active and Inactive status indicating the option to connect locally.
4. Registration button - part of the initial smartphone connection procedure, described above.
5. Info button - provides access to detailed information, the option to reconfigure or delete the connection. Once deleted, only authorising the mobile device again from the beginning can restore the connection to the controller.

3.5.2.3 Add Manually

This button allows you to connect to a controller by manually entering the IP and port.

3.6 Notification Settings

The current version of the Houseper system supports 2 types of notifications - System and Regular, both of which can be sent to email and/or smart phone(s)/tablet(s). Notifications types:

1. System notifications concern your system status, such as insufficient disk space, cloud services expiry, etc.
2. Regular notifications are those that keep you informed of events and emergencies taking place like fire, flood, burglary, etc.

3.6.1 E-mail Notifications

To configure e-mail notifications, go to E-mail Settings in the Settings tab of the Houseper app. You have two options that can work both separately and simultaneously:

1. Houseper Service Mail - use the Edit button to enter/change the e-mails to which you want to receive notifications. If you list more than one e-mail, make sure they are separated by ";" Once you have configured your e-mails, you can use the checkbox to enable/disable them. When the check box is not marked, you will not receive e-mails. Using Houseper Service Mail is only possible with active Cloud Services (Please, check the Cloud Services section on our website).

2. Personal Mail - use the Edit button to configure the e-mail(s) where you would like to receive notifications. Use ";" as a separator when listing more than one e-mail. Using the start checkbox, you can temporarily stop and start sending e-mails. The Personal Mail option does not require active Cloud Services.

3.6.2 Smartphone(s)/Tablet(s) Notifications

To receive notifications on your phone/tablet, make sure that the following steps are checked:


- The Send Notifications on your phone/tablet on the Houseper app in the Settings tab and the Remote Control in Authorised Devices sections are all marked.
- You have a "Registered" status in the Houseper mobile app from the Settings tab in the Notifications section. You can test it using the Test button and in case of a problem, you will need to renew your registration using the Renew registration button.
- Check your Houseper mobile app - for most phones, notifications do not work after the application's Force Stop has been applied.

3.6.3 Configuration of Regular Notifications

You can change the Default Configuration in the Houseper app from the Settings tab, using Configure Alarm Notifications. This is where all newly added devices inherit their notification configurations from. If you want you can make a detailed configuration for each device by selecting the Devices tab in Detailed Information from the Device Configuration section using Configure Alarm notifications. For more details, please see the Configuring Alarm notifications section here.

4 Devices

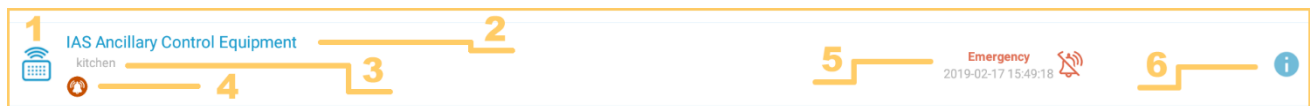
The Devices tab gives you information about all existing devices in your Houseper system. You can monitor, manage, configure and remove them from the system. On the first page, you will see a list of all devices with the most important information

about them. Use the Info button  to switch to the next page (Detailed Information) where you will get detailed information about the device.

4.1 Device List

The first page on the Devices tab contains a list of all devices and a search/filter bar. Devices are listed by joining time. The newest ones are added at the top of the list. When a new device is added, a discovery process is initiated and the Houseper controller begins to communicate with the device until it obtains complete information about it and its configuration settings. Devices in discovering mode are listed at the top and will not be moved down until their discovery process completes successfully. Devices that do not support the full Zigbee specification may never be successfully discovered. This will be indicated and they can be removed from the system or you can retry to discover them.

Each device is displayed in the list with the most important properties depending of its type.



1. Button or image depends on the device type.
 - Button - if the device supports any of the following functionalities: On/Off, Zone, Door Lock, Thermostat, etc., a blue button will be displayed with an image indicating the type of device. The button colour indicates the device status. When the colour is saturated, this indicates the On/Active device status, while the pale colour marks the Off/Inactive status. When you press the button, the device changes its status from On/Active to Off/Inactive and vice versa, depending on the current status.
 - Image - if the device cannot be controlled from the list of devices, a grey-coloured image is displayed, corresponding to the device type.
2. Device name.
3. Device location (room).
4. Alarms indication.
5. Additional Information and/or control depending on the device type.

For all devices with Zone and/or Zone Control functionality, only alarms for this particular functionality are displayed as Additional Information. This of course does not exclude the presence of other alarms that will be indicated in the "Alarms Indications".

Grey-coloured alarms show the current status of the device when it is not active. They are not reflected in the Alarms tab and they do not trigger notifications, but are still added to the registry.

6. Info button – used to switch to Detailed Information for the device.

4.1.1 Undiscovered Devices



1. Indication for Undiscovered Device.
2. Additional Information.
3. Discovery button – restarts the process for device discovering.

4.1.2 Search/Filter Bar

The search/filter bar is located right above the list of devices.



1. Indicates the number of devices shown, relative to the total number of devices.
2. Filtering/Search field - search for the name and room location of the device.
3. Filter button - showing all devices or filtered only.

In the case of an active filter, devices marked as hidden will not be displayed.

4.2 Device Info

4.2.1 Functionality

All supported features by the device are listed in the Functionality section. Detailed Information about all functionalities can also be found here.

4.2.2 Devices Suitable for Binding

Binding is a logical connection between two devices. For example, an illuminating device can turn on/off the luminaries with which it is bound, depending on the level of illumination.

This section is accessible only from the Houseper application. It features a list of devices suitable for binding with the current device.



1. Device.
2. Binding status.
3. Binding functionality.
4. Bind button - connects devices over relevant functionalities.
5. Unbind button - removes binding between devices over relevant functionalities.

The "Devices Suitable for Binding" section is not displayed when there are no suitable devices available.

4.2.3 Device Information

The section contains basic device information and possibility to change the device name and/or room location.

4.2.4 Device Configuration


Device configuration usually provides the following information:

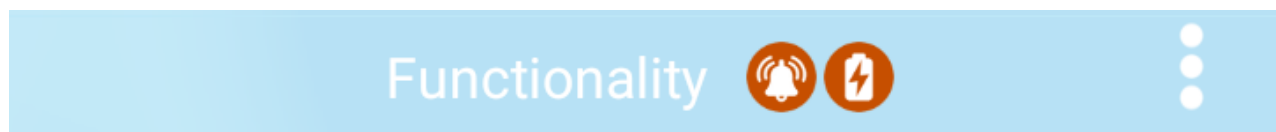
- Hidden devices will not be displayed in the list of devices on the first page of the Devices tab when there is an active filter. For example, a light switch that is bound with a lighting unit and has no other functionality. It serves to manage the luminaries with which it is bound, but it does not give us any additional information and cannot be controlled. Therefore, its presence in the list of devices is totally useless and you can configure it as "hidden". Hidden Device Configuration is designed simply for convenience and can be changed at any time.
- Sleeping Device marks devices that are not permanently connected to the network. They communicate with the controller at a certain time to perform their predefined tasks (measurement, reporting, etc.) and/or in cases of emergency events (to report them). When "asleep" they are inaccessible and even leave the Zigbee network temporarily. The "sleep" function saves the batteries of the devices for a very long period of time. The longer the device sleeps, the slower the battery is exhausted. Some devices wake up so often that their sleeping times are

unnoticeable and can be accessed almost all the time. They are usually equipped with batteries of larger capacity. In this case, the "Sleeping Device" check can be removed, which will make the Refresh buttons visible in the Functionality section.

- Configure Alarm Notifications – devices inherit these settings from the configured alarm notifications in the Settings tab. If desired, this configuration can also be changed at device level. It is the user that decides on what and how to be notified for each separate device.
- Remove Device – removing a logical device leads to the removal of the entire physical device. For example, if you have a physical temperature and humidity measuring device that contains two logical devices - one for temperature measurement and another for humidity tracking, the removal of either of the two logical devices will lead to the actual removal of both of them.

4.3 Functionalities

The Functionality section in Detailed Information contains a list of all device features. The headline of the section shows the alarm indicators and the presence of the following image  indicates communication problems.



Each Functionality has its own title bar, which displays:



1. The Functionality name.
2. The Refresh button - optionally presented, depending of the functionality and device type.
3. A button to Hide/Show All/Part of the Functionality - optional.

All basic Functionalities are listed below. For example Humidity, Illumination, Pressure, Flow, Occupancy, etc. are analogous to Temperature and are not described. Certain functionalities are quite complex and have different visualisation depending on the particular device. In general, controls for characteristics that are not supported by the

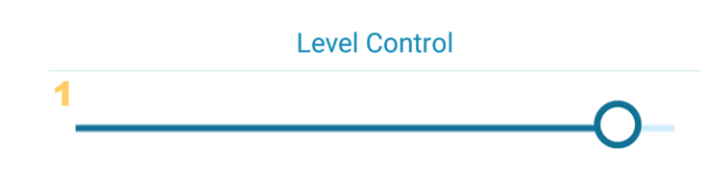
device, whenever such information can be obtained from it, are not to be displayed. For example, for a thermostat that does not have an occupation sensor, the controls regarding information and presence management will not be shown.

4.3.1 On/Off



1. Current status.
2. Turn On button.
3. Turn Off button.
4. Toggle button.

4.3.2 Level Control



1. Control of level – a number of applications are available, the most common being with Dimming Control for example.

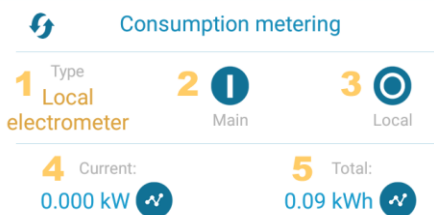
4.3.3 Colour Control



1. Hue control.
2. Saturation control.

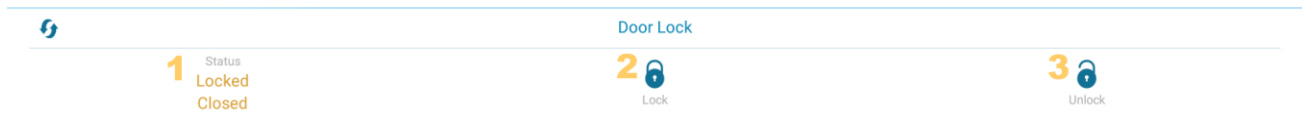
Colour control may have a different visualisation depending on the device type. The above image shows the most common type, but there could be others as well.

4.3.4 Consumption Metering



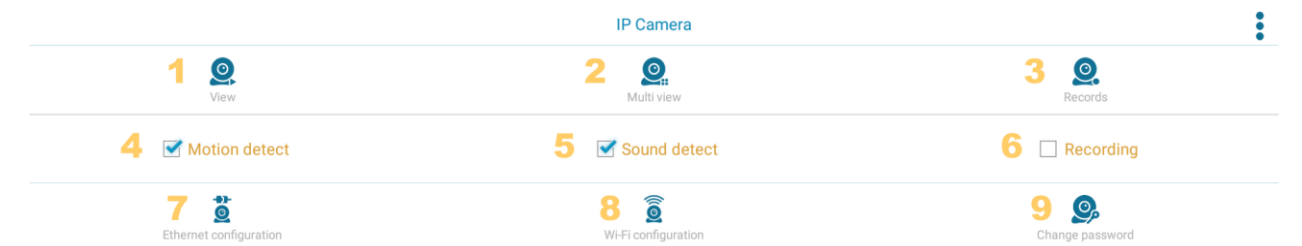
1. Type of the electrometer.
2. Main electrometer button - data for all devices declared as Main electrometer are accumulated and the total can be viewed from the Home tab with the Electricity button. For this purpose, it is necessary to input the electricity periods and prices from the Settings tab in Electricity Pricing.
3. Local electrometer button - once a Main electrometer has been reconfigured as a Local one, the data that has been accumulated already by the device will not be altered, but future data will not be included in the total.
4. Current Consumption of electricity and a Graphical Overview button for data accumulated from the device. The type of electrometer and its reconfiguration does not affect accumulated data.
5. Total Consumption accumulated and a Graphical Overview button for data accumulated from the device. The type of electrometer and its reconfiguration does not affect accumulated data.
6. It is necessary to input Reporting Periods and Electricity Price using the Settings tab in Electricity Pricing.

4.3.5 Door Lock



1. Current status.
2. Lock button.
3. Unlock button.

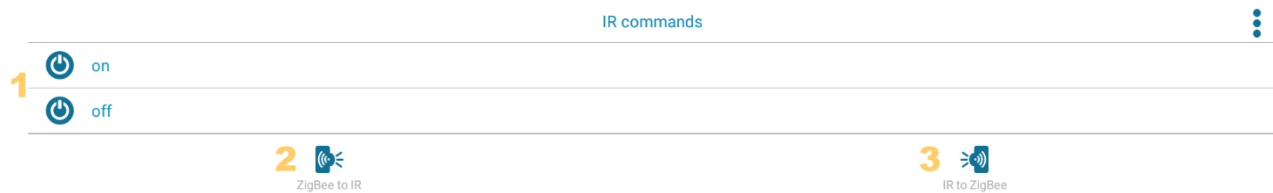
4.3.6 IP Camera



1. Online Monitoring – in addition to live streaming, depending of the camera type, certain features such as camera rotation in different directions, centering, zooming, room temperature will be displayed.
2. Online Monitoring of 4 cameras simultaneously.
3. Recordings View button - all images and video recordings can be viewed, downloaded/saved and deleted.
4. Configure Event (Alarm, Recording) for Motion Detect - an alarm will be generated in the event of movement, when this option is selected and the IP camera is active. If the Recording option is selected, a recording of the event causing the alarm will be made.
5. Configure Event (Alarm, Recording) for Sound Detect - an alarm will be generated in the event of sound, when this option is selected and the IP camera is active. If the Recording option is selected, a recording of the event causing the alarm will be made.
6. Record Configuration - When this option is selected, the events causing the alarm will be recorded.
7. Configure the LAN network on the camera.
8. Configure the Wi-Fi network on the camera.
9. Change camera password.

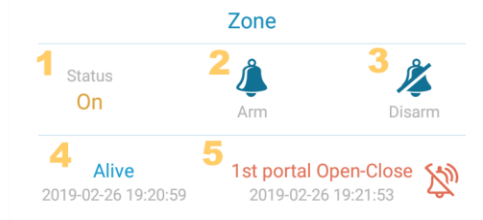
4.3.7 IR Commands

This option is used to configure and execute infrared (IR) commands from the application to the devices supporting the corresponding commands and vice versa - to manage Zigbee devices via IR remotely.



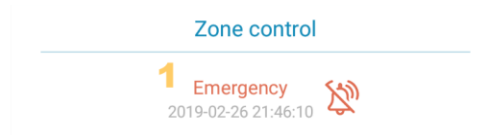
1. A list of all configured IR commands that can be executed locally and remotely through the application. You can control all IR devices that you usually operate at home, such as the air conditioner, TV, etc.
2. Zigbee to IR Commands configuration - when you enter this menu, follow the instructions to configure the desired commands. All configured IR commands are displayed in List 1 above. When executing such a command, the controller will send a Zigbee command to the current device that in its part will send the stored IR command. The end result is exactly the same as if you had used your old remote control.
3. IR to Zigbee Commands configuration - when you enter this menu, follow the instructions to configure the desired commands. With these commands, you can convert any IR remote into a Zigbee remote control. For example, you can turn on and off Zigbee devices by using the TV remote. When executing such a command the remote will send an IR command to the current device that will perform the stored Zigbee command. The end result is exactly the same as using the Houseper application to manage the devices in your home automation system.

4.3.8 Zone



1. Current status.
2. Arm button - arm device.
3. Disarm button - disarm device.
4. Last-received live report with date (if available).
5. Current alarm with date (if available) and button to delete it. Alarms requiring an armed device will be coloured in grey when the device is not armed unless it is combined with another alarm. In that case, all alarms are to be listed in red and only those that do not require an armed device will be indicated in the title bar of the Functionality section.

4.3.9 Zone Control



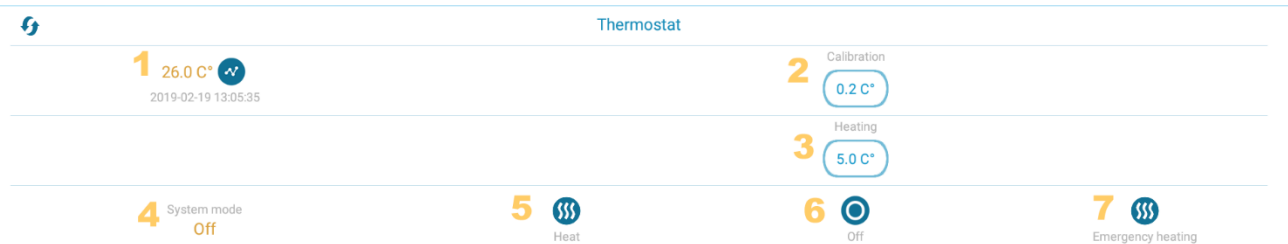
6. Current alarm with date (if available) and button to delete it - alarms requiring an armed device will be coloured in grey when the device is not armed unless it is combined with another alarm. In that case, all alarms are to be listed in red and only those that do not require an armed device will be indicated in the title bar of the Functionality section.

4.3.10 Temperature



1. The latest received value with a reporting date.
2. Graphical overview of data statistics accumulated from the device.

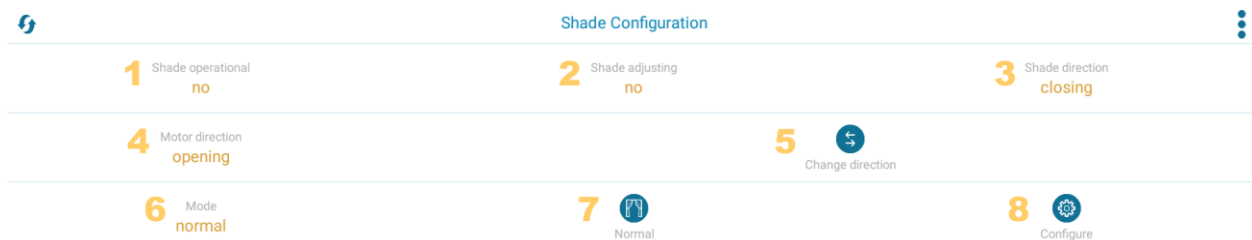
4.3.11 Thermostat



1. Last-measured internal temperature with reporting date - for thermostats that support outside temperature measurement, additional information will be displayed for the last-measured outside temperature with a reporting date.
2. Calibration - the temperature measured by the thermostat often differs from the room average, since the thermostat sensor is located in close proximity to the heater. Therefore, it would be better to input this deviation so that all other configurations are comparable to the average of the room.
3. Heating - entering the desired heating temperature. The thermostats with an occupation detector will be presented with two controls - one for temperature configuration when the room is occupied and the other one when it is not. Also, there are thermostats providing for cooling with/without an occupancy sensor - they show controls analogous to the above.
4. Current state.
5. Heat on button.
6. Heat off button.
7. Emergency heat on button.

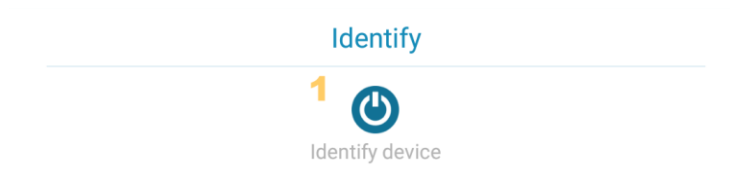
Different buttons may be shown/hidden depending on the type of the thermostat, such as cooling, fan, etc. Turning on/off heating/cooling requires certain technological time, and it is advisable that you wait a little before sending out another command.

4.3.12 Motorised Shades Configuration



1. Shades operational status.
2. Shades adjusting status.
3. Shades direction.
4. Motor direction.
5. Change motor direction button.
6. Current mode - normal or configure.
7. Switch to normal mode.
8. Switch to configure mode.

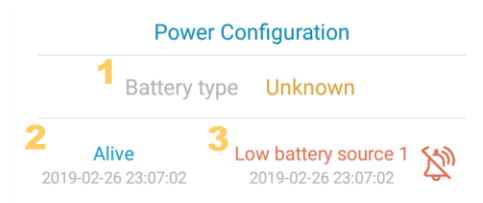
4.3.13 Identify



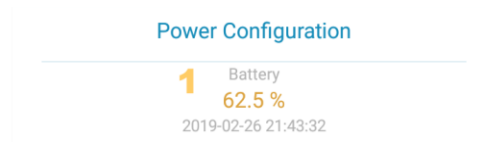
1. Device Identification button – this is a very useful functionality when you have more than one similar devices and you have not entered unique names. Running this command will cause the device to blink for 15 seconds.

4.3.14 Power Configuration

All components in this section are optional and can take different combinations depending on the device. Two examples are shown below:

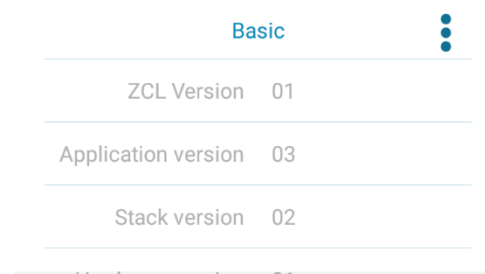


1. Battery type.
2. Last-received live report with date.
3. Last alarm received with date and delete button.



1. Battery charge value in percentage and date of value reporting.

4.3.15 Basic



Provides basic device information.

5 Scenes

Scenes represent a set of predefined modes and settings for one or more devices. They are very convenient for simultaneous management of multiple devices.

To create a new scene, use the Add Scene button, then enter a scene name, optional description and select the devices that will participate in it. All devices that support scenes are included in the list and those you select will be remembered with their current modes.



1. Activate Scene - with this button you can activate the scene and all the devices included in it will switch to their predefined status. Here is an example with a colourful light blue bulb that can create a scene called "Blue". Once the scene has been successfully created, we can change the bulb's colour and/or even switch it off. When we activate the "Blue" scene, the bulb will light up in blue (and that



would be exactly the same blue colour that has been pre-selected, with the appropriate level, hue and saturation set in the beginning).

2. Scene name and description (if available).
3. The Edit button allows you to change the name and/or description of an existing scene.
4. IR commands – you can use this button to add IR commands to the scene. For example, if you already have a "Turn All Off " scene and add an IR device in which you have configured the Stop Air Conditioner command. When you add this command to the "Turn Off All" scene, in addition to stopping the device already defined, it will turn off the air conditioner as well.
5. The Devices button lets you view a list of all devices included in the scene and change them if necessary. You can remove devices, add new ones or use the Overwrite button to change the predefined mode of a device with its current settings.
6. Scene Delete button.

With the Remove All Scenes button, you can delete all scenes.

6 Alarms

Active alarms are listed together with an option to be deleted. All alarms received are displayed together in one row. For example, for a certain device we can have "fire" and "tamper" on one row and a "battery low" on another. It is also important to note that there are no special listings for "armed device" if devices are not armed. For example, if an open door detector is disarmed because you are at home and you are continually opening and closing doors it will not be marked as an active alarm.

Date and Time	Device	Event
1  2019-02-26 18:47:21	2 Water Sensor bathroom	3 Water overflow indication 4 

1. The alarm indicators and the alarm date.
2. Name and room location of the device.

3. Alarm list.
4. Button to delete the corresponding alarm(s).

When alarms that require an armed device are in combination with another alarm but the device is disarmed, the alarm related to the armed device will also be displayed on the alarm list but it will not be presented in the alarm indicators.

6.1 Alarm Indicators

Alarm indicators are graphical images that help quickly understand the alarm type.



Depends on the device. It bears collective names like Alarm1 and Alarm2, but most often appears with specific names relating to the device type, such as Fire indication, Water Overflow indication, Panic, Movement indication, Fall/Concussion, CO indication, Intrusion indication, Presence indication, Vibration, etc.



Indicates battery-related problems such as low battery, defective, etc.



Indicates intrusion, attempt to compromise the device.



Power supply problems - high/low voltage, power off, etc.



Indicates a problem with the device, impaired functionality.



Missing device – when the regular report is missing or when a persistent inability of the controller to connect to the device is present. The possible reasons for generating this alarm most often relate to the device being disconnected from the power supply, the device having been turned off after completely exhausted batteries, also if the device has left the network range and cannot connect to the controller or the device has been severely damaged.

7 Zones

This part refers to all devices that have the "Zone" and/or "Zone Control" functionalities.

Each guarded property (apartment, house, villa, etc.) can be divided into guarded zones (front yard, backyard, first floor, children's rooms, etc.) Each zone can contain any

number of devices and any device may belong to any number of zones. Devices grouped into zones can be managed together, allowing quick arming and disarming for overall protection. Arming/Disarming one zone arms/disarms all devices belonging to that zone.

There are two predefined system zones - Day/Home Zone and Night/Sleep Zone. They cannot be deleted and/or changed, but there is no limit to adding and removing devices to/from them. There are devices with which the zones can be managed, especially the predefined Day/Home and Night/Sleep Zones.

Configuring zones and adding/removing devices to them can be changed at any time.



1. Arm zone - arms all devices belonging to that particular zone.
2. Disarm zone - disarms all devices belonging to that particular zone.
3. Zone name.
4. Information about the number of currently armed devices relative to the total number of devices belonging to that zone.
5. Button to add/remove devices to/from the zone.

8 Log

The log contains information about all important events and can be filtered by device and event types. This is very useful for tracking chronological events.

All events are logged, even if they have been once marked with "for armed device" when using Configure alarm notifications from the Settings tab, regardless of the device status. For example, an open/closed door/window sensor will not generate an alarm if the device is disarmed, however the event will still be logged.



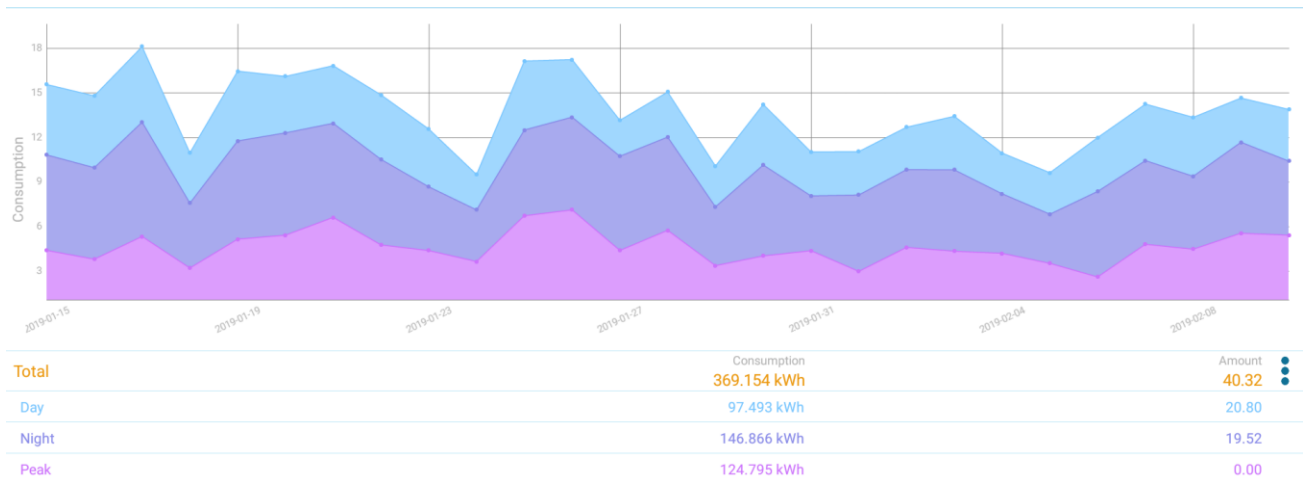
1. Alarm indicators and date of the event.
2. Event - can be an alarm in orange color or a live report in green colour.
3. Name and room location of the device.
4. Delete button.

8.1 Filter Bar

1. Name and room location of the device.
2. Configure filter button.

9 Electricity

Electricity in the Home tab shows cumulative statistics and graphs over a period of time for all main electrometers. It allows for viewing data by tariffs and and/or total consumption, as well as in cash equivalent.



Days and periods are calculated based on the Time Zone of the Controller.


All system devices that support the "Consumption Metering" functionality can be configured as a Main Electrometer. This is usually a device (for example, a prime electricity meter) that is located at the entrance your property's electricity network, but there could be more devices (sockets, couplers, etc.) whose added consumption value would give you the total.

When changing the configuration from a Main to a Local electrometer and vice versa, the statistics accumulated so far will not change.

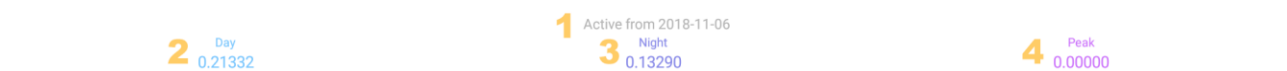
The electricity consumed and its cash equivalent are calculated on the basis of the information entered in Electricity Pricing in the Settings tab of the Houseper application. If no data is available for the reporting periods and the corresponding prices, statistics cannot be accumulated and the graph will be empty and/or the amount will not be calculated.

A special dialogue box will be displayed for entering the required periods and price information when you add a new power measuring device, in case that no data has been previously input in Electricity Pricing.

9.1 Electricity Pricing

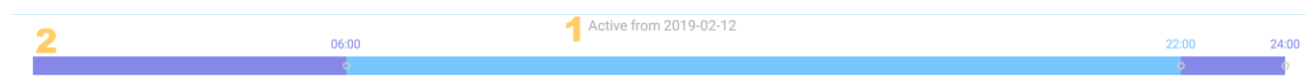
Electricity Pricing gives you two lists of corresponding prices and periods. There is an add  button in the title bar of each list, with which future pricing and time period changes can be entered. Data entered for past periods cannot be changed or deleted.

9.1.1 Electricity Pricing List




1. Period for which the prices are up-to-date. It can contain a starting and an end date or just a starting date, after which it will be active until a subsequent period is defined that will set the end date for the current one.
2. Price per kWh for day electricity consumption.
3. Price per kWh for night electricity consumption.
4. Price per kWh for peak electricity consumption.

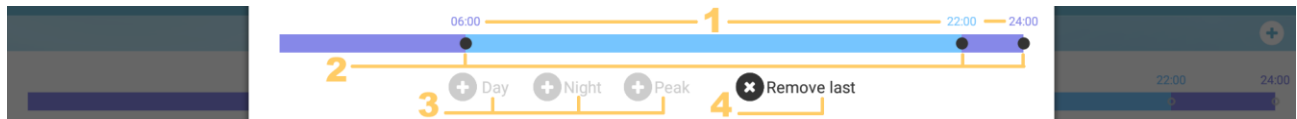
9.1.2 Charging Periods List



1. Period for which predefined electricity charging periods are up-to-date. It can contain a starting and an end date or just a starting date, after which it will be active until a subsequent period is defined that will set the end date for the current one.
2. A bar displaying the predefined electricity charging periods - the image above has three periods:
 - From 00: 00h to 06: 00h - nighttime;

- From 06: 00h to 22: 00h - daytime;
- From 22: 00h to 24: 00h - nighttime.

When adding a new period (with the button ) use the black sliders marked with 2 at the picture below or select the value you want to change (marked with 1 at the picture below) - an additional dialogue box will open for precise time selection.



1. End of the period - the beginning of the period is the end of the previous one or 00:00h if this is the first period. It is also a button that allows you to make changes.
2. Sliders for end-of-period configuration.
3. Buttons for adding a new period - when active they are coloured in the corresponding to the period colour. In order to be active, these buttons must differ from the last period entered, the end of the last period being before 24:00h.
4. Delete the last period button.

When the period bar is filled through 24:00h, they can be added.

10 Rooms

The term "room" is conditional and serves to identify a physical location. It could be a real room such as a kitchen, living room, bathroom, an open space (yard, pool, garden, roof) or even an auxiliary building (workshop, greenhouse). Each device can be assigned a "room" in which it is physically located. Rooms are used as Additional Information for faster device identification. For example, when you have multiple identical devices located in different rooms.

The room and device names serve as primary identifiers for the device.

You can add, remove and change rooms at any time.

There is a predefined pack of rooms that will be offered to you. If you decide to take advantage of them, you should know that they do not differ in any way from the rooms you can create. They can be deleted and changed like all other rooms.

11 Recent Actions

This module is located in the Home tab of the Houseper mobile application and allows one of the last commands executed to be easily found and launched again. It contains a list of commands executed by the corresponding mobile device. These are usually the most frequently used commands and can be quickly executed through this module.



1. Execute command.
2. The command to be executed. It can be Switch a device On, Activate a Scene, Disable Zone, etc.
3. Depending on the command type it can be: Name and Room of a device when the command refers to a device, Names and Scene Description when the command refers to a Scene, etc.
4. Additional Information about the last execution of the command.

12 Settings

12.1 Add Device



Available both for the Houseper and Houseper Mobile applications. Please, check also the Add Device and Discover Device sections of the current User Guide for more information.

12.2 Add Camera



Available from the Houseper application only. Please, check also the Add Camera section of the current User Guide for more information.

12.3 E-mail Settings



Available from the Houseper application only. Please, check also the E-mail Notifications section of the current User Guide for more information.)

12.4 Configure Alarm Notifications



Available from the Houseper application only.

This section is for configuring default settings for sending notifications. Each device inherits these settings when it is added. Subsequently they can be changed for each specific device.

Event	Notification	Mail	Armed Siren	Disarmed Siren
1 2 Alarm1 for armed device	3 <input checked="" type="checkbox"/>	4 <input checked="" type="checkbox"/>	5 <input checked="" type="checkbox"/>	6 <input type="checkbox"/>



1. Alarm indicator - optional only if the event is an alarm type.
2. Event name with optional description - the name may be quite specific, such as Tamper, Battery, etc. or collective as shown on the picture above. Alarm 1 and Alarm 2 are collective names relating to particular devices used for Fire indication, Water Overflow indication, Intrusion indication, Movement indication, Presence indication, Panic, Emergency, etc.
3. Defines sending notifications to all smart phones/tablets configured.
4. Defines sending emails to all email addresses configured.
5. Defines the activation of a siren if it has been added to the system and if it is active.
6. Defines the activation of a siren if it has been added to the system and if it is not active - there are cases that can be defined as very urgent and it would be important to have the siren triggered.

The Restore options are displayed at the bottom of the Configure Alarm notifications section. These options apply for automatic clearing of alarms when receiving a live report. When a device has an active alarm, such as an open door and this alarm disappears when the door is closed, some devices depending of their type send a report to cancel the existing alarm. There are two options here:

Restore options	
1 <input type="radio"/>	Never restore alarms, before it is manually cleared
2 <input checked="" type="radio"/>	Restore alarms depending device default options

1. Never Restore alarms before the event is manually cleared - alarms will not be automatically deleted when you receive a live report. Manual deletion is the only way to remove them.
2. Restore alarms depending on the device default options - when this option is selected, the alarms for which the recovery report is received will be cleared automatically.

To receive notifications on your smartphone/tablet, you need to be sure that:

1. Your phone has been successfully authorised with the controller and "Send Notifications" is selected in the list of Authorised Devices from the Houseper application in the Settings tab in Remote Control.
2. Your smartphone/tablet has been successfully registered to receive notifications - the "registered" status is displayed in the Settings tab in the Notifications section of the Houseper mobile application. If you have problems, you can perform
 - a  Test and/or  Renew Registration using these options.
3. You have not reached the limit of unread notifications for your mobile device.

12.5 Electricity Pricing



Available from Houseper application only. Please, check the detailed Electricity Pricing section of this User Guide.

12.6 Remote Control

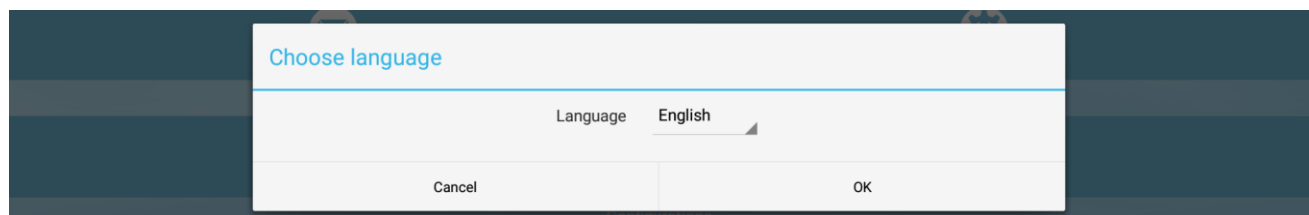


For more information, please see the Remote Control section of this User Guide.

12.7 Language



To change the application language, select Language from the Settings tab.

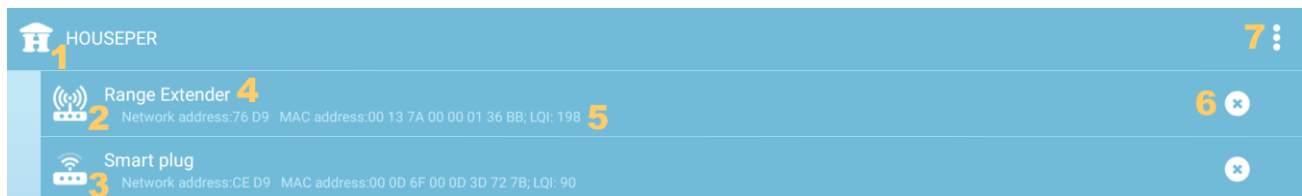


The application inherits the language configuration by default from the operating system. If the application does not support the language selected in the operating system, the "default" language for the application will be English.

12.8 Network



This part contains information on the Zigbee network. Please note, that sleeping devices can leave the Zigbee network for a long period of time (missing from this list). When they change their mode to "awake" they will appear again.



1. Controller identifier.
2. Signal strength indicator for a router device.
3. Signal strength indicator for an end device that is not a router.
4. List with names of all logical devices that are contained in the physical device.
5. Additional Information - network address, MAC address and signal strength.
6. Remove Device button.
7. Hide/Show all other appliances connected to the device.

12.9 Data Cleaning



Option for configuring automatic data clearance.

12.10 Check for Updates



Checks for a new version of the Houseper application. If a new version is available, information about the changes made will be provided and the update can be installed.

12.11 System Info



Presents basic system information such as:



1. Houseper Id - a unique controller identifier needed to activate cloud services.
2. Android Id - unique service number.
3. Application version.
4. Remote URI.

12.12 Payments



Gives information about:

- Activated additional services - service name, validity date, current status.
- Payment option for additional services.

	Basic 1 month	Basic 6 months	Basic 12 months
Service: Basic			
Valid to: 2019-03-03			
Staus: Active			

It also presents information on payments' history.

The maximum eligible prepayment period is one year.

12.13 Zigbee Restart



Restarts the Zigbee controller module.

12.14 Factory Reset



Removes all devices, clears the collected data and re-initialises the home automation module. When using this feature you will be offered the option to save certain data.

It is important to keep in mind that if the operating system is set back to factory settings, the Houseper application will also be reset and all data will be cleared, but the Zigbee

controller module will still remain with old data that should be removed with the Factory Reset button.

12.15 Others

The Other section in the Houseper mobile tab allows you to select "Use the time zone of the controller". When this option is selected, all dates in the mobile app will be displayed according to the time zone of the controller and the dates of the controller and the mobile application will match completely. If this option is not selected, dates will be displayed according to the time zone of the mobile device. If the controller and the mobile device are in different time zones, you will see different dates for the same event, in respective to the device time zones.

There is only one exception, and it concerns graphical statistics for electricity - for Main electrometers in the Home tab and for All electrometers in the Device Detailed information in the Device tab. These statistics depend entirely on the reporting periods and the prices for the respective tariffs and they are consistent with the time zone of the controller. Graphs respectively, are always displayed according to the time zone of the controller.