theben

LUXORliving
System manual
Version 1

2018-01-05

Contents

1 General

LUXORliving smart home control is based on a bus communication and includes control of lighting, actuators and indoor climate. LUXORliving is taken into operation by using the free LUXORplug programming tool.
(http://luxorliving.de/luxorplug/)

LUXORplug assigns all functions, which can also be changed later on.

Operation is done via permanently installed operating controls or by using the free LUXORplay app, which can be installed on a smartphone or tablet.

For iOS - App Store → 

For Android - Play Store → 

When operating via app, the LUXORliving IP1 system control centre has to be connected to your home network.

2 System

- All components of LUXORliving communicate via a bus connection according to the KNX standard (KNX S-mode).

- The connection to the home network is via the LUXORliving IP1 system control centre. This allows operation via the LUXORplay app.

- The system can be equipped with a maximum of 64 LUXORliving devices, which includes system devices, sensors and actuators.

  System devices
  - LUXORliving IP1 (system control centre),
  - LUXORliving P640 (power supply)[1]

  Sensors
  - Room sensors
  - Binary inputs
  - Button interfaces

  Actuators
  - Switch actuators
  - Dimming actuators
  - Blind actuators
  - Heating actuators

- For operation, conventional buttons are used. They are integrated into the system via button interfaces/binary input. Control is always via button. Only for the "switch" function you can chose between "button" and "motion detector" (switch).

[1] Only **one** system control centre and one power supply are allowed to be installed in one system.

3 Installation

- The components of LUXORliving are intended for installation in a switch cabinet, in a flush-mounted box, or for wall mounting.
- Communication is via a 2-wire bus, to which each device has to be connected. The bus connection can be executed as a line, star or tree topology.

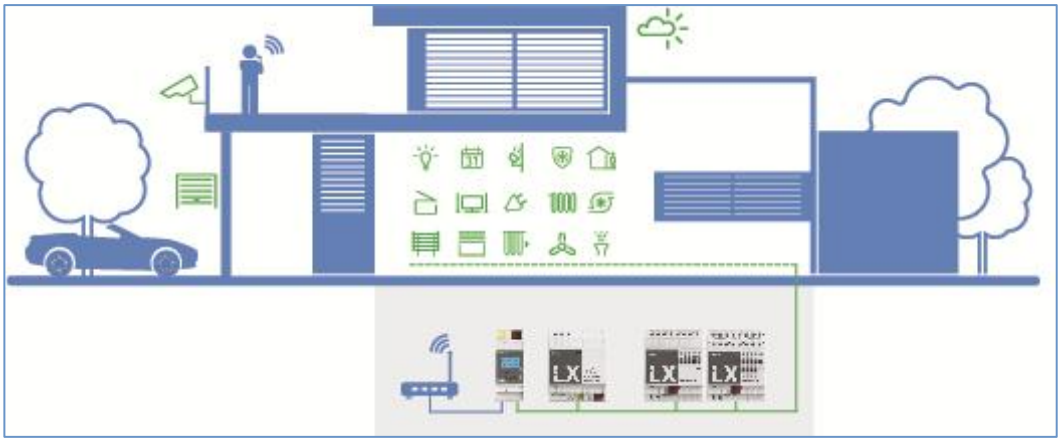
ⓘ The following cable lengths have to be observed:

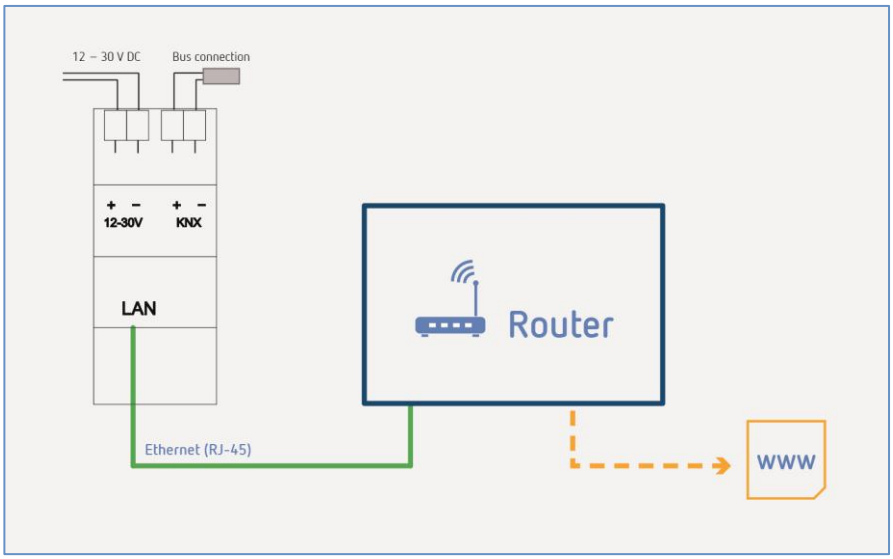
power supply – participant	→ max. 350 m
participant – participant	→ max. 700 m
total cable length	→ max. 1,000 m

For the bus connection, a KNX-certified bus line (J-Y(St)Y 2 x 2 x 0.8 mm) has to be used.

ⓘ For operation, conventional buttons are used. They are integrated into the system via button interfaces/binary input. Control is always via button. Only for the "switch" function you can chose between "button" and "motion detector" (switch).

ⓘ Please note that outdoors, a bus line can pose an increased safety risk. As an alternative in the outdoor area, normal motion detectors with relay contact can for instance be integrated into the system via the LUXORliving B6 binary input. When using the LUXORliving M140 weather station, installation location and cable routing should be chosen in a way, so access to the bus line is difficult.




12 – 30 V DC
Bus connection
+ –
12-30V
+ –
KNX
LAN
Ethernet (RJ-45)
Router
www

4 Start-up

4.1 Establish a connection

LUXORliving is always put into operation by using the LUXORliving IP1 system control centre and the LUXORplug software. The LUXORplug software can be downloaded for free at https://www.theben.de/ (http://luxorliving.de/luxorplug/).

For operation, the LUXORplay app is used, which is also available as a free download for your smartphone/tablet (http://luxorliving.de/demoversion-luxorplay-2/) (see page 3).

ⓘ System requirements for **LUXORplug**:
- Windows 7 to Windows 10
- 32 bit and 64 bit

ⓘ System requirements for **LUXORplay**:
- Windows 7 to Windows 10
- 32 bit and 64 bit
- Android from version 4.4,
- iOS from version 9.x

The connection between PC and LUXORliving IP1 system control centre can be established in various ways. We recommend the connection via a router:

4.1.1 Option 1 – Connection via a router

➢ Connect PC (WLAN or LAN) and LUXORliving IP1 system control centre (LAN) with the router and switch on the power supply of the LUXORliving IP1 system control centre.

The LUXORliving IP1 system control centre is delivered with activated DHCP service and receives its IP address automatically from the router. After start-up, the IP address is displayed in the LUXORliving IP1 display.

If the router does not support DHCP, the IP address of LUXORliving IP1 has to be assigned **manually**. Please find further information on this in the manual of the router.

In LUXORliving IP1, the IP address can be configured as follows:

➢ Press the "↓" button and open the "IP Config" menu with the "↳" button.

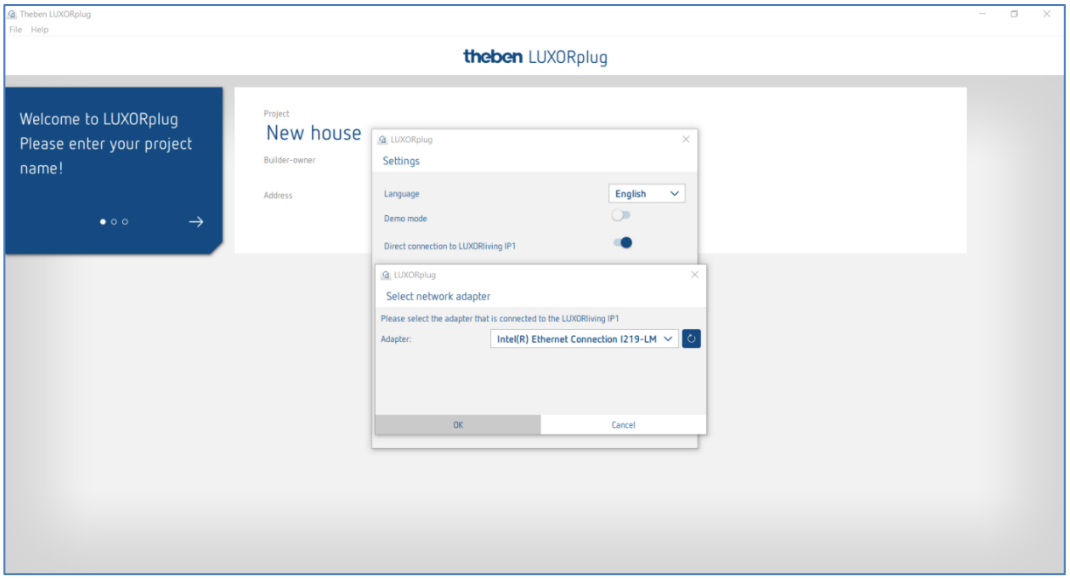
➢ Select the "DHCP" setting with the "↳" button.

➢ Set it to "Manual" with "↑", and confirm with "↵". Now, you can set the IP address, subnet mask and gateway by using the arrow keys.
e.g. IP address 192.168.0.100/subnet mask 255.255.255.0/gateway 192.168.0.1

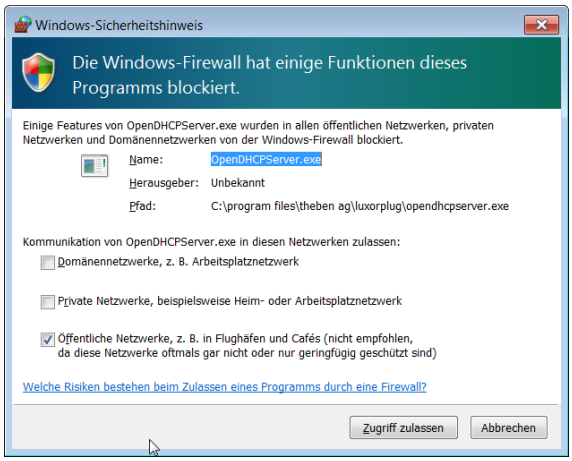
4.1.2 Option 2 – Connection without router using the DHCP service of LUXORplug

Via an integrated DHCP service in LUXORplug, an IP address can be assigned to the LUXORliving IP1 system control centre and the PC. This changes the network settings, which requires the appropriate access rights. When exiting LUXORplug, these settings will be undone.

➢ Start the LUXORplug application "As an administrator", and activate "Settings" – "Direct connection to LUXORliving IP1" in the "File" menu.



➢ Update the adapter settings and start the process with "OK".



➢ In the firewall settings, allow access in "Public networks".

→ Afterwards, an IP address will be assigned to the LUXORliving IP1 system control centre as well as the PC.

4.1.3 Option 3 – Connection without router using manual network settings

- Deactivate the WLAN connection at the PC.
- Use a network cable to connect the PC directly with the LUXORliving IP1.

The PC normally obtains the IP address automatically via an existing network. Since no network is available, the IP address of the PC has to be set manually. This setting has to be made in the control panel.


The following settings interrupt possibly existing network connections. This might lead to a loss of data in open applications.

- Close all applications, before making these changes.

Example

- Open the file explorer (by using the shortcut Win + E), right click on "Network" and select "Properties".
- In the new window, click on "Change adapter settings".

→ A list with the connections of all network adapters will be shown.

- Double click on the "Ethernet" connection and open "Properties".
- In a new window, double click on "Internet protocol, version 4 (TCP/IPv4)".
- In the following window, activate the entry "Use the following IP address".
- Complete the fields below correctly.
  e.g. IP address 192.168.0.10/subnet mask 255.255.255.0/gateway 192.168.0.1

Undo these settings after finishing your activities in the LUXORliving system and activate DHCP.

At LUXORliving IP1, the IP address has to be set manually as well:

- Press the "↓ " button and open the "IP Config" menu with the "↳ " button.
- Select the "DHCP" setting with the " ↳" button, set it to "Manual" with " ↑" and confirm with "↳".
- Set the IP address, subnet mask and gateway by using the arrow keys.
  e.g. IP address 192.168.0.100/subnet mask 255.255.255.0/gateway 192.168.0.1

→ The connection between PC and LUXORliving IP1 is now established.

- Start the LUXORplug application and start configuration.

4.2 Configuration with LUXORplug

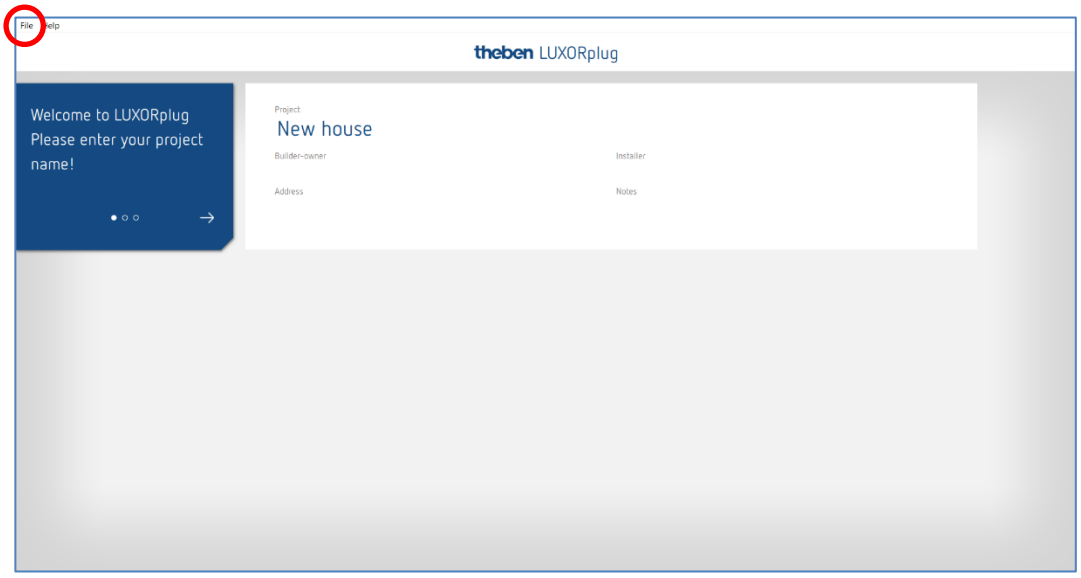
For creating a project, the following steps have to be done:

- Project details (project name, address, etc.)
- Create building structure (floors and rooms)
- Create a device list (loading the system or creating the device list manually)

ⓘ Only if the last step is confirmed with (→), the device list will be saved in the project!

➢ Click on the  icon.

→ The home page appears with the following information on the project:

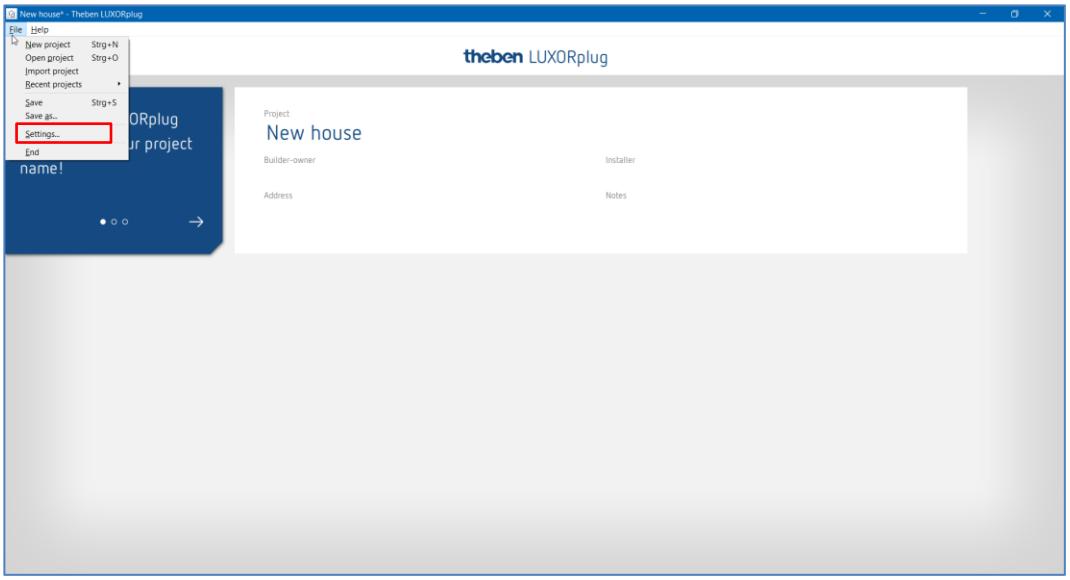


➢ Enter project name, address, installer etc.

4.2.1 "File" menu

In the "File" menu, several functions are available.

New project:	Create a new project
Open project:	Open an existing project
Import project:	Import a project file from LUXORliving IP1
Previous projects:	List of previously edited projects
Save:	Saves the current project with the most recently selected filename and storage location
Save as:	Save the current project with the save dialogue (filename and storage location selectable)
Settings:	Set the menu language of LUXORplug, demo mode, Activate direct link and debug mode
Quit:	Quit and exit LUXORplug



Functions of the menu "File" – "Settings"

Demo mode

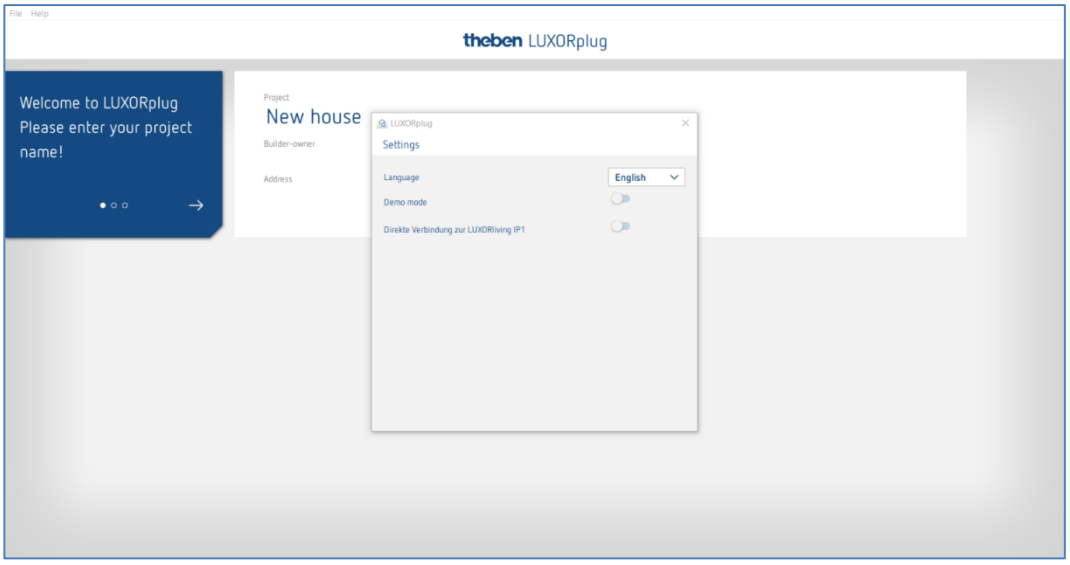
In demo mode, the connection to a system is simulated. This mode is used for displaying the LUXORplug functions and has to be disabled if there is an existing connection to a LUXORliving system.

Direct connection to LUXORliving IP1

This function is used if LUXORliving IP1 is connected directly to the PC via a LAN cable. When activated, a DHCP service is started in LUXORplug, which automatically assigns an IP address to LUXORliving IP1 and to the PC. For this, the network settings of LUXORliving IP1 and PC must have activated the DHCP service.

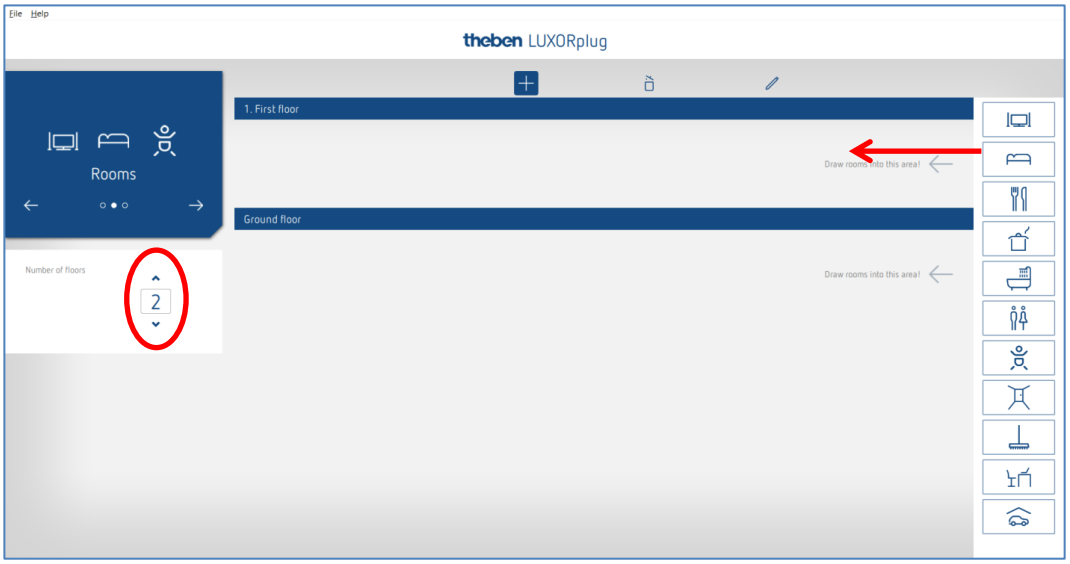
Debug mode

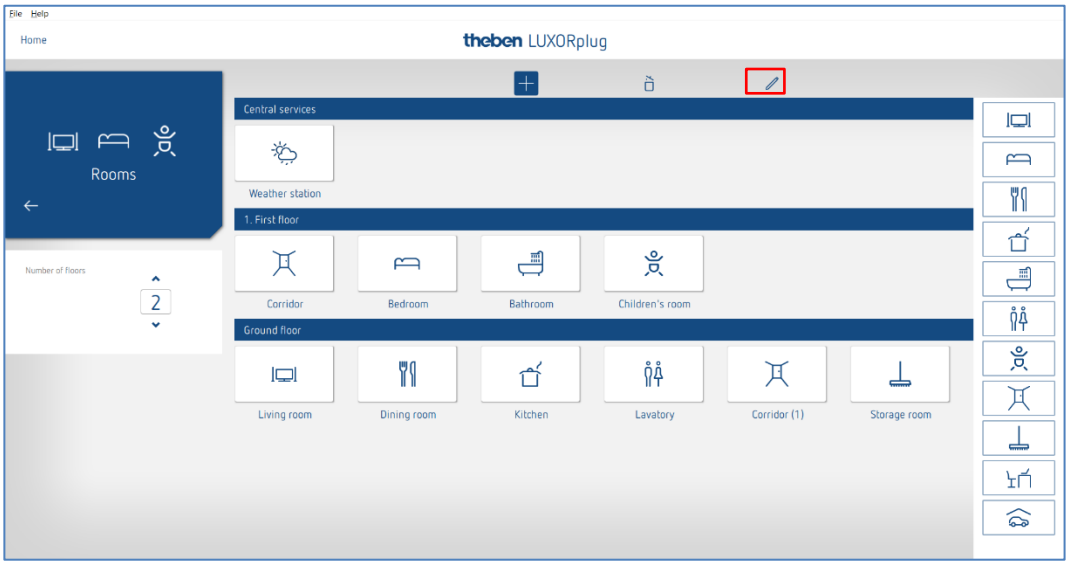
Debug mode can be activated by clicking five times on the free space. Debug mode is used for troubleshooting in the configuration. You can find further information in the Appendix.



4.2.1.1 Define floors and rooms

By navigating with the arrow icons, you can go one menu step ahead (→) or back (←).
In the next step, you can define the number of floors and include the corresponding rooms on each floor.





4.2.1.2 Further functions

Add further floors or rooms

Delete floors or rooms

Edit floors or rooms

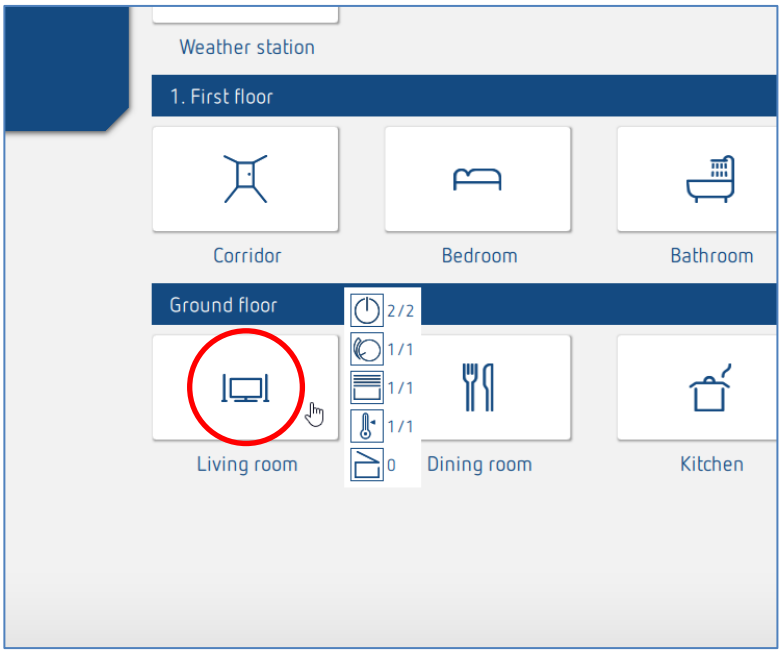
➢ Click on the pin. In this way, you can change the names of rooms and floors.

➢ Click on a room (e.g. bedroom)

→ A choice of alternative icons for the respective room is displayed.

➢ In room view, place the cursor on a room.

→ The functions configured in this room are displayed.

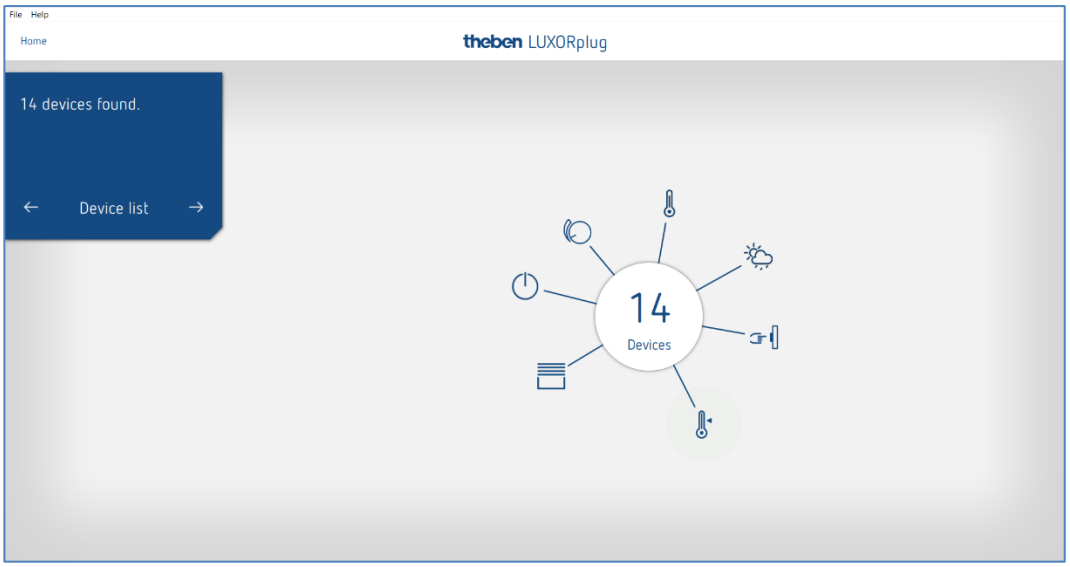


4.2.1.3 Load devices of the system

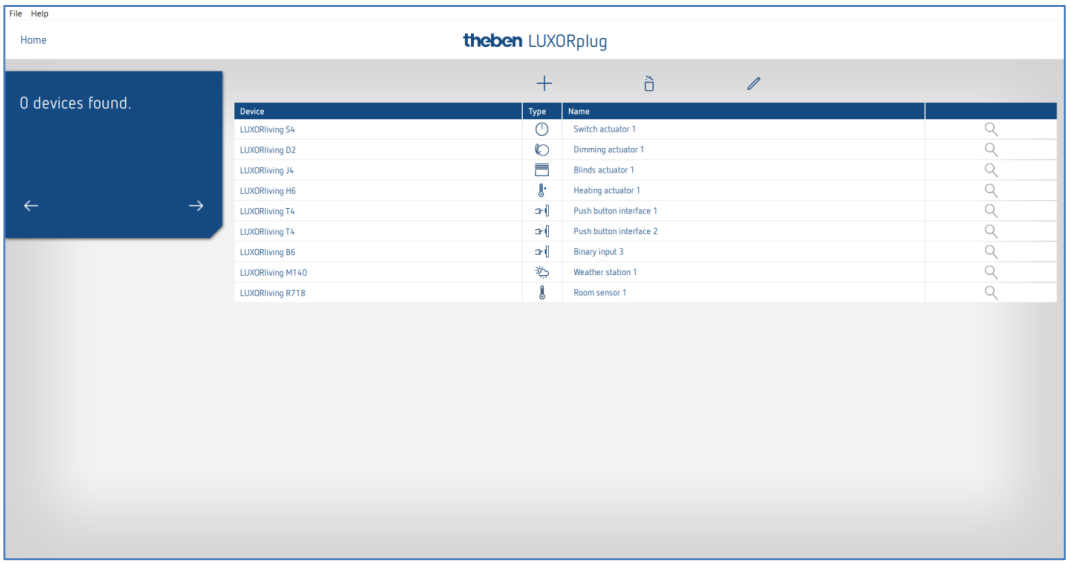
By navigating with the arrow icons, you can go one menu step ahead (→) or back (←).
In the next step, you can load the system.

> ⓘ In order to do this, the PC must be connected to LUXORliving IP1 and other LUXORliving components. As an alternative, you can skip this step and create the device list manually.

➢ Click on the "Load system" field.



The connected LUXORliving components are automatically loaded and then shown in the device list.



The arrangement of the devices in the left column (devices) can be adjusted by clicking, holding and moving.

4.2.1.4 Identify and name devices

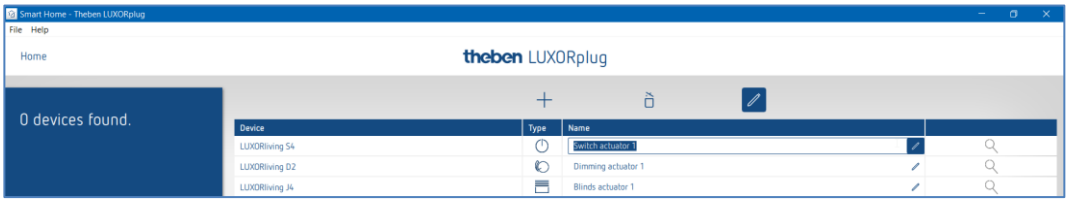
Each device has to be clearly named, in order to be assigned to functions and rooms. For instance, each device can show the installation location, function or another identification.

For identifying the device inside the installation, the "magnifying glass" icon is used.

➢ Click on the "magnifying glass".

→ The red LED of the device flashes and allows an identification.

ⓘ If the button interfaces LUXORliving T2, T4, T8 are already installed in the switch box, any of the connected buttons can be pushed three times briefly. The "magnifying glass" icon then indicates the respective button interface. The identification can be finished by pressing the button again briefly.



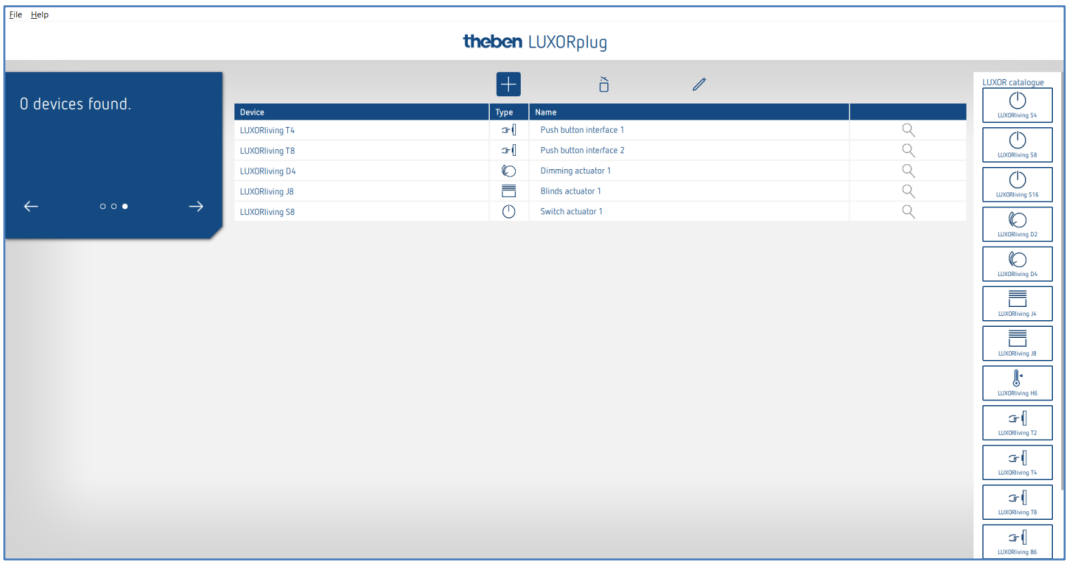
After all devices have been identified and clearly named, configuration can be completed with "→".

4.2.1.5 Create the device list manually

If the PC is not connected to the LUXORliving system, or the LUXORliving components are not linked with each other, the device list can be created manually. This function allows configuration, without the installation being already started or completed.

➢ Skip "Load system" and include the planned LUXORliving components in the device list.

The arrangement of the devices in the left column (devices) can be adjusted by clicking, holding and moving.



This device list can be used to continue configuration, and the individual functions of the added devices can be used inside the rooms.

ⓘ It is absolutely necessary that the system is loaded, as soon as all LUXORliving components have been installed and linked with each other.

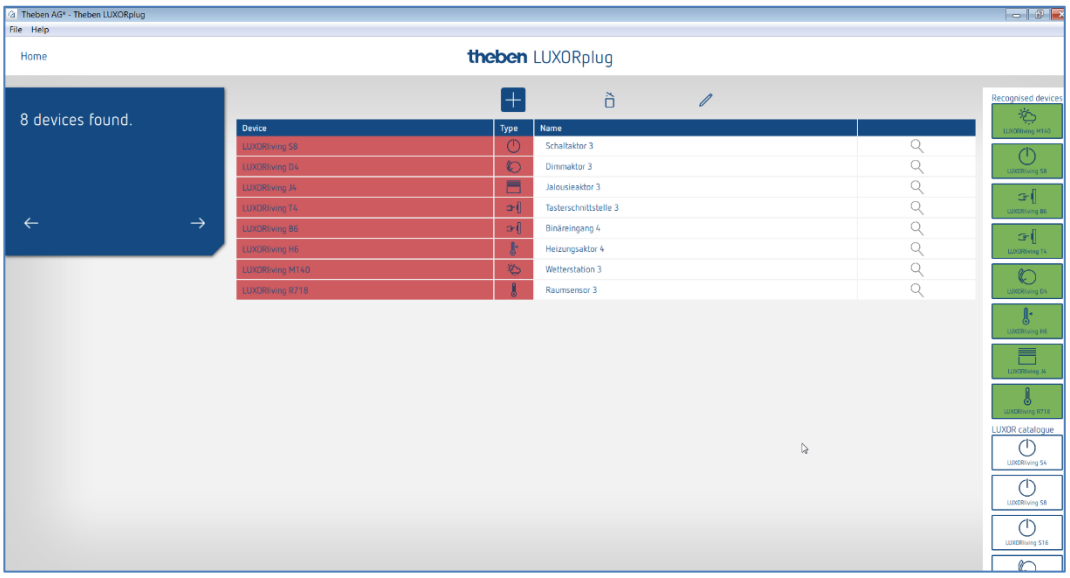
After loading, the configured and found devices will be assigned.
For identifying a device inside the installation, the list of the green-coloured devices on the right side is used. If you click on a green-coloured device, the red LED of that device flashes and thus allows its identification.

➢ Draw this device on the corresponding red-coloured device in the device list and assign it to the appropriate functions.

ⓘ If the button interfaces LUXORliving T2, T4, T8 are already installed in the switch box, any of the connected buttons can be pushed three times briefly. After that, one of the green-coloured button interfaces on the right side flashes and indicates the respective button interface.

➢ Press the button again briefly.

→ The identification will be finished again.



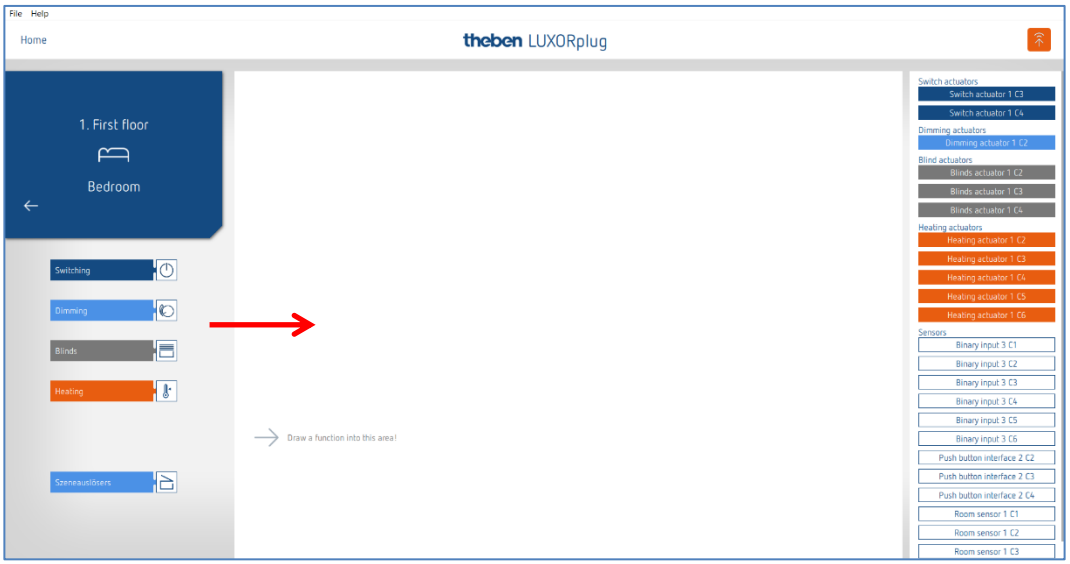
4.2.2 Include functions

After the device list has been edited and completed, the **main menu** will be displayed.

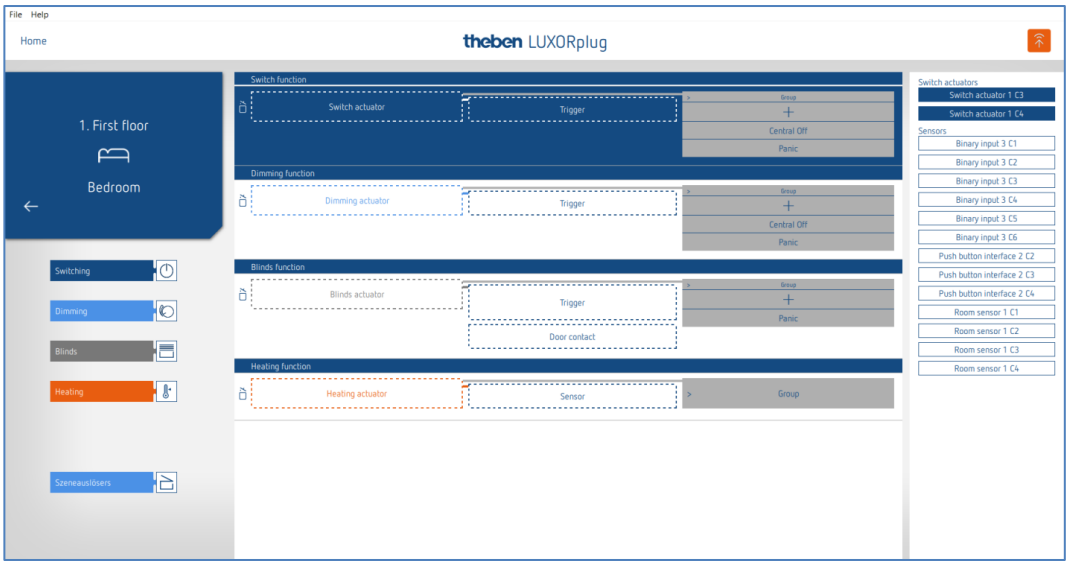
➢ Click on the "Rooms" field.

→ The building view will be opened and allows a room-based configuration of functions.

➢ Click on the desired room, for instance the bedroom.



➢ Draw the desired function to the right and into the room.

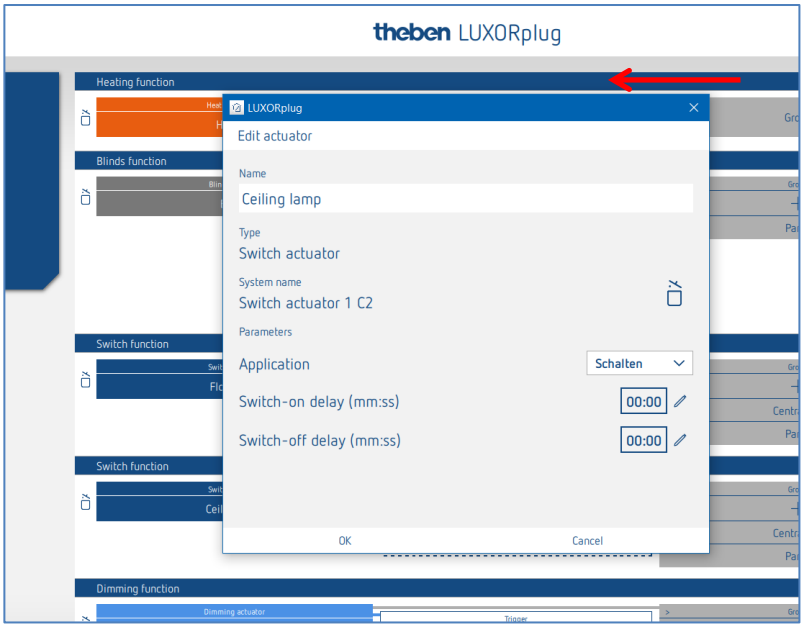


On the right side, devices appropriate for the selected function are displayed.

4.2.2.1 Switching

➢ Pull the appropriate channel, which is highlighted in grey (e.g. switch actuator 1 C1), of a switch actuator to the "Switch actuator" field.

→ The parameter window of this switch function is opened.

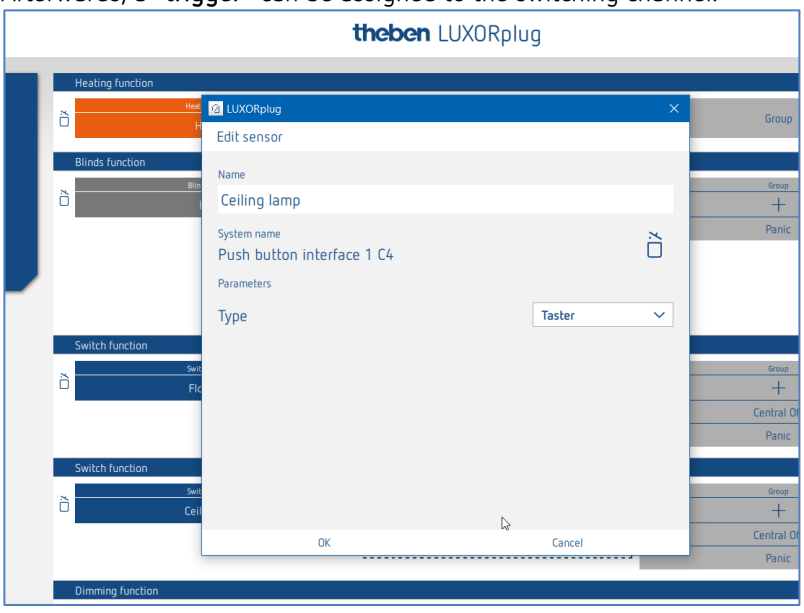


In the parameter window, the function can be named and various parameters can be set.

Applications

Switching: Switching on/off with optional time delay
Cellar light: Switching on/off with additional automatic switch-off after the set time (with switch-off pre-warning as an option)
Staircase light: Switching on with automatic switch-off after the set time. (with switch-off pre-warning as an option)

Afterwards, a "**trigger**" can be assigned to the switching channel.

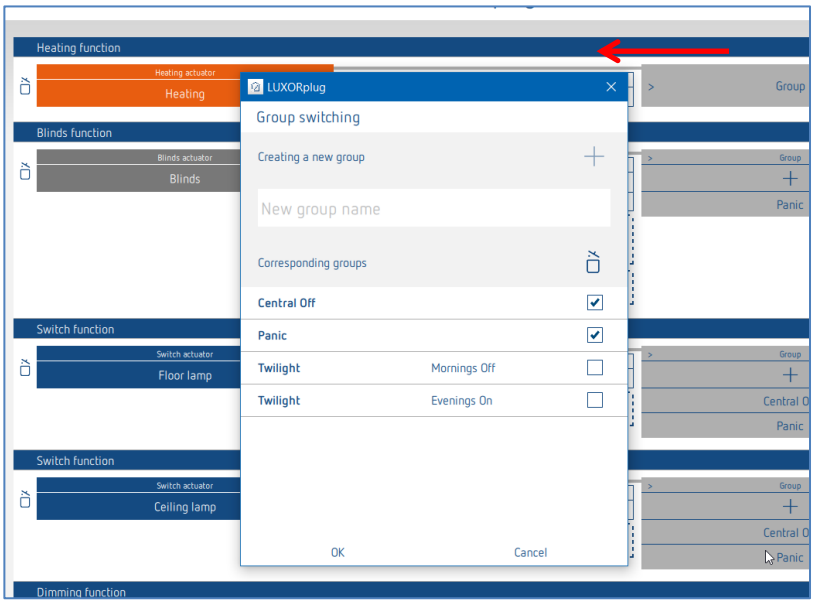


In the parameter window, the function can be named and various parameters can be set.

Type
Button: Toggling function with each press of the button
Motion detector: "Switch" function (rising edge = On / falling edge = Off)

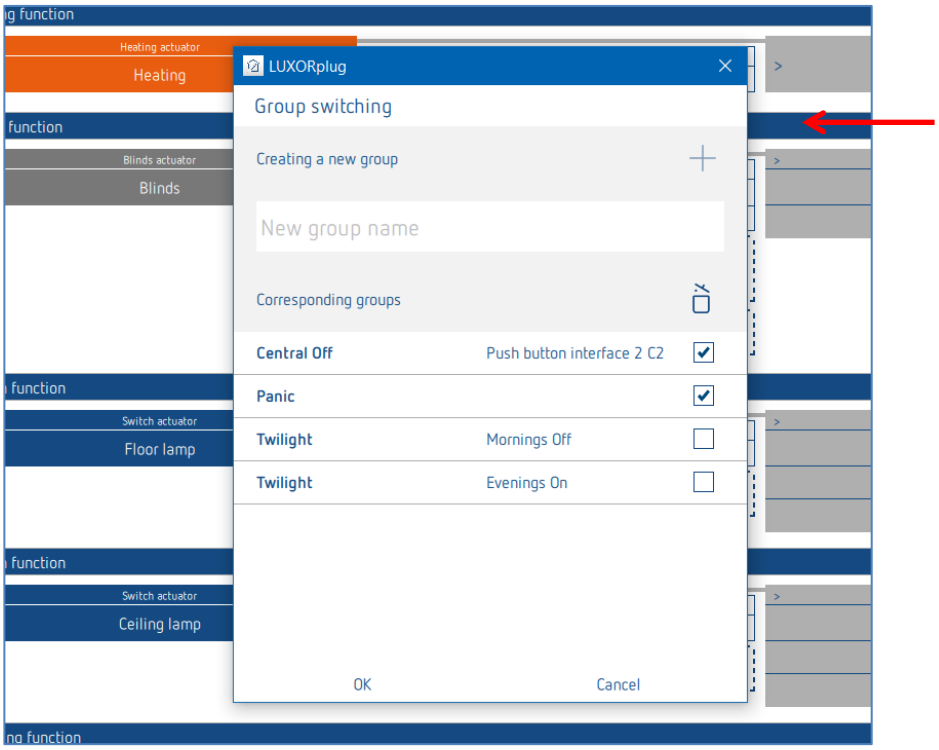
➢ Click on the "Group" field.

→ The window with the central and group functions is opened.



Here, the channel can be integrated into existing group functions, and own groups can be added. The thresholds for twilight functions can be set in the settings of the weather station.

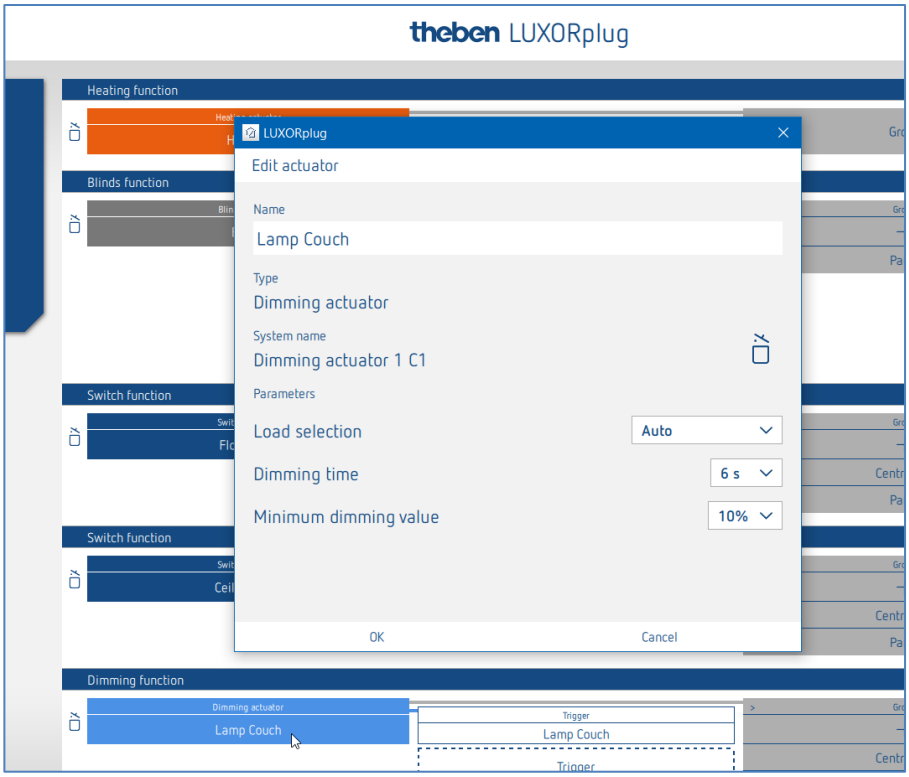
A "trigger", e.g. the channel of a button interface, can be drawn on a group function and thus be triggered with this participant.


g function
Heating actuator
Heating
function
Blinds actuator
Blinds
function
Switch actuator
Floor lamp
function
Switch actuator
Ceiling lamp
ng function
LUXORplug
Group switching
Creating a new group
New group name
Corresponding groups
Central Off
Push button interface 2 C2
Panic
Twilight
Mornings Off
Twilight
Evenings On
OK
Cancel

4.2.2.2 Dimming

➢ Pull the appropriate channel of a dimming actuator to the "Dimming actuator" field.

→ The parameter window of this dimming function is opened.



In the parameter window, the function can be named and various parameters can be set.

Load selection

Auto: The connected load type is automatically detected by the dimming channel.

Inductive: Dimming channel operates with leading edge control

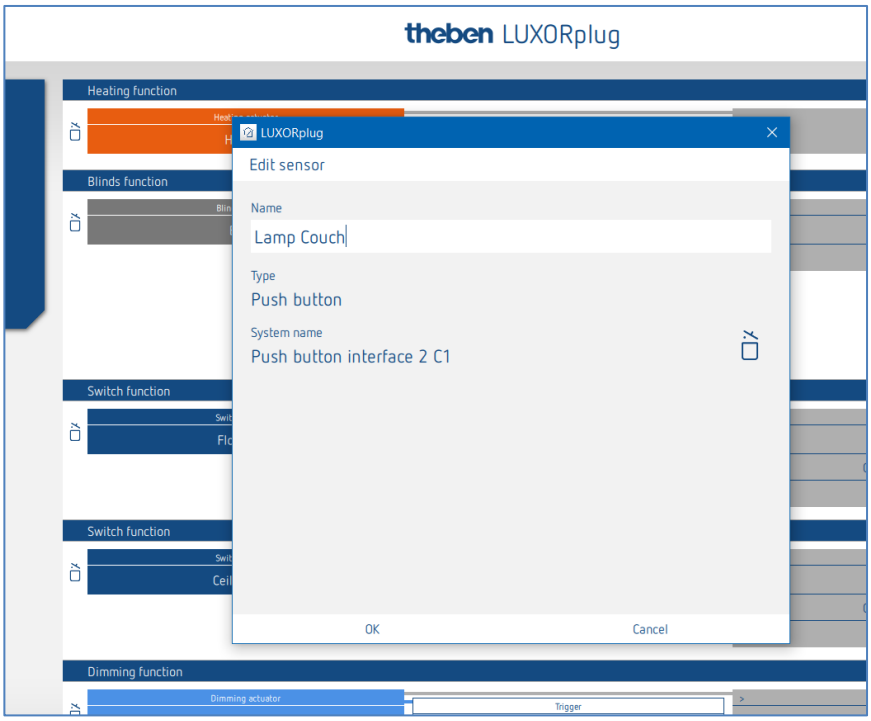
RC load: Dimming channel operates with trailing edge control

ESL-L and ESL-RC: Settings for dimmable energy-saving lamps / Compact fluorescent lamps

Dimming time: The dimming time defines the dimming speed for the complete dimming range 0 ...100 %

Minimum dimming value: Adjustment to the connected lamp. If the lamp flickers, e.g. with dimming values < 10 %, the minimum dimming value has to be limited to 10 %.

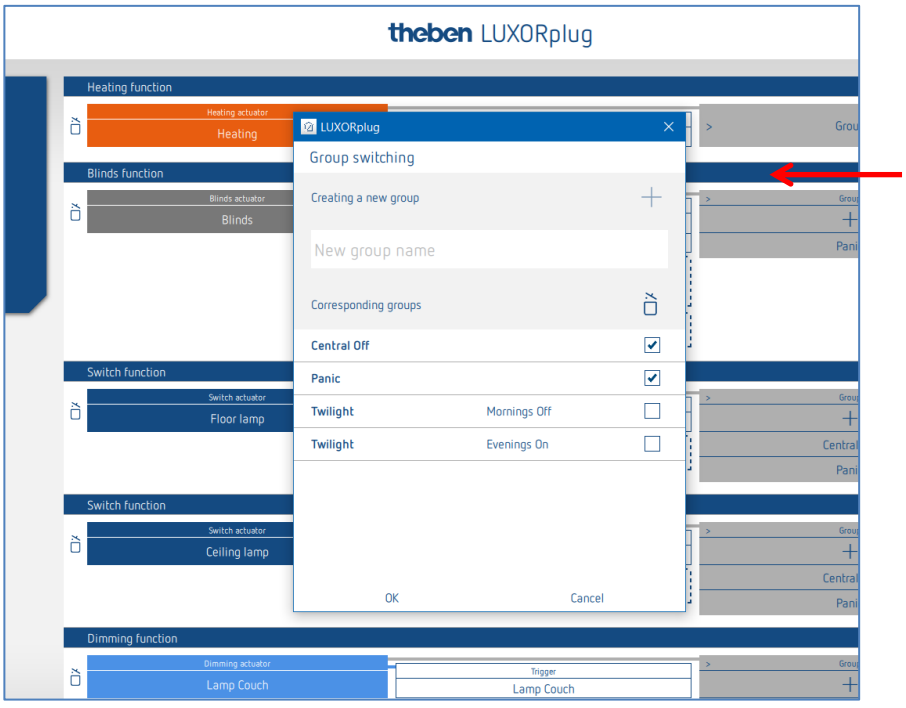
Afterwards, a "trigger" can be assigned to the dimming channel.



In the parameter window, the function can be named.

➢ Click on the "Group" field.

→ The window with the central and group functions is opened.



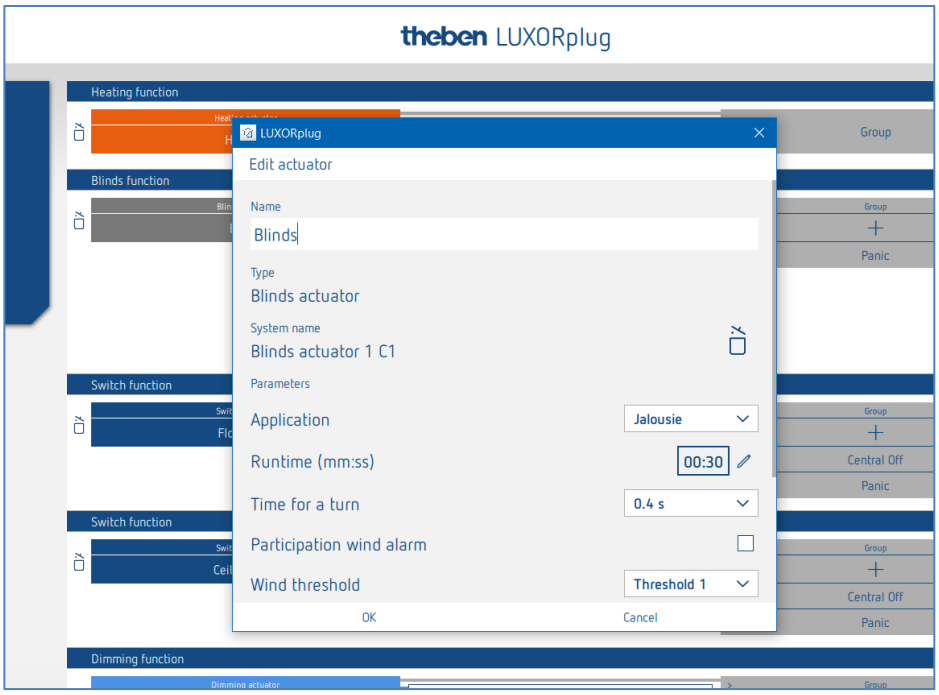
Here, the channel can be integrated into existing group functions, and own groups can be added. The thresholds for twilight functions can be set in the settings of the weather station.

A "trigger", e.g. the channel of a button interface, can be drawn on a group function and thus be triggered with this participant.

4.2.2.3 Blinds

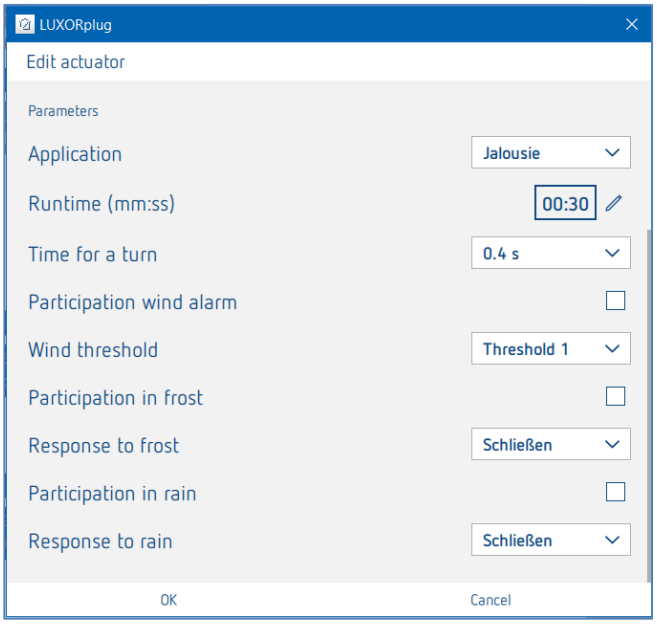
➢ Pull the appropriate channel of a blinds actuator to the "Blinds actuator" field.

→ The parameter window of this blinds function is opened.



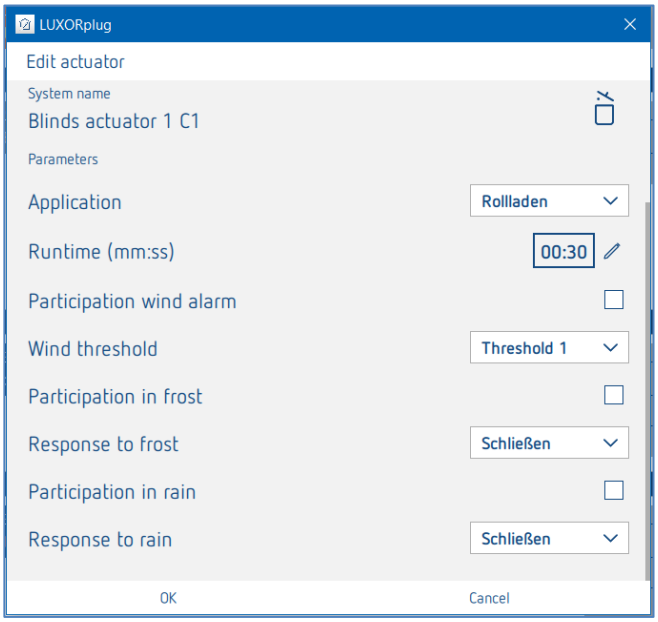
In the parameter window, the function can be named and various parameters can be set.

Application "blinds"



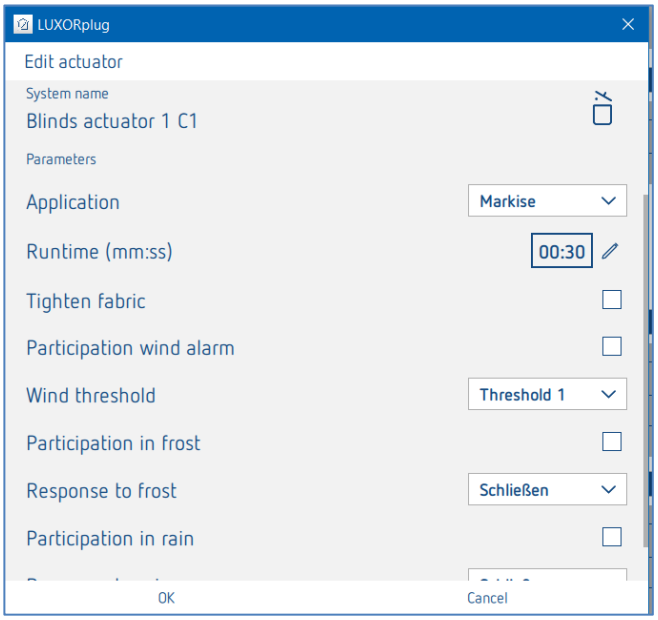
For each blinds channel, the entire runtime, the time for a turn (step), as well as the participation in functions of the weather station can be set individually.

Application "roller blinds"



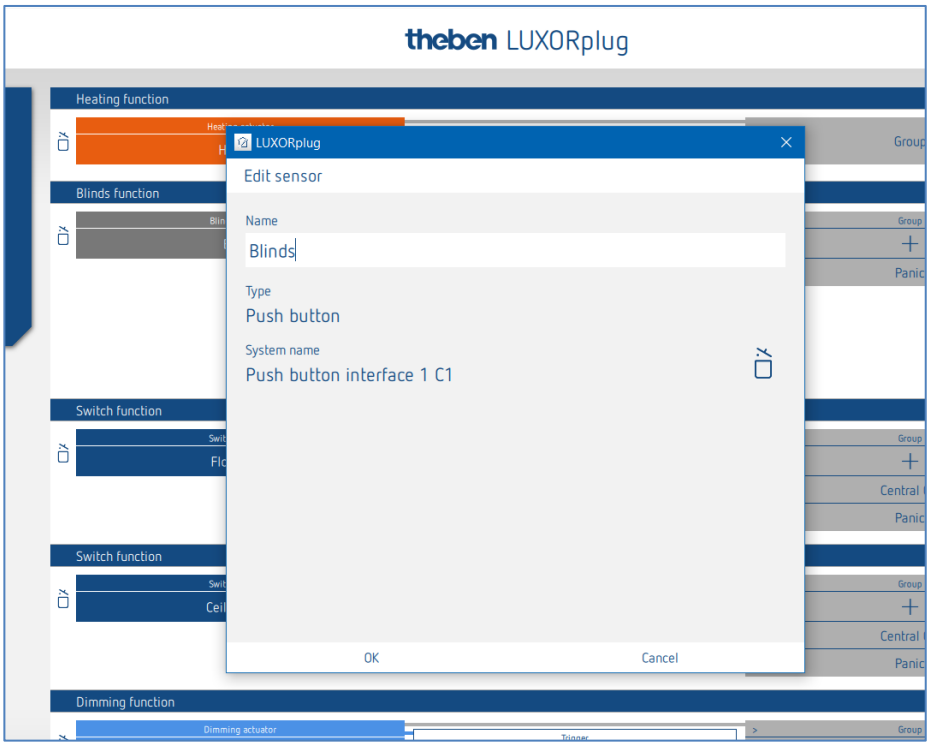
For each roller blind channel, the entire runtime, as well as the participation in functions of the weather station can be set individually.

Application "awning"



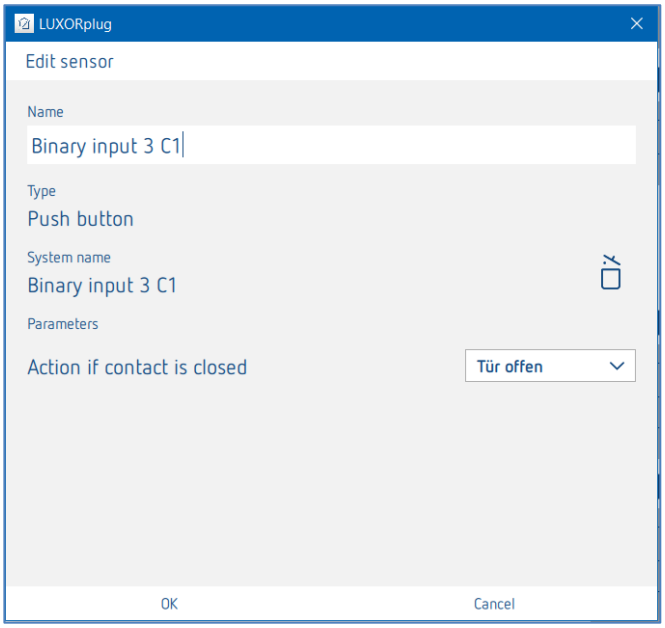
For each awning channel, the entire runtime, a canvas tightening, as well as the participation in functions of the weather station can be set individually.

Afterwards, a "trigger" can be assigned to the awning channel.



For controlling blinds, roller blinds, or an awning, two inputs are necessary (Up/Down). This input pair will be assigned automatically. The first trigger that is assigned must have an odd channel number (C1, C3, C5, C7), and the second trigger will be added automatically (C2, C4, C6, C8).

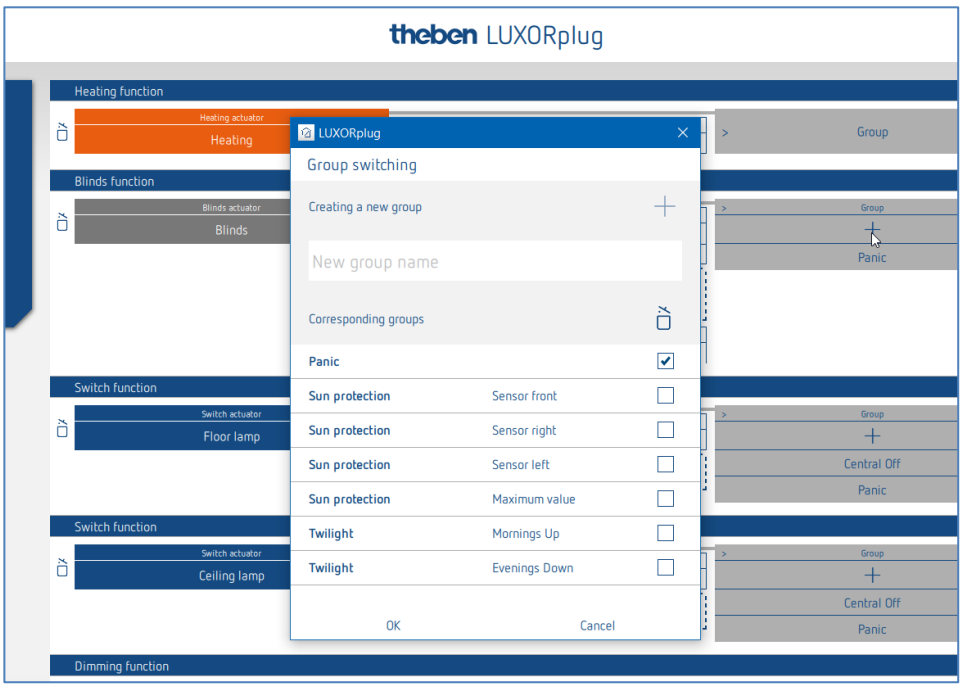
In addition, a "door contact" can be assigned to the blinds channel. The door contact prevents automatic travel with an open door or window.



The setting "Operation with closed contact" depends on the contact used (NO contact (NO) or opening contact (NC)).

➢ Click on the "Group" field.

→ The window with the central and group functions is opened.



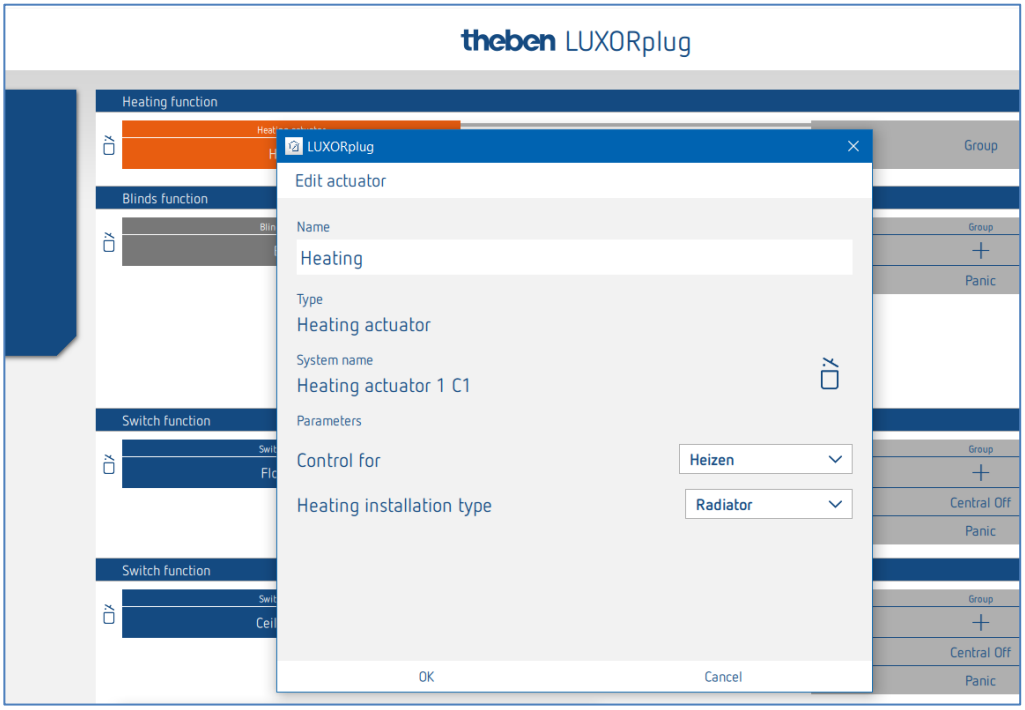
Here, the channel can be integrated into existing group functions, and own groups can be added.
The thresholds for sun protection or twilight function can be set in the settings of the weather station.

A "trigger", e.g. the channel of a button interface, can be drawn on a group function and thus be triggered with this participant.

4.2.2.4 Heating

➢ Pull the appropriate channel of a heating actuator to the "heating actuator" field.

→ The parameter window of this heating function is opened.



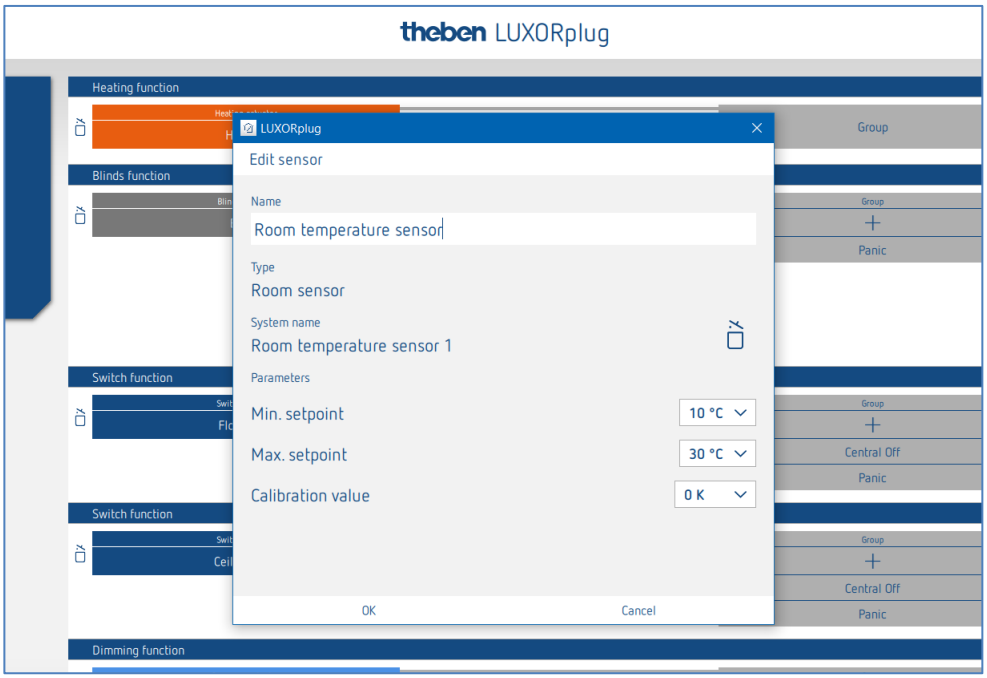
In the parameter window, the function can be named and various parameters can be set.

The control supports the operating mode "Heating", as well as "Heating and cooling". The installation type can be set for each operating mode.

Installation type heating:
Radiator: For fast acting heating systems, such as radiators or blower heaters
Floor: For slow acting heating systems, such as water-using underfloor heatings

Installation type cooling:
Cooling ceiling: For slow acting cooling systems, such as water-using cooling ceiling
Fan coil: For fast acting cooling systems, such as fan coil unit

Subsequently, a "Sensor" can be assigned to the heating channel.

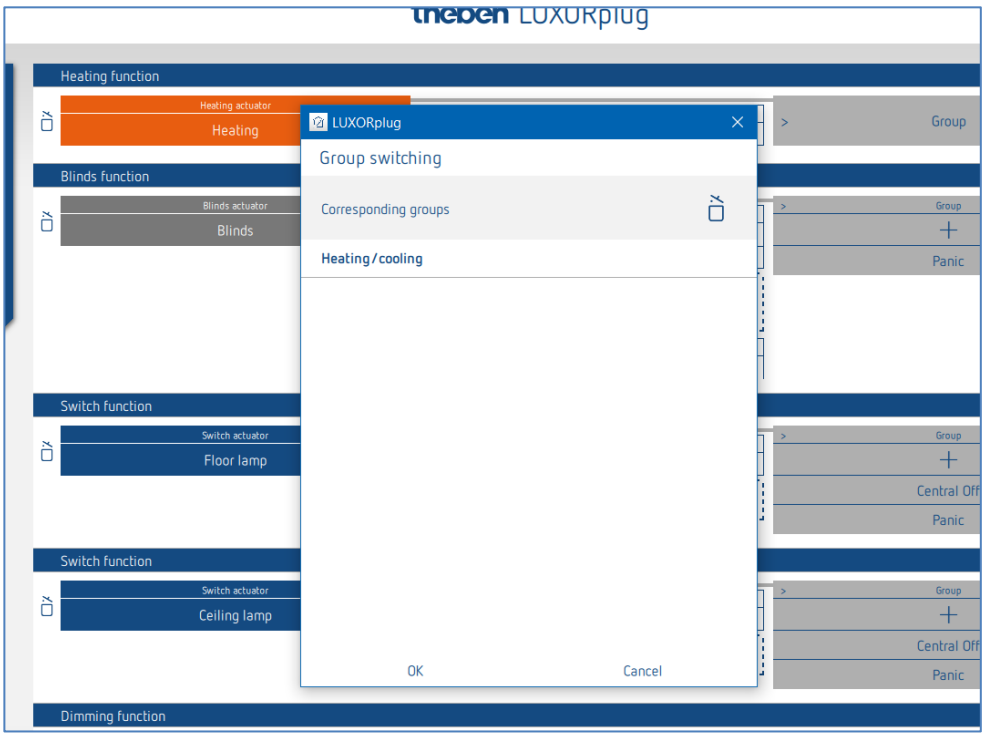


In the parameter window, the function can be named and various parameters can be set.

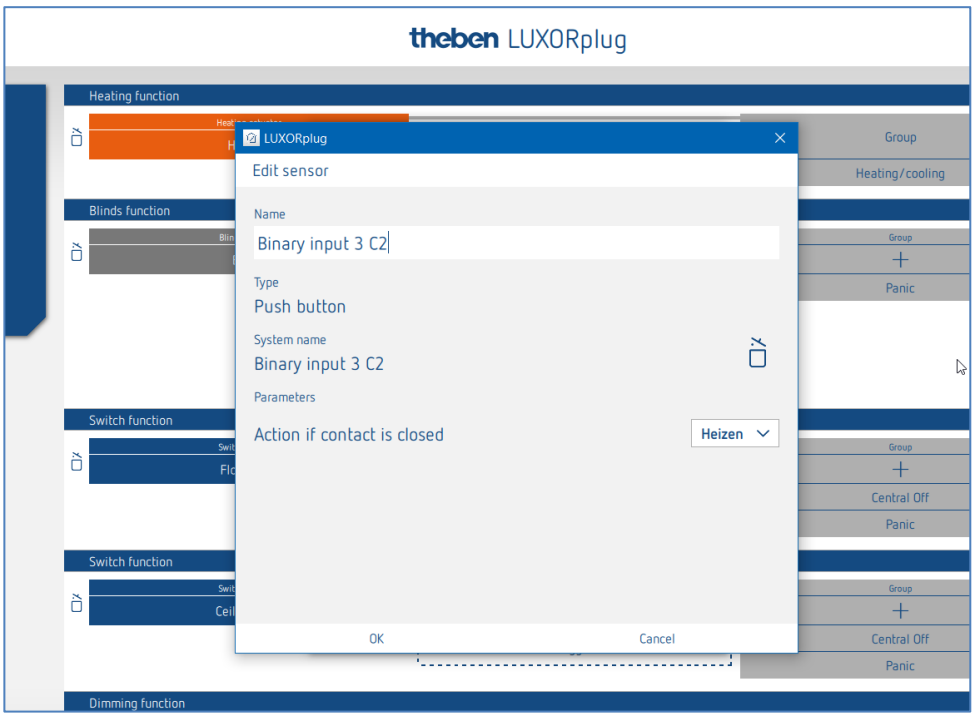
Apart from limiting the minimum and maximum permissible set temperature, a room calibration can be performed. Room calibration allows a subsequent adjustment of the temperature measurement.

➢ Click on the "Group" field.

→ The window with the central and group functions is opened.



In control type "Heating and cooling", a "trigger", e.g. a channel of a button interface, can be drawn on the "Heating/cooling" group function, and the configuration type can be set.

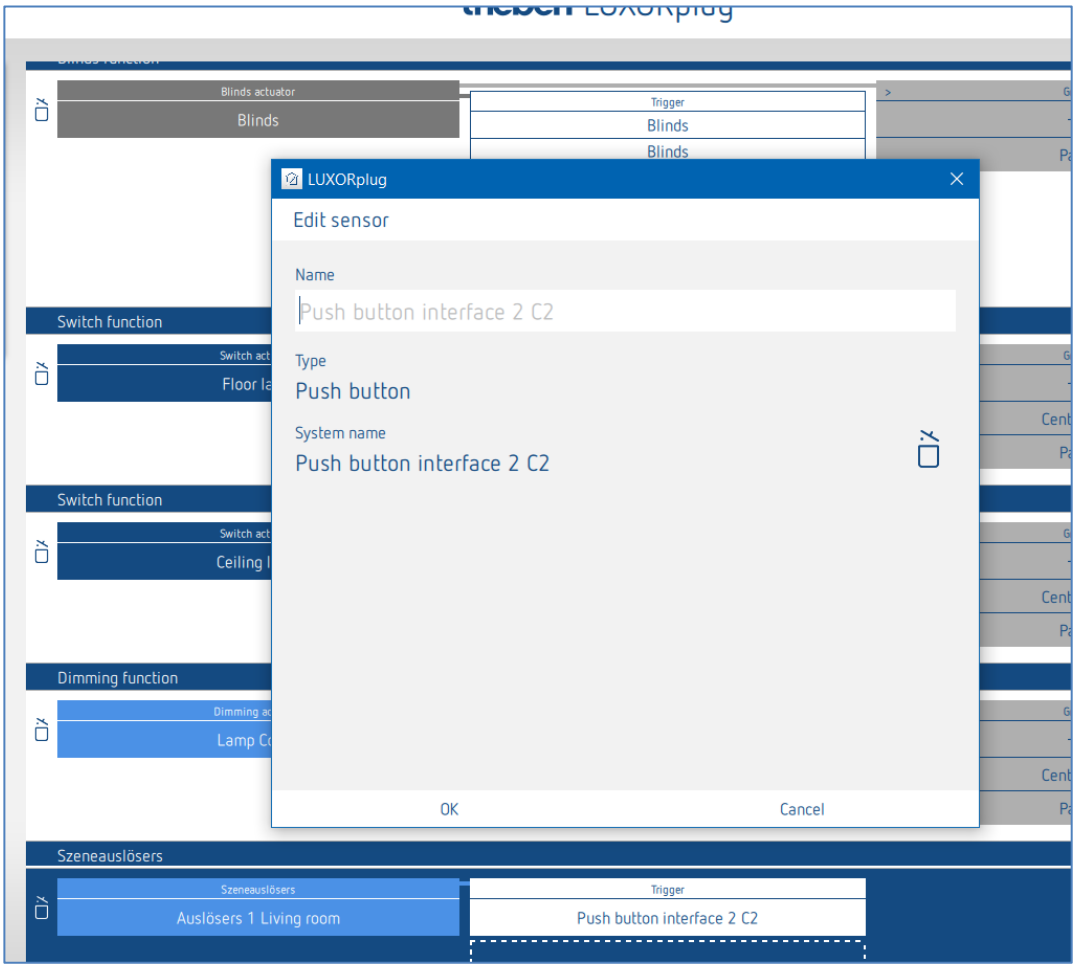


4.2.2.5 Scene

The scene function can be used to assign inputs, e.g. a channel of a button interface, for triggering saved scenes.

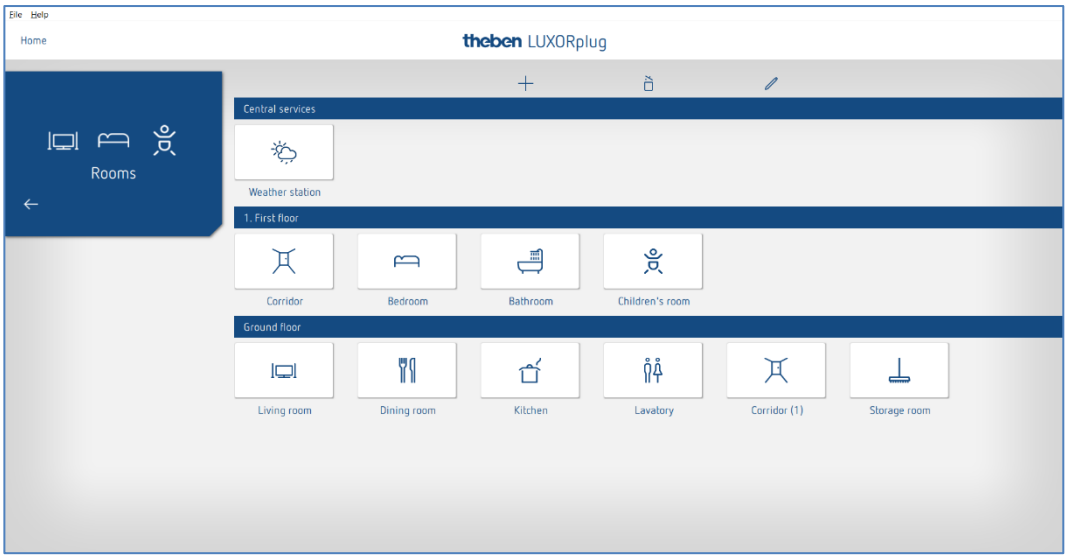
The participants and operations of the scenes are completely added and configured in the LUXORplay app.

After adding a scene trigger, a trigger (e.g. a channel of a button interface) can be connected.



4.2.3 Weather station

If a weather station was loaded or added to a device list, it will be displayed in the room view under "Central services".



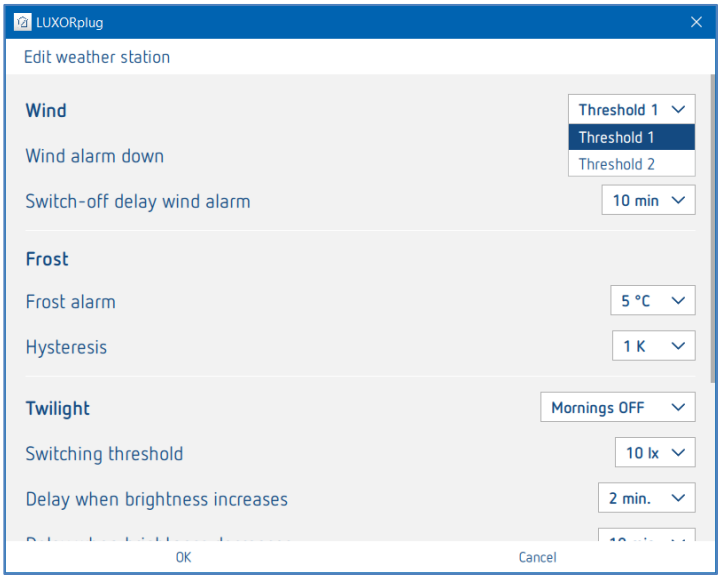
➢ Click on the "Weather station" field.

→ The parameter window is opened.

The following functions can be set:

Wind	Threshold 1 and threshold 2
Frost	
Twilight	In the morning OFF, in the evening ON, in the morning UP, in the evening DOWN
Sun protection	Sensor at front, sensor right, sensor left, maximum value

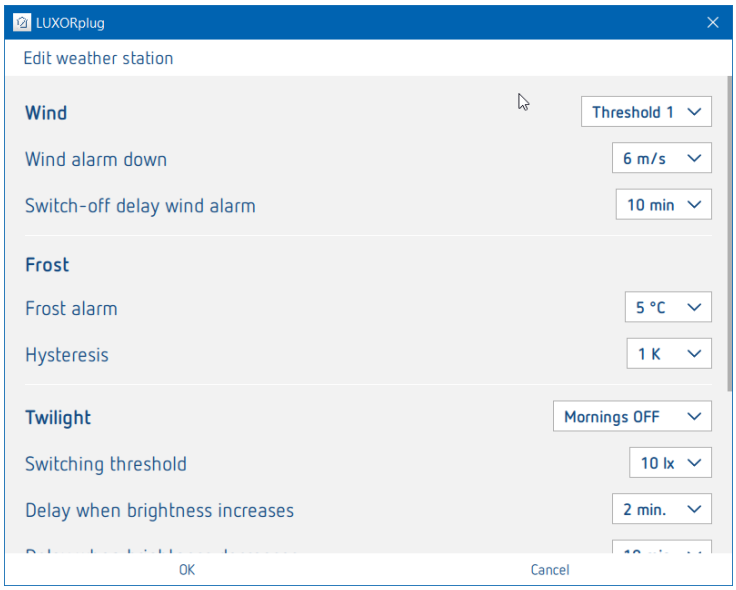
4.2.3.1 Wind



For each wind channel (threshold 1 and threshold 2), wind speed and switch-off delay can be set individually. The wind speed has to be set after consulting the technician or manufacturer of the hangings.

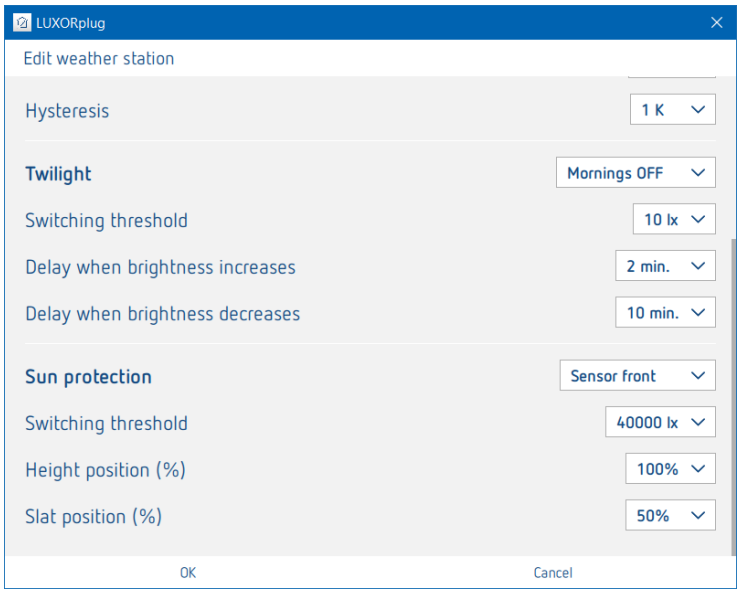
A larger switch-off delay minimizes the frequency of travel and thus provides a calm facade. Participation and operation in case of wind alarm can be set for each blinds function individually in room view.

4.2.3.2 Frost



The "Frost" function prevents the automatic lowering of hangings when there is a risk of frost and allows the performance of a defined action in case of frost alarm. Participation and operation in case of frost alarm can be set for each blinds function individually in room view.

4.2.3.3 Twilight



The "twilight" function includes four different dimming functions. In room view, each of these functions can be assigned individually to the switch, dimming, and blinds functions.

In the morning OFF: This function can be used in connection with switch and dimming functions and allows an automatic switch-off if the set brightness value is exceeded.

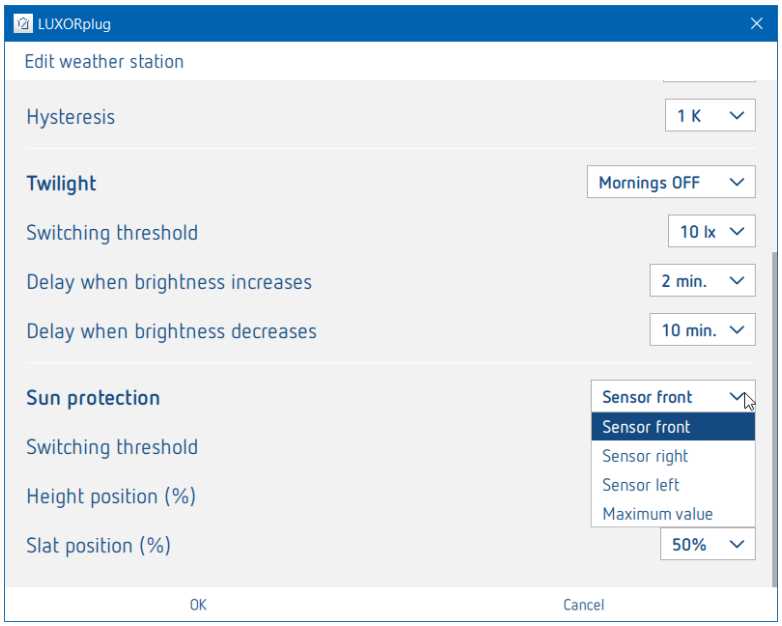
In the evening ON: This function can be used in connection with switch and dimming functions and allows an automatic switch-on if the brightness value falls below the set value.

In the morning UP: This function can be used in connection with blinds functions and allows an automatic up travel (to the upper end position) if the set brightness value is exceeded.

In the evening DOWN: This function can be used in connection with blinds functions and allows an automatic down travel (to the lower end position) if the brightness value falls below the set value.

For each function, the brightness threshold and the delay times can be set individually.

4.2.3.4 Sun protection



The "Sun protection" function includes four different functions. In room view, each of these functions can be assigned individually to the blinds functions.

Sensor at front: The sensor at the front of the weather station detects the brightness and carries out, for instance, the automatic shading control of the south facade.

Sensor right: The sensor at the right side of the weather station detects the brightness and carries out, for instance, the automatic shading control of the east facade.

Sensor left: The sensor at the left side of the weather station detects the brightness and carries out, for instance, the automatic shading control of the west facade.

Maximum value: All three sensors of the weather station detect the brightness. As soon as the measurement value of one of the sensors exceeds the set switching threshold, the set positions are approached.

For each function, the position "height" and "slat" can be set in percentage values.
The delay times are non-adjustable (exceeding: 3 minutes, falling below: 20 minutes).

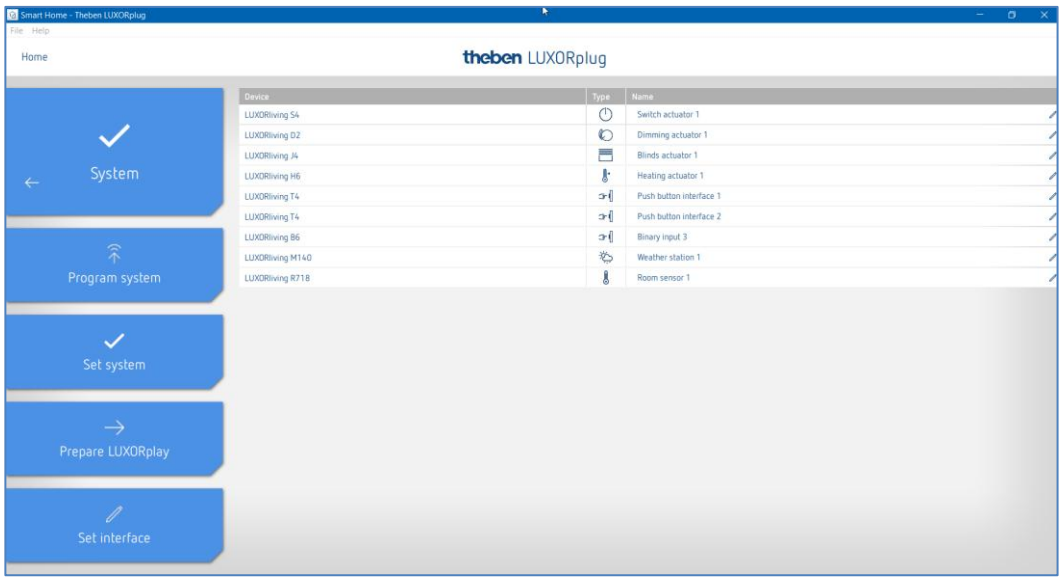
4.3 Programming with LUXORplug

After the functions have been assigned to the rooms and set, the system can be programmed. This step is possible any time, even if only single functions have been added.

➢ For programming, open the **main menu**.

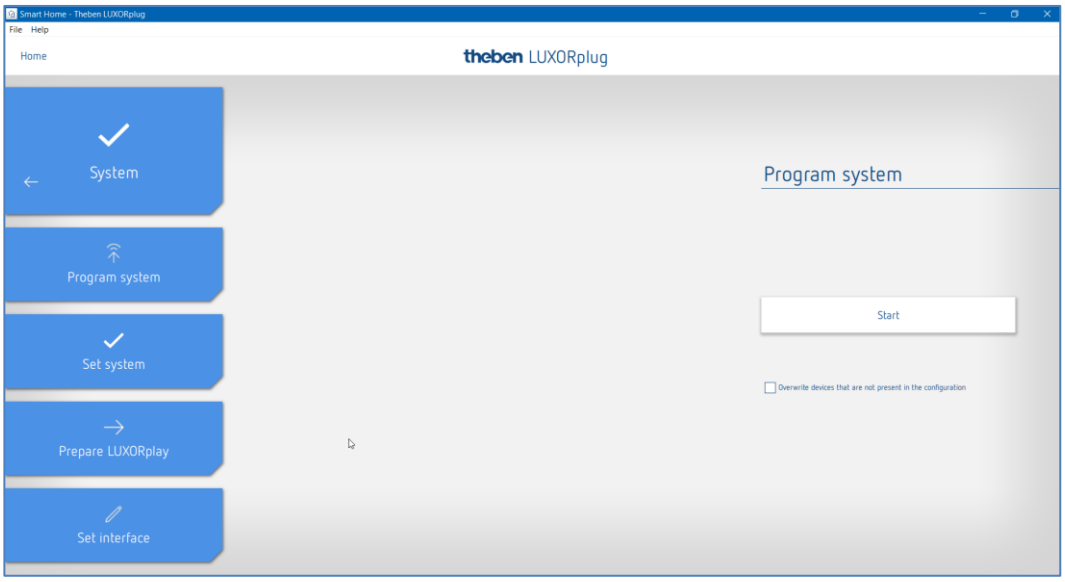
➢ Click on the "System" field.

→ The submenu is opened.



➢ Click on the "Program system" field and then on "Start".

Here, you can also overwrite devices which have been installed, but not yet included in your project. This ensures that these devices do not disturb the functions included in the project.



At the first time, programming will take a little longer, since all device parameters have to be transferred. Subsequent programming is faster.
Successful programming will be acknowledged.

After successful programming, the configured functions are available in the system.

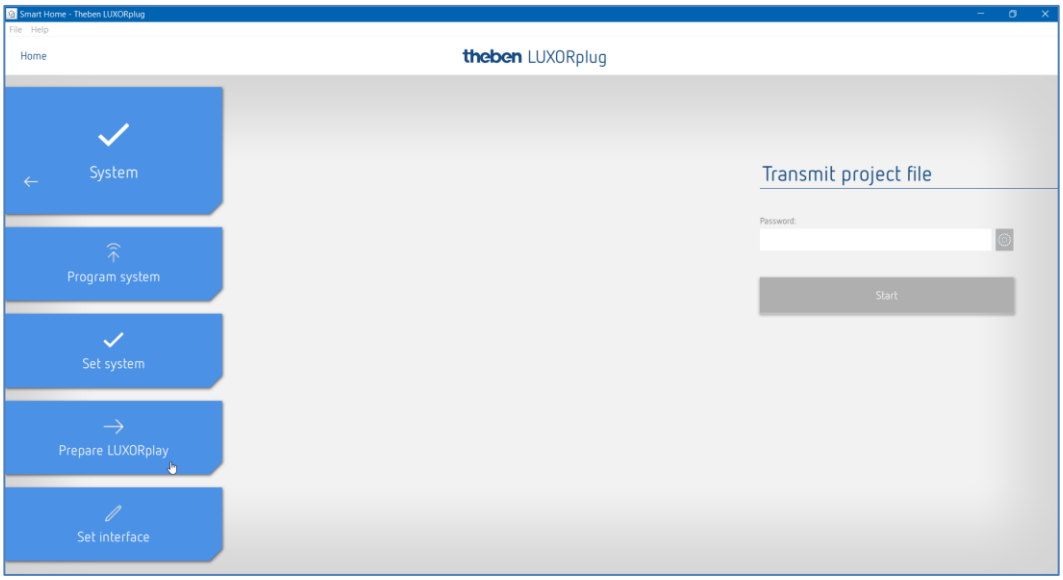
4.4 Prepare LUXORplay

In order for the **LUXORplay** app to be able to access the programmed functions, this has to be prepared in the "System" menu.

➢ Click on the "Prepare LUXORplay" field and start the data transmission to the system centre.

For the transmission, a password for the administrator has to be defined (default password: admin)[2]. The password can be changed or defined by clicking on the password settings.

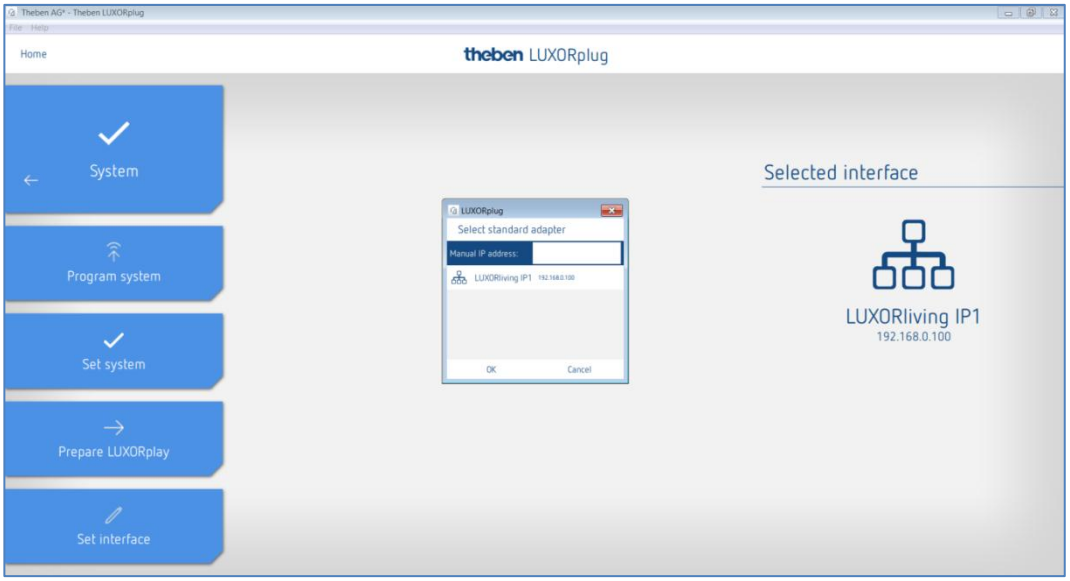
If the password gets lost, the LUXORliving IP1 system control centre has to be reset with a master reset. This can be done directly at the device ("Reset" menu – "Master Reset"). Afterwards, the password can be created again via LUXORplug.



[2] In the LUXORplay app, the administrator has to authenticate himself with this password, in order to be able to create other users and define their rights as well as individual passwords for each user.

4.5 Set interface

Another function in the "System" menu allows the setting of the LUXORliving IP1 system control centre. Principally, the system control centre is automatically detected. If this is not the case, the IP address of the connected system control centre can be entered manually in this menu. You can read the IP address of the system control centre in the display.

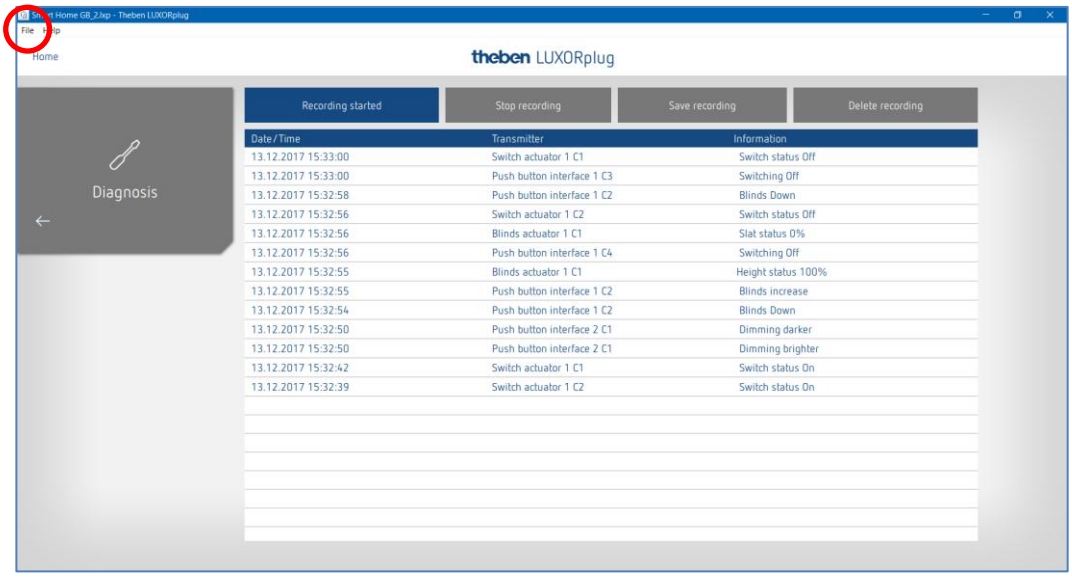


4.6 Diagnosis

The "Diagnosis" menu allows a recording of the bus communication. This tool is intended to facilitate start-up and, if necessary, troubleshooting. The recording can be started, stopped and saved.

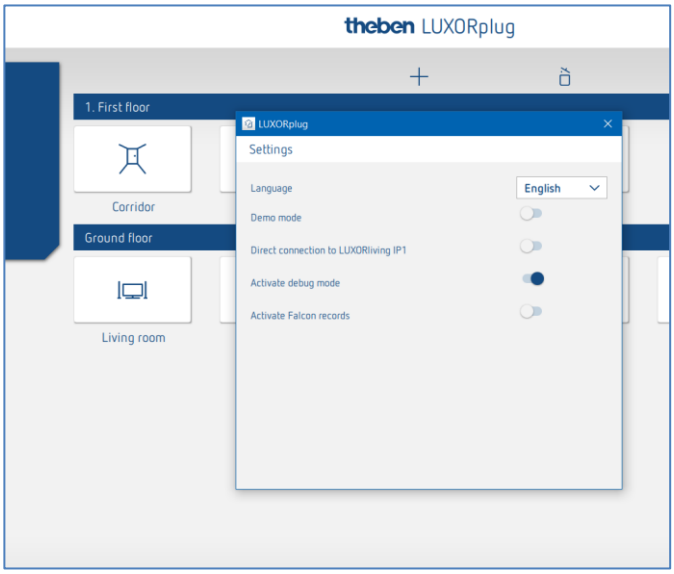
➢ Click on the "Home" menu.

→ The following window will open:



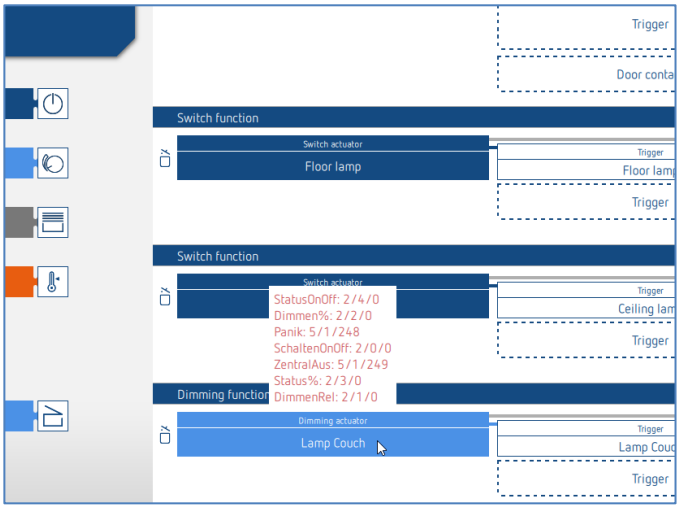
5 Appendix

5.1 Debug mode



Debug mode can be activated by clicking five times on the free space. It is used for troubleshooting in the configuration.

In debug mode, the connected group addresses are displayed for each function if the cursor is placed on it.



In the "Device list" menu of the debug mode, you can also manually search for devices which are not included in the configuration or which have incompatible addressing.