

Issue:  
24.03.2015

## DRA server

## Order No. 5301 00



## Table of Contents

<b>1</b>	<b>Commissioning with the eNet server - At a glance</b>	<b>7</b>
<b>2</b>	<b>Applications of the eNet server</b>	<b>8</b>
2.1	Commissioning of an eNet system	8
2.2	Visualisation and operation of an eNet system	9
<b>3</b>	<b>Project design interface</b>	<b>10</b>
3.1	The views	10
3.2	The filter functions	11
3.3	The location selection	11
3.4	Illustrations in the project design interface	12
3.4.1	Illustration of the devices	12
3.4.2	Configuration status of the devices	13
3.4.3	Illustration of the channels	14
3.4.4	Connection lines in plans	16
<b>4</b>	<b>Commissioning the eNet server</b>	<b>17</b>
4.1	Preconditions	17
4.2	Secure connection	17
4.3	Network connection via LAN	17
4.4	Network connection via WLAN	18
<b>5</b>	<b>Logging on or off as a user</b>	<b>20</b>
<b>6</b>	<b>User administration</b>	<b>22</b>
6.1	Create user	22
6.2	Change password	23
<b>7</b>	<b>Configuration management</b>	<b>24</b>
7.1	Creating, copying, deleting, exporting and importing a configuration	25
7.2	Carry out update	26
7.2.1	Migrating project after a server update	26
7.3	Disabling local operation on the eNet server	27
7.4	Resetting the eNet server	27
7.5	Setting the system time	27
7.6	Entering the location and selecting the language	28
7.7	Details on the installation engineer	29
7.8	Network settings - LAN parameters	29
7.8.1	Fixed IP address and DNS server	30
7.8.2	IP address via DHCP	30
7.8.3	Basic principles	31
7.9	Network settings - Wi-Fi parameters	32
7.10	Remote access	32

<b>8</b>	<b>Working with the project design interface</b>	<b>34</b>
8.1	Access to the installation	34
8.2	Start project design	34
8.3	Save project	35
<b>9</b>	<b>Devices and device channels</b>	<b>36</b>
9.1	Information on devices and device channels	36
9.1.1	Information on devices	36
9.1.2	Information on device channels	37
9.2	Settings of devices and device channels	37
9.2.1	Settings of devices	38
9.2.2	Settings of device channels	38
9.2.3	Program device	39
9.2.4	Reset device	39
9.2.5	Delete connection	39
<b>10</b>	<b>Function modules</b>	<b>40</b>
10.1	Logic modules	40
10.1.1	AND module	41
10.1.2	OR module	41
10.1.3	XOR module	41
10.1.4	Comparator module	41
10.1.5	Settings of the logic modules	41
10.1.6	Behaviour of logical connections	41
10.2	Timer modules	44
10.2.1	Settings of the timer module	44
10.2.2	Create time profile	44
10.2.3	Timer settings in the visualisation	47
10.2.4	Using timer module in further projects	48
10.3	Action modules	48
10.4	Simulation modules	50
<b>11</b>	<b>Building view</b>	<b>51</b>
11.1	Adding a building, floor or room	51
11.2	Deleting a building, floor or room	51
11.3	Duplicating a building, floor or room	51
11.4	Moving a floor or room	52
<b>12</b>	<b>Devices view</b>	<b>53</b>
12.1	Devices from product catalogue	53
12.1.1	Adding a catalogue device	53
12.2	Devices from system scan	54
12.2.1	Performing a system scan	54
12.2.2	Adding a new device	55
12.2.3	Replacing a catalogue device	56
12.2.4	Replacing a device from the installation	57
12.2.5	Adding device with data	57

12.3	Deleting a device from the project .....	57
12.4	Moving a device to another installation location .....	58
12.5	Copying a device .....	58
12.6	Localising a device .....	59
12.7	Reset device .....	59
12.8	Adding a repeater .....	59
<b>13</b>	<b>Connections view .....</b>	<b>61</b>
13.1	Creating a connection plan .....	61
13.1.1	Setting the values of the actuator channel .....	63
13.1.2	Changing or resetting action location .....	63
13.1.3	Deleting a connection line .....	63
13.1.4	Removing an element from the plan .....	64
13.1.5	Switch-over the channel type and select the operating mode .....	64
13.2	Navigating to the plans .....	65
13.3	Moving, copying and deleting a plan .....	65
13.4	Programming a plan .....	66
13.5	Measuring the signal quality .....	67
13.6	Changing the plan in Edit mode .....	69
<b>14</b>	<b>Scenes view .....</b>	<b>70</b>
14.1	Create scene .....	70
14.2	Master dimming .....	72
14.3	Creating All On/All Off scenes .....	73
14.4	Saving disabling scenes .....	74
14.5	Creating threshold value scenes .....	76
14.6	Enabling a scene for visualisation .....	77
<b>15</b>	<b>Diagnostics view .....</b>	<b>78</b>
15.1	Record and delete telegrams .....	78
15.2	Export telegrams .....	79
<b>16</b>	<b>Project view .....</b>	<b>80</b>
16.1	Create new project .....	80
16.2	Manage project information .....	80
16.3	Activate project .....	80
16.4	Copy project .....	80
16.4.1	Creating a project template with catalogue devices .....	81
16.4.2	Creating a project copy from an existing project .....	81
16.4.3	Creating a catalogue project from an existing project .....	81
16.5	Import and export project .....	82
16.6	Print project .....	82
16.7	Delete project .....	82
16.8	Read in project .....	82
16.8.1	Reading in a manually-commissioned system .....	83
16.8.2	Reading in a manually-commissioned system with the eNet system .....	85
16.9	Compare project .....	86

<b>17 Overview .....</b>	<b>88</b>
17.1 Display devices .....	88
17.2 Display connections .....	89
17.3 Display scenes .....	89
17.4 Localising a device .....	89
17.4.1 Localising a device of the installation in the project design interface .....	89
17.4.2 Localising a device of the project design interface in the installation .....	90
17.4.3 Repair Function .....	90
<b>18 System overview .....</b>	<b>91</b>
18.1 Displaying eNet server update .....	91
18.2 Performing a device update .....	91
18.3 Program project .....	92
18.4 Programming all devices .....	92
18.5 Programming or deactivating all connections .....	92
18.6 Programming or deactivating all scenes .....	92
18.7 Make scenes visible for visualisation .....	92
18.8 Displaying applications of the visualisation .....	92
18.9 Logging out other users .....	92
18.10 Perform signal quality measurement of all plans .....	92
18.11 Display devices with weak battery .....	92
18.12 Displaying and deleting unknown devices .....	92
18.13 Displaying help dialogues .....	93
18.14 Other settings .....	93
<b>19 Appendix .....</b>	<b>94</b>
19.1 Index .....	94
19.2 Icons of the project design interface .....	95
19.3 Copyright notice and disclaimer .....	96
<b>20 Parameters of the devices .....</b>	<b>107</b>
20.1 Radio hand transmitter .....	107
20.2 Hand-held transmitter with display .....	107
20.2.1 Information window .....	109
20.3 Radio wall transmitter .....	109
20.4 Radio universal transmitter .....	110
20.5 Radio switch actuators .....	111
20.5.1 Information window .....	114
20.6 Radio Venetian blind actuators .....	115
20.6.1 Information window .....	117
20.7 Radio switching/Venetian blind actuator .....	117
20.7.1 Information window .....	122
20.8 Radio dimmer actuators and radio control units .....	123
20.8.1 Information window .....	127
20.9 Radio button, light system .....	128
20.9.1 Information window .....	131
20.10 Radio energy sensors .....	131
20.10.1 Information window .....	133

20.11 Radio transformer intermediate plug .....	133
20.12 Mobile gate .....	134
20.13 Repeater .....	135
20.14 Radio sun sensor .....	135
20.14.1 Information window .....	135

## 1 Commissioning with the eNet server - At a glance

The planning and commissioning of an eNet system can be carried out easily and conveniently using the eNet server.

The following graphic provides an overview of the commissioning of an eNet system.

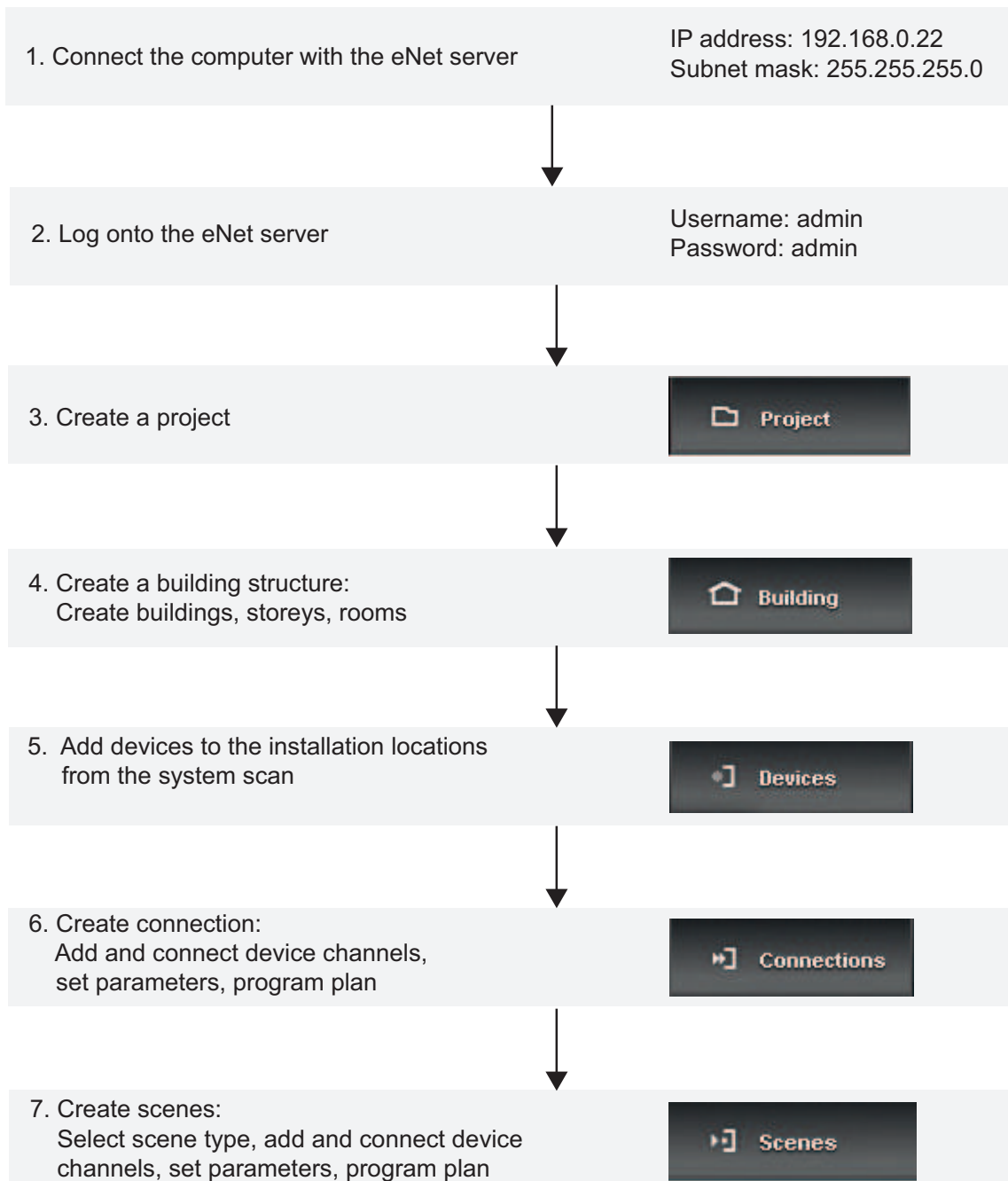



Figure 1: Commissioning with the eNet server at a glance

- i** The overview  provides an overview of the project.
- i** The commissioning of an installation with the eNet server is described in detail in the following chapters. There is a chapter for each view describing the commissioning steps and the functions of the appropriate view.

## 2 Applications of the eNet server

The eNet server can be used for the commissioning, visualisation and operation of an eNet system. Commissioning is carried out using the project design interface of the eNet server. The eNet system is visualised and operated using the visualisation interface. Access for both user interfaces is controlled in user administration.

The eNet server is required in the system for the visualisation and operation of an eNet system. If the eNet server is not planned as a system device, it can also be used as a radio receiver for modules installed in series. In addition, the function modules of the eNet server can be used for logical connections (e.g. configuration barrier) and for time functions.

The eNet server is accessed via a web browser on a computer. The connection between the computer (client) and the eNet server can be created either in wireless fashion via Wi-Fi or via LAN. Commissioning can be carried out, for example, using a laptop or a tablet PC, and the visualisation interface can also be accessed via a smartphone.

### 2.1 Commissioning of an eNet system

An eNet system can be planned, commissioned and then managed via the project design interface of the eNet server.

Up to ten projects can be created and managed in the eNet server. For each project, a building is shown, made up of building sections, floors and rooms. A system scan can be used to read the devices of the installation into the eNet server, assign their installation location and thus add them to the project. After this, plans for device connections and for scenes are created.

#### Additional parameters

In addition to the parameters that can be set on the device, other parameters can be set on all eNet devices via the eNet server, e.g. behaviour after voltage return. The parameters to be set are dependent on the type of device. The parameter table in the appendix contains a list of all the eNet devices, along with their settable parameters.

#### Commissioning with catalogue devices

The planning and commissioning of an eNet system can also be carried out using the eNet server, without devices from the installation. For this purpose, devices are added to the project from a product catalogue, plans are created and, if necessary, parameters are set. Afterwards, the devices of the installation are read into the project via a system scan and assigned to the programmed catalogue devices.

#### Logic and timer modules

Besides the devices, logic modules and timer modules can be integrated into the plans. Thus, for example, a time module can provide time-controlled switching of system devices and a configuration barrier can be created using logic modules.

#### Energy sensors

The project design can be used to integrate energy sensors into the project for determining voltage, current and energy values. These values can be opened via the visualisation interface or can be used in plans in conjunction with logic modules.

#### Troubleshooting

During commissioning, it is possible to measure the signal strength of transmitters. The signal arriving at the receiver is evaluated. The plan shows the quality of the signal using colour coding according to the traffic light principle. In this way, for example, the mounting location can be checked directly and, if necessary, changed. If faults occur during operation of an eNet system, telegrams can be recorded for a specific period of time and exported for evaluation.

#### Subsequent changes in the project

If changes are made subsequently in the eNet system, e.g. new devices are installed, the project can then be expanded. Settings are possible on the device as well as changes in plans. The changes can be easily transferred to the system.



## **Update of the device software**

Updates to the devices can be performed via the eNet server. An archive file with updates of the devices, product catalogues, project design interface and visualisation interface is provided for download on our website.

## **Reading in eNet systems**

The project design can read in eNet systems commissioned with another eNet system. It is also possible to read in those eNet systems which were commissioned manually. The read-in eNet systems can be processed further in the project design interface.

## **The eNet server as a commissioning tool**

The eNet server is not necessarily required for the operation of a system and can be used solely by the installation engineer as a commissioning tool. The eNet server can be used on the move for commissioning, for example on a desk or in the workshop. There is a power supply unit available for mobile operation.

- i If function modules are integrated in plans or if operation and visualisation are to take place via the visualisation interface, the eNet server must remain in the system.

## **2.2 Visualisation and operation of an eNet system**

The display and central operation of the eNet devices are possible using the visualisation interface of the eNet server.

## 3 Project design interface

This chapter is designed to help you get to know the structure of the project design interface. The following chapters describe the functions and exact procedure for project design.

The figure below shows the elements of the project design interface.

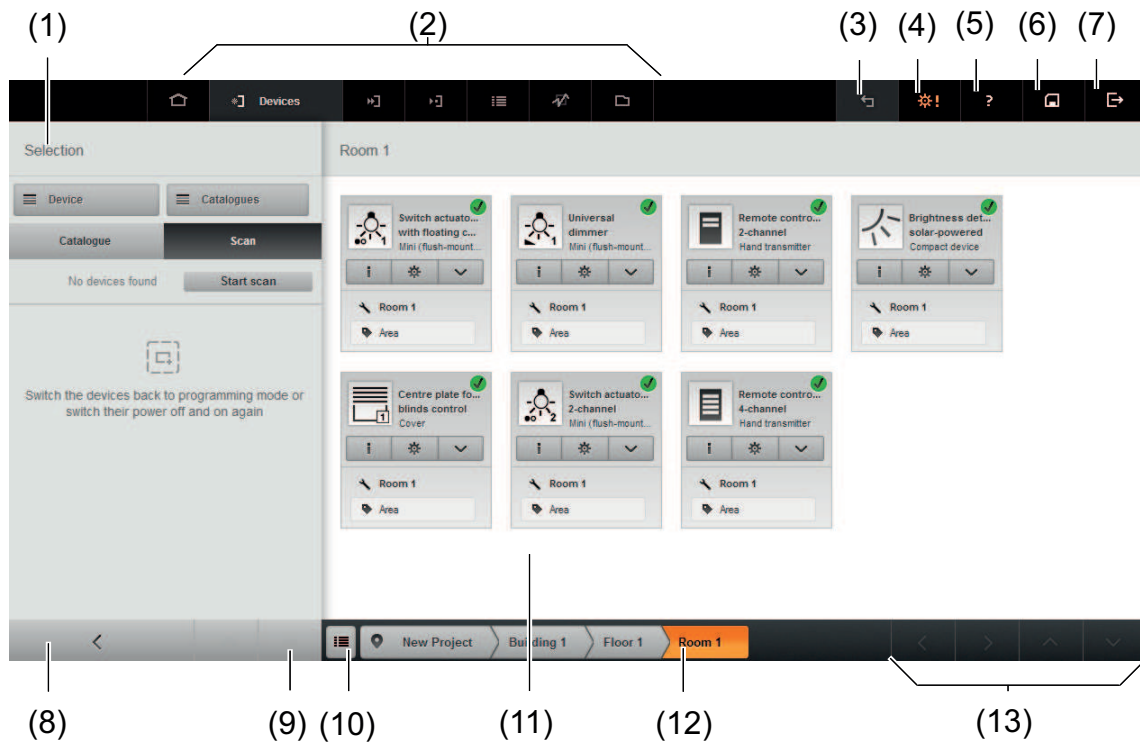


Figure 2: The project design interface

- (1) Selection, e.g. of devices
- (2) View of the project design interface
- (3) Undo last action
- (4) Project settings or log-out
- (5) Open language-dependent product documentation or manufacturer's website
- (6) Save project
- (7) Switch to log-on screen
- (8) Hide selection
- (9) Scroll selection
- (10) Display building overview
- (11) Work area
- (12) Breadcrumb bar
- (13) Scroll work area

### 3.1 The views

The various views are arranged in the top bar of the project design interface. The appearance in the bar is dependent on the resolution of the screen. At low resolutions, only the icons of the individual views are shown, and only the active view is also named (Figure 3).

The functions of the various views are described in the respective chapters.

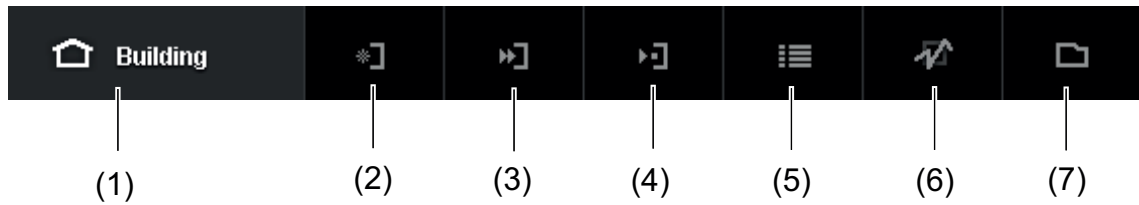


Figure 3: View of the project design interface

- (1) Building view
- (2) Devices view
- (3) Connections view
- (4) Scenes view
- (5) Overview (project overview) view
- (6) Diagnostics view
- (7) Project view

### 3.2 The filter functions

In some views of the project design interface, the selection can be limited using filters.

For example, in the **Connections** view, plans can be created and the selection of devices filtered according to the installation locations and the device type.

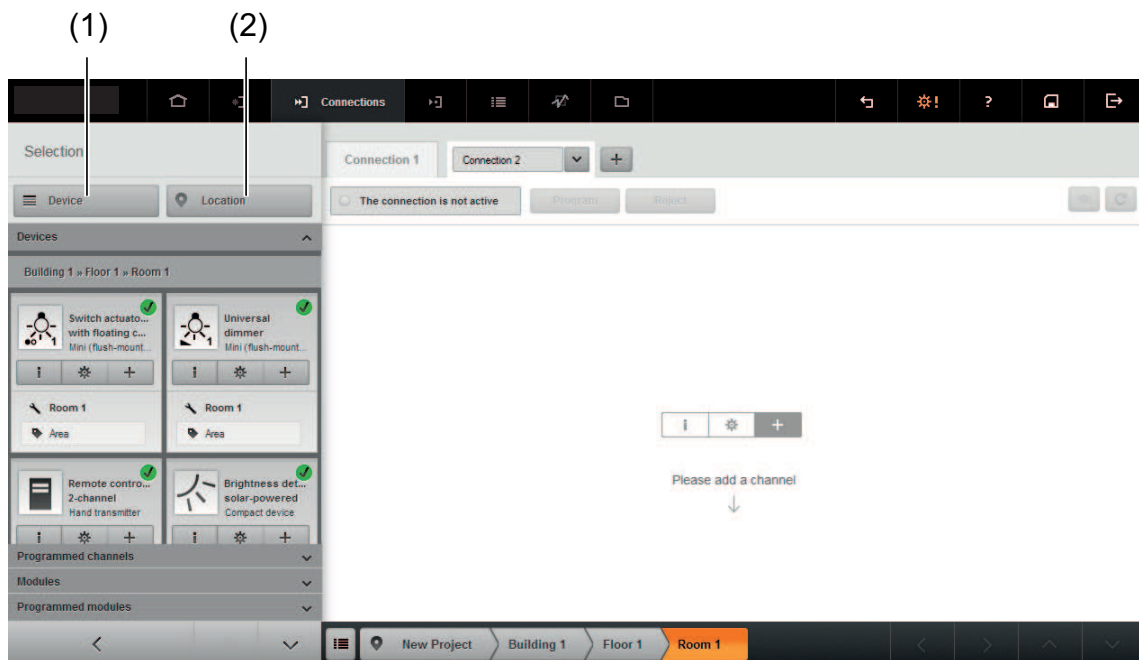


Figure 4: Select filter - Connections view

- (1) Filter according to sensors and actuators
- (2) Filter according to installation location

### 3.3 The location selection

In the **devices**, **connections** and **scenes** views, it is possible to select a location in the building structure using the so-called breadcrumb bar or using a building overview. The building overview must be shown in order to select the location from it (Figure 5).

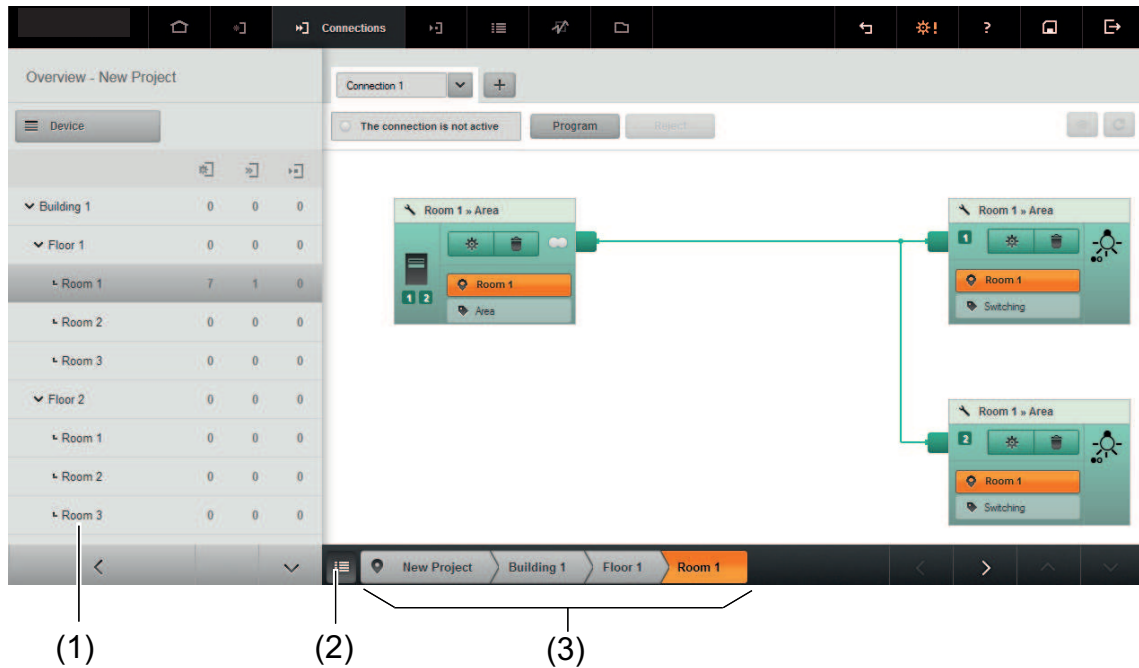


Figure 5: Location selection in the Connections view

- (1) Selection of the installation location via building overview
- (2) Hide building overview
- (3) Selection of the installation location via breadcrumb bar

### 3.4 Illustrations in the project design interface

This chapter explains the key elements of the project design interface, such as the illustration of the devices and channels.

#### 3.4.1 Illustration of the devices

In the project design interface, devices are shown as device tiles (Figure 6).

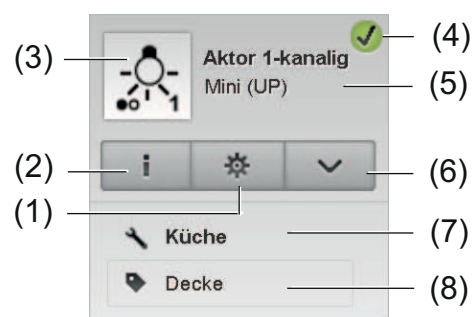


Figure 6: Device tile

- (1) Device settings
- (2) Device information
- (3) Device icon
- (4) Configuration status
- (5) Device designation
- (6) Move, duplicate, delete device

- (7) Installation location
- (8) Installation area

### Installation location

If a device is assigned to an installation location, the installation location is entered into the device tile automatically (Figure 6).

### Installation area

To describe the installation location in more detail, the installation area can also be entered in a text box of the device tile (Figure 6).

## 3.4.2 Configuration status of the devices

Devices read in using a system scan are indicated in the device tile with a configuration status. Catalogue devices have no configuration status.

If devices in the project and from the installation are identical, e.g. parameters and connections are the same, the device is labelled with a checkmark in the project design interface (Figure 7).

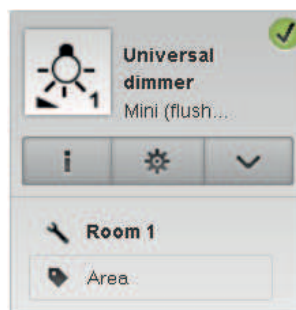


Figure 7: Device in the project corresponds to device in the installation

Devices, in which parameter settings or connections are not identical with the devices in the installation, are indicated by an exclamation mark (Figure 8). If, for example, parameters or the installation area of a device were changed and the device was not then programmed, the label of the device changes and displays the different version of the devices.

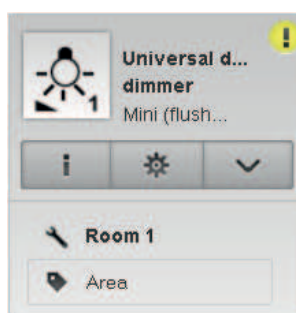


Figure 8: Device in the project does not correspond to the device in the installation

If devices of the installation cannot be reached via the project design interface, they are labelled with an **x** in the device tile

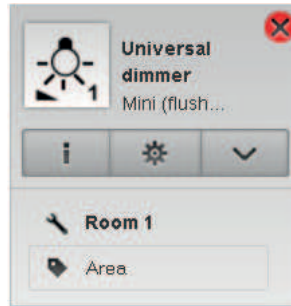


Figure 9: Device in the installation cannot be reached via the project design interface

### 3.4.3 Illustration of the channels

In the project design interface, channels are shown as channel tiles. Channel tiles of devices in the installation are shown in green, whereas channel tiles of catalogue devices and function modules appear in grey.

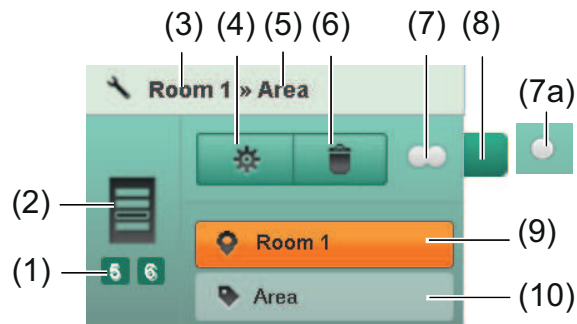


Figure 10: Channel tile of a sensor

- (1) Channels
- (2) Device icon
- (3) Installation location
- (4) Settings
- (5) Installation area
- (6) Reset channel
- (7) Channel type, rocker switch
- (7a) Channel type, scene
- (8) Anchor point
- (9) Action location
- (10) Action area

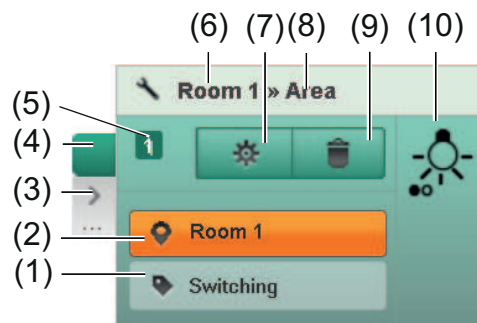


Figure 11: Channel tile of an actuator

- (1) Function name of the actuator
- (2) Action location
- (3) Optional: List of the plans containing the channel
- (4) Anchor point
- (5) Channel
- (6) Installation location
- (7) Channel settings
- (8) Installation area
- (9) Reset channel
- (10) Device icon

### Action location

The action location displays the location, where the sensor or actuator channel is active. For example, an actuator may be installed in the cellar, e.g. an RMD actuator. However, the action location of the actuator channel is most likely to be in a different room of the building, e.g. the living room.

### Action area

The action area of a sensor can be entered in the text box available in the channel tile to provide a more detailed description of the action location, e.g. light.

- i** For the hand-held transmitter with display, the name entered here is used to name the channel or scene.

### Channels of catalogue devices and function modules

Channel tiles of catalogue devices and function modules appear in grey. Grey tiles indicate that the plan cannot be implemented without further measures. If, for example, function modules are used in the plan, the eNet server is required for the operation of the eNet system. If planning was carried out with catalogue devices, these must be replaced with the devices from the installation.

If there is a logic module or timer module in a connection, a value pair can also be entered in the channel tile of an actuator (Figure 12). The saved values apply solely to control using logic or timer modules. Sensor channels, which are directly connected to the actuator channel, control the actuator channel as normal.

If the plan is assigned to a location identical to the action location of the channel, this is indicated by the channel tile turning orange (Figure 12).

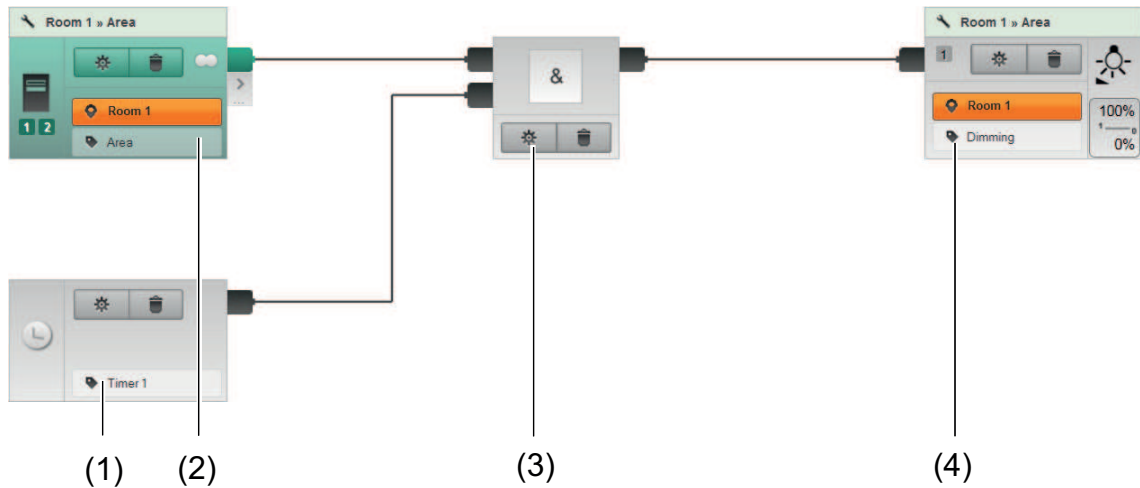


Figure 12: Illustration of function modules and channels of catalogue devices and devices in the installation

- (1) Timer module
- (2) Device of installation
- (3) Logic module
- (4) Catalogue device

### 3.4.4 Connection lines in plans

Connection lines between channels of devices in the installation are shown in green (Figure 13). The plan can be transferred to the installation. The eNet server is not necessary for the implementation of the plan in the system.

Connecting lines, starting from catalogue devices and function modules, are grey. For this plan, the catalogue devices must be replaced with devices from the installation and the eNet server must remain in the installation for the functions of the function modules (Figure 12).

If multiple sensor and actuator channels are interconnected, the transitions of the connection lines are indicated by a dot. This dot indicates that the rules of a changeover circuit apply: The last command is triggered, irrespective of the status of the other sensor channels (Figure 13).

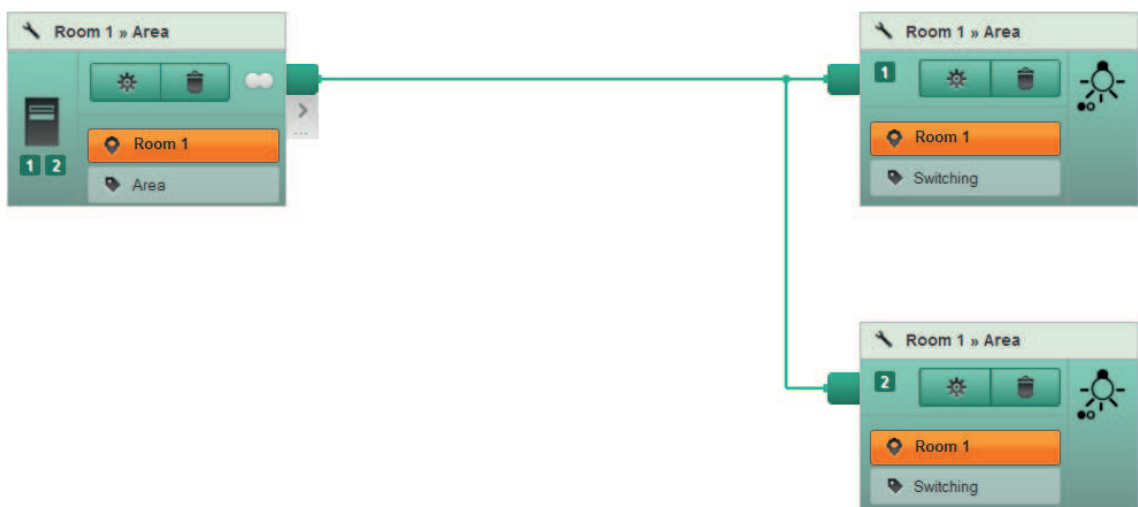


Figure 13: Plan with devices from the installation



## 4 Commissioning the eNet server

A LAN connection is required for the first commissioning of the eNet server (see chapter 4.3. Network connection via LAN).

The eNet server can be operated in distribution boxes or on the move, such as in the workshop, for example.

- i** Several clients (visualisation and/or project design) may not be opened in different windows or tabs of a browser at the same time. Should it be necessary, a second client can be opened in a browser of another manufacturer.
- i** The mounting and electrical connection of the eNet server, connection of the power supply and the external antenna are described in the enclosed operation manual.

### 4.1 Preconditions

The following conditions must be fulfilled in order to operate the eNet server:

- Laptops and tablet PCs can be used as clients.
- The minimum resolution should be 1024x768 pixels, because the project design interface for this resolution in full screen mode has been designed for 96 dpi and normal font size.
- For network connections via Wi-Fi, the Wi-Fi adapter of the client must correspond to the standard for communication in telecommunications networks IEEE 802.11g.
- The client must belong to the same network as the eNet server, i.e. the Net IDs of the client and the eNet server are identical.
- A Java script-compatible web browser (HTML 5) is required for commissioning via the eNet server.
- The use of cookies in the web browser must be permitted in order to use the full scope of functions of the project design and visualisation interface.
- i** The browser cache must be activated in order to avoid long loading times in the project design interface.
- i** We recommend using the current browser version.

Web browser	Minimum version
Internet Explorer	10.0
Google Chrome	33.0
Firefox	24.0
Safari for MAC OS	6.0

### 4.2 Secure connection

Encrypted communication via an https protocol is used for the secure connection between eNet server and computer. The connection is set up using a security certificate. The security certificate can be viewed via the browser.

When the connection is established for the first time, a warning message appears, is generated by the browser. In some browsers, this warning message must be confirmed once in order to set up the connection. Some browsers have been set so that the warning message appears and has to be confirmed during each access.

- i** The default setting of the eNet server provides a connection via an https protocol. This setting can be changed in the configuration management in the **Update** tab.

### 4.3 Network connection via LAN

A network connection via LAN is required for the first commissioning. In the as-delivered state, the eNet server is appropriately preconfigured and can be reached via a fixed IP address.

The screenshot displays the 'Configuration management' interface for 'DefaultCo.. (Active)'. The 'Network' tab is selected, showing the 'Addressing' section. Under 'Addressing', 'Fixed IP' is selected, and the following values are entered: IP address: 192.168.0.22, Subnet mask: 255.255.255.0, Standard gateway: 192.168.0.1, DNS Server: 192.168.0.1, and DNS server (alt.): 192.168.0.1. The 'WLAN parameters' section shows 'WLAN active' is unchecked, 'SSID name' is empty, 'Encryption' is set to 'WPA2', and 'Key' is empty. At the bottom, there are 'Close' and 'Apply' buttons.

Figure 14: LAN network settings (preset)

**Procedure:**

- Set up the network connection between the client and the RJ45 socket of the eNet server via a network cable.
  - Start web browser.
  - Enter URL **http://192.168.0.22** in the address line of the web browser.  
The connection to the eNet server is established and the start page of the eNet server appears.
- i** A connection can also be set up via a DHCP server (see chapter 7.8. Network settings - LAN parameters).

#### 4.4 Network connection via WLAN

After first commissioning of the eNet server, the network connection can also be wireless. The Wi-Fi parameters must be configured appropriately in the configuration of the eNet server.

The screenshot displays the 'Configuration management' interface for 'DefaultCo.. (Active)'. The 'Network' tab is selected, showing the following settings:

- Addressing:**
  - Fixed IP:
  - DHCP:
  - IP address: 192.168.0.22
  - Subnet mask: 255.255.255.0
  - Standard gateway: 192.168.0.1
  - DNS Server: 192.168.0.1
  - DNS server (alt.): 192.168.0.1
- WLAN parameters:**
  - WLAN active:
  - SSID name:
  - Encryption: WPA2
  - Key: 12345678

Buttons for 'Close' and 'Apply' are visible at the bottom.

Figure 15: Wi-Fi network settings with DHCP (example)

**Procedure:**

- Open the Configuration management (see chapter 7. Configuration management).
- Select the **Network** tab.
- Select **Wi-Fi active**.
- Enter the **SSID name** of your network.
- Select the encryption type.
- Enter the Wi-Fi network key.
- ⓘ This unique key must be used in every device with a Wi-Fi adapter in the selected radio network.
- Start web browser.
- Enter URL **http://192.168.0.22** in the address line of the web browser.  
The connection to the eNet server is established and the start page of the eNet server appears.

## 5 Logging on or off as a user

If the connection between the eNet server and client has been established, the log-on screen will appear (Figure 16).

- i** Several clients (visualisation and/or project design) may not be opened in different windows or tabs of a browser at the same time. Should it be necessary, a second client can be opened in a browser of another manufacturer.
- i** A maximum of one user can log onto the project design and eight users onto the visualisation.

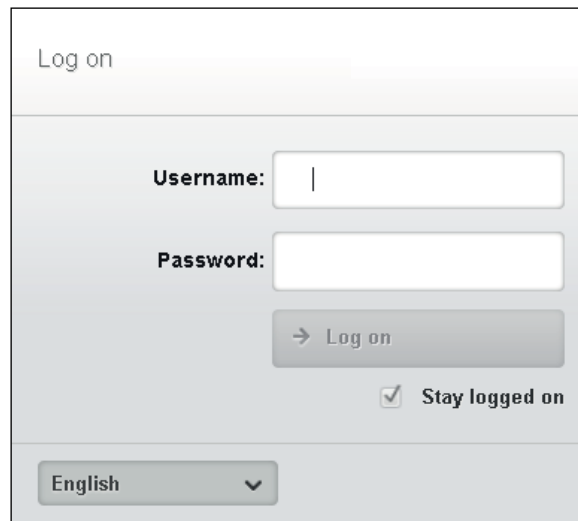


Figure 16: Log-on screen - User log-on


### Log-on as user

For first log-on, "admin" must be entered both as the username and password. For security reasons, the password should then be changed.

- i** The language of the interfaces can be selected via a selection menu.
- i** If the **Stay logged-on** option is enabled, then the user does not need to log on again when accessing one of the interfaces. If the last access is seven or more days in the past, then a new log-on will be required, even if the checkmark is set.

- Enter your username and password.
- Select **log-in**.

After successful log-on by the administrator the selection screen (Figure 17) is displayed loaded.

- i** You can switch from the project design interface to the selection screen by pressing the  button in the menu bar.
- i** If a user of the visualisation logs on, the visualisation is then loaded.

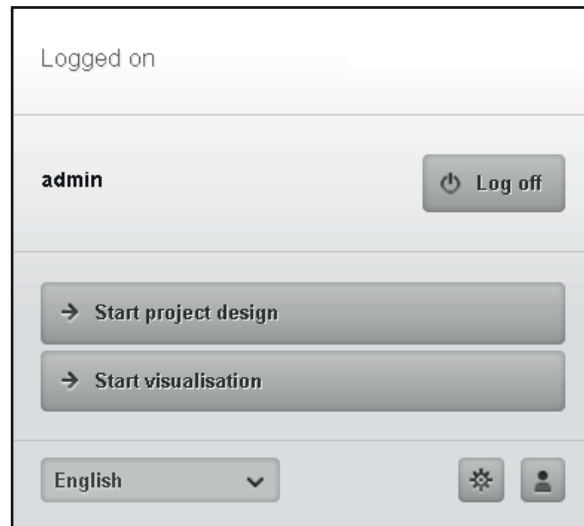






Figure 17: Selection screen after log-on by the administrator

- i** The administrator has access rights to the project design (**Start project design**) and the visualisation (**Start visualisation**), to the configuration management  and user administration  (Figure 17).

### Log-off user

- i** To avoid data loss, the project must be saved using the  button in the toolbar before logging-off.
- To log-off as user, select the  button in the **Log-off** toolbar.

## 6 User administration

New user profiles can be created and managed in the user administration. A distinction is made between the roles Administrator, Administrator Visualisation and User of Visualisation. The roles of the administrators are set permanently and each exists only once.

Rights of the Administrator:

- Access authorisation for project design, visualisation and configuration
- Administrator sees all profiles
- Assign Visualisation authorisation for the configuration to the Administrator
- Create and delete users for the visualisation
- Change passwords of users of the visualisation and their own password
- i** After the Administrator has logged on, the selection screen opens, in which the Administrator can open the project design, visualisation or configuration as required.

Rights of the Administrator Visualisation:


- Access authorisation for visualisation
- i** The Project Design Administrator can assign the access authorisation for the configuration of the eNet server using the **Server configuration** button.
- Create and delete users for the visualisation
- Change passwords of users of the visualisation and their own password
- i** After the Administrator has logged on, the selection screen opens, in which the Administrator can select the visualisation or, if he is so authorised, the configuration.

Rights of users:

- User see their own profile
- Change their own password
- i** If a user logs on, then the visualisation is opened directly.

### 6.1 Create user

**Procedure:**

- Start the user administration by pressing the  button in the selection screen. The user administration is opened.

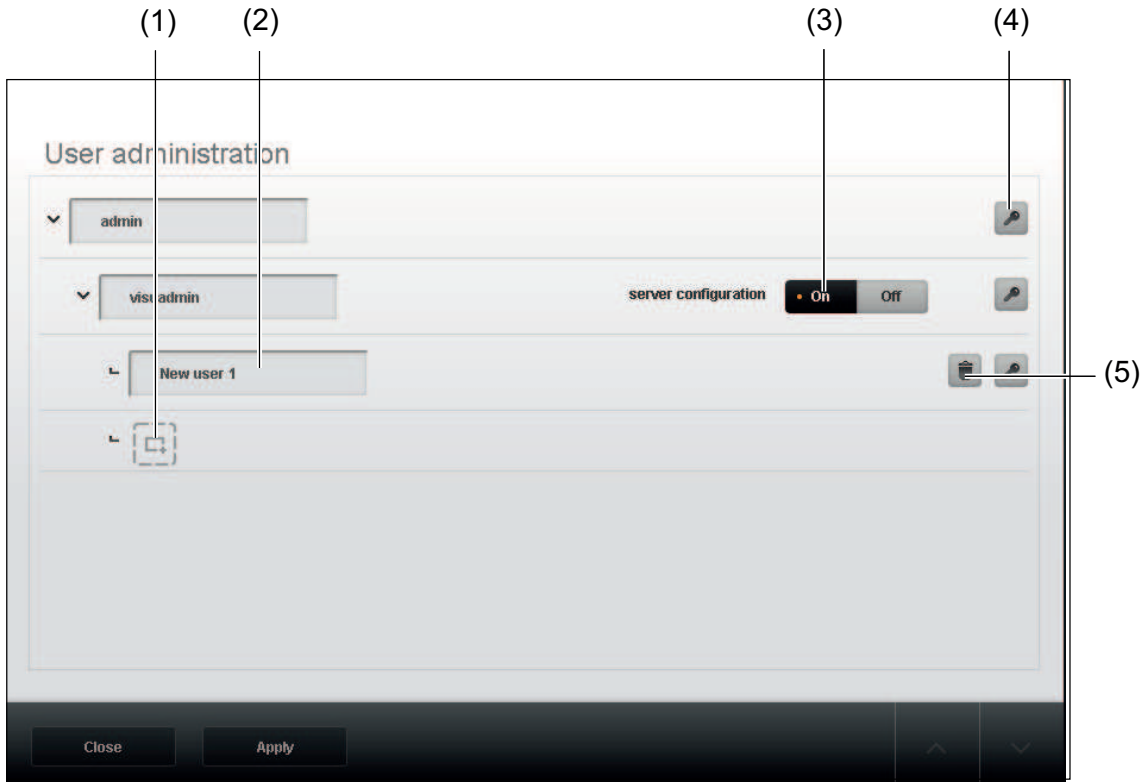




Figure 18: User administration

- Select the button for new users (1).
- Enter the user name in the text box (2).
- If necessary, enable access to the configuration (3) for the Visu Admin.
- Select the  button to assign a password (4).
- Repeat the password and apply it with **Confirm**.

- i Select the  button (5) to delete a profile.  
Clicking the **Apply** button saves the user profile.

## 6.2 Change password

### Procedure:


The password can be changed using the  button.

- i The administrator can change any password. The Administrator Visualisation can change the passwords of the users and their own password. The user, however, can only change his own password.

## 7 Configuration management

In the configuration administration, the following actions or settings can be performed:

- Calling up version information about the eNet server, visualization and project design software
- Update of the eNet server
- Disabling buttons on the eNet server
- Reset eNet server
- Changing system time and using time server
- Selecting location and language
- Entering information about the installation engineer
- Configuring network parameters
- Configuring remote access to the eNet server via the Internet

Configuration management is opened using the  button in the log-on screen (Figure 17).

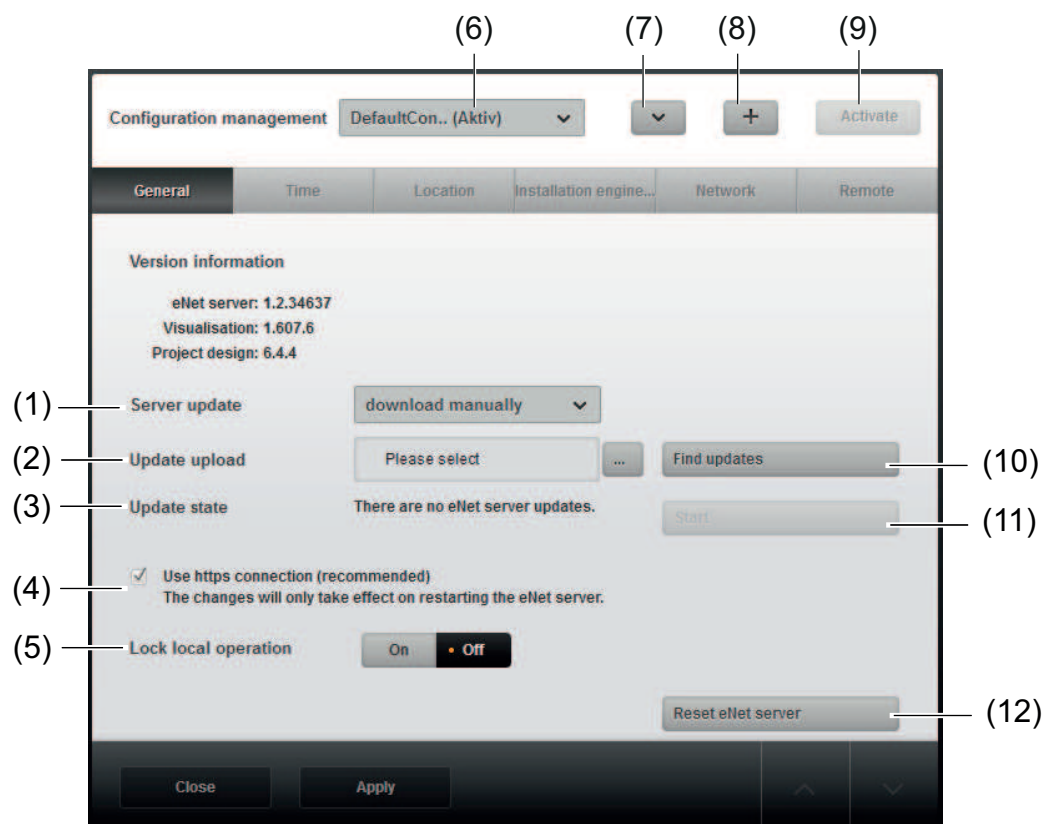


Figure 19: Configuration management

- (1) Setting the type of server update
- (2) Manual uploading the archive file of the update from the computer to the eNet server
- (3) The update status is displayed when the setting for the server update is set to **Search automatically**
- (4) Activating/deactivating connection via the https security protocol
- (5) Disabling local operation on the eNet server
- (6) Selecting a configuration
- (7) Copying, deleting, renaming, deleting, exporting and importing a configuration
- (8) Creating a new configuration
- (9) Activating a configuration



- (10) Searching after update
- (11) When the server update setting is **Download manually** or **Download automatically**: Update is executed.  
When the server update setting is **Search automatically**: Update is loaded and executed.
- (12) Reset eNet server

## 7.1 Creating, copying, deleting, exporting and importing a configuration

Up to ten configurations of the eNet server can be created.

The following settings can be saved for a configuration:

- **General**: The type of server update, https connection activated/deactivated and local operation on the eNet server
- **Time**: time zone, time server and summer time
- **Place**: Location
- **Installation engineer**: Information on the installation engineer
- **Network**: IP parameters and Wi-Fi parameters

### Creating a configuration

- Select the  button to create a new configuration (Figure 19).  
An entry window opens for the designation of the new configuration.
- Enter the designation for the new configuration.  
Pressing the **Confirm** button creates the new configuration and the settings for it can be made.

### Copying a configuration

- Select the appropriate configuration from the drop-down list (Figure 19).
- Using the  button, select the **Duplicate** function.  
An entry window opens for the designation of the copy.
- Enter the designation for the new configuration.  
Pressing the **Confirm** button creates a copy.

### Deleting a configuration

- Select the appropriate configuration from the drop-down list (Figure 19).
- Using the  button, select the **Delete** function.  
Confirmation of the security query deletes the configuration.

The active configuration cannot be deleted.

### Importing a configuration

- Using the  button, select the **Import** function.  
The **Import** window is opened.
- Select the cfg file from the directory.  
The **Import** button imports the configuration file to the eNet server.

### Exporting a configuration

- Select the appropriate configuration from the drop-down list (Figure 19).
- Using the  button, select the **Export** function.  
The configuration can be saved as a cfg file.

### Activating a configuration

- Select the appropriate configuration from the drop-down list (Figure 19).
- Select the **Activate** button.  
The configuration is active for the eNet server.

## 7.2 Carry out update

In the **General** tab of the configuration administration an update of the eNet server can be loaded and performed. The update can contain updates of the project design interface, visualisation interface, device software and product catalogues.

The current software version of the eNet server can be downloaded from our website as a zip archive. The file for the update of the eNet server with the file ending \*.iuf is available in the zip archive.

- i** The power supply must not be interrupted during a server update since this could then result in faults of the eNet server.
- i** During an update, work with the project design interface is limited. Buildings can still be created, catalogue devices added and connections and scenes created.
- i** If there are updates for the device software, they are displayed in the system overview and can be performed there (see chapter 18.2. Performing a device update).

The update procedure can be performed manually or partly automatically. The start of the update must always be performed manually. The settings for this can be made in the **Server Update** dropdown menu:

### Manual download

An update must be searched for and the update file uploaded to the eNet server with this setting.

- Select **Search for update** button to search for an update on our website.
- Download update file to your computer.
- To upload the update file to the eNet server, select the  button.
- Select the **Start** button to start the update.

### Automatic search

With this setting, an update is searched for on our website automatically in regular intervals. If an update is available, it is displayed in the **Configuration (3)** and **System overview** .

- Download update file from our website to your computer.
- Select the **Start** button to upload the update to the eNet server and to start the update.

### Automatic download

With this setting, an update is searched for on our website automatically in regular intervals. If an update is available, the update file is uploaded automatically to the eNet server.

- Select the **Start** button to start the update.

### 7.2.1 Migrating project after a server update

The update of an eNet server can potentially support a new device type or enable new performance features for existing devices. These performance features must be transferred to existing projects. This is done by the migration of the projects to the new server version.

After an update, the previously active project is loaded and migrated automatically. For this reason, a query appears at the start of the update, asking whether the project should still be saved in the old version.

- i** The migration of a project cannot be undone. Therefore, it is advisable to make a backup of the project before starting a migration.

### 7.3 Disabling local operation on the eNet server

Operation using the buttons of the eNet server can be disabled. To do this, in the **General** tab under **Disable local commissioning** select the **On** button.

- i** It is still possible to restart the eNet server by pressing the button for a longer period of time (press **RESTART** button longer than 10 seconds).

### 7.4 Resetting the eNet server

The eNet server can be reset to the default setting using the **Reset eNet server** button on the **General** tab. At the same time, all project-related data, users and passwords are deleted. The network configuration is reset to the as-delivered state LAN with a fixed IP address (192.168.0.22). The software state of the eNet server incl. the product catalogue remain intact. After a successful reset, the log-on screen appears.

- i** The network configuration, all users incl. passwords can selectively be reset or all projects deleted using the buttons on the device (see eNet server operating manual).

### 7.5 Setting the system time

The system time of the eNet server, consisting of the date and time, can be entered manually or synchronised internally at a defined time using a time server, the so-called NTP server (NTP: Network Time Protocol).

The system time is necessary for displaying the current time and date during telegram recording and for control using timer modules.

- i** The system time and system date are also displayed in the **Settings** window of the timer module.

The screenshot shows a configuration window titled "Configuration management" with a dropdown menu set to "DefaultCon.. (Aktiv)". Below the title bar are tabs for "General", "Time", "Location", "Installation engine...", "Network", and "Remote". The "Time" tab is active. The settings are as follows:

System date	07.03.2015
System time	07:34
Time zone	(UTC+1) CET - Central European Standard
Use time server	<input type="checkbox"/>
NTPServer1	de.pool.ntp.org
NTPServer2	ntp1.ptb.de
Sync. Time	21:00
Summer time active	<input type="checkbox"/>
Summer time automatic	<input checked="" type="checkbox"/>

At the bottom, there are "Close" and "Apply" buttons.

Figure 20: Configuration management – Time

#### Procedure:

- Enter the date and time in the top text boxes (Figure 20).

Or

- **Select Use time server.**
- Select the time zone from the drop-down list.
- ❏ Specifying the time zone corrects the time.
- Specify the NTP server for the synchronisation of the system time of the eNet server (e.g. <http://timeserver.verschdl.de/>).
- ❏ A second NTP server can be specified as an alternative.
- Enter the time for daily synchronisation in the **Sync.** Enter **Time**.
- ❏ Synchronisation via the time server can be checked after applying the setting via a button for both time servers.  
Display of the time server status:  
 Grey: Synchronisation running  
 Green: Last synchronisation was successful  
 Red: Last synchronisation was unsuccessful
- Select **Summer time active** to activate summer time manually.
- ❏ In winter time, the **Summer time active** setting must be deactivated.
- Select **Summer time, automatic** if the eNet server is to activate summer time.
- ❏ If it is currently summer time, the checkmark for **summer time** is set automatically.
- ❏ The **Summer time, automatic** setting only takes summer and winter times within the EU into account.
- Click **Apply** to close the window.

## 7.6 Entering the location and selecting the language

The location can be specified on the **Location** tab. Specification of the location is important when using the astro function in conjunction with a timer module. Specifying the location takes seasonal sunrise and sunset times into account. In addition, it is possible to switch between the available languages for the project design interface.

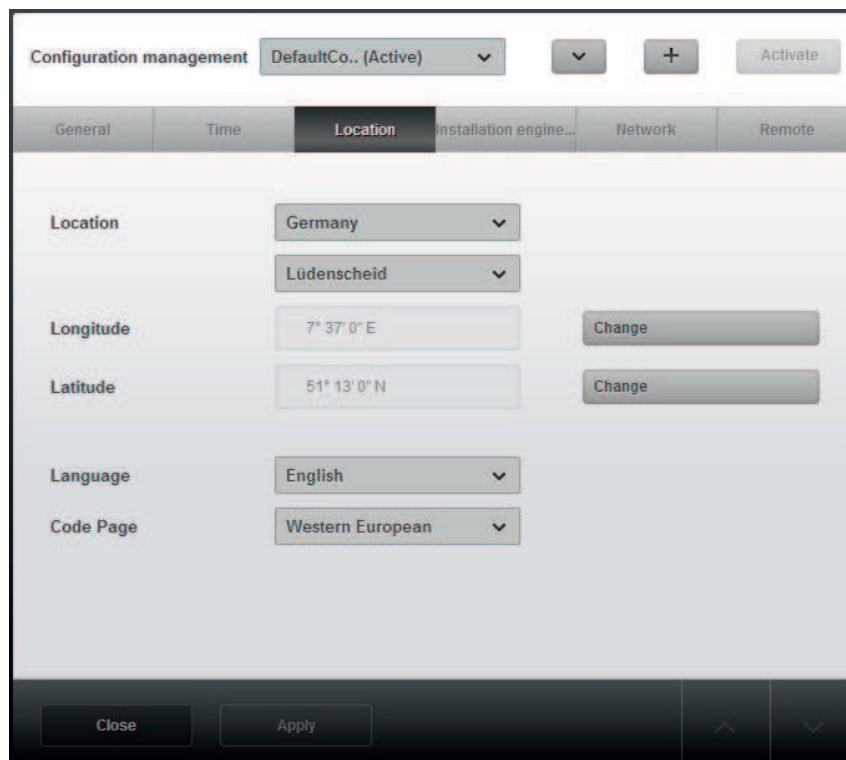


Figure 21: Configuration management - Location specification

## Procedure:

- Select the country and location from the drop-down lists (Figure 21).

Or...

...enter the latitude and longitude to determine the location by entering coordinates.

- Select the **Change** button.  
The entry window is opened.
- Enter values, e.g. 52° 31' 7" N and apply them with **Confirm**.  
The window is closed.
- Select the language from the drop-down list if necessary.
- Select character encoding if necessary.

**i** Character encoding must be set for the texts entered in the project design interface, e.g. action location and action area. Based on the character encoding, the entered texts are converted and written to the devices and vice-versa. The **Western European** character encoding is preset for the German language.

**i** The language and character encoding can also be set in the project design interface (see chapter 18.14. Other settings).

- Click **Apply** to close the window.

## 7.7 Details on the installation engineer

On the **Installation engineer** tab, it is possible to enter information on the installation engineer in a text field and to save it. If a new project is created, this information is then added to the project and output, for example, in documentation (see chapter 16.2. Manage project information).

## 7.8 Network settings - LAN parameters

First commissioning of the eNet server requires a direct connection of the client to the eNet server via LAN (peer-to-peer connection). In the as-delivered state, the IP parameters of the eNet server are preset for first commissioning, i.e. a fixed IP address and the subnet mask of the eNet server are stored (see chapter 4.3. Network connection via LAN).

If the first commissioning of the eNet server has taken place, the eNet server can be configured so that a connection can be made via Wi-Fi and communication is possible, for example, via a router with integrated DHCP server (see chapter 4.4. Network connection via WLAN).

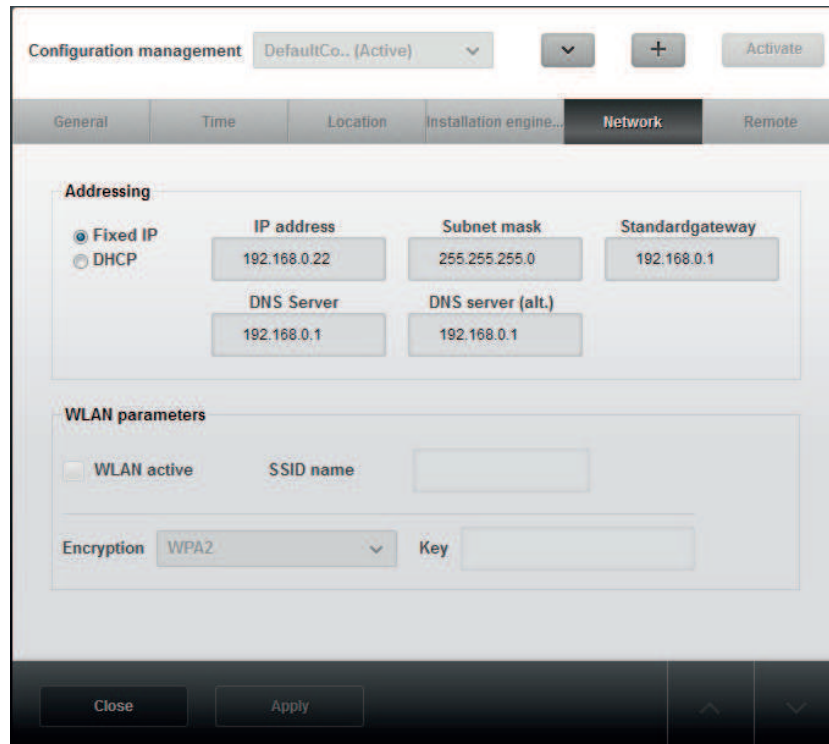


Figure 22: LAN network settings

## 7.8.1 Fixed IP address and DNS server

### Fixed IP address

In the as-delivered state, the setting "Fixed IP" is chosen in the eNet server and the IP address, subnet mask and standard gateway of the eNet server are stored, see table.

IP parameters	Delivery state
IP address	192.168.0.22
Subnet mask	255.255.255.0
Standard gateway	192.168.0.1

### DNS Server

If the fixed IP address has been set as the addressing, then it is possible to specify the DNS server of the Internet provider (Figure 14).

## 7.8.2 IP address via DHCP

As an alternative to specifying a fixed IP address, it is possible to choose automatic allocation of the network configuration of the eNet server via a DHCP (Dynamic Host Configuration Protocol). When DHCP is activated, each time the power supply is switched on, the eNet server requests its IP address from the DHCP server, along with the corresponding parameters such as subnet mask, standard gateway and, if necessary, DNS address.

A router with an integrated DHCP server is necessary in order to use DHCP (Dynamic Host Configuration Protocol). Standard routers have an integrated DHCP server, but do not always have a DNS server. For this reason, the following section describes procedures for routers with and without a DNS server.

- i** If the setting "DHCP" is selected in the configuration management, it is essential to ensure that a router with DHCP server is connected to the network. If this is not the case, the eNet server and the client will obtain an Auto IP that is not known to the user. As a consequence of this, it might not be possible to access the start page of the eNet server.

## Router with DNS server

If the router has a DNS server, the IP address of the eNet server is not always required. The eNet server can be accessed via its domain name. The DNS server, which stored the assignment of domain name and IP address, ensures the connection between the eNet server and the client.

### **Preconditions:**

- The **DHCP** setting has been selected in the configuration management.
- The router has an integrated DHCP server and a DNS server.

### **Procedure:**

- Connect the client to the eNet server, please refer to the operation manual of the eNet server.
- Start web browser.
- **Enter eNetServer** in the address line of the web browser.

## Router without DNS server

If the router does not have an integrated DNS server, the IP address of the eNet server needs to be known. This can be polled in the router, for example.

### **Preconditions:**

- The **DHCP** setting has been selected in the configuration management.
- The router has an integrated DHCP server.

### **Procedure:**

- Connect the client to the eNet server, please refer to the operation manual of the eNet server.
- Start web browser.
- Poll the IP address of the eNet server, e.g. via the router (see router instructions).
- Enter the IP address of the eNet server in the address line of the web browser.

## **7.8.3 Basic principles**

### IP address

Each subscriber must have a unique IP address in order to be accessible in a network.

### Subnet mask

The IP address is subdivided into the Net ID and Host ID in order to distinguish between the individual networks. The Net ID addresses the network and the Host ID addresses the network subscribers (e.g. PC or eNet server). The part of the IP address belonging to the Net ID and the part belonging to the Host ID depends on the size of the individual network (subnet) and is determined by the subnet mask.

### DHCP

Each subscriber must have a unique IP address in order to be accessible in a network.

The eNet server can be addressed using a fixed IP address or, if a router with an integrated DHCP server is connected, using a DHCP (Dynamic Host Configuration Protocol).

With DHCP, network settings of the individual terminals, such as the IP addresses, can be coordinated automatically and configured centrally by the DHCP server (e.g. router in a home network).



## 7.9 Network settings - Wi-Fi parameters

It is also possible to access the eNet server from a client, e.g. laptop or tablet, via a Wi-Fi router (see chapter 4.4. Network connection via WLAN).

- i** The eNet server supports the standard for communication in radio networks IEEE 802.11g.

The following settings must be made:

- **Encryption type** Encryption types WEP (Wired Equivalent Privacy) or WPA2 (Wi-Fi Protected Access 2)
- **Key** for the encryption of the payload data
- **SSID name** for your own Wi-Fi network

## 7.10 Remote access

It is also possible to access the eNet server via the Internet. Registration of the eNet server on the manufacturer's portal is necessary for remote access.

- i** The project design, visualization, configuration and user administration can be performed via the Remote access. Depending on the distance to the eNet server and Internet bandwidth, long response times must be expected.

### Registration of eNet server

The eNet server only has to be registered once. The registration on the manufacturer's remote portal must first be performed.

The remote portal is opened on a new browser tab via the link [Click here to go to the Internet portal](#) . The registration takes place and the registration data is generated with the serial number of the eNet server (located on the front side of the eNet server) and address data.

The registration data must be entered in the **Remote** tab during the second step.

The screenshot shows the 'Configuration management' interface with the 'Remote' tab selected. The 'Registration' section is highlighted with a green box. It contains the following elements:

- Registration** section with instructions: "To set up the remote access, you must log in once on the remote portal with this device and your user data:"
- Input fields for "Remote username" and "Remote password".
- A "Show password" checkbox.
- A link: "Click here to access the remote portal".
- A "register device" button.

Below the registration section is the "Allow remote access" section with a toggle switch set to "Off (deactivated)".

Figure 23: Registration of eNet server

- Enter your user name and password.
- Select **Register device**.



The eNet server is registered on the manufacturer`s portal.

- i** To delete a registration, the eNet server must be reset to the factory setting (see chapter 7.4. Resetting the eNet server).

### Allowing remote access

Access to the eNet server via remote access can be disabled or allowed.

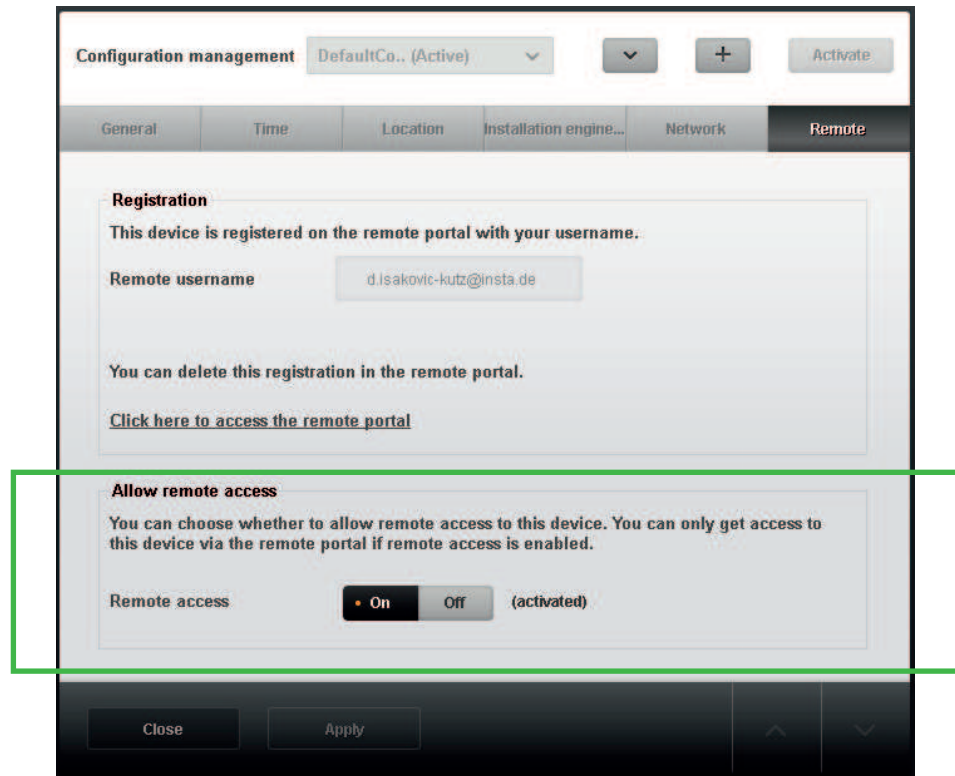


Figure 24: Allowing remote access

- Select **On** button to allow remote access.
- Select **Off** button to disable remote access.

If remote access is on, it is possible to access the manufacturer's remote portal on the eNet server.

## 8 Working with the project design interface

### 8.1 Access to the installation

Access to the installation by the eNet server is not necessary for planning and preparation for commissioning of an eNet system. The eNet server will only access the installation if the project design carried out with catalogue devices is to be transmitted to the devices of the eNet system, for example.

- i** If the operating mode switch is set to the **PC** position, the setting of the operating mode and channel configuration of the actuators (e.g. switching or Venetian blind for the switching/Venetian blind actuator) can then take place in the project design interface. If a different setting of the operating mode switch to **PC** is used, the project design of the devices or channels in the project design interface must correspond to the settings on the operating mode switch.

The device must be accessible in order for the eNet server to access the installation.

Access to the installation by the eNet server is necessary for the following applications:

- Reading in the system scan to the project
- Comparing the system scan to the project
- System scan in the Devices view
- Localising a device
- Reset device
- Program device
- Programming and deactivating a plan
- Measuring the signal quality
- Programming and deactivating a scene
- Record telegrams
- Device update

If preconditions have not been fulfilled when the eNet server accesses the installation, appropriate messages for each device are displayed in the **Device accessibility** window.

The application is only carried out when all the preconditions have been fulfilled. If necessary, battery-operated devices must be actuated.

- i** Before an application is executed, the current device software version is checked and compared to the software version in the project. If a more recent software version is available for devices, this is displayed in the system overview (see chapter 18. System overview).

#### Battery-operated devices

Battery-operated devices must be actuated once for the eNet server to be able to access it. After this, the device can be contacted during short periods for further applications. If access to the device is required again, this means that the device can either be actuated again or it is possible to wait until the device can again be contacted automatically.

### 8.2 Start project design

Only the administrator has a right to access the project design interface.

#### Procedure:

- In the selection screen, select the **Start project design** (Figure 17) button.  
The **Load project** window is opened.

- i** If the box **Always start with the current project** is selected, the current project is always loaded after starting the project design interface. The **Load project** window no longer appears and can be reactivated in the **system overview** using the **Show dialogs again** function.

In the **Load project** window the following options exist for loading a project:

- **Active project:** The active project is displayed and can be loaded.

- **Existing project:** A project that has already been created can be searched for and loaded from a dropdown list.
  - **New project:** A new project can be created and a project name entered.
  - **Import project:** A project can be imported to the eNet server and loaded directly (see chapter 16.5. Import and export project). When you import a project in the **Project** view, the project is also imported but not loaded directly.
  - **Read-in project:** An eNet installation can be read in as a project. This function is identical with the function **Read-in project** in the **Project** view. (see chapter 16.8. Read in project).
- i** Using the **Next** button, the selected function is executed and the system switches to the view last selected. With the exception of the **New Project** function, in which the system switches to the **Building** view in order to create a building structure as the next step (see chapter 11. Building view).

## 8.3 Save project

The project or changes to the project can be saved using the diskette icon in the toolbar. It is wise to do this regularly, although it must be noted that the save operation may take several minutes, depending on the size of the project. The project is saved automatically when the project is changed. The system does not save automatically when the user logs off and saving should therefore be carried out manually.



## 9 Devices and device channels

### 9.1 Information on devices and device channels

In the **Devices**, **Connections** and **Scenes** views, information on the device, e.g. order number, installation location and area, can be viewed along with the use of the individual channels on plans. In the **Information** window, as in the **Settings** window, it is possible to control channels.

The amount of information displayed in the information window is dependent on the device type. The information windows are described below based on the example of a dimmer actuator.

#### Procedure:

- Select the  button in the device tile.  
The information window is opened and the **General** tab of the device is displayed (Figure 25).
- Select the appropriate channel from the drop-down list to obtain information on that channel.
- Select the tab.
-  Use the arrow keys to scroll through the visible area.

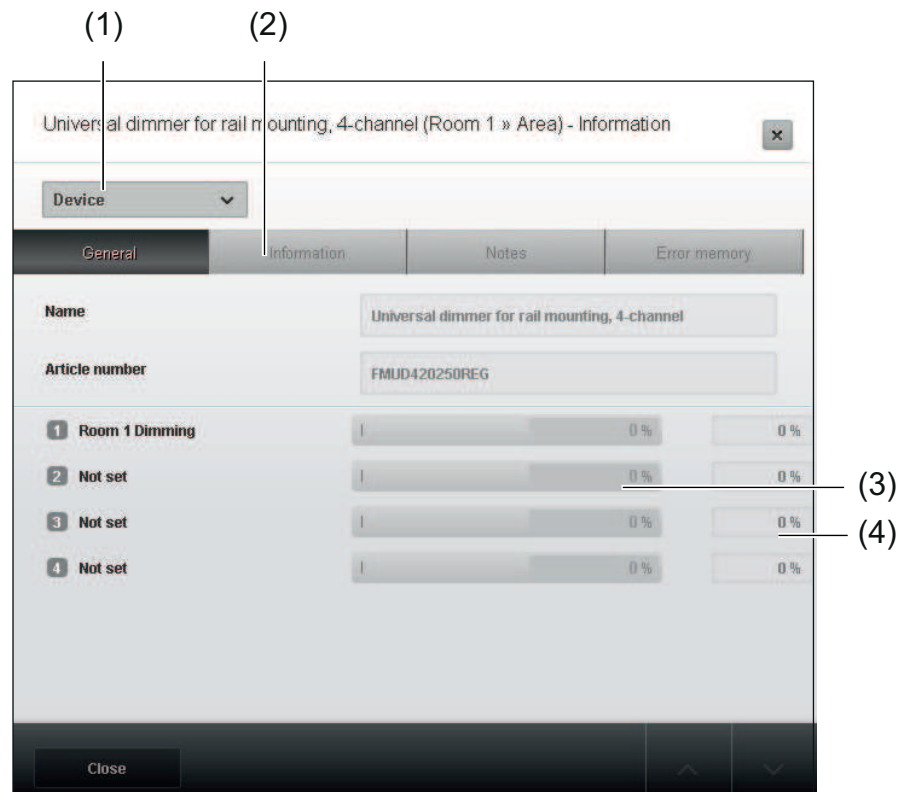


Figure 25: Information window - devices (example of a dimmer actuator)

- (1) Select device or channel
- (2) Select tab
- (3) Operate channels
- (4) Current channel values

#### 9.1.1 Information on devices

To obtain information on the device, select the Device setting in the drop-down list (Figure 25).

## General tab

The **General** tab contains device information, such as the device name, order and serial number. In the case of actuators, it is also possible to control the channels (Figure 25).

## Information tab

The **Information** tab contains the installation location and area as well as other device information, such as the item number, product group code, design, phase-out code, battery and parameter status.

## Error memory tab

The error memory of the device can be viewed in the **Error memory** tab.

## Note tab

In this tab, it is possible to enter notes, e.g. the connected load. The notes on the device are output in the project documentation (see chapter 16.6. Print project) Up to 500 characters can be entered.

## 9.1.2 Information on device channels

To obtain information on a channel, select the appropriate channel from the drop-down list (Figure 25).

### Channel control tab

The **Channel control** tab displays the status of the outputs of actuators as well as any restraint that might exist. Control of the outputs is also possible.

**i** In the case of energy sensors, the voltage, current and energy values of the last transmission are displayed.

### Channel information tab

The **Channel information** tab lists the plans used by the channel. In addition, a circuit changeover counter, an operating hours counter (resettable) and a total operating hours counter are shown. In the case of dimmer actuators, the current dimming principle is displayed.

## 9.2 Settings of devices and device channels

The **Settings** windows of devices and channels can be recalled in the **Devices**, **Connections** and **Scenes** views.


In the **Devices** view, settings can be made on the device and on individual channels and the devices can be programmed. Settings can be made for the selected channel in the **Connections** and **Scenes** views and channels can be programmed.

The structure of the **Settings** window for actuators is shown here, using the example of a dimmer actuator.

**i** In the **Settings** window, it is possible to control channels, as in the **Information** window (see chapter 9.1. Information on devices and device channels).

**i** The explanations of the parameters of the individual products are described in a separate chapter (see chapter 20. Parameters of the devices) and can be recalled using the **i** button in the **Settings** window in the project design interface.

### Procedure:

- Select the  button in the device tile.  
The **Settings** window is opened (Figure 26).
- If necessary, select the channel from the drop-down list to make settings for a channel.
- Select the appropriate tab.
- i** Use the arrow keys to scroll through the visible area.

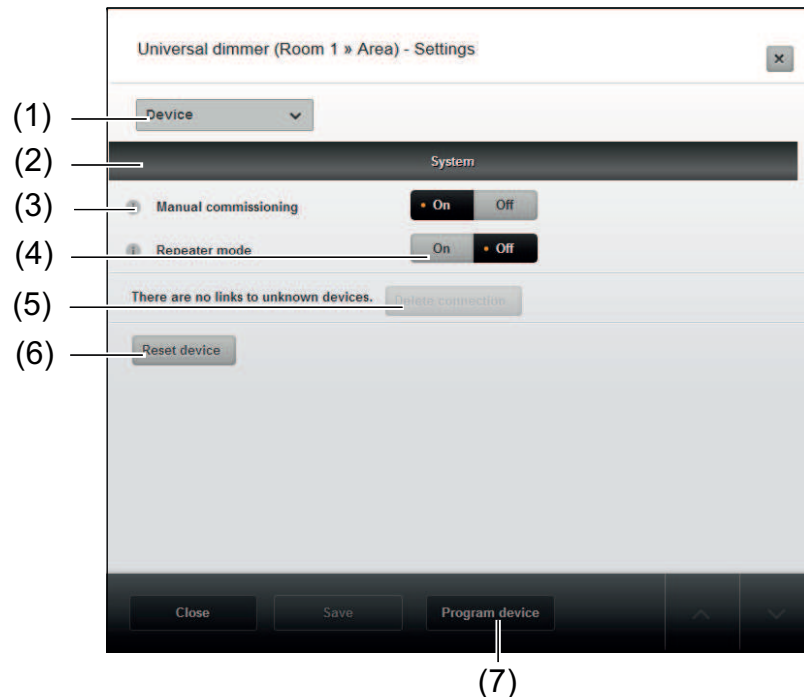


Figure 26: Settings window - devices (example)

- (1) Select device or channel
- (2) Select tab
- (3) Help text for parameter
- (4) Setting parameters
- (5) Deleting connections to unknown devices
- (6) Reset device
- (7) Program device

### 9.2.1 Settings of devices

To make settings to the device, the Device setting must be selected in the drop-down list, The devices settings described here refer to the example of a dimmer actuator (Figure 26).

#### Setting device parameters

Specific and general device parameters can be set in the **System** tab.

#### Create channel group

In the **Channel assignment** tab, channels can be configured for output extension of a channel group. Parallel connection of the channels must be performed on the device.

### 9.2.2 Settings of device channels

The channel settings described here relate to the example Dimmer actuator 4k RMD. The setting options will differ for other devices.

#### Setting channel parameters

The channel parameters of the device can be set in the **System** tab. The modified parameters are applied to all the plans and scenes.

#### Setting actuator behaviour

The behaviour of the actuator, such as the switch-on brightness, switch-on delay and run-on time, can be set in the **Behaviour** tab.

## Brightness undershoot/overshoot




Automatic switch-on and switch-off for dimmer actuators can be set according to brightness in the **Light control** tab.

## Setting the load behaviour

On the dimmer actuator 4k RMD, the load behaviour can be set in the **Load** tab.


### 9.2.3 Program device

If all the changes to the device in the project are to be written directly to the devices of the installation, this can be done using the **Program device** function.

-  The device must not be programmed during a reference run of a Venetian blind, awning or roller shutter.
-  In the system overview , it is possible to simultaneously program all the devices to which changes were made (see chapter 18. System overview).


### 9.2.4 Reset device

The **Reset device** function resets all the device parameters and settings to the factory setting and deletes all the connections. The function can be recalled in the **Device/System** tab.

-  If the device on an active plan is integrated, it can be reset.

### 9.2.5 Delete connection

This function can be used to delete connections to unknown devices. Unknown devices can occur, e.g. after the downloading of a project, when a device of the project cannot be found using the system scan. The device can also be downloaded at a later time, when it is available again.

-  The **Delete connection** function is only visible when there are connections to unknown devices.

## 10 Function modules

In addition to physically existing devices, it is possible to use virtual function modules in plans. If other function modules of the eNet server are used, the eNet server must remain in the installation.

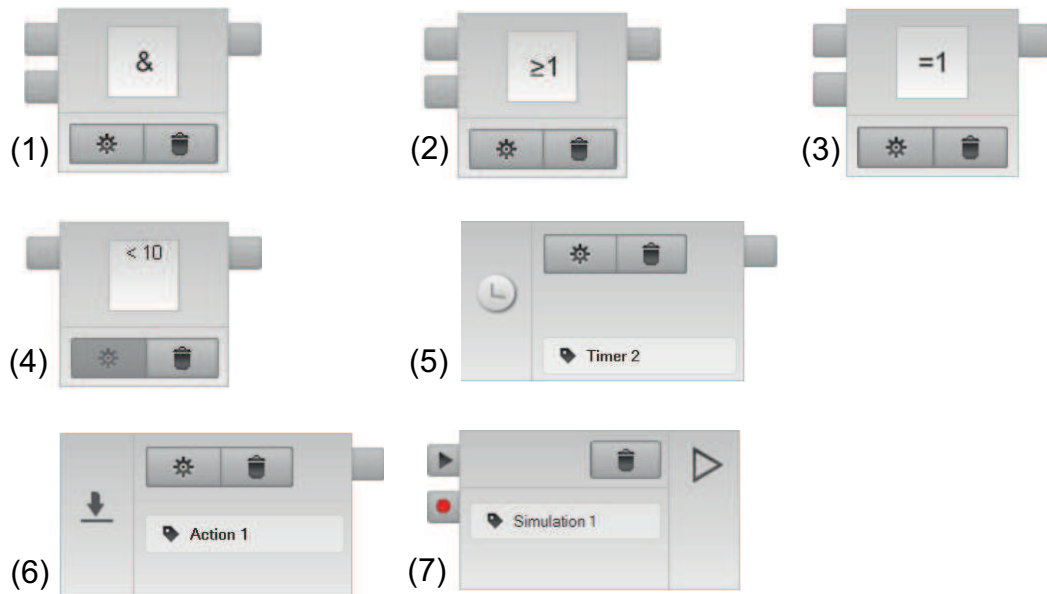


Figure 27: Function modules of the eNet server

- (1) AND module
- (2) OR module
- (3) XOR module
- (4) Comparator module
- (5) Timer module
- (6) Action module
- (7) Simulation module

### 10.1 Logic modules

Logic functions can be used in connection plans of the project design for extending the functions of an eNet system.

The project design provides the following logic modules for this:

- AND module
- OR module
- XOR module
- Comparator module

**i** The inputs and outputs can be inverted and thus additional logic functions can also be implemented.

A logic module evaluates commands arriving at the inputs. A logic value is forwarded to the actuator channel via the output depending on the module type. The logic value can be 0 or 1. Therefore, with logic connections, a value pair must be entered on the actuator channel for execution of the commands.

**i** The function of logic connections is explained using examples (see chapter 10.1.6. Behaviour of logical connections).



## 10.1.1 AND module

An AND module has multiple inputs (sensor channels) and one output (actuator channel). For the actuator channel to switch the value to 1, the status 1 must exist on all the inputs. For example, a configuration barrier can be implemented with an AND module.

## 10.1.2 OR module

An OR module has multiple inputs (sensor channels) and one output (actuator channel). For the actuator channel to switch the value to 1, the preset status 1 must exist on at least one input.

## 10.1.3 XOR module

An XOR module has multiple inputs (sensor channels) and one output (actuator channel). If the status is 1 on an uneven number of inputs and 0 on the other inputs, the actuator channel switches to the value for 1.

## 10.1.4 Comparator module

Actuators can be controlled according to values using a comparator module. In connections with comparator modules, sensors must be selected that forward values, e.g. a sun sensor.

**i** The sensor channel must be connected to the comparator module to be able to adjust the settings of the comparator module.

A threshold value, which is independent of the connected sensor channel, and the relation can be specified in the settings of the comparator module. The following relations are possible:


- Unequal
- Equal
- smaller than
- greater than
- Smaller
- Greater

## 10.1.5 Settings of the logic modules

The setting options of the logic modules are dependent on the module type.

### Procedure:

**i** The sensor channel must be connected to the comparator module to be able to adjust the settings of the comparator module.

- Select the  button in the module tile.  
The window for the settings is opened.
- Select the **Additional input** button to add an anchor point.

**i** A logic module can have a maximum of five anchor points.

- If necessary, negate the input value using the **On/Off** buttons.
- The **Save** button applies the settings and closes the window.

## 10.1.6 Behaviour of logical connections

This chapter explains the most important rules and the behaviour of logic connections using examples.

Rules of logic connections:

- If, for example, a sensor channel transmits an ON command, the logic value 1 is present at the input of the logic module. An OFF command from a sensor channel is interpreted as the logic value 0.
- For an actuator channel, two values must be input in a logical connection. The actuator tile is expanded to include a grey input box for the value pair, see Example 1. The value taken into account on the actuator channel is dependent upon the logic status (0 or 1) at the output of the logic module. Dimming commands, for example, are not interpreted.

- The eNet server must remain in the system for the implementation of logical functions.
- The inputs and outputs of a logic module can be operated normally and in inverted form.
- A logic module can be expanded to a maximum of five inputs.
- Multiple sensor channels can be connected to an input of a logic module, see Example 2.
- In a plan with logic modules, sensor channels can be directly connected to actuator channels. The logic function has no relevance for the direct connection, see Example 3.
- In a connection with a logic module, the actuator channel does not send any status feedback to the sensor.

The following examples are intended to explain the behaviour in logic functions.

## Example 1

A dimming actuator channel is connected with a hand-held transmitter and a timer module via an AND module.

Behaviour:

16:00 to 8:00: Light can be switched to 20% or 80% using the hand-held transmitter.

8:00 to 16:00: Light is switched on at 20%.

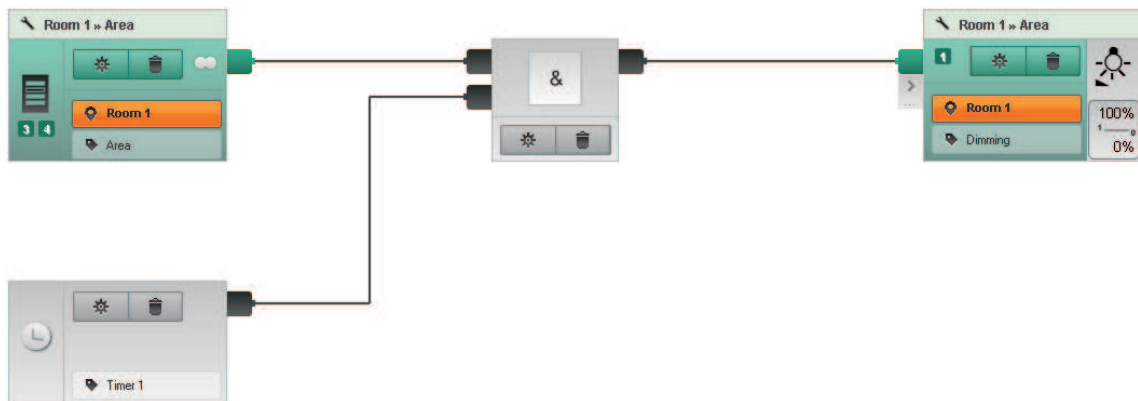


Figure 28: Example of a logic connection with a dimming actuator channel

## Example 2

Example 1 has been expanded to include a second transmitter channel at an input of the AND module. This means that the actuator channel can be switched to the brightness values 80% and 20% between 16:00 and 8:00 using a second hand-held transmitter.

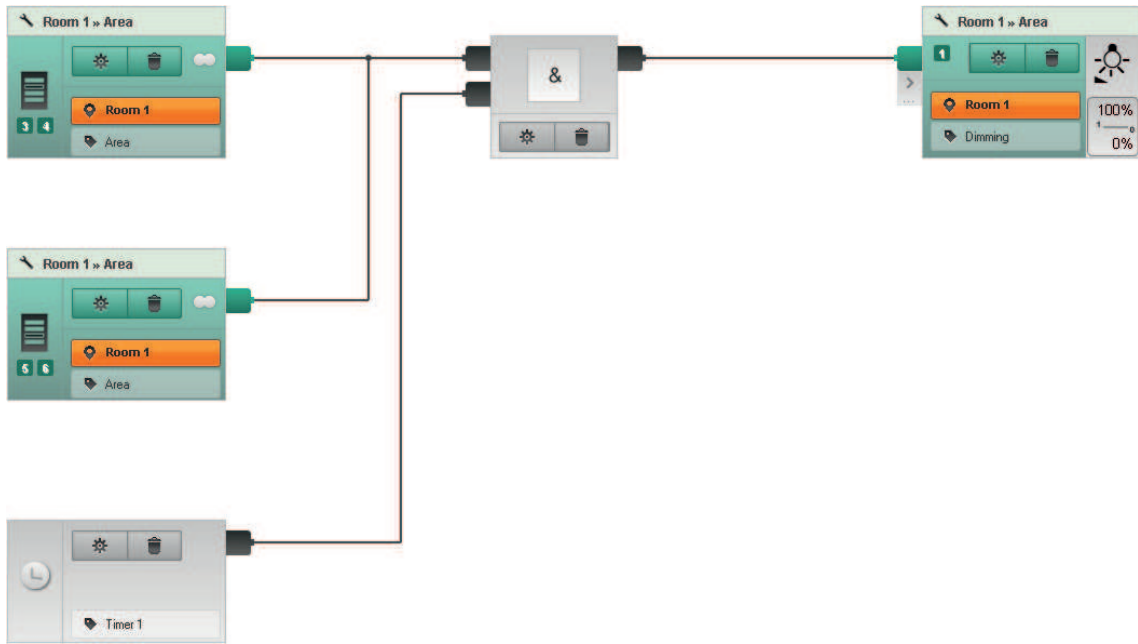


Figure 29: Example of a logic connection with two sensor channels at an input of an & module

### Example 3

Example 1 has been expanded by one hand-held transmitter channel, which is directly connected to the dimming actuator channel. Through longer actuation, the light can be dimmed up or down using the directly-connected hand-held transmitter channel. The entered value pair is not taken into account. The behaviour of the actuator channel via the controller of the top hand-held transmitter is identical to the behaviour in the first example.

**i** The direct connection also functions without an eNet server in the installation.

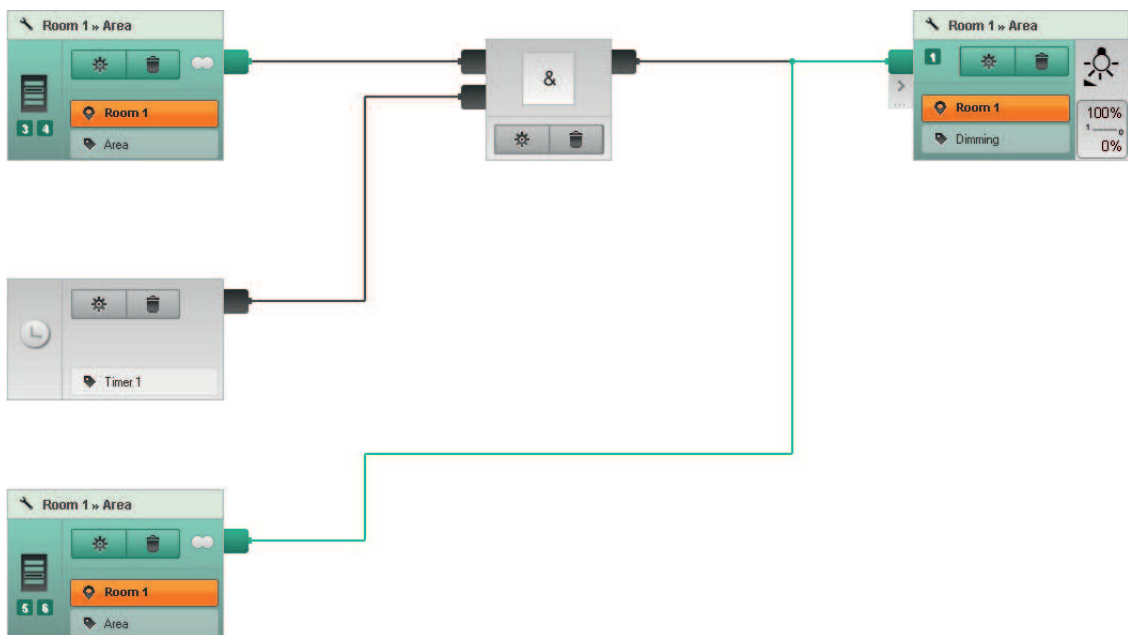


Figure 30: Example of a direct connection between a sensor channel and an actuator channel in a plan with logic functions

## 10.2 Timer modules

Actuators can be switched in a time-controlled manner using timer modules. In addition, the calculated location-dependent and seasonally-dependent sunrise and sunset times can be taken into account (astro time).

A configured timer module can be used on multiple plans of connections and scenes.

- i** To use a configured timer module for other projects as well, it can be exported and imported to further projects.

### 10.2.1 Settings of the timer module

Up to 16 time profiles for different days of the week can be created in the settings of a timer module.

The following settings can be saved in a time profile:

- Create profile for the On or Down action or Off or Up
- Various operating modes for Astro time
- Shift of the astro time in minutes
- Randomly delay or bring forward action by 15 minutes

#### Astro function

The Astro function permits switching according to the determined sunrise and sunset times. In addition, various operating modes that regulate the switching times can be set.

The astro time relates to the coordinates entered as the location in the configuration (see chapter 7.6. Entering the location and selecting the language). It may be necessary to adjust the settings for summer time (see chapter 7.5. Setting the system time).

The astro time shift can additionally take individual requirements into account. For example, the shading of a window in the evening can be moved back by 50 minutes in order to enjoy the sunset. The maximum shift time is +/- 120 minutes.

The following modes are possible:


- **At the earliest, from** the set switching time, however **at the latest by** sunrise.  
The switching operation is executed at the set switching time, but at sunrise according to the Astro function at the latest.
- **At the earliest, from** sunrise, however **at the latest by** the set switching time.  
The switching operation is executed at sunrise according to the Astro function, but at the set switching time at the latest.
- **At the earliest, from** the set switching time, however **at the latest by** sunset.  
The switching operation is executed at the set switching time, but at sunset according to the Astro function at the latest.
- **At the earliest, from** sunset, however **at the latest by** the set switching time.  
The switching operation is executed at sunset according to the Astro function, but at the set switching time at the latest.

### 10.2.2 Create time profile

Individual time profiles can be created for the On and Off actions. Different days can be assigned to each time profile.

- i** The time profiles are displayed, sorted according to the switching time.

#### Procedure:

- Select the button  in the timer module.  
The window for creating time profiles is opened (Figure 31).

- i** Two time profiles are preset, which can be adapted.



Figure 31: Timer module - Settings' overview (example)

- Enter the designation for the timer module (1).
- **i** The system time (2) is necessary for the functions of the time module and can be adapted in the configuration management.
- If necessary, enable the timer module for the visualisation (3).
- Select the weekdays for the template of new time profiles (4).
- Open the **Advanced settings** window (5).

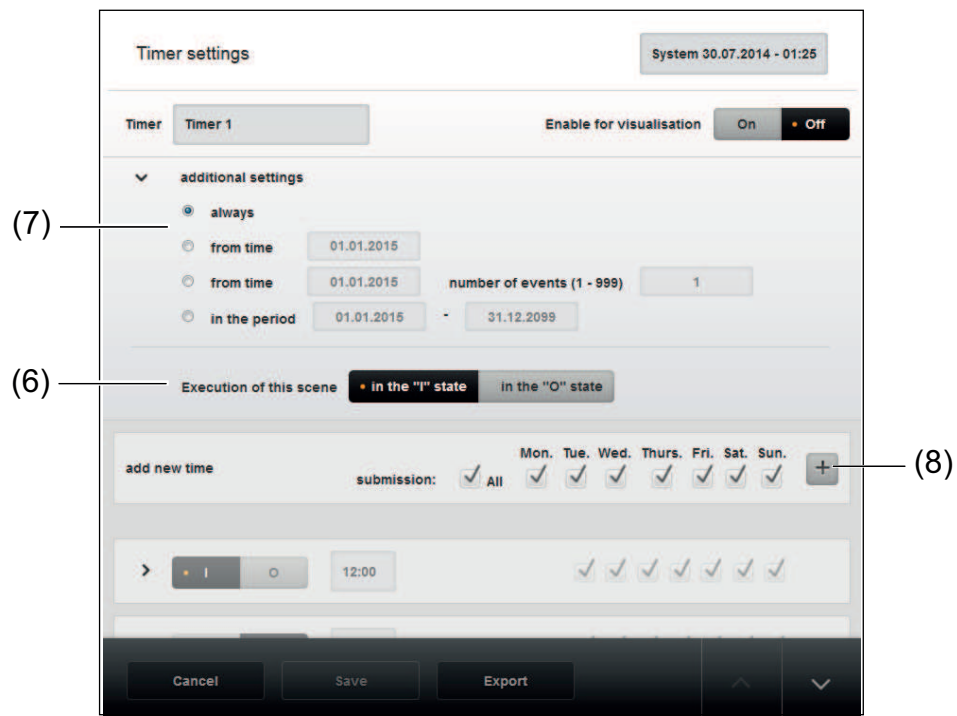


Figure 32: Timer module - Advanced settings

- Set time point, period of time or number of switching operations from a specific date (7).
- When using it in a scene plan, choose which action "I" or "O" the scene should be recalled for (6).
- **i** The **Advanced settings** window can be hidden again using the arrow key.
- Select the **+** button to create a new time profile (8).  
The window for entering the time profile opens.

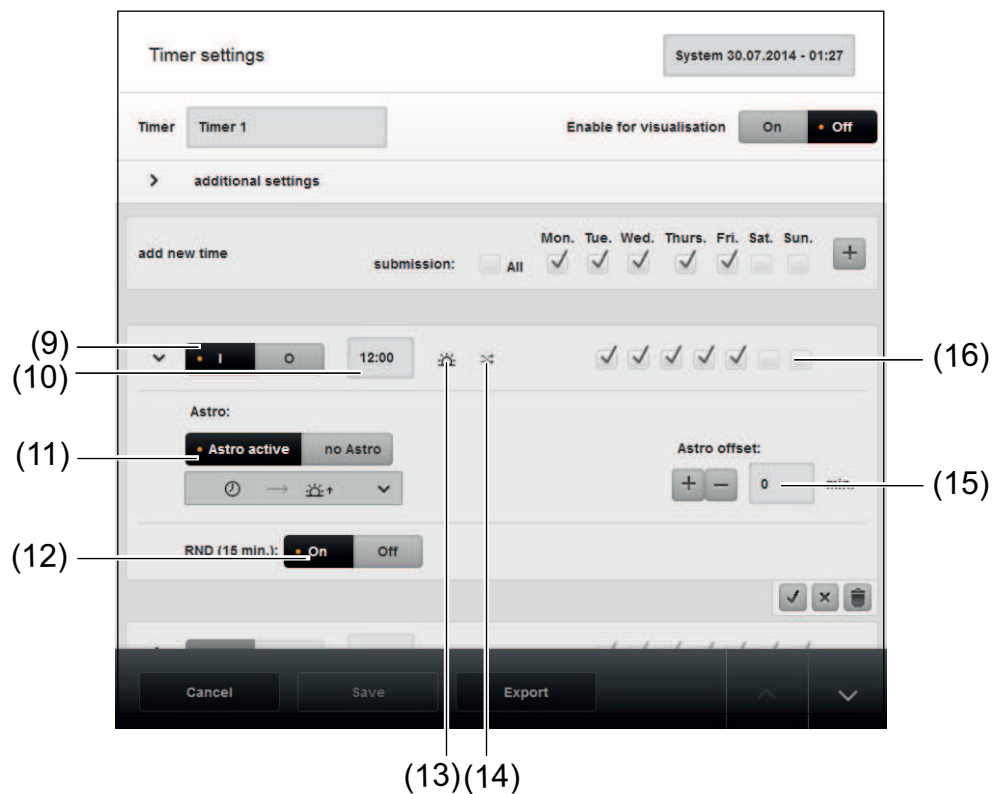




Figure 33: Timer module - Create new time profile

- Select the **I** or **O** action for the time profile (9).
- Enter the switching time for the action (10).
- If necessary, activate the Astro function (11).  
If the Astro function was activated, the  icon is displayed (13).
- If the Astro function has been activated, select a mode from the dropdown list.
- If necessary, set the shift of the Astro switching times (15).
- If necessary, select **Random** to bring the switching time forward or to delay it randomly by up to 15 minutes if necessary (12).  
If the Random function was activated, the  icon is displayed (14).
- If necessary, adjust the **weekdays** on which the time profile should be active (16).
- Close the window using:
  - Apply for changes
  - Reject for changes
  - Delete for time profile
- Pressing **Save** applies the changes and closes the **Settings** window of the timer module.
- i** The timer module is active as soon as the plan is active.

### 10.2.3 Timer settings in the visualisation

Timers can be made visible in the visualisation. It is possible to change the timer settings via the visualisation. It is not possible to change logic connections of the timer module.

- i** Select the **Enable for visualisation** setting to enable the timer module (Figure 31).


### 10.2.4 Using timer module in further projects

Programmed timer modules can be used in other projects. To do this, they are exported and imported in another project.

#### Procedure:

- In the **Timer settings** window of a configured timer module, select the **Export** button. A dialog for saving the timer appears. The timer can now be saved on the client as a tmr file.

The saved timer module can be imported to any project.




- Select the  button on the **Timer-Import** module. The **Import** window opens in which you can select the tmr file of the desired timer for importing.

### 10.3 Action modules

There are various uses for action modules in connections and scenes. For example, an action module can be used as an operating element of the visualisation interface in order to control actuators. An additional application for the action module is the connection of plans. Both applications are explained below in examples.

#### Create operating element for visualisation interface

The following example explains the procedure: Actuator channels are to be controlled using an action module. The action module should be used as an operating element of the visualisation interface.

- Select the **Connections** view. Select the location. Create and name the plan.
- Add and name an action module to the plan using the  button . The action module is inserted in the **Programmed modules** tab and can be used on other plans.
- Add actuator channels to the plan using the  button in the device tile.
- Connect the action module to the actuator channels.
- Select the settings  of the action module.
- Select **enable for visualisation**.

If the plan is active, the action module in the visualisation interface can be used to switch the connected actuators.

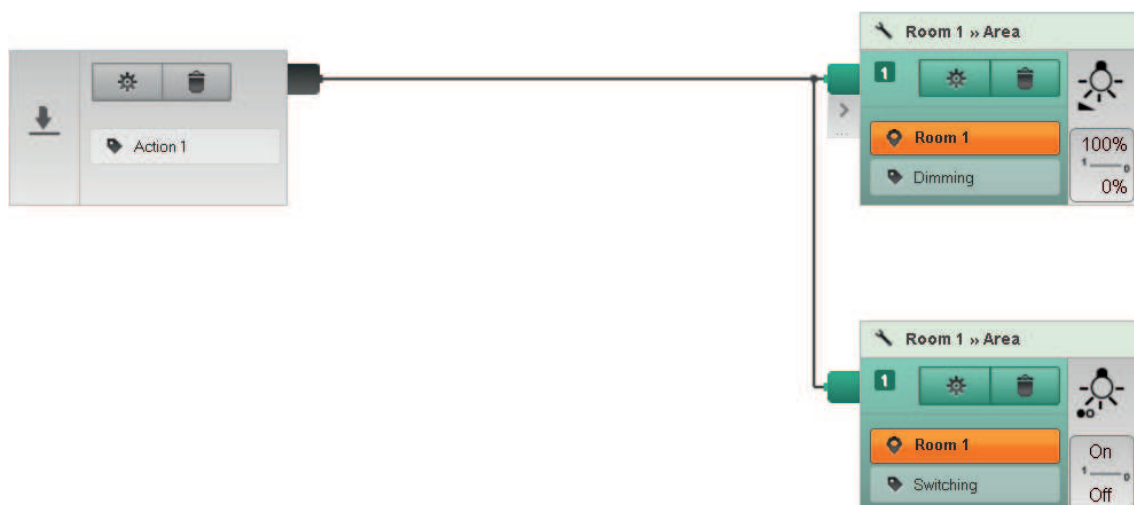


Figure 34: Connection with action modules to control actuator channels



## Interconnecting plans

The following example explains the procedure: Connect a connection plan with a scene plan. An energy sensor, in combination with a comparator module and an action module, controls the scene of another plan.

- Select the **Connections** view. Select the location. Create and name the plan.
- Add and name a sensor channel, actuator channel and comparator module to the plan using the **+** buttons of the device tiles.
- Add and name an action module to the plan as an output using the **+** button.
- Interconnect the channels and modules.

The first plan has been created with an action module as the output. The action module is added using the **Programmed modules** tab.

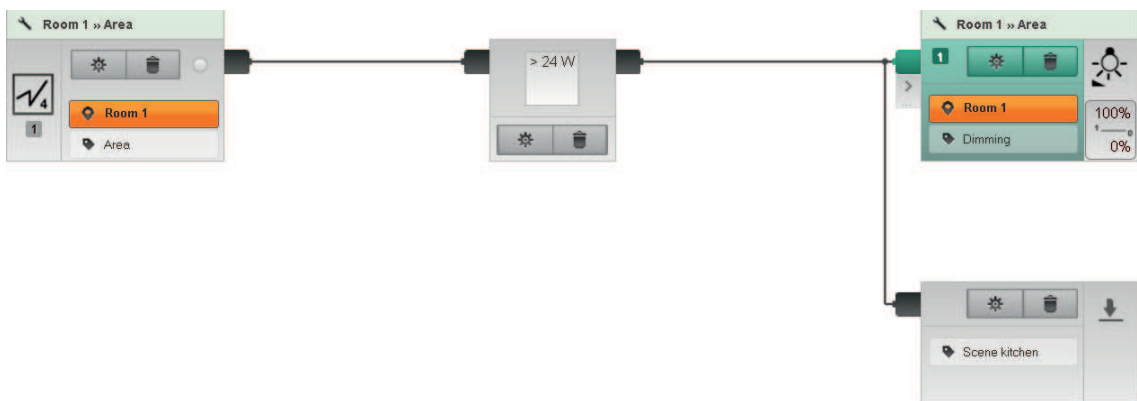


Figure 35: Action module **Scene kitchen** as the output of the connection plan

- Select the **Scenes** view. Select the location. Create and name the plan.
- Select the action module created for the first plan from the **Programmed modules** tab and add it to the plan as an input using the **+** button.
- Add actuator channels to the plan using the **+** button and connect them with the action module.

If the plans are active, the scene can be recalled using the energy sensor of the connection plan.

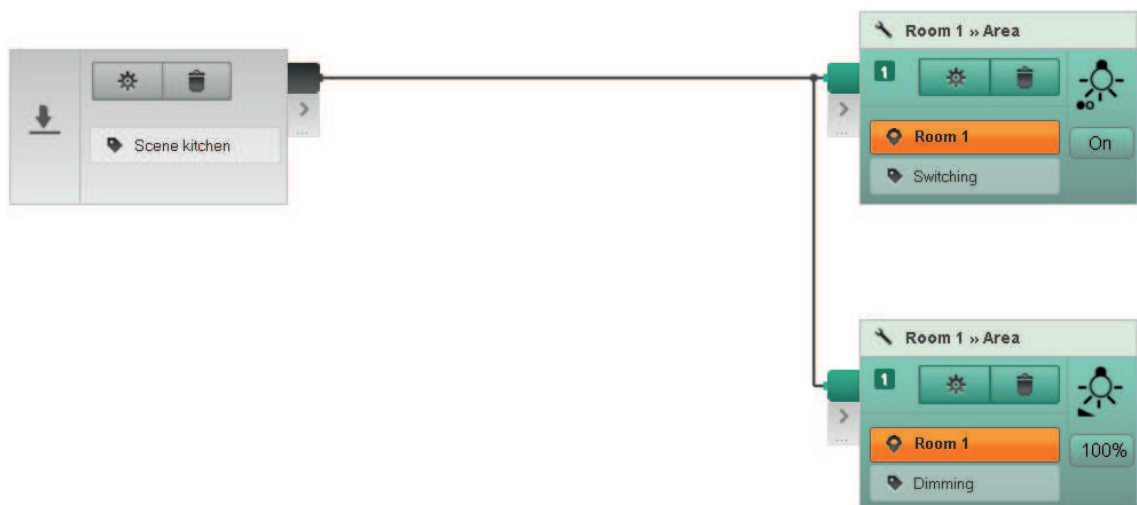


Figure 36: Action module **Scene kitchen** as input of the scene

## 10.4 Simulation modules

The buttons of a sensor can be configured for the recording and playback of a Presence simulation via the **Simulation** function module. The presence simulation is configured in the visualisation interface and can be recorded and played back using the configured buttons of the sensor.

In the **Connections** view, two plans for the configuration of the sensor channels are created for this purpose. If a sensor channel is to control the recording of a presence simulation, the lower input of the function module is connected to the sensor channel (Figure 37). The upper input of the function module must be connected in order to configure a sensor channel for playing back the presence simulation (Figure 38).

- i In the text box of the simulation module, a name for the presence simulation can be entered. This text is displayed in the visualisation interface.

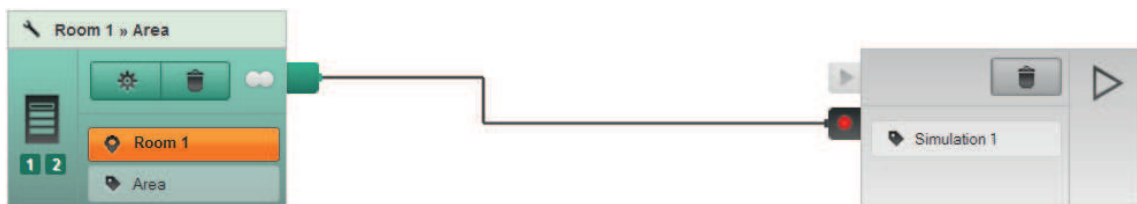


Figure 37: Sensor channel with simulation module for the recording of a simulation



Figure 38: Sensor channel with simulation module for the playback of a simulation

## 11 Building view

In the **Building** view, the building structure of the project, consisting of elements such as building sections, floors and rooms, is created and can be edited. A total of six buildings and seven floors can be created.

Floors and rooms can be created in a building, but only rooms can be created in a floor. If an element of the building structure is selected, the subordinate elements are displayed.

- i** After double-clicking on a room, the **Devices** view opens and the selected room together with the assigned devices is visible.

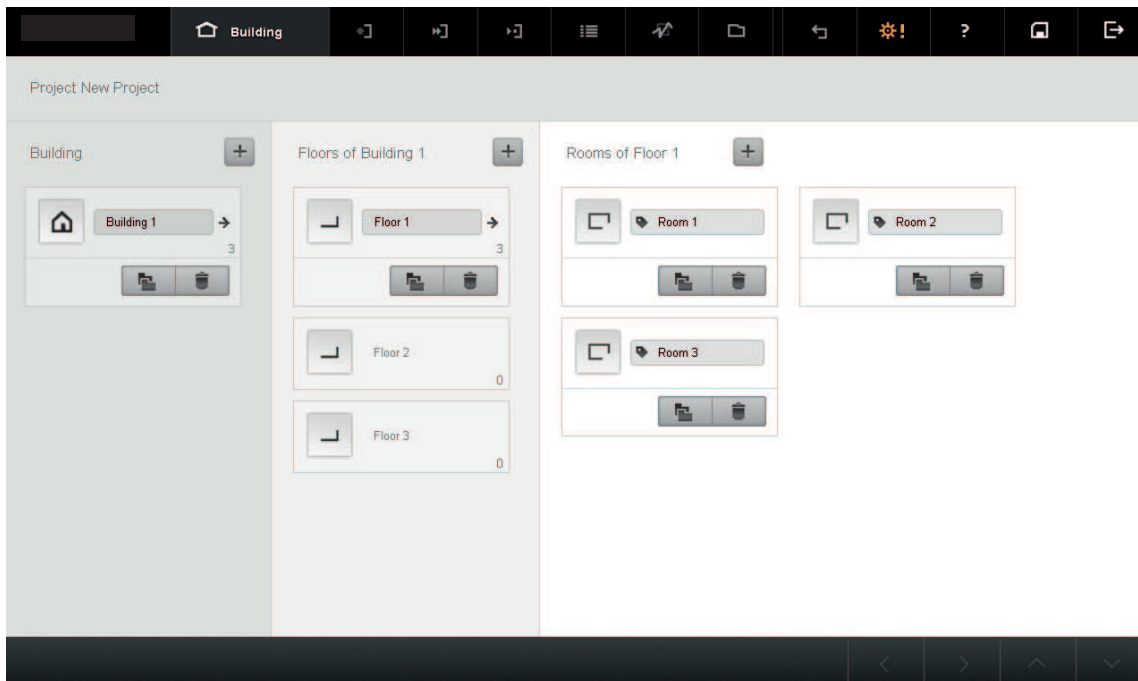


Figure 39: Building view - Example

### 11.1 Adding a building, floor or room

Buildings, floors and rooms can be added to the building structure using the **+** buttons. The designation of the element can be entered in the active text box or selected from a list with suggested designations for buildings, floors and rooms. The list is opened filtered by entering the first letter.

- i** The designations of the building elements are displayed in the visualisation.

### 11.2 Deleting a building, floor or room

If an element is deleted, all the elements, devices, plans and scenes contained in the element are also deleted.

#### Procedure:

- Select the **🗑️** button, to delete the element.  
If the security query is confirmed, the element is removed from the building structure and deleted in the project.

### 11.3 Duplicating a building, floor or room

The **Duplicate** function creates a copy of the selected element, e.g. Storey, in the same layer and copies all the subordinate elements (e.g. rooms, devices).

- i** If a storey with multiple rooms is copied, then each room is viewed and copied individually.


The following rules apply to the copying of a room:

- All the catalogue devices are copied and added to the new room. Parameters are applied.
  - New catalogue devices are created for devices from the installation and are added to the new room. Parameters are applied.
  - Device channels of copied devices are only created in the **Connections** and **Scenes** views on plans if the devices are located in the room to be copied (installation location is identical to the action location). If a device is installed in another room, then this device is not inserted into the plan, see example below.
- i** Empty plans are not be created.
- All the logic modules are copied and inserted into the appropriate plans.
  - All the timer and action modules are copied and inserted into the appropriate plans.

**Example:**

A device, with the central function All Off, is installed in the corridor of a building in order to switch off the light in the entire building. If a room, for example the child's bedroom, is now copied in order to create a second room with the same installation, then the device with the All Off central function would not be copied and would be missing on the newly-created plan.


**Procedure:**

- i** Online and offline plans can be copied.
- Using the  button, select the **Duplicate** function.  
The element is created as a copy. The text box is active in order to enter a new designation for the new element.
- i** The above rules apply to rooms containing devices and plans.

## 11.4 Moving a floor or room

Floors and rooms can be moved within the building structure. The room information of the affected devices is updated.

**Procedure:**

- Using the  button, select the **Move to** function.  
A window appears displaying the building structure.
  - Select the element of the building structure, into which the element is to be moved.
- i** Floors and rooms can also be moved by drag & drop.

## 12 Devices view

The project design of the electrical installation is carried out in the **Devices** view. During project design, the devices are assigned to their installation locations and added to the project in the same step.

If project design and commissioning are carried out with installed devices, the eNet server must be installed in the system. All the devices of the installation are read into the project design using a system scan.

Project design and commissioning can also take place with catalogue devices, if, for example, the eNet server is not in the system. For this purpose, the devices from product catalogues are imported into the project design. If the eNet server is installed in the system at a later time, the devices of the system can be read into the project design using a system scan. If the devices from the system scan are added to the project, they replace the catalogue devices and apply their parameter settings and connection information.

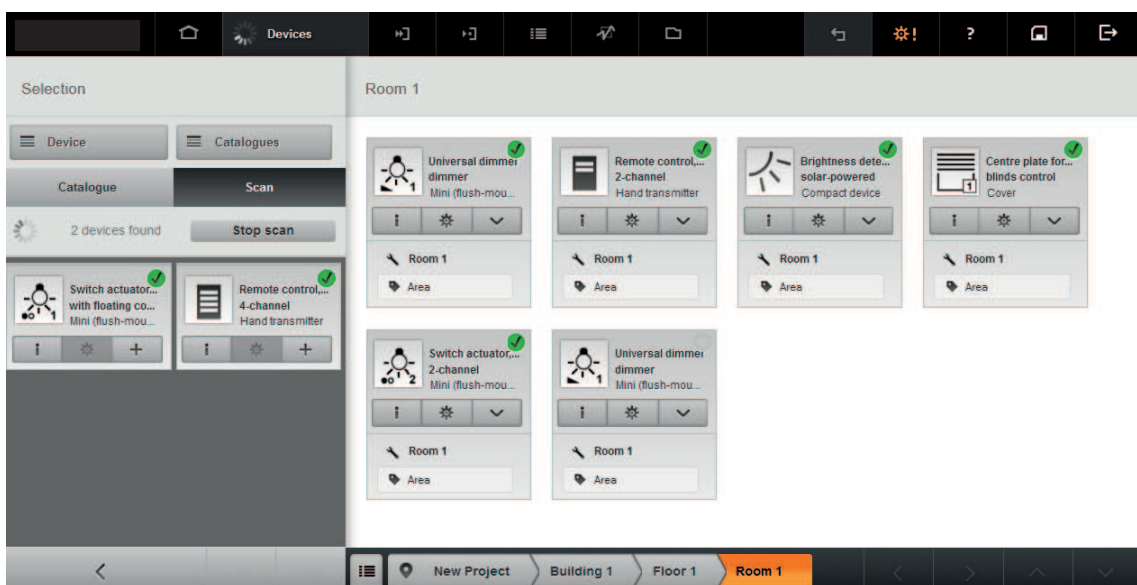


Figure 40: Devices view - Example system scan

### 12.1 Devices from product catalogue

Devices can be selected from a product catalogue and added to the project for the project design of a system. The catalogue devices can be replaced with devices from the installation later and parameters and connections applied automatically (see chapter 12.2.3. Replacing a catalogue device).

The manufacturer-specific product catalogues are stored in the software of the eNet server and can be updated or replaced using the eNet server. Product catalogues of third-party manufacturers can be imported.

#### 12.1.1 Adding a catalogue device

Catalogue devices can be added to the project, have their parameters set and be connected to other device channels.



Figure 41: Adding a catalogue device

**Procedure:**

- If necessary, select the catalogue using the **Catalogue selection** button (1). It is possible to insert devices from the catalogues of third-party manufacturers into the selection.
- Select the **Catalogue** tab (Figure 41)(2).  
The devices of the product catalogue are displayed in the order: Sensors, actuators, number of channels and design.
- i** The device selection can be scrolled up or down using the arrow keys.
- If necessary, filter the device selection according to sensors, actuators, design or number of channels.
- Select the installation location from the building overview (3a) or navigation bar (3b).
- Add the device using the **+** button (4).  
The device is added to the installation location. The cursor flashes in the text field for the specification of the installation area.
- Enter the installation area (5).
- i** Catalogue devices must be replaced by devices from a system scan before the system is switched to active (see chapter 12.2.3. Replacing a catalogue device).

**12.2 Devices from system scan**

The devices of a system are imported to the eNet server using a system scan and displayed in the device selection (Figure 40).

Devices from a system scan can be added to the project as a new device or can replace devices in the project. In this way, programmed catalogue devices can be replaced with devices from the installation. If a defective device is replaced, the new device must be read in using the system scan and replaced in the project.

When devices are exchanged, the parameters and connections of the devices and function modules of the project are applied and transmitted to the devices and saved after programming.

**12.2.1 Performing a system scan**

A system scan finds all the devices which are in programming mode or in which the voltage was interrupted and restored within the last 3 minutes. In the case of devices that are not directly accessible, the voltage interruption and restoration is a wise idea. Only those devices that do not already exist in the current project are found in the system scan.

- i** During a system scan, the eNet server accesses the devices permanently and reads out the data. To avoid unnecessary telegram traffic, the scan operation should be terminated after all the devices have been read in.

**Procedure:**

- Select the **Scan** tab (Figure 40).
- Select **Start scan**.

The active system scan is displayed by an animated icon in the toolbar.

- i** The scan operation is not terminated automatically by the eNet server and must be terminated using the **Stop scan** function.
  - Switch the devices to programming mode or switch their power off, wait 10 seconds and switch it on again.
- i** In the case of RMD devices, it may be necessary to interrupt the voltage for several minutes, since the power supply stores energy.

The scan result displays all the devices which are in programming mode or in which the voltage was interrupted and restored within the last 3 minutes.
- i** The settings on the operating mode switch of a device are applied during the system scan.
- i** The scan result is deleted if the system scan is restarted.

**Why are eNet devices not found during the system scan?**

Cause 1: Devices are out of range.

Cause 2: Devices are not in programming mode or the voltage has not been restored within the last 3 minutes.

Cause 3: The eNet server is connected together with a radio receiver for RMDs.

**Why can a device found using the system scan not be inserted into the project?**

Cause: The device has already been in another project, but was not removed properly.

Carry out a reset on the device (see device operating manual).

No room has been selected yet, to which the device should be assigned.

Select a room from the breadcrumb bar.

**12.2.2 Adding a new device**

Devices found in the system scan can be assigned to an installation location as a new device and added to the project.



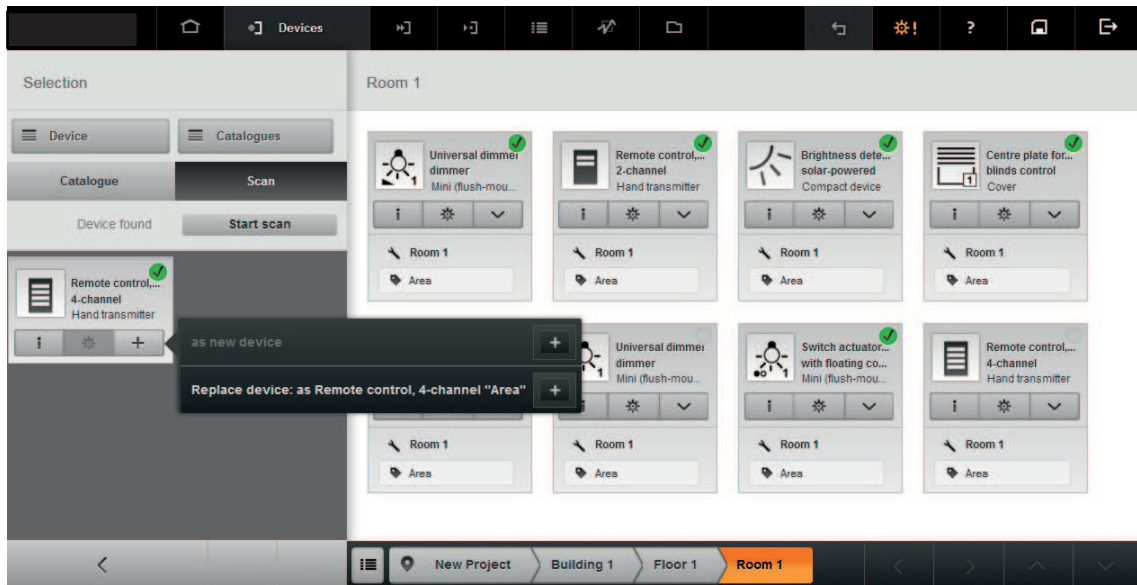


Figure 42: Adding a device from a system scan to an installation location

#### Procedure:

- Perform a system scan (see chapter 12.2.1. Performing a system scan).
- If necessary, filter the scan result according to sensors, actuators, design or number of channels.
- ❏ The scan result can be scrolled up or down using the arrow keys in the bottom bar.
  - Select the installation location from the building overview or navigation bar.
  - Select the **+** button in the device tile or pull the device into the installation location by drag & drop (Figure 42).

The device is added to the installation location.
- ❏ Devices can be moved by drag & drop.
- ❏ If the device already contains data, such as parameter settings, these can be applied or reset.
- ❏ If there are multiple options for adding the device, the function selection opens. Select the **as new device** function (Figure 42).
  - Enter the designation for the installation area.

#### 12.2.3 Replacing a catalogue device

If there are already catalogue devices in the installation location, these can be replaced with devices from the system scan. Connections and parameter settings are applied from the catalogue devices.

#### Procedure:

- Switch the new device to programming mode or switch its power off and on again.
- Perform a system scan (see chapter 12.2.1. Performing a system scan).
- Select the installation location from the building overview or navigation bar.
- Select the **+** button in the device tile.

The function selection is opened (Figure 42). The catalogue device is listed behind the function **Replace device: As** together with its installation location.

- Select **Replace device: As** to replace the catalogue device.



The catalogue device is replaced in the installation location by the device from the system scan and is indicated with an exclamation mark as the configuration status. Parameters and connections to other devices or function modules are applied.



- i** During the next programming operation, the parameters and connections are transmitted to the device and saved. The configuration status "Checkmark" is set (see chapter 3.4.2. Configuration status of the devices).

#### 12.2.4 Replacing a device from the installation

If, for example, a defective device in the system is replaced by a new one, this device must also be replaced in the project. The device applies the connections and parameter settings from the project.

- i** If a device to be replaced remains in the installation, this can lead to malfunctions. The device must be removed from the installation or reset (see chapter 12.7. Reset device).


##### Procedure:

- Switch the new device to programming mode or switch its power off and on again.
- Perform a system scan (see chapter 12.2.1. Performing a system scan).
- Select the installation location from the navigation bar or tree structure.
- Select the  button in the device tile (Figure 42).  
The function selection is opened.
- Select **Replace real device** and add the appropriate device to the project using .  
Confirming the security query replaces the device in the installation location. Parameters and connections to other devices or function modules are applied.
- i** During the next programming operation, the parameters and connections are transmitted to the device and saved.

#### 12.2.5 Adding device with data

If a device with data such as parameter and connection data to other devices is added to the project later, the device data can either be accepted or discarded. If, for example, a project is read in and a device from the project cannot be accessed, it can be added to the project later in this way.

##### Procedure:

- Switch the device to programming mode or switch its power off and on again.
- Perform a system scan (see chapter 12.2.1. Performing a system scan).
- Select the installation location from the building overview or navigation bar.
- Select the  button in the device tile.  
A new window opens with the message that the device contains data.
- Select **Import device data**.  
The device is added to the project with the existing data and is available in the plans and in the overview.
- i** Select **Reset device data** to add the device to the project without the data such as parameter and connection data.

#### 12.3 Deleting a device from the project

If a device is removed from the project, all the connections to other devices are deleted. Information such as installation location and installation area is removed and the parameters are reset.

- i** To avoid miscommunication of the connected devices, the devices remaining in the project must be reprogrammed. The devices that must be reprogrammed are listed in the system overview (see chapter 19. Appendix).

If a device is removed from the project to which the eNet server has no access, the information and parameters remain in the device. The device can be added again to the project via a

system scan. The device can either be added to the project with the information that it contains e.g. installation location and area as well as the set parameters, or it can be reset before adding.

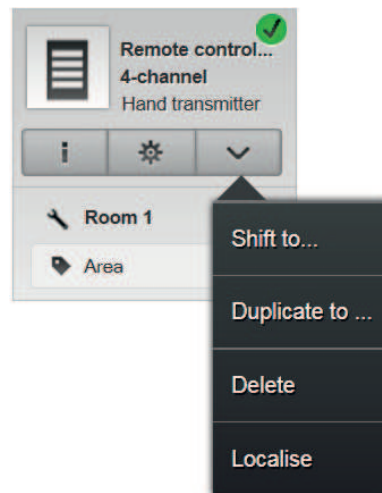


Figure 43: Function selection, e.g. deletion of the device from the project

**Procedure:**

- Select the  button in the device tile (Figure 43).  
The function selection is opened.
- Select the **Delete** function.  
The device is removed from the installation location. Connections to other devices and function modules are deleted. All the parameters of the device are set to default values.

## 12.4 Moving a device to another installation location

Devices can be moved to another installation location. The new installation location is taken into account in the device tile and in the overview.

**Procedure:**

- Select the  button in the device tile.  
The function selection is opened.
- Select the **Move to...** function.  
A window containing the building structure is opened.
- Select the new installation location and confirm with **OK**.  
The device is removed from the installation location and inserted into the newly-selected installation location.

**i** During the next programming operation, the new installation location is transmitted to the device and saved.

## 12.5 Copying a device

Devices, including the parameter settings, can be copied and saved in a location of the building structure.

**Procedure:**

- Select the  button in the device tile (Figure 43).  
The function selection is opened.
- Select **Duplicate to....**

A window containing the building structure is opened.

- Select the new installation location and confirm with **OK**.

The device is inserted into the newly-selected installation location as a catalogue device. The parameter settings and installation area are also applied. The installation is updated in the device tile.

## 12.6 Localising a device

It is possible to identify a scanned device in the installation using the **Localise device** function.

### Procedure:

- Select the  button in the device tile.

The function selection is opened.

- Select the **Localise** function.

**i** A battery-operated device, which has not been actuated for a considerable time, must also be actuated once in advance.

A window opens with the device tile. Depending on the actuator type, loads may be actuated for localisation. The LED flashes red for sensors.

## 12.7 Reset device

Parameters are reset and connections to other device channels are deleted using the **Reset device** function.

**i** If the device is reset, it cannot be restored to its original state using the **Reject** function.

### Procedure:

- Switch all plans containing the device channels of the device to Edit mode.

- Select the  button in the device tile.

The **Settings** window is opened.

- Select **Reset device**.

Connections to other devices are deleted. The parameters of the device are set to default values. The settings on the operating mode switch of the device are applied after the device is reset.

**i** The device must be programmed in order to compare the device with the device in the project.

## 12.8 Adding a repeater

A repeater can be connected to one or more devices to extend the range of a transmitter or actuator. The repeater receives and repeats the eNet radio telegrams.

**i** We recommend using a maximum of two repeaters in an eNet system in order to prevent a high level of telegram traffic.

### Procedure:

The **Devices** view has been selected.

- Switch the device to programming mode or switch its power off and on again.

- Perform a system scan (see chapter 12.2. Devices from system scan).

- Select the installation location from the navigation bar or tree structure.

- Add the repeater to the installation location using the  button.

- Select the  button in the device tile of the repeater.

The **Settings** window is opened.

- Select the **System** tab.

**i** For the bidirectional communication to work between the connected actuators and sensors, all the actuators and sensors of a connection must always be added to the repeater.

- Select the **Add device** function and select the appropriate devices from the selection menu.
  - The devices are added to the repeater using the **Save** button. The received and sent eNet radio telegrams are repeated for the selected devices.
- i** If no devices are added to the repeater in the **Settings** window, then the repeater will repeat all the eNet radio telegrams.

## 13 Connections view

Plans for connections are created in the **Connections** view. A tab is created for each plan, on which the actuator and sensor channels can be interconnected. For more complex connections, function modules, such as logic modules and timer modules, are available. Plans can be interlinked using action modules.

The following rules apply to connections:

- Previously-programmed function modules or channels can be used in other plans.
- If function modules are integrated in a plan, the eNet server must remain in the system.
- Each plan is assigned to a location from the building structure. The location can be used as a filter in various views to allow quick access to the plan. For example, it is wise to assign a plan implementing the lighting of a kitchen to the location "Kitchen".
- When adding a sensor channel to a connection plan, the installation location is added automatically to the sensor tile as the action location and the installation area as the action area. Changes can be made at a later time.
- When adding an actuator channel to a connection plan, the location selected in the breadcrumb list as the action location is added automatically to the actuator tile along with the entered plan name as the action area. Changes can be made at a later time. The action location and action area of the actuator channel is displayed in the visualisation.
- A plan can be made up of just a few elements, e.g. to switch a light in a room. However, more complex plans, such as master controllers, can contain several elements.
- In a plan, each actuator channel must be connected to each sensor channel. If, for example, a sensor channel and three actuator channels are interconnected in a plan, and another sensor channel is added and connected to one of the actuator channels, connection lines to all the actuator channels are then added automatically.

Below, the term "Element" is used to represent all the function modules and channels. For more information on function modules please refer to (see chapter 10. Function modules).

A plan can have the following states:

- Plan is not active: The plan is not active in the installation. Changes are possible.
- Plan is active: The plan is identical with the configuration in the installation. The plan is disabled. Changes are not possible.
- The plan is active and can be changed (Edit mode): The plan is enabled for editing and varies from the configuration in the installation after changes. The plan is still active in the installation. Changes can be applied or discarded.

### 13.1 Creating a connection plan

In a plan, elements such as actuator and sensor channels, action modules, logic modules and timer modules, can be interconnected.

- i** In a connection plan, a sun sensor in combination with a comparator module can be used as an input for brightness-dependent control of actuators.

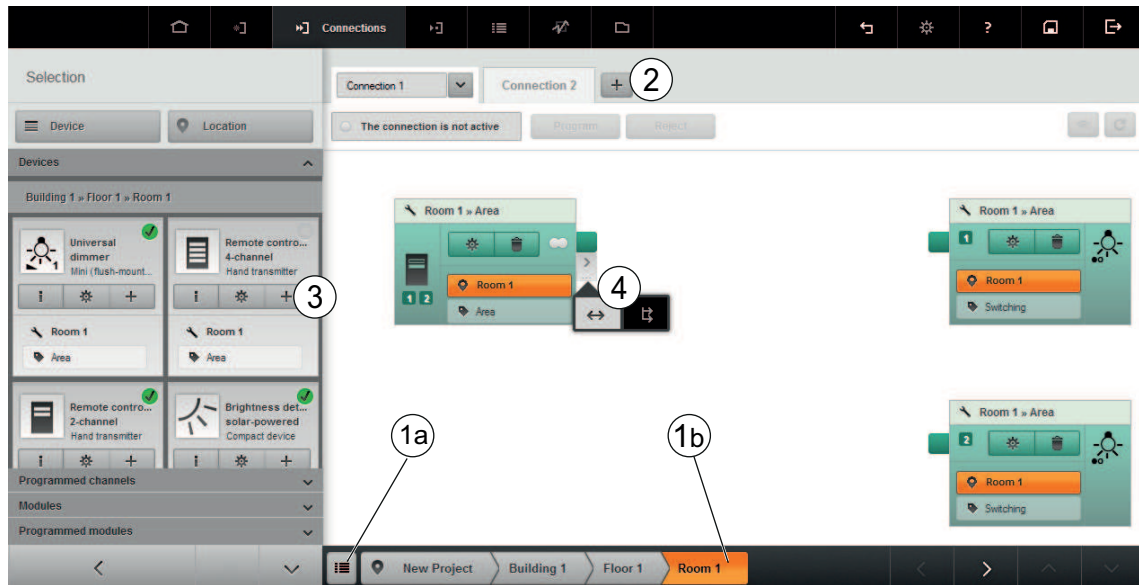


Figure 44: Creating a plan - First steps

## Procedure:

- Select a location from the building overview (1a) or breadcrumb bar (1b) to assign the connection to a location (Figure 44).
- Select the **+** button next to the tab to create a new plan (2).  
A new tab is created.
- Enter the name of the connection in the text field.

In the selection, devices, function modules and previously programmed channels and function modules are stored in the tabs sorted. Only the devices that can be added to a connection plan are displayed.

- Open the appropriate tab in the selection.
- i** The selection can be limited using the filter.
- Add elements to the plan using the **+** button in the device tile (3) or by drag & drop.  
In the case of multi-channel devices, a selection window opens, in which the channel type and operating mode can be set, as necessary (see chapter 13.1.5. Switch-over the channel type and select the operating mode). All channels or just one channel can optionally be added to the plan.
- i** Items that are possible for the appropriate element are indicated in the plan.  
The elements are added to the plan. If no action area has yet been assigned, the text field is active for entering the action area.
- If necessary, enter the action area.
- If logic modules were added, enter the value pair for the actuator channel (see chapter 13.1.1. Setting the values of the actuator channel).
- i** The action location of the channel can be changed using the entry on the channel tile.
- To interconnect the channels, and possible modules, select the anchor point of the transmitter (4).  
A selection box appears, offering either to connect the functions of the transmitter channel with all the existing actuator channels automatically, or to create the connections manually.
- Create the connections.
- i** The plan is not active and must be programmed into the devices of the installation for applications (see chapter 13.4. Programming a plan).

- i** Elements can be moved to the plan by drag & drop.
- i** To rename a plan, activate the text field and enter the new designation.

### 13.1.1 Setting the values of the actuator channel

With logic connections, a value pair must be specified for the actuator channel. These values can be entered using the channel tile of the actuator.

- i** If the actuator channel is also contained in a connection plan without a logic module, the constellation of the actuator channel, sensor channel and logic module will then determine the reaction of the actuator channel.

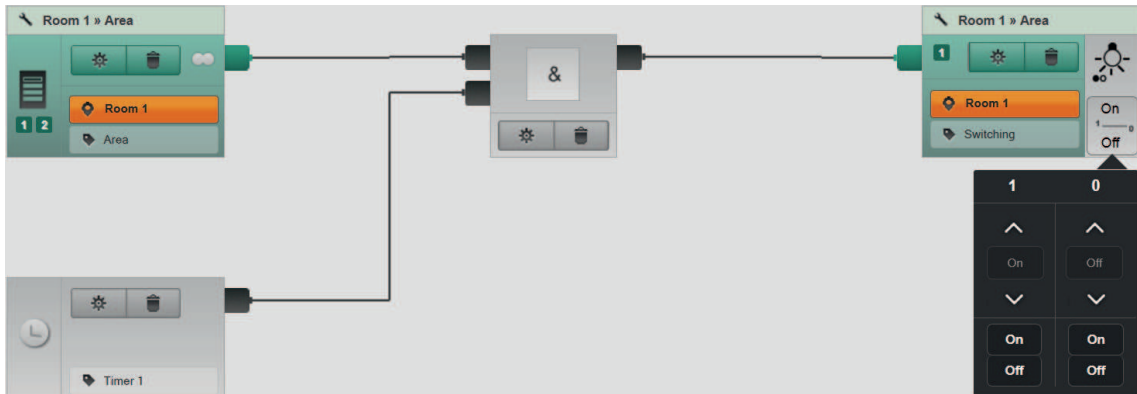


Figure 45: Setting the actuator values

#### Procedure:

- To change the actuator values, select the grey values area (Figure 45).  
The window for changing the actuator values is opened.
- Change the values using the arrow keys or enter them directly.  
The values remain in the actuator even if the logic connection is deleted. The actuator values are only displayed if there is a connection to a logic module.

### 13.1.2 Changing or resetting action location

#### Procedure:

- Select the action location entry.  
A window is opened, containing the building structure.
  - Select the new action location from the building structure or select **no location** to reset the action location.  
Pressing **OK** applies the change.
- i** The action location can also be changed in the **Information** window in the **Channel information** tab of the device tile (see chapter 9.1.2. Information on device channels).

### 13.1.3 Deleting a connection line

#### Procedure:


- Press the anchor point and select the  button in the connection selection.  
The connection line turns red and an **X** appears in the anchor point.
- Select the anchor point with the **X** to delete the connection line.




Figure 46: Deleting a connection line

### 13.1.4 Removing an element from the plan

**Procedure:**


If the plan is active, it is necessary to change to Edit mode.

- Select **Edit**.  
The plan is still active and can be changed.
- Select the  button in the tile.  
The element is removed from the plan. Channels that were blocked for applications, such as the Venetian blind channels for actuators or scene or channel buttons for sensors, are enabled again if necessary.
- To transmit the changes to the devices, select the **Program** button.

### 13.1.5 Switch-over the channel type and select the operating mode

When an actuator channel is added to a plan, the channel type can be selected and the operating mode set. For example, in the case of a switching/Venetian blind actuator, the channel type **Venetian blind** and the operating mode **Roller shutter** can be selected.

**Procedure:**

- Select the  button in the device tile.  
In the case of multi-channel actuators, a selection window of the channels opens, in which the channel type can be switched over and the operating mode can be chosen. In the case of single-channel actuators, only the operating mode can be selected.




**CAUTION!**

**Damage to property through switching over the channel type when a load is connected.**

**Switching over the channel type from Venetian blind to switching when there is a connected load can damage the Venetian blind motor.**

**Before changing the channel type from Venetian blind to switching, disconnect the load from the circuit.**

- Select the channel type.  
Two channels are required for the channel type "Venetian blind". The second channel is greyed out (Figure 47).
- Select the operating mode from the drop-down list (Figure 47).
- Add the channel to the plan using  in the selection.



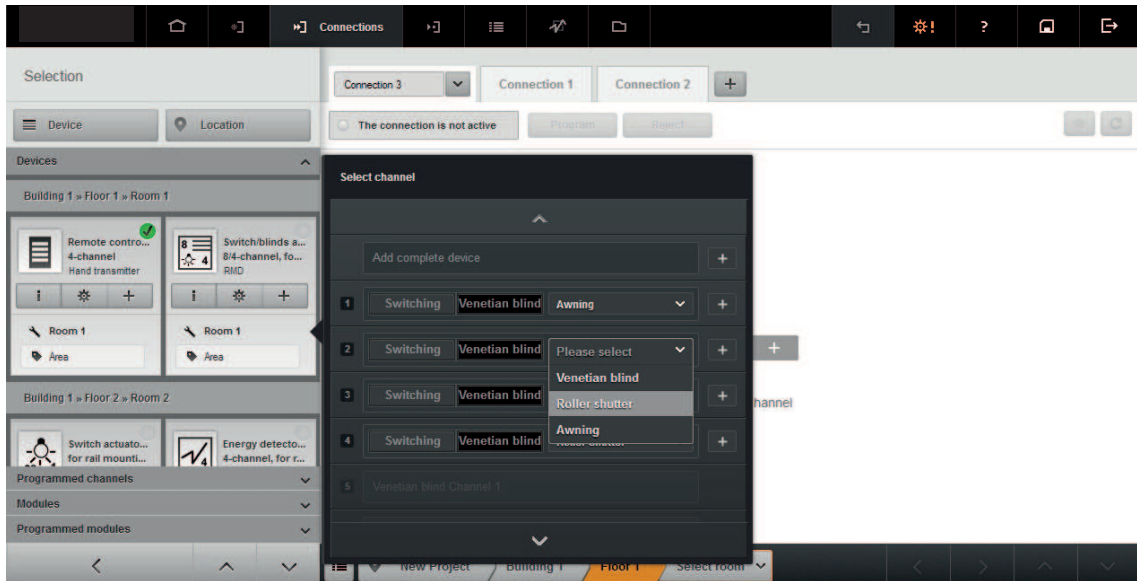


Figure 47: Selection window for channel selection (example of switching/Venetian blind actuator)

## 13.2 Navigating to the plans

If channels or function modules are already used in other plans of connections or scenes, it is possible to navigate to the plans.

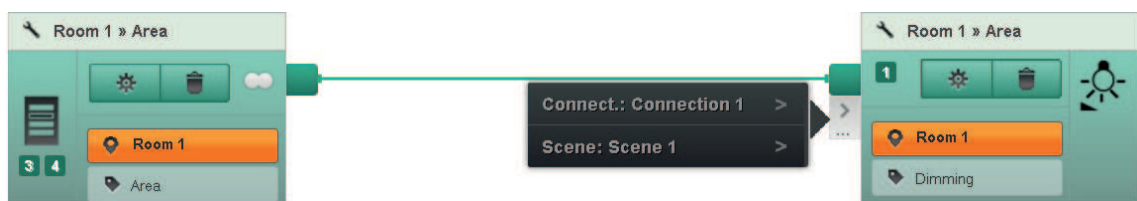



Figure 48: Navigation to other plans

### Procedure:

- Select the  button in the tile (Figure 48).  
A list with the plans is opened.
- Select an entry from the list to open a plan.

## 13.3 Moving, copying and deleting a plan

The **copy to function** allows a plan to be copied and moved to another installation location at the same time. The **Move to** function allows a plan to be moved to another installation location at a later time.

To delete a plan using the **Delete** function, the plan must be deactivated beforehand. During deletion, all the connections are removed. Devices, including parameter settings, remain intact in the project.

All the functions are recalled via a drop-down menu (Figure 49).

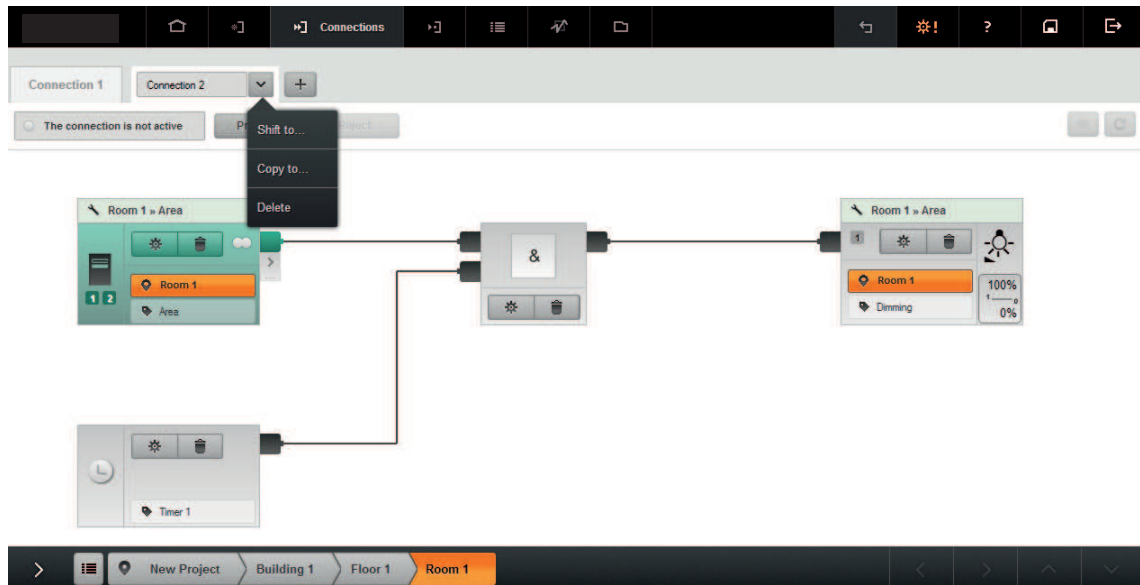


Figure 49: Move to..., copy to..., delete functions

### Moving a plan

- Select a location from the breadcrumb bar.
- Select the plan.
- Using the cursor key , open the menu and select the **Move to** function (Figure 49). A window containing the building structure is opened.
- Select the new location.  
Clicking **OK** assigns the plan to the new location.

### Copying and moving a plan

- Select a location from the breadcrumb bar.
- Select the plan.
- Using the cursor key , open the menu and select the **Copy to** function (Figure 49). A window containing the building structure is opened.
- Select the new location.  
Clicking **OK** copies the plan and assigns it to the new location. The new plan is not active and must be programmed.

### Deleting a plan

The plan must be deactivated beforehand.

- Select a location from the breadcrumb bar.
- Select the plan.
- Using the cursor key , open the menu and select the **Delete** function (Figure 49).  
Confirmation of the security query deletes the plan.

## 13.4 Programming a plan

To transmit connections to the devices of the installation, the plan must be programmed into the devices of the system. Changed parameters are also transmitted to the devices. If the plan is deactivated, the connections are removed from the devices.

### Procedure:

- Select the **Program** button.

- If necessary, actuate battery-operated devices.  
The connections and parameters are transmitted to the devices of the installation. The applications can be used immediately. The plan is blocked for further changes (Figure 50).
- i** To change the plan, select the **Edit** button (see chapter 13.6. Changing the plan in Edit mode).
- i** To remove the connections from the devices, select the **Deactivate** button.

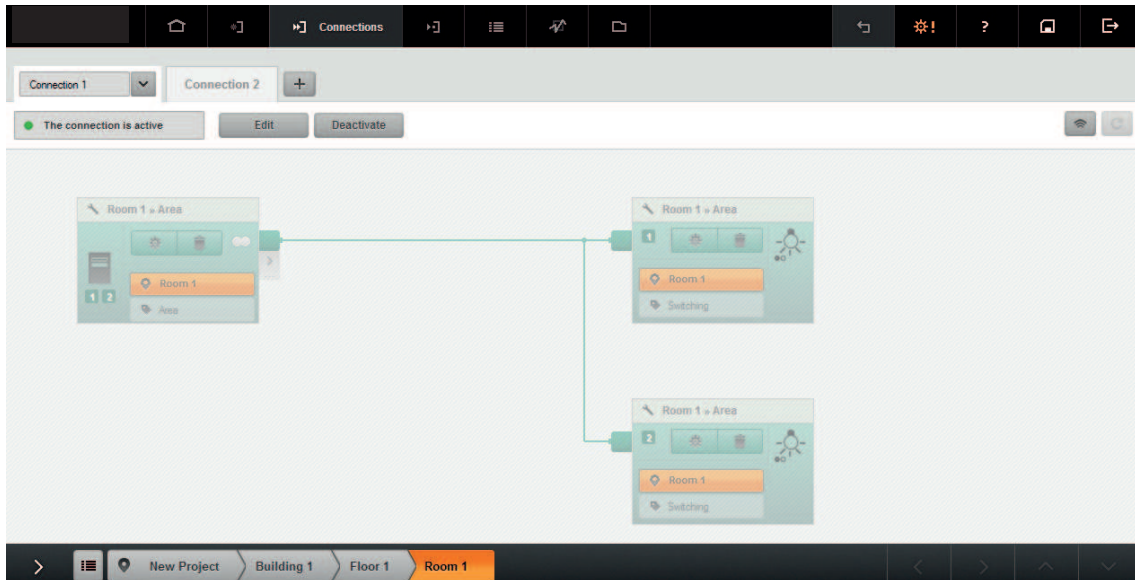


Figure 50: The plan is active and cannot be changed

## 13.5 Measuring the signal quality

The signal quality of the connections of the current plan can be measured and evaluated. Starting with a receiving device, the signal quality shows the quality of the connected transmitting devices in three stages.

- i** The signal quality measurements can be performed simultaneously in the system overview also for all plans of the **Connections** and **Scenes** views.


The result of the measurement is shown using colour coding according to the traffic light principle:

- Green: Good reception
- Yellow: Sufficient reception, observe as necessary
- Red: No reception, insert repeater as necessary

In the first step, the signal quality of all the connections is measured. Then, the reception quality between channels can be measured in a targeted manner. The procedure and the principle are explained using an example.

- i** In a signal quality measurement, a repeater is only taken into account when no reception would be available without the repeater.

### Procedure:

- Select the  button.
- i** Battery-operated devices may need to be operated manually.  
The signal quality between all the connections is measured and the connection lines shown in the colour of the worst quality (Figure 51).

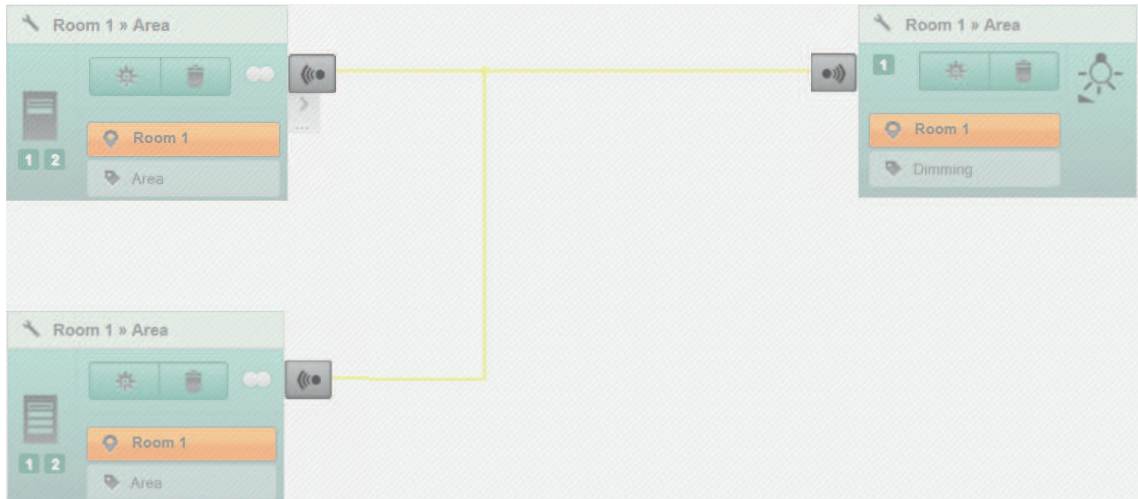




Figure 51: Signal quality of the connections is sufficient (example)

- To measure the signal quality between channels, select the  icon of the channel which is to be the measurement receiver.

The selected channel is highlighted by the  icon. It displays how well signals from other devices are being received. The connections are indicated using the traffic light principle.

In the following example, the signal on the actuator channel is evaluated and the reception of both transmitters checked. The signal strength of the lower transmitter is good and that of the upper transmitter sufficient (Figure 52).

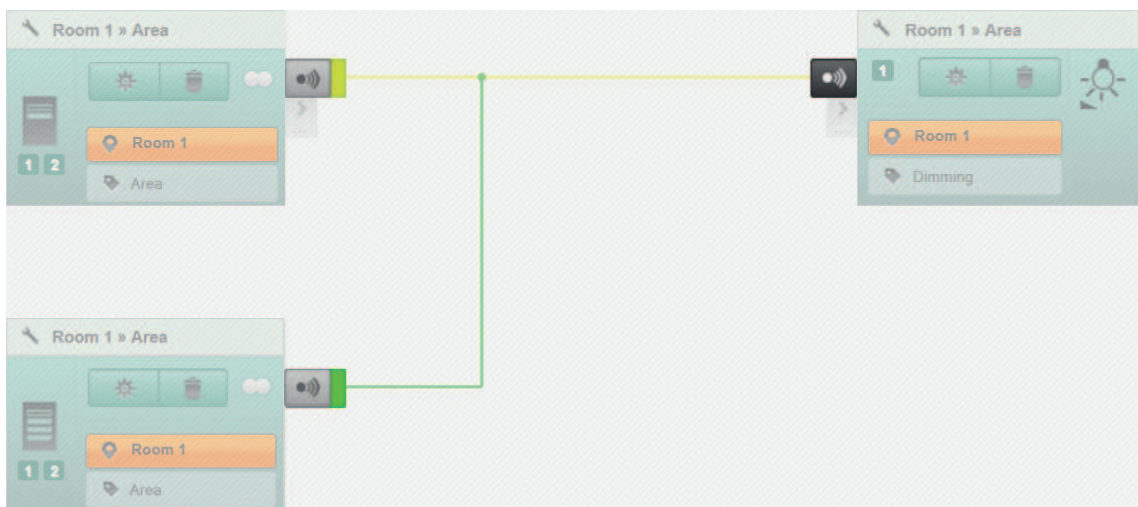





Figure 52: Measurement of the reception quality of two transmitters (example)

- To terminate measurement mode, select the  button.

 An insufficient connection can be improved by adding a repeater. In the selection, the **Repeater** filter can be used to display the devices with a repeater function. The repeater function must be activated in the device settings. Since the use of repeaters may lead to faults in telegram transmission, a maximum of only two repeaters should be used.

The measurement can be repeated to check directly the impact of changes made to the system.

  - Select the  button to repeat the measurement.

## 13.6 Changing the plan in Edit mode

A plan can be changed in Edit mode, e.g. device channels can be added or deleted. The connections in the devices of the installation are preserved, so that control of the actuators in Edit mode is still possible. Changes can then be transmitted to the devices of the installation or rejected again.

### Procedure:

- Select the **Edit** button.  
The plan is in Edit mode and can be changed (Figure 53). The plan is still active.
- i** Several plans can be switched to Edit mode simultaneously in order to change them.
- i** The changes are discarded and the Edit mode exited using the **Discard** button.
- To transmit the changes to the devices, select the **Program** button.  
Changes are transmitted to the devices of the installation. The plan can no longer be changed.

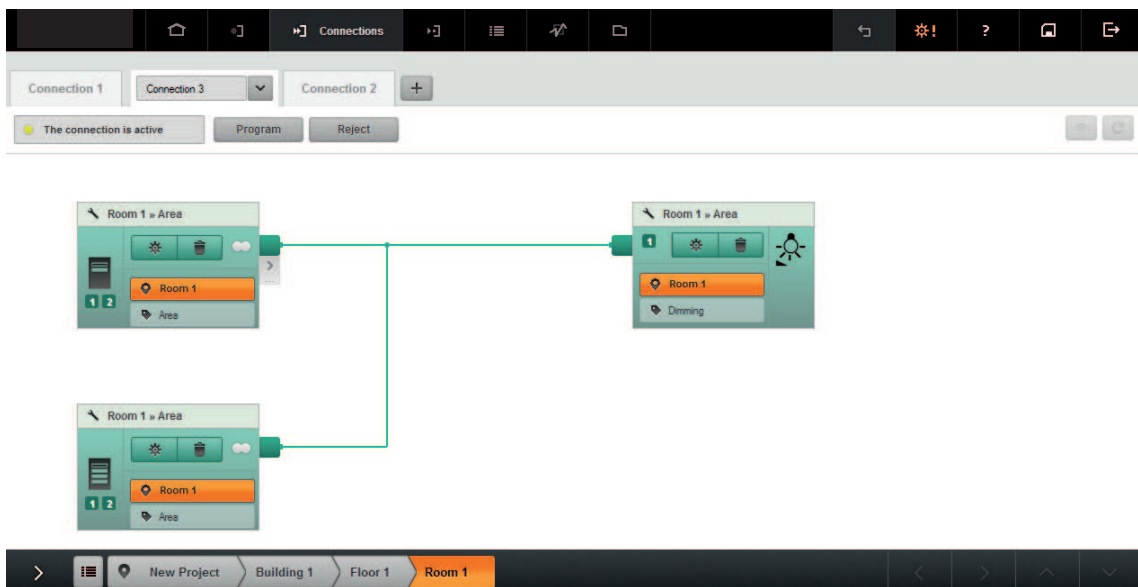


Figure 53: Edit mode - The plan is still active and can be changed



## 14 Scenes view

Plans for scenes are created in this view. In a scene, one or more sensor channels control a group of actuator channels. When a scene is created, a defined state is set on each actuator channel. This can be, for example, a brightness value for a dimmer actuator, the "ON" state for a switching actuator. Each time the scene is recalled, regardless of the connected sensor channels, the actuator channels assume the defined state. Timer modules and action modules can also be used to recall scenes.

**i** Logic function modules cannot be used in a scene.

A tab is created for each scene, which can be assigned to a location. This allows more rapid access to the scene using the filter function, e.g. in the overview. If an actuator channel is to be added to a scene at a later time, which, for example, is only controlled by a part of the sensor channels, a new tab must be created with the sensor and actuator channels.

Recall of a scene using the visualisation can be enabled or prevented using the project design interface.

The procedure for creating a scene plan is similar to the procedure for creating connection plans. Only sensor channels of the type "Scene" can be added to a scene plan. These are indicated by a different icon to the sensor channel of type "rocker switch" (see chapter 3.4.3. Illustration of the channels). Representations in the scene plans, apart from the representation of the channel type, are identical with the connection plans in the Connections view (see chapter 13. Connections view).

The following functions in the **Scenes** view can be used in the same way as the functions in the **Connections** view. For this reason, they will only be listed here with a reference to the appropriate chapter.

Functions in the **Scenes** view:

- Changing the action location (see chapter 13.1.2. Changing or resetting action location)
- Disconnecting (see chapter 13.1.3. Deleting a connection line)
- Removing an element from the plan (see chapter 13.1.4. Removing an element from the plan)
- Navigating to the plans (see chapter 13.2. Navigating to the plans)
- Moving, copying and deleting plans (see chapter 13.3. Moving, copying and deleting a plan)
- Programming and deactivating a plan (see chapter 13.4. Programming a plan)
- Measuring the signal quality (see chapter 13.5. Measuring the signal quality)
- Changing the plan (see chapter 13.6. Changing the plan in Edit mode)

### 14.1 Create scene

A tab is created for each scene, which is assigned to a location in the building structure. The location can be used as a filter to provide faster access to the scene.

In a scene, elements such as actuator and sensor channels, action modules and timer modules, can be interconnected. Below, the term "Element" is used to represent the function modules and channels. For more information on function modules please refer to (see chapter 10. Function modules).

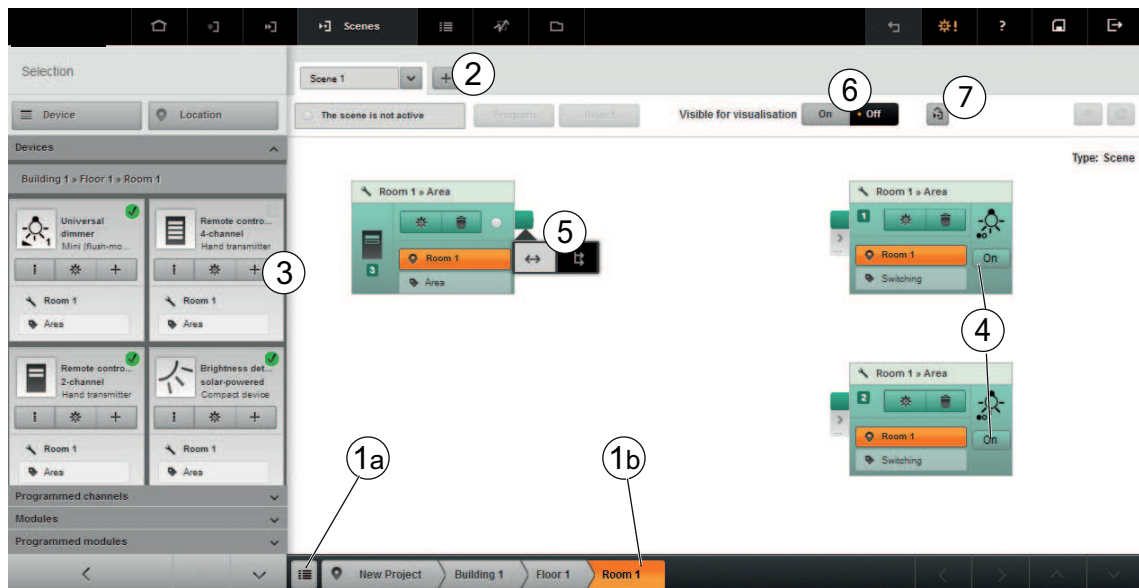


Figure 54: Creating a scene - First steps

### Procedure:

- Select a location from the building overview (1a) or breadcrumb bar (1b) to assign the scene to a location (Figure 54).
- Select the **+** button next to the tab to create a new plan (2).  
A new tab is generated.
- Enter the name of the scene in the text field.
- i** In the selection, devices, function modules and previously programmed channels and previously programmed function modules are stored in the tabs sorted. Only the devices that can be added to a scene plan are displayed.
- Open the appropriate tab in the selection.
- i** The selection can be limited using the filter.
- Add elements to the scene using the **+** button (3) or by drag & drop.
- All channels of actuators that have the current rooms as action location can be added simultaneously to the scene via the Room scene (7) button if necessary.
- i** Items that are possible for the appropriate element are indicated in the plan.  
The elements are added to the scene. In the case of sensor channels, the scene name is inserted for the action location if an action location was not previously entered.
- Change the action area if necessary.
- i** For time-controlled recall of a scene, a timer module can be integrated into the scene plan and the time can be set in the timer module to trigger the scene.
- To enter a value, select the right-hand area of the channel tile of the actuator (4).  
The window for changing the actuator values is opened.
- Change the values using the arrow keys or enter them directly.  
The scene values are stored in the actuator.
- To interconnect the channels, and possible modules, select the anchor point of the transmitter (5).  
A connection selection appears providing the option to connect the transmitter channel to all the available actuator channels automatically, to create connections manually or to delete existing connections.
- Create the connections.

- If necessary, enable the scene for the visualisation (6) (see chapter 14.6. Enabling a scene for visualisation).  
If the scene is enabled for the visualisation, the scene name will appear in the visualisation.
- i** The scene plan is not active and must be programmed into the devices of the installation for applications (see chapter 13.4. Programming a plan).
- i** Elements can be moved in the scene by drag & drop.
- i** To rename a scene, highlight the text field and enter the new designation.

## 14.2 Master dimming

This function can be set on sensors configured to scenes. The master dimming function allows the brightness of a scene previously recalled using the same sensor to be changed or switched off.

The following rules apply to the master dimming function:

- Master dimming always applies to a pair of buttons.
- If a scene is recalled by other sensors in the interim, the master dimming function is deactivated.
- If the brightness of individual actuators of the recalled scene is changed, these are excluded from the master dimming function.
- It is not possible to switch scenes on using master dimming.
- Master dimming is not visible on a plan. It is an activated device property.

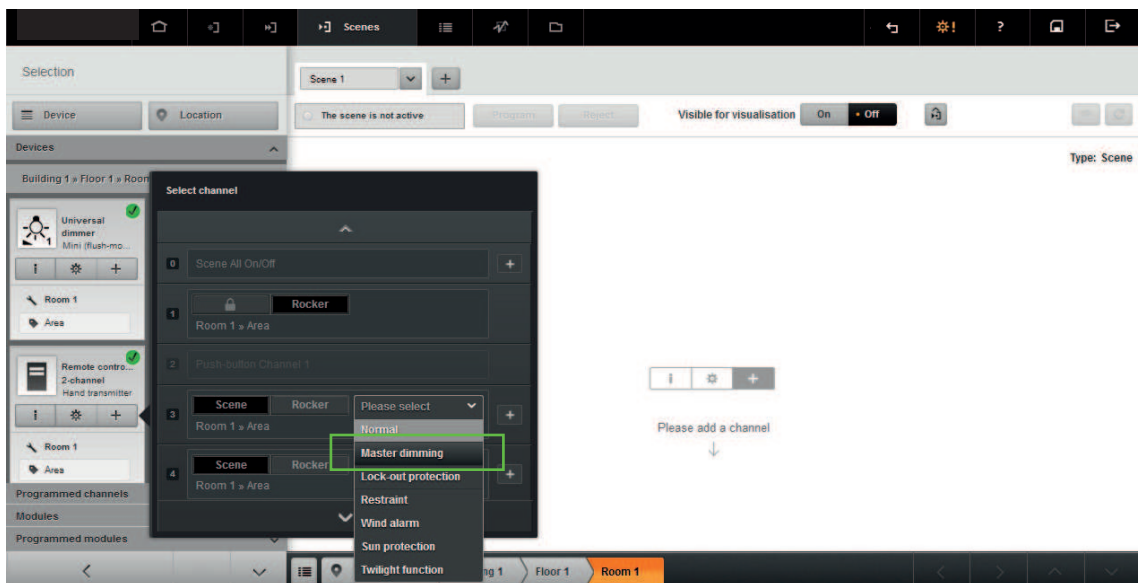


Figure 55: Setting up master dimming

### Procedure:

- Create and name the plan for the scene.
- Select the **+** button in the device tile of a sensor.  
The **Select channel** selection window is opened (Figure 55).
- Select a free scene channel and recall **Master dimming** in the selection menu.  
The corresponding channels are set as master dimming.
- i** The device must be programmed for the application of the function (see chapter 9.2.3. Program device).



### 14.3 Creating All On/All Off scenes

On a plan, it is possible to create one of the All On and All Off scenes or both together. If both scenes have been created on a plan, they control the same actuator channels. In the sensor channel for All On the **I** icon is on the output of the channel tile and for All Off the **O** icon.

The following rules apply to the All On/Off scenes:

- When an All On/All Off scene is created, there must be no other sensor channels on the plan.
- Actuator channels can be added to or removed from All On/Off scenes at a later time.
- All On or All Off channels of sensors can be added or removed at a later time.

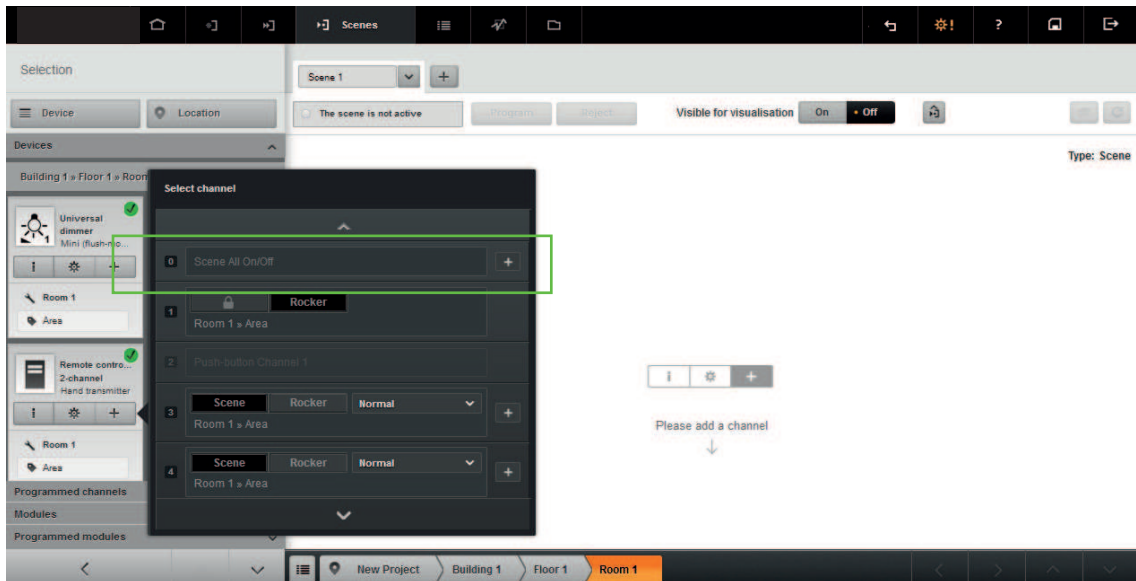


Figure 56: Creating an All On/All Off scene

#### Procedure:

- Create and name the plan for the scene.
- Select the **+** button in the device tile of a sensor.  
The **Select channel** selection window is opened (Figure 56).
- Select **All On/All Off** scene and add to the plan.  
The **Channel All On/All Off - Settings** window is opened to assign keys to the All On/Off channels.
- Select the button for the All On or All Off scenes or for both scenes and save the settings with **Apply**.  
If no actuator channels have been added to the plan, the **Automatically add actuator channels** window opens for the selection of the actuators.
- Select the actuators and select **Create scene**.  
The settings **All actuators of the project**, **All switching and dimming actuators** and **All connected actuator channels of this sensor** automatically connect the actuator channels to the sensor channel or channels.

Continue as described below using the **Manual compilation** setting:

- Select the actuator channels and add them to the plan.
- Interconnect the sensor and actuator channels.

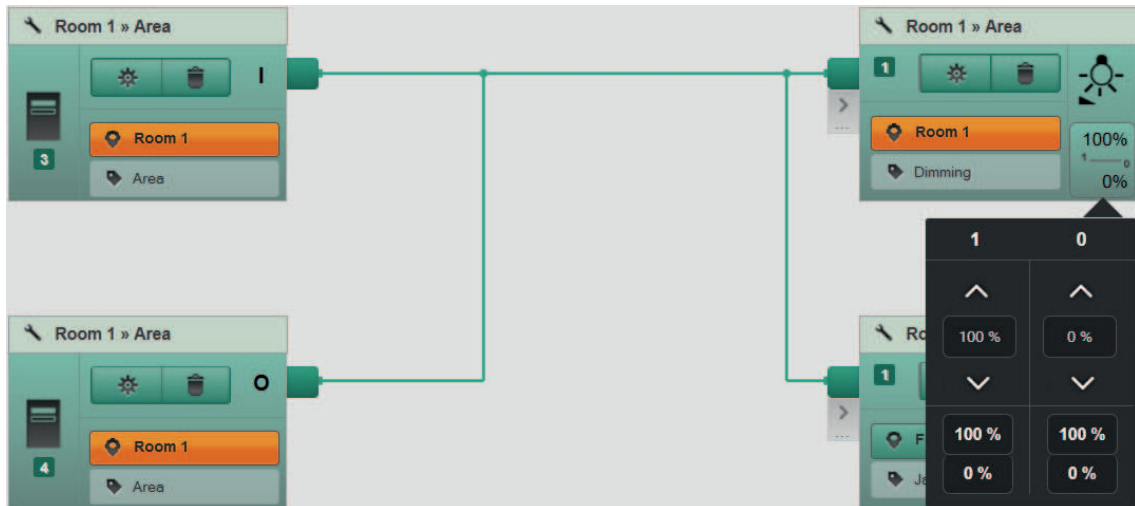




Figure 57: Assigning actuator values for All On/All Off

Values for All On and All Off can be assigned to each actuator. The default setting for switching and dimming actuators for All On is 100 % and for All Off is 0 %. In the case of shutter actuators, the values 100% blind/shutter height (bottom end position) and slat angle 100% are preset for All On and 0% for All Off.

- Click the extension of the device tiles of the actuator and set the values for All On (1) and All Off (0) (Figure 57).

**i** The scene plan is not active and must be programmed into the devices of the installation for applications (see chapter 13.4. Programming a plan).

## 14.4 Saving disabling scenes

The disabling scenes lock-out protection and forced position can be saved to a scene plan. Disabling scenes are given priority and can override functions and scenes without priority. A disabling scene remains valid until it is removed. Disabling scenes use a sensor channel to recall the scene and a sensor channel to remove the scene. Sensor channels can be created jointly on a plan for a disabling scene to recall (channel symbol ) and remove (channel symbol ) a scene. If both sensor channels are available on a plan, they control the same actuator channels.

The following rules apply to the scenes:

- In a plan with disabling scenes, additional sensor channels of the same scene type and actuator channels can be added at a later time.
- It is possible to set the behaviour of the actuators when the scene is recalled and removed.
- The priority of the scene is set separately on each actuator channel in the **Behaviour** tab of the **Settings** window.

### Presettings of priorities

Lock-out protection	Priority 1, highest priority
Restraint	Priority 2

As soon as a priority has been set for the scene, operation of the appropriate actuator channels is blocked for the length of the scene recall. The exception to this is the recall of another scene with the same or higher priority. The priority can be set in 4 levels.

- i** If a priority is assigned to a scene, the parameter **Behaviour after end of disabling function** is taken into account for the behaviour of the actuator after the disabling function.

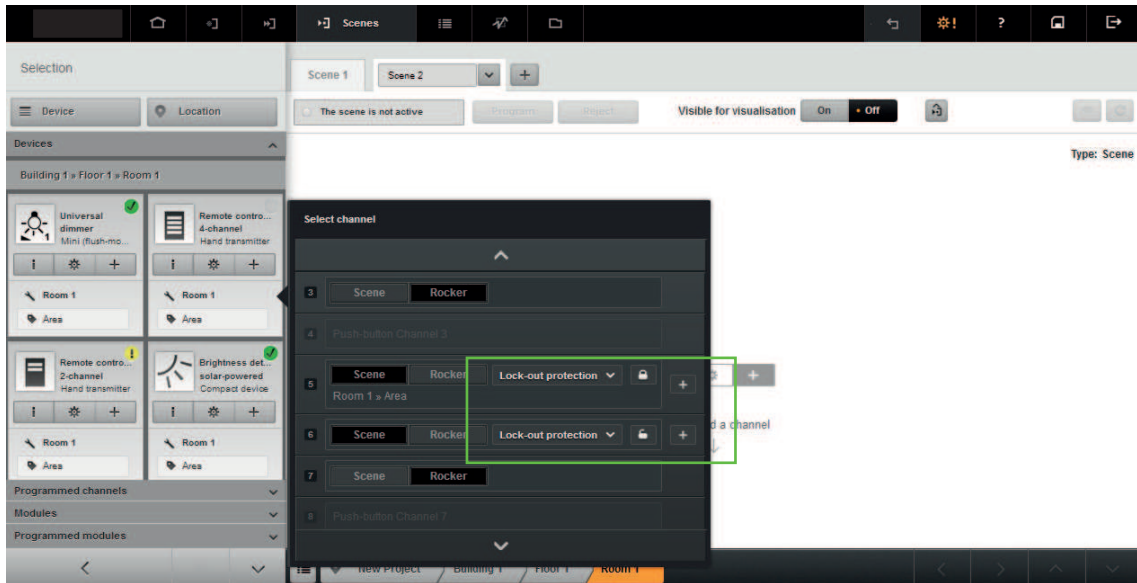














Figure 58: Create disabling function - Example lock-out protection

### Procedure:

- Create and name the plan for the scene.
- Select the  button in the device tile of a sensor.  
The **Select channel** selection window is opened (Figure 58).
- Select a free scene channel and select scene type in the selection menu.  
The corresponding channels are set accordingly. One channel  is created for recalling the scene and one channel  is created for removing it.
-  The Call and Cancel functions can be changed via the  and  buttons.
- Use the  button to add one or both channels to the plan.  
In the plan, the scene type switches to the selected scene type.
- Select the actuator channels and add them to the plan.
- Interconnect the sensor and actuator channels.
- Set the actuator values for recalling and removing the scene. To do this, click the extension of the device tile of the actuator and set the values for Recall  and Remove  of the scene (Figure 59).  
**Old setting:** The last status before the disable was recalled is restored.  
**= setting:** The status after the lifting of the disabling function remains intact.
-  The behaviour of the actuator after the removal of a scene with priority can also be set via the parameter **Behaviour after end of disabling function** of the actuator. To do this, open the **Settings** window using the  button of the device tile and set the parameter of the appropriate channel. This behaviour applies to all the plans in which the actuator channel is used.
- If necessary, set the priority by selecting  button of the device tile. In the appropriate channel, set the **Priority...** parameter of the selected scene type.

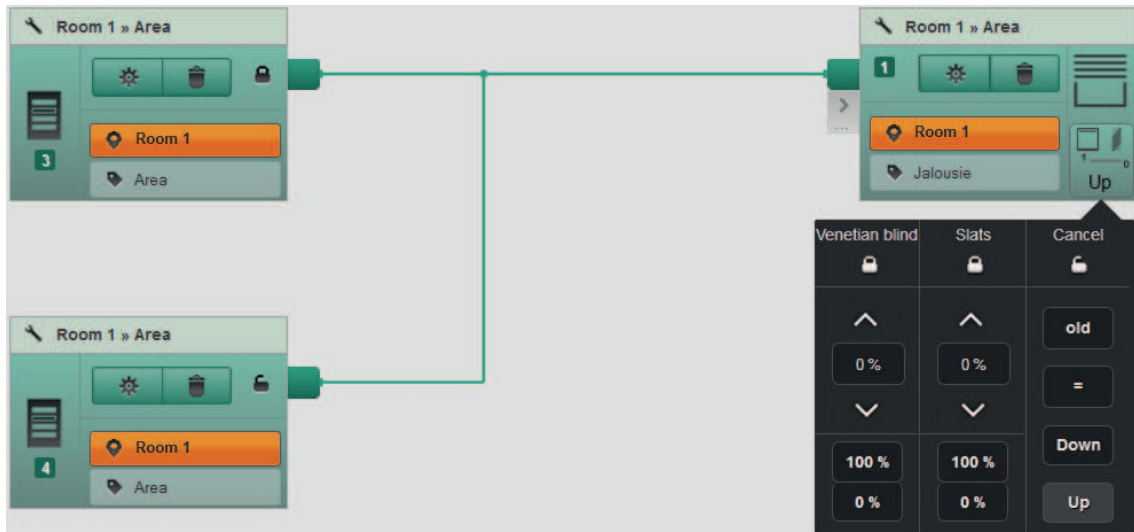


Figure 59: Assigning the actuator values for recalling and removing the disabling scene

## 14.5 Creating threshold value scenes

The threshold value scenes for sun protection, twilight and wind alarm can be created on a scene plan. Threshold value scenes are triggered by falling below or exceeding a limiting value and control connected actuator channels.

The threshold value scenes for twilight and sun protection can be recalled via two sensor channels of the sun sensor. For example, a threshold value scene is triggered when a threshold value is exceeded. The actuator reactions to take place when the threshold value is exceeded or fallen below are set on the actuator channels. A scene plan is necessary for each sensor channel of a sun sensor.

The following rules apply to the scenes:

- In a plan with threshold value scenes, additional sensor channels of the same scene type and actuator channels can be added at a later time.
- It is possible to set the behaviour of the actuators when the scene is recalled and removed.
- The priority of the scene is set separately on each actuator channel in the **Behaviour** tab of the **Settings** window.

### Presettings of priorities

Sun protection	Priority 0, no priority
Twilight	Priority 0, no priority
Wind alarm	Priority 3


As soon as a priority has been set for the scene, operation of the appropriate actuator channels is blocked for the length of the scene recall. The exception to this is the recall of another scene with the same or higher priority. The priority can be set in 4 levels.


- i** If a priority is assigned to a scene, the parameter **Behaviour after end of disabling function** is taken into account for the behaviour of the actuator after the disabling function.

### Creating a threshold value scene with sun sensor

- Create and name the plan for the scene.
- Select the **+** button in the device tile of a sensor.  
The **Select channel** selection window is opened.
- Select channel 1 for sun protection or channel 2 for twilight and add them to the plan using the **+** button.

In the plan, the scene type switches to the selected scene type.

- Select the actuator channels and add them to the plan.
- Interconnect the sensor and actuator channels.
- Set the actuator values for recalling and removing the scene. To do this, click the extension of the device tile of the actuator and set the values for Recall **1** and Remove **0** of the scene (Figure 60).
- If necessary, set the priority by selecting  button of the device tile. In the appropriate channel, set the **Priority...** parameter of the selected scene type.

- i** The behaviour of the actuator after the removal of a scene with priority can also be set via the parameter **Behaviour after end of disabling function** of the actuator. To do this, open the **Settings** window using the  button of the device tile and set the parameter of the appropriate channel. This behaviour applies to all the plans in which the actuator channel is used. As soon as a priority greater than 0 is set, the padlock icon appears in the extension of the device tile when setting the actuator values.

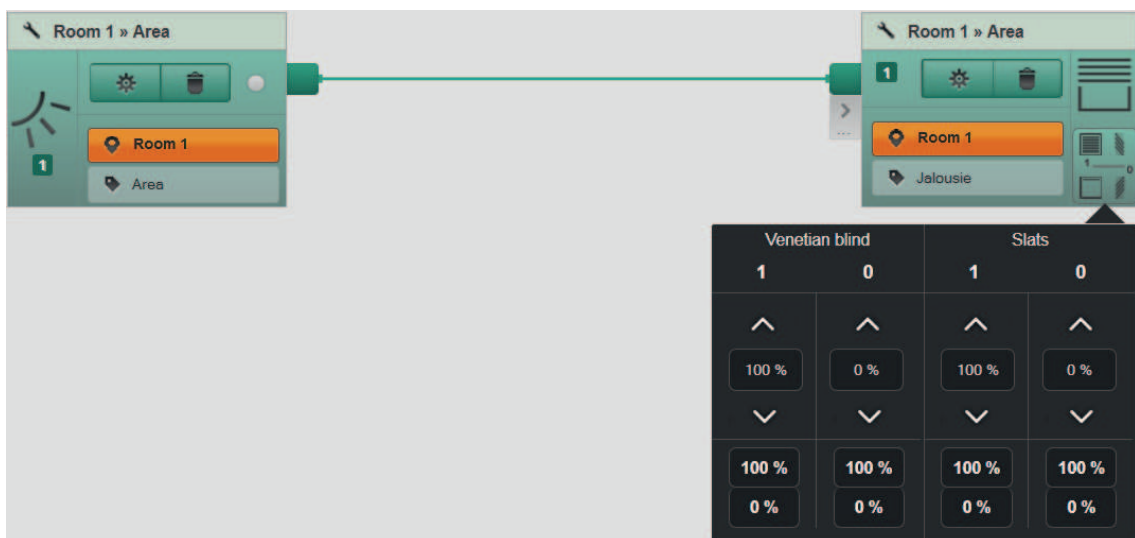


Figure 60: Assigning the actuator values for recalling and removing the threshold value scene - example sun protection

## 14.6 Enabling a scene for visualisation

If a scene is to be recalled using the visualisation and scene values can be changed, the plan of the scene must be made visible for the visualisation.

- i** A maximum of 16 scenes as well as the threshold value and disabling scenes and the All on/off scenes can be made visible for the visualisation.

### Enabling a scene for visualisation

- Switch **Visible for visualisation** to on.  
The scene is visible in the visualisation. The scene name is applied for the visualisation.

- i** If the Visible for visualisation setting is switched to Off, the scene will not be visible in the visualisation.

## 15 Diagnostics view

In the **Diagnostics** view, telegrams that are transmitted between device channels are recorded. The telegram recording can run for several hours in the background. The client does not have to be connected to the eNet server for this. Up to 2,000 telegrams can be recorded; after that the oldest entries are overwritten. The telegram recordings can be exported for an evaluation of the telegram traffic.

Applications for telegram recording:

- Test for whether a channel is transmitting
- Evaluate telegram exchange between the sensor and actuator channel
- Quantitative evaluation of telegram traffic, e.g. proportion of third-party telegrams

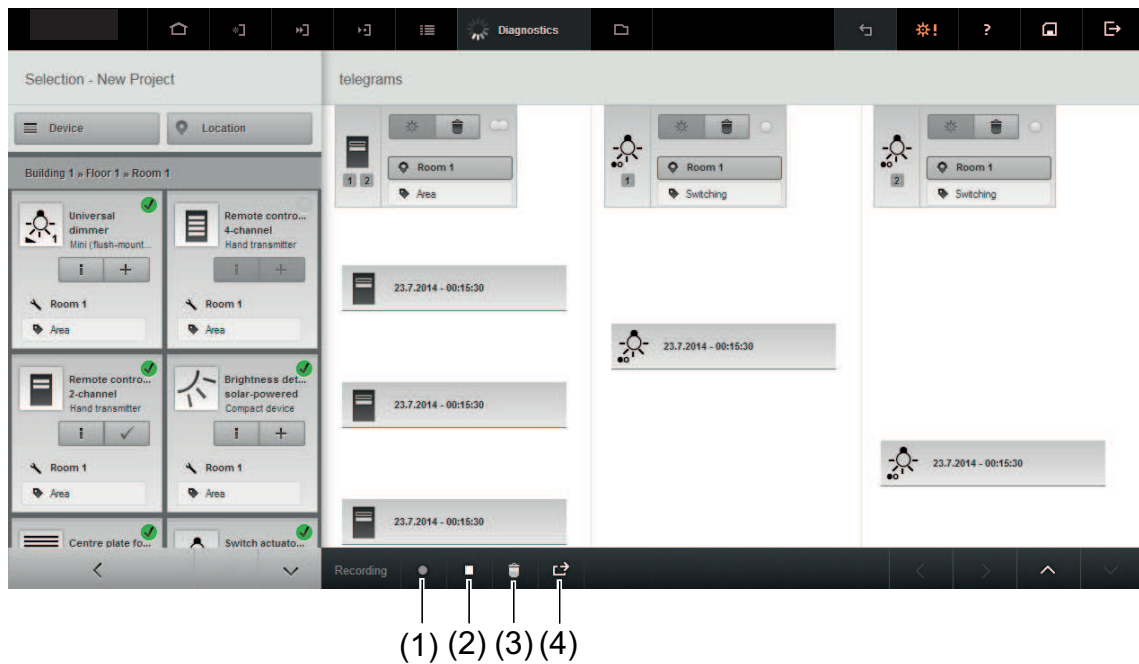


Figure 61: Diagnostics view - Telegram recording

- (1) Start telegram recording
- (2) Stop telegram recording
- (3) Clear memory
- (4) Export telegrams

### 15.1 Record and delete telegrams

Up to 10 channels can be selected for telegram recording. To record all telegrams received from the eNet server, no channels must be selected, but the telegram recording must be started directly instead.

- i** During telegram recording, it is possible to continue working in the other views of the project design.

#### Record telegrams

- Select the filter and installation location in order to limit the selection of devices if necessary.
- Select the device or channel for the telegram recording using the **+** in the device tile.
- i** In the case of the channels for the All on/off scenes, the channel provided for this must be added.
- Select **Start** (Figure 61).



A maximum of 50 telegrams are displayed.

- Stop telegram recording using the **Stop** button.

**i** The telegram recording can be continued using the **Start** button.

The date and time of the telegrams are displayed in the result of the telegram recording. If the telegram was transmitted via a repeater, this is indicated by the **R** icon behind the date and time.

### Clearing the telegram memory

- Select **Clear** (Figure 61).  
The recorded telegrams are deleted permanently.

## 15.2 Export telegrams

The telegrams can be exported as a table in csv format in order to perform evaluations in other software (e.g. MS Excel). In the table, the information from the telegram recording (time stamp and telegram transmitted via repeater) is supplemented by additional information from the project.

The following information on each telegram is listed line by line in the table.

- Time stamp: Time when the eNet server received the telegram
- Device UID: freely assigned device-specific number
- Serial number: Serial number of the device that can also be viewed in the **Information** window
- Device type: Abbreviation of the device name that has no relevance
- Device name: The device name, among other things, is displayed in the device tile
- Installation location and area: Installation location and area of the device
- Channel number: Channel number of the device channel that has transmitted the telegram
- Channel name: The channel type is displayed for sensors, the operating mode for actuators
- Action location and action area: Action location and action area of the actuator channel
- Repeater: Indication showing whether the telegram was received via a repeater

### Procedure:

- Select **Export telegrams** (Figure 61).  
A table is generated and saved locally on the client.

### Evaluation of the telegram recordings

- Cumulative occurrence of external telegrams can be a possible cause for faults in the system. External telegrams are recorded by the diagnostics and can be recognized by the fact that they only have one time stamp.
- Individual actuators or sensors can be examined as to whether they transmit telegrams. Assuming that the eNet server is within range, device faults can hereby be excluded.
- If no telegrams are recorded, the cause can be due to the fact that the range between the eNet server and device (actuator and/or sensor) is not sufficient. The use of repeaters can ensure better telegram reception. The measurement can then be repeated with an installed repeater.

## 16 Project view

Up to ten projects can be created and managed in the **Project** view. One project is always activated. Projects can be exported, imported and printed. If a project is no longer required, the project data can be exported, for example, and the project then deleted.

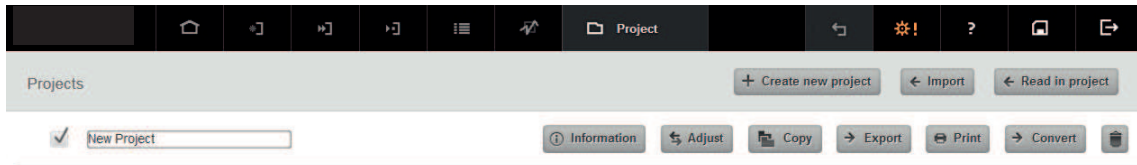


Figure 62: Project view (example)

### 16.1 Create new project

If the **Create new project** function is selected, a window opens, in which the project name can be entered. A new project is created and activated after input and confirmation of the project name. Information on the installation engineer is transferred automatically from the configuration management for the new project (see chapter 7.7. Details on the installation engineer).

**i** To change the project name, highlight the project name and overwrite it.

### 16.2 Manage project information

The **Information** button opens a text box, in which information on the project, e.g. customer contact data, can be entered. Headings, which can be changed or deleted, are added as an aid. Information on the installation engineer is transferred automatically from the configuration management for the new project (see chapter 7.7. Details on the installation engineer).

### 16.3 Activate project

To edit a project, it must be activated by placing a checkmark in the box in front of the appropriate project name. The most recently activated project is closed. An active project is always necessary in the **Project** view for the operation of the eNet server.

If there are projects on the eNet server that were created with an older version, these are indicated by an exclamation mark in the project view and migrated automatically when activating.

**i** The migration of a project cannot be undone. Therefore, it is advisable to make a backup of the project before starting a migration.

### 16.4 Copy project

The **Copy project** function can be used for the following applications:

- Creating a project template with catalogue devices
- Creating a project copy from an existing project
- Creating a catalogue project from an existing project



## 16.4.1 Creating a project template with catalogue devices

The **Copy project** function can be used to create additional project templates with catalogue devices from a catalogue project. The project copy can be adapted and catalogue devices can be replaced with devices from the installation. The template can be used for other projects.

### Procedure:

Precondition: A project with catalogue devices has been created.

- Select the project with the catalogue devices.
- Select the **Copy project** function.  
A window opens, in which the project name can be entered.
- Enter the name for the project template and accept it with **OK**.  
A copy of the project is created. The building structure, devices with settings, connections and scenes are applied from the copied project.

## 16.4.2 Creating a project copy from an existing project

The **Copy project** function can be used to create a project copy with devices from the installation, in order to try out changes in the project in the installation. For example, the impact of logic functions in the installation can be tested. If the changes should not be applied, the previous state can be restored by comparing the project of the installation with the original project.

### Procedure:

Precondition: A project has been created with devices from the installation.

- Select the project to be copied.
- Select the **Copy project** function.  
A window opens, in which the project name can be entered.
- Enter the name for the project copy and accept it with **OK**.  
A copy of the project is created. The building structure, devices with settings, connections and scenes are applied from the copied project.

**i** No device should be removed or added, since the original project can no longer be compared and thus cannot be further processed anymore if there are too many changes in the copies.

## 16.4.3 Creating a catalogue project from an existing project

To use a project with project-designed devices from the installation as a basis for other projects, a project copy with catalogue devices can be generated from this project. Two steps are required for this, which are described below.

### Procedure:


Precondition: A project has been created with devices from the installation.

- Select the project to be copied.
- Select the **Copy project** function.  
A window opens, in which the project name can be entered.
- Enter the name for the project template and accept it with **OK**.  
A copy of the project is created. The building structure, devices with settings, connections and scenes are applied from the copied project.
- Activate the copied project.
- Select the **Convert** function.  
A new project is created. The devices from the installation are replaced by catalogue devices. The device settings remain intact.

**i** The new project has no reference to the copied project and cannot be reset to the original state without considerable effort.

## 16.5 Import and export project


Project data can be exported for archiving purposes, for example. Similarly, project data can be imported to an eNet server and integrated into the project design in order to edit the project.

-  Imported projects created with a more recent version than the version installed on the eNet server cannot be activated. An update of the server must be performed beforehand in order to use these projects with this eNet server.

### Export project

- Select the **Export** button.  
A dialog for saving the project appears. The project data is saved on the client as an iex file.

### Import project

- Select the **Import** button.
-  If the project already exists, the project can be overwritten or a copy of the project must be created beforehand.  
A selection dialog opens.
- Select project file for the import and choose **Import**.  
The client imports the project into the eNet server and loads it.


## 16.6 Print project

Using the **Print** button, it is possible to create project documentation in PDF format and then print it. You can select via a selection window whether all or only certain parts of the documentation are created.


The documentation contains the following information:


- Project name and project information
- Project overview: Building structure with plans, devices
- The sum total of all direct device connections of the project and each plan
- Building structure
- Plans of the connections
- Plans of the scenes
- Device list: Device with order number and serial number, installation location and area, parameter settings
- Configuration of the eNet server
- The result of a signal quality measurement
- Device parts list with order numbers
- Notes on the device which can be entered in the **Information** window

### Procedure:

- Select **Print**.  
The documentation generated is provided as a PDF file for download in a separate window.
-  If the browser used supports a popup blocker, this must first be deactivated.

## 16.7 Delete project

The project is deleted using the  button. All the data for this project is deleted permanently.

-  If devices exist in the project, these devices can no longer be integrated in other projects after the deletion operation. Integration into another project is only possible after a manual reset of the device.

If an activated project is deleted, there is the option of creating a new project or activating a new project. An inactive project is deleted directly after confirmation of the security query.

## 16.8 Read in project

The **Read in project** function allows devices, commissioned manually or using another eNet server, to be read in as a project and saved.

In this procedure, parameters, connection data and scene data are transmitted, and plans for connections and scenes are generated. In the case of connections, a plan with all the sensor channels to be controlled is created for each actuator channel. In the case of scenes, a plan with all the connected actuator channels is created for each sensor channel. The plans are named according to the installation location and, in the case of actuator channels, the channel type, e.g. dimming, is added.

The project can then be edited in the project design like any other project.

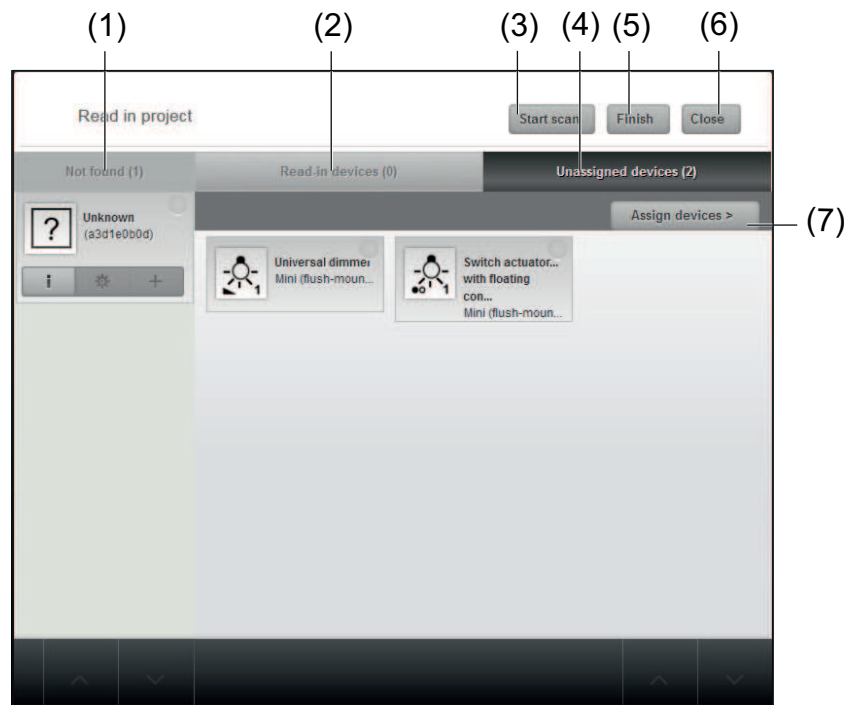


Figure 63: Read in project window

- (1) Tab with devices that were not found
- (2) Tab with read-in devices
- (3) **Start scan** function: Scan can be started to read-in additional devices
- (4) Tab with unassigned devices
- (5) **Finish** function: Plans for connections and scenes are created
- (6) Close **Read in project** window
- (7) **Assign devices** function: Change to the **Devices** view to assign devices to their installation locations

The following chapters describe the processes for reading in a purely manually-commissioned eNet system and an eNet system commissioned with another eNet server.

### 16.8.1 Reading in a manually-commissioned system

When a manually-commissioned eNet project is read in, device data, such as the setting on the operating mode selection switch, parameters, connection and scene data, is transmitted.

Since no building structure was created in a manually-commissioned system, a building structure must be created and devices assigned to their installation location.

#### Procedure:

- Select **Read in project**.

- A new project is created and a project name suggested and highlighted.
- Enter the project name and confirm it with ENTER.
- Switch a device of the project to Programming mode so that it is found in the system scan.  
When the first device is found, a query appears asking whether the project for the found device should be read-in.
- Select **Use device** to add the device to the project.
- ❗ If **Ignore device** is selected, other found devices are suggested for reading-in.
- Switch all the remaining devices of the project to be read-in to Programming mode or switch on their power again.  
The most recently found device and the number of devices found is displayed in a window.
- Select **finish the scan and Read-in devices**.  
A window with the devices that were found is opened.
- Select devices that should be read-in and select **Use devices**.

All the selected devices are listed in the **Unassigned devices** tab (Figure 64).

- ❗ Connected devices not found in the scan are displayed in the **Not found** tab as unknown devices. For better identification, all connections found for this device can be displayed with the i button on the tile of the unknown device. To read in an unknown device, it must be switched to programming mode or the voltage must be restored and a scan started. If the unknown device is not currently available, it can be added to the project later via a system scan (see chapter 12.2.5. Adding device with data). The connection data in the connected devices remains unchanged.
- ❗ In the system overview, it is possible to display the devices with unknown connections or to delete the unknown connections (see chapter 18.12. Displaying and deleting unknown devices) It is also possible to delete the connections to unknown devices in the **Settings** window of the devices (see chapter 9.2.5. Delete connection).

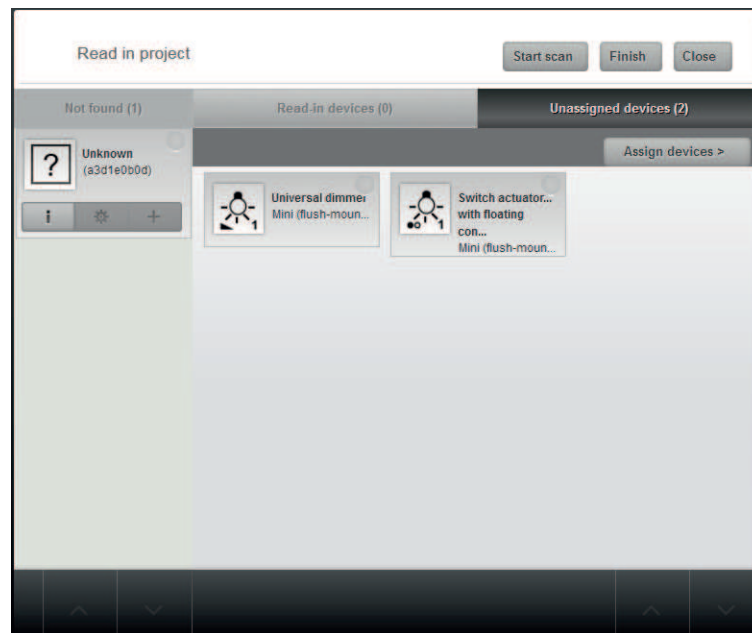


Figure 64: Found devices - not yet assigned to their installation location

- Select **Start scan** to read-in additional devices if necessary.
- Select **Assign devices** to assign the devices to their installation locations.  
The system switches to the **Devices** view. The devices added to the project are listed in the selection box.

- i** If the **Exit read-in mode and finish** function is selected here, the devices and plans are created in an unknown room.
  - Select **Add building** to create the building structure.  
The system switches to the **Building** view.
  - Create the building structure (see chapter 11.1. Adding a building, floor or room).  
When the building structure has been created, the devices can then be assigned to their installation locations.
  - Select **Assign devices** to switch to the **Devices** view.  
The read-in device are contained in the selection and can be added to their installation locations.
  - Assign the devices to their installation locations (see chapter 12.2.2. Adding a new device).
  - If necessary, select **Resume reading-in** to change to the **Read-in project** window.
  - Select **Exit read-in mode and finish**.  
All the plans for connections and scenes are created and the system switches to the overview. The new devices and plans for connections and scenes are displayed in the overview.

### 16.8.2 Reading in a manually-commissioned system with the eNet system

When reading in an eNet project that was commissioned with another eNet server, the building structure and device data as well as the setting on the operating mode selection switch, parameters, connection and scene data are transmitted. A plan is generated for each actuator channel of connections, or for each sensor channel for scenes. The plans are named using the actuator or sensor designation.

- i** Function modules cannot be read in because they are a component part of the other eNet server.

#### Procedure:

- Select **Read in project**.  
A new project is created.
- Enter the project name and confirm it with ENTER.
- Switch a device of the project to Programming mode so that it is found in the system scan.  
When the first device is found, a query appears asking whether the project for the found device should be read-in.
- Select **Read in project from this device** to add the device to the project.
- i** If **Search for other device** is selected, other found devices are suggested for reading-in.
  - Switch all the battery-powered devices of the project to be read-in to Programming mode or switch on their power again.  
The most recently found device and the number of devices found is displayed in a window.
- Select **finish the scan and Read-in devices**.  
The devices are created and the device data is read-in.
- i** The scan result is deleted with **Discard scan** and the **Read-in project** window is opened.  
A new scan can be performed.  
The **Read-in project** window is opened and the devices found are displayed in the **Read-in devices** tab (Figure 65).
- i** Connected devices not found in the scan are displayed in the **Not found** tab as unknown devices. For better identification, all connections found for this device can be displayed with the **i** button on the tile of the unknown device. To read in an unknown device, it must be switched to programming mode or the voltage must be restored and a scan started. If the unknown device is not currently available, it can be added to the project later via a system scan (see chapter 12.2.5. Adding device with data). The connection data in the connected devices remains unchanged.

- i In the system overview, it is possible to display the devices with unknown connections or to delete the unknown connections (see chapter 18.12. Displaying and deleting unknown devices). In the **Settings** window of the devices the connections to unknown devices can also be deleted (see chapter 9.2.5. Delete connection).
  - Select **Start scan** to read-in additional devices.

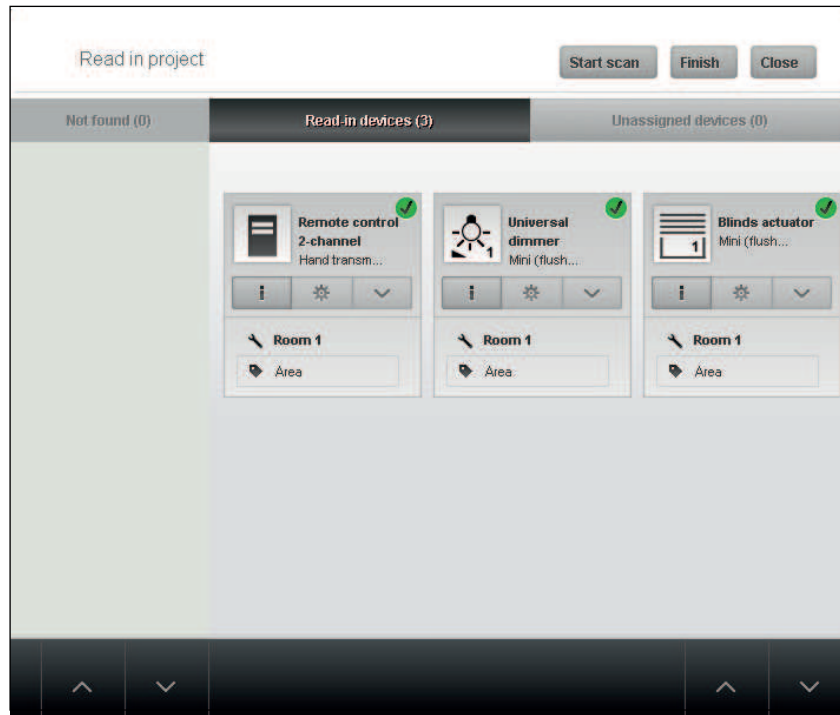


Figure 65: Found devices - already assigned to their installation location

- Select **Finish** to create the plans and select the **Read-in project** function to exit. All the plans for connections and scenes are created and the system switches to the overview. The new devices and plans for connections and scenes are displayed in the overview.

## 16.9 Compare project

The **Compare** function can be used to compare an eNet installation with the project saved in the eNet server.

The devices of the eNet system are compared with the project saved in the eNet server. If the installation is identical with the project, a positive message will be returned.

If there are any differences, for example due to changed parameters or states of operation, the project can be read into the eNet server from the installation or the project from the eNet server can be restored in the installation. The devices that do not match are listed and can be identified based on the product description and installation location.

- i If the changes in the installation are so extensive that a project comparison is not possible, an appropriate message is displayed. In this case, the project can be read-in once again via the **Read-in project** function (see chapter 16.8. Read in project).

The following changes in the installation are taken into account during a project comparison:

- New connections created through manual commissioning
- New devices added
- Devices removed
- Changes to parameters and operating mode

## Procedure:

- Activate the appropriate project.
- Select **Compare**.

**i** Battery-operated devices must be actuated.

The **Read in project** window is opened and the devices found are compared with the devices from the project.

The devices from the project are listed in the left-hand column. If a device is found using the system scan, it is removed from the left-hand column and placed in the **Read in devices** tab. If new devices are found, they are listed in the "Unassigned devices" tab (Figure 63).

**i** If no device is found, it can be removed from the project or retained in the project without updating the device data using the **Retain devices** function. The project comparison can then be continued.

The devices, parameters, connection data and scene data of the installation are compared with the devices and device data of the project. If there are differences, you can choose whether all the data from the installation is to be transferred for the project or whether the project is to be written back into the installation.

- Select **Write data** to transmit the data from the project to the devices of the installation and to undo the changes in the installation.
- Select **Analyse**.

Data from the project is transferred to the installation.

- Select **Read-in data** to import the data from the installation to the project.
- Select **Analyse**.

Plans for connections and scenes are created or adapted. The new devices and plans for connections and scenes are displayed in the overview.



## 17 Overview

This view provides an overview of the active project. Devices, connections and scenes of a building element are displayed in the appropriate tabs.

The following functions are possible in this view:

- Display devices, connections and scenes of the active project
- Switch to the connections and scenes of a device
- Switch to the installation location of a device
- Localise devices in the installation
- Localise devices in the project design interface
- Shifting the device within the building structure

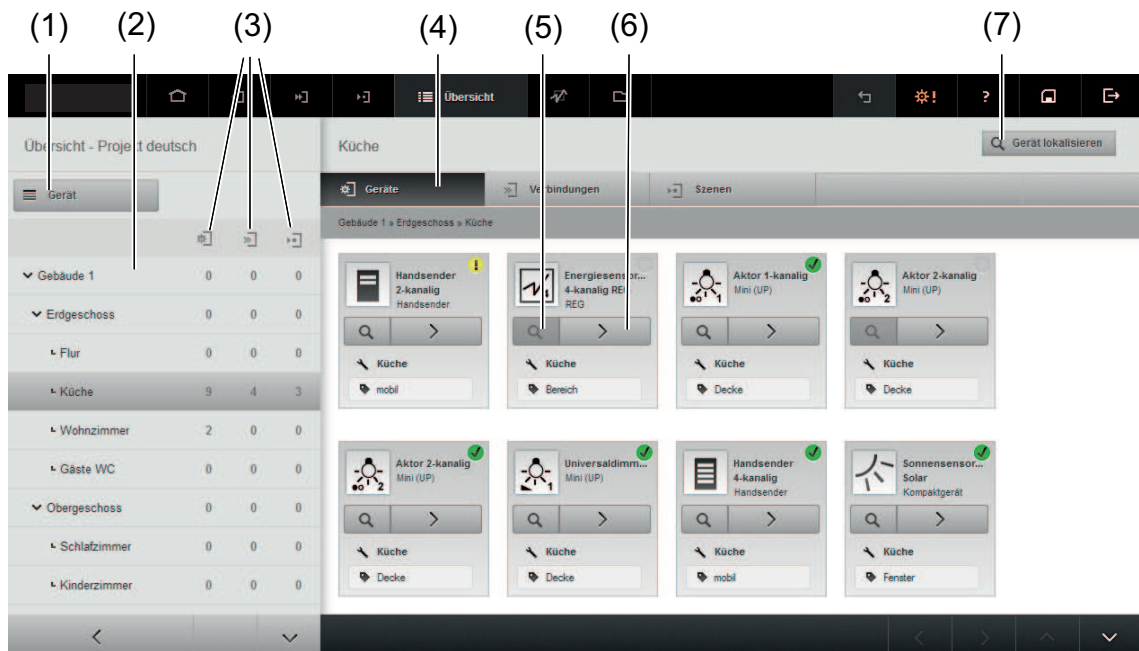


Figure 66: Overview - Devices tab

- (1) Filter
- (2) Building structure of the active project
- (3) Number of devices in the building, in connections and in scenes
- (4) Devices, Connections and Scenes tabs
- (5) Localise device in the project design interface
- (6) Navigation to connections, scenes and installation location
- (7) Localise device of the installation

- i** It is possible to selectively limit the displaying of devices and plans using a filter, e.g. only actuators are displayed.
- i** All the devices contained in the results list of the system scan, and which have therefore not yet been added to an installation location, are displayed under **Not assigned** in the building structure.
- i** If new devices are transferred from the installation to the project at a later time and new connection and scene plans are generated, these can be displayed in the overview using the **Newly created** filter.

### 17.1 Display devices

The devices of the active project can either be displayed for the entire building or by floor or room.



**Procedure:**

- Select the **Devices** tab.
- Select an element of the building structure, e.g. corridor.
- If necessary, use a filter, e.g. All actuators.  
The devices contained in this element of the building structure are displayed.

**i** It is possible to scroll through the building structure using the arrow keys.

Using the button in the device tile, it is possible to navigate to the plans in the **Connections** and **Scenes** views, on which the channels are connected.

**i** The installation location of the device can be changed using the installation location text box. The building structure opens by selecting the installation location. A room can be selected and the device can be moved to the room.

## 17.2 Display connections

The plans of the connection of the active project can either be displayed for the entire building or by floor or room.

**Procedure:**

- Select the **Connections** tab.
- Select an element of the building structure, e.g. corridor.
- If necessary, use a filter, e.g. All actuators.

**i** It is possible to scroll through the building structure using the arrow keys.

The plans of the connections contained in this element of the building structure are displayed as a list.

**i** It is possible to navigate to the plans using the arrow keys.

## 17.3 Display scenes

The scenes of the active project can either be displayed for the entire building or by floor or room.

**Procedure:**

- Select the **Scenes** tab.
- Select an element of the building structure, e.g. corridor.
- If necessary, use a filter, e.g. All actuators.

**i** It is possible to scroll through the building structure using the arrow keys.

The scenes contained in this element of the building structure are displayed.

**i** It is possible to navigate to the scenes using the arrow keys.

## 17.4 Localising a device

It is possible to assign a device of the installation to the programmed device using the **Localise device** function. It is possible to identify a device in the project design and in the installation.

### 17.4.1 Localising a device of the installation in the project design interface

**Procedure:**

- Select **Localise device** (Figure 66) button.


The **Localise device** window appears with the request to actuate the device.

**i** A battery-operated device, which has not been actuated for a considerable time, must also be actuated once in advance.

- Actuate the device.

The device found is displayed in a window (Figure 67).

**i** To localise an additional device, press the **New search** button.

- i** To switch to the plans of the installation location of the device, press the  button.

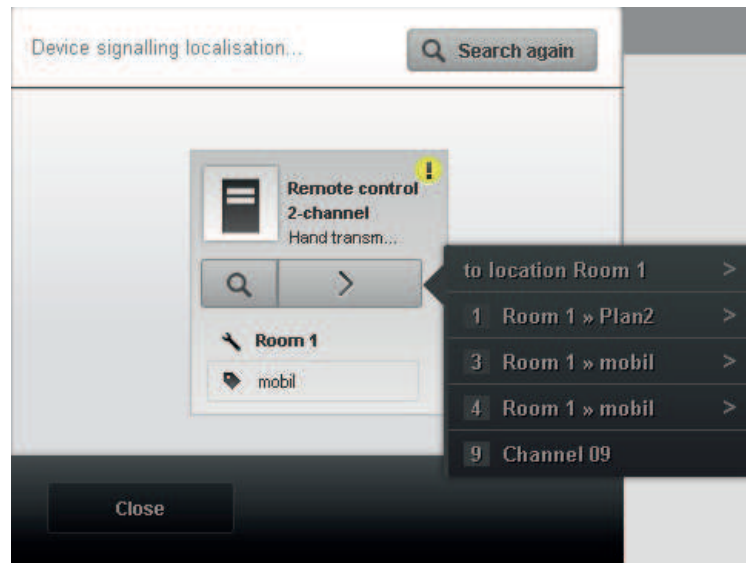



Figure 67: Localised device with navigation bar (example)

### 17.4.2 Localising a device of the project design interface in the installation

#### Procedure:

- Select the  button in the device tile (Figure 66).

- i** A battery-operated device, which has not been actuated for a considerable time, must also be actuated once in advance.

A window opens with the device tile. Depending on the actuator type, loads may be actuated for localisation. The LED flashes red for sensors.

### 17.4.3 Repair Function

If, for example, a factory reset is performed on a device included in a plan, the eNet server can no longer reach the device. In the device tile, this is indicated by a red symbol (see chapter 3.4.2. Configuration status of the devices). The eNet server can reach the device via the Repair function and reintegrate it into the project with all set parameter and connection information.

#### Procedure:

- Select the **Magnifier** button in the device tile of the reset device (Figure 66).  
The **Availability of the devices** window appears.
- Since the eNet server cannot reach the device, select **Cancel**.  
A window appears displaying a message that the device cannot be reached.
- Select **Restore**.

- i** Battery-operated devices may have to be actuated.

The **Device localised** window opens with the device tile (Figure 67). The device can be reached again via the eNet server. All the parameter and connection data is written to the device so that it responds as it did before the factory reset.

## 18 System overview

In the system overview, the following actions can be performed in the active project:

- Display the update for the eNet server and switch to configuration
- Perform device updates
- Program complete project
- Program devices to which changes were made
- Transmit the plans of the connections to the installation
- Deactivate the plans of the connections for the installation
- Transmit scenes to the installation
- Deactivate scenes for the installation
- Make all scenes visible for visualisation
- Deactivate the timers created via the visualisation
- Deactivate presence simulations created via the visualisation
- Deactivate metering recordings created via the visualisation
- Log out other users
- Perform signal quality measurement of all plans
- Display devices with weak battery
- Display devices with unknown connections
- Delete unknown connections
- Show the Help dialogs again

The system overview is opened using the  button in the toolbar.

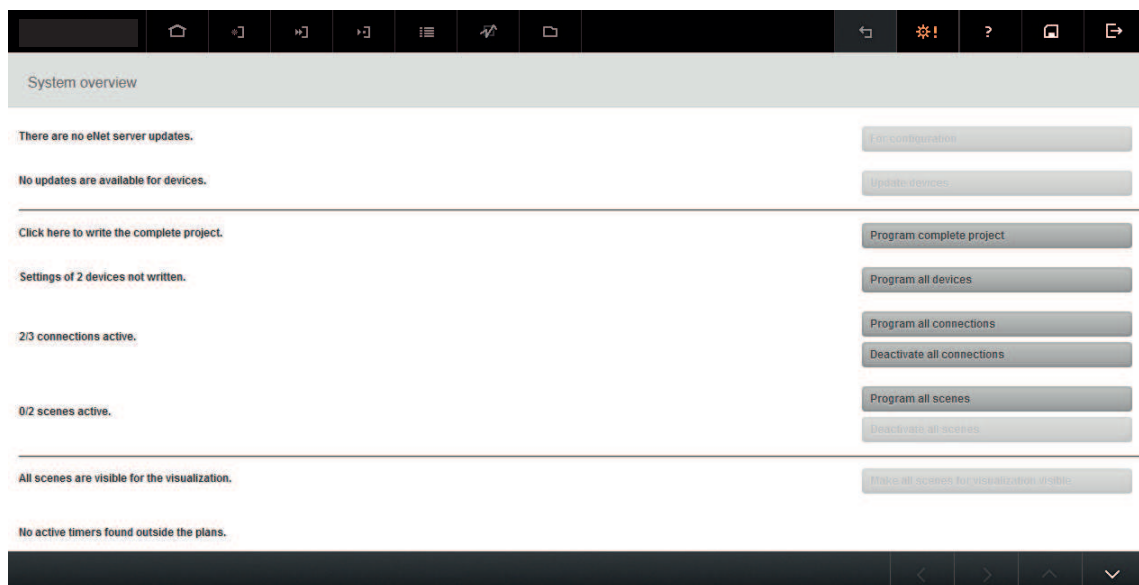



Figure 68: System overview

### 18.1 Displaying eNet server update

In the **Configuration management**, it is possible to preset the automatic search for an update for the eNet server. If an update for the eNet server is available, then it is displayed here. It is then possible to switch to the **Configuration management** using the **To configuration** button in order to perform the update.

### 18.2 Performing a device update

The **Update devices** function allows an update to be performed on all the devices in the system, for which a new device version exists.

-  The hand-held transmitter with a display must be updated with the power supply connected.

- i** Before an update of the solar sun sensor, the charging level of the energy storage is checked. If the charging level is too low, no update is started. The sun sensor must first be charged in a very bright place beforehand.
- i** If connections were added to the project through manual commissioning, then a project comparison must be carried out before an update.

## 18.3 Program project

The **Program project** function allows all plans from the **Connections** and **Scenes** views and all changes made to the devices, e.g. parameter settings, to be programmed to the devices of the installation in one step.

## 18.4 Programming all devices

This function allows changes made to the devices, e.g. parameter settings, to be programmed to the devices of the installation in one step.

## 18.5 Programming or deactivating all connections

The **Program all connections** function allows all the plans of the connections that have been newly created or changed to be programmed to the devices of the installation in one step. To deactivate all the plans of the connections, select the **Deactivate all connections** function.

## 18.6 Programming or deactivating all scenes

The **Program all scenes** function allows all the plans of the scenes that have been newly created or changed to be programmed to the devices of the installation in one step. To deactivate all the scenes, select the **Deactivate all connections** function.

## 18.7 Make scenes visible for visualisation

Scenes, with the exception of the threshold value and disabling scenes and the All on/off scenes, can be made visible in the visualisation with this function.

The number of scenes to be made visible is limited, is offered if necessary, so that only the active scenes can be made visible.

## 18.8 Displaying applications of the visualisation

If applications such as timer, presence simulation and metering recordings are activated in the visualisation, it is displayed in the system overview.

## 18.9 Logging out other users

This function can be used to log out all other users simultaneously.

## 18.10 Perform signal quality measurement of all plans

The signal quality measurement of all plans of the connections and scenes views can be performed simultaneously using the **Start signal quality measurement** function. During the measurement, work with the project design interface is limited. Buildings can still be created, catalogue devices added and connections and scenes created. If the signal quality measurement has been completed, the results can be opened using the **Display signal quality measurement result** button.

- i** In the **Project** view, the results of the signal quality measurement can be printed out (see chapter 16.6. Print project).

## 18.11 Display devices with weak battery

All the battery-operated devices with a weak battery can be displayed using the **Display devices** button. The battery status is polled by the client every 2 minutes.

- i** The battery status is displayed in the **Information** window of the device.

## 18.12 Displaying and deleting unknown devices

The devices of the project connected to unknown devices are displayed using the **Display devices with unknown connections** function.

The connections to the unknown devices are deleted using the **Delete unknown connections** function.

## 18.13 Displaying help dialogues

Help dialogues can be activated again using the **Display dialogues again** button.

## 18.14 Other settings


The applications described below can be accessed using the **Display settings** button.

### Toggle the language of the project design interface

The language of the project design interface can be toggled both in the configuration and here.

### Setting character encoding for languages

Character encoding must be set for the texts entered in the project design interface, e.g. action location and action area. Based on the character encoding, the entered texts are converted and written to the devices and vice-versa. The **Western European** character encoding is preset for the German language.

-  The language and character encoding can also be set in the configuration management (see chapter 7.6. Entering the location and selecting the language).

### Displaying messages of the project design system

Messages of the project design system can be displayed to provide support for the eNet server.

### Loading messages of the eNet server

Messages of the eNet server can be downloaded for the support of the eNet server.

### Setting the level for messages

There are different levels for the messages. The **Serious** level, for which only error messages are taken into account, is preset. The other levels, **Warnings**, **Information** and **Debug**, also take other messages into account. The range of the messages increases from the **Serious** level to the lowest **Debug** level.

-  The setting of the levels applies to the messages of the project design system and eNet server.

### Communication Timeout

If the response time of the eNet server to a request of the project design interface is greater than the set value for the communication timeout, then the process is aborted and an error message is generated. 100,000 ms is preset.

### Delete local storage































The browser memory for the project design interface can be deleted with this function.










## 19 Appendix

### 19.1 Index

<b>A</b>		
Action area.....	15	
Action location.....	15	
action modules.....	48	
AND module.....	41	
Astro function.....	44	
<b>B</b>		
Battery-operated devices.....	34	
<b>C</b>		
change any password.....	23	
channel type.....	64	
circuit changeover counter.....	37	
Clearing the telegram memory.....	79	
comparator module.....	41	
configuration status.....	13	
<b>D</b>		
Deactivate metering recordings.....	91	
Deactivate presence simulations.....	91	
DHCP.....	30-31	
DNS Server.....	30	
<b>E</b>		
encryption type.....	19	
energy sensors.....	8	
<b>H</b>		
https .....	24	
<b>I</b>		
Installation area.....	13	
Installation location.....	13	
IP address.....	17,30	
<b>L</b>		
LAN .....	17	
languages.....	28	
location.....	28	
logic module.....	40	
<b>M</b>		
Master dimming.....	72	
<b>O</b>		
operating hours counter.....	37	
operating mode.....	64	
<b>OR module.....</b>		41
<b>P</b>		
parameters.....	8	
password.....	20	
Presence simulation.....	50	
<b>R</b>		
range.....	59	
Remote access.....	32	
Repair function.....	90	
repeater.....	59	
Room scene.....	71	
<b>S</b>		
Subnet mask.....	31	
system time.....	27	
<b>T</b>		
tablet PC.....	8	
telegram recordings.....	78	
timer module.....	44	
<b>U</b>		
update.....	9,26	
username.....	20	
<b>W</b>		
Web browser.....	17	
Wi-Fi network key.....	19	
Wi-Fi parameters.....	18	
<b>X</b>		
XOR module.....	41	

## 19.2 Icons of the project design interface

<b>General icons</b>	
	Add
	Delete
	Copy
	Open selection
	Open file search
	Link to the list of plans containing the channel
	Tiles: Settings of devices and channels; Selection screen: Open the Configuration management
	Information on devices and channels
	Additional functions, e.g. copying, moving or deleting
	Filter for device selection
	Installation location for devices
	Action location for channels
	Installation area for devices, action area for channels
	Display building overview
	Help text for the parameter
<b>Icons of the menu bar</b>	
	Building view
	Devices view
	Connections view
	Scenes view
	Overview view
	Diagnostics view
	Project view
	Undo
	System overview or log-off
	Opens the product documentation of the eNet server or the manufacturer's website
	Save project
	Switch to the selection screen
	User administration: Set password
<b>Connections and scenes view</b>	
	Create connections to all actuator channels automatically
	Create connections manually

	Select channel for signal quality measurement
	Selected channel for signal quality measurement
	Carry out signal quality measurement
	Repeat signal quality measurement
	Labels sensor channel to recall a blocking scene
	Labels sensor channel to remove a blocking scene
<b>Overview view</b>	
	Localising a device
	Opens menu to navigate to connection scene plans or location, in which the device is used
<b>Diagnostics view</b>	
	Repeater is used

## 19.3 Copyright notice and disclaimer

We hereby declare that, on request, we provide our customers with a complete machine-readable copy of the source code of the free software. For this procedure we will charge no more than our cost of physically performing the source distribution on a medium customarily used for software interchange. This offer is valid for three years.

This product incorporates open source software components covered by the terms of third party copyright notices and license agreements contained below.

### **GNU/Linux ver. 3.3.8 armv5tejl**

Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA  
 GPL License Version 2.0: <http://www.gnu.org/licenses/gpl-2.0.txt>

### **BusyBox v1.18.4**

Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA  
 GPL License Version 2.0: <http://www.gnu.org/licenses/gpl-2.0.txt>

### **Apache Felix OSGi 4.2.1**

Copyright (c) OSGi Alliance (2000, 2009)  
 Apache License Version 2.0, January 2004 <http://felix.apache.org/license.html>

### **pax-web-jetty-bundle-2.1.4**

Copyright (c) OSGi Alliance (2000, 2009) Apache License Version 2.0, January 2004  
<http://felix.apache.org/license.html>

### **slf4j-api-1.7.5**

Copyright (c) 2004-2013 QOS.ch MIT License (MIT)

### **Java SE Embedded Runtime Environment**

and all Java based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.



## **GNU/Linux ver. 3.3.8 armv5tejl/ BusyBox v1.18.4**

GNU GENERAL PUBLIC LICENSE Version 2, June 1991  
Copyright (C) 1989, 1991 Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor,  
Boston, MA 02110-1301 USA Everyone is permitted to copy and distribute verbatim copies of  
this license document, but changing it is not allowed.

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.  
The precise terms and conditions for copying, distribution and modification follow.

### **GNU GENERAL PUBLIC LICENSE TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION**

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it,

in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it

contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present

version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

## NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## END OF TERMS AND CONDITIONS

### How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.> Copyright (C) <year>  
<name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) year name of author Gnomovision comes with
ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are
welcome to redistribute it under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which
makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
```

```
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

## **Apache Felix OSGi 4.2.1**

Apache License  
Version 2.0, January 2004  
<http://www.apache.org/licenses/>

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

#### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.



"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that

You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

## END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY

KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

## **pax-web-jetty-bundle-2.1.4**

Apache License Version

2.0, January 2004

<http://www.apache.org/licenses/>

### TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

#### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.



2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely

responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

## END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.


Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

## 20 Parameters of the devices

The following chapters describe the parameters of individual devices, as well as their limits and default settings (highlighted in **bold**). The **Settings** window is opened via the  button of the device and channel tiles. The sequence of parameters mirrors the sequence of tabs in the **Settings** window of the devices and device channels.

### 20.1 Radio hand transmitter

The parameters described below apply to the products **Radio remote control, 1-gang, 2-gang, 4-gang**.

Description	Values	Comment
☰ Device settings		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Channel 1	<b>Rocker</b> Scene	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .
Channel 2 <i>Only for multi-channel devices</i>	<b>Rocker</b> Scene	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .
Channel 3 <i>Only for multi-channel devices</i>	<b>Rocker</b> Scene	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .
Channel 4 <i>Only for multi-channel devices</i>	<b>Rocker</b> Scene	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .
☰ Settings, channel/scene		
Local Operation	<b>On</b> Off	Blocks local operation for the device channel.
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Sum status / transmission repetitions	<b>On</b> Off / transmit 2x...11x Off / transmit 4x (without connection)	<b>On:</b> The transmitter evaluates the received status messages and displays them as a sum status. If individual status messages fail, then the transmitter will repeat its telegram up to three times. <b>Off/Transmit x times:</b> The evaluation and display of the sum status is deactivated. The number of telegram repetitions is prescribed. In this setting, no transmission errors are displayed. <b>Off/Transmit 4x (without connection):</b> Reserved for sensors which transmit without a connection.

### 20.2 Hand-held transmitter with display

The parameters described below apply to the products **Radio remote control, Multi**.

Description	Values	Comment
☰ Device settings		

Manual commissioning	<b>On</b> Off	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Name, list 1 to 10	Free text, maximum 15 characters <b>List 01 to list 10</b>	List designations of List 1 to 10.
Font size	Small <b>Large</b>	Setting of the font size for displaying characters.
Inverted display	Off <b>On</b>	Switch-over between black font on white background and white font on black background.
Language	<b>German</b> English Dutch Norwegian Spanish French	Setting of the display language.
Display brightness	1 to 16 <b>10</b>	Brightness setting of the display.
Clock: Minutes	<b>0</b> to 59	Setting of the minutes for the current time.
Clock: Hours	<b>0</b> to 23	Setting of the hours for the current time.
Date: Weekday	Monday to <b>Sunday</b>	Setting the current day of the week.
Date: Day	<b>1</b> to 31	Setting of the current day for the date display.
Date: Mont	<b>1</b> to 12	Setting of the current month for the date display.
Date: Year	1 to 99 <b>12</b>	Setting of the current year for the date display.
Clock: Summer time changeover	<b>On</b> Off	Clock setting for automatic switch-over to summer and winter time.
Light run-on time	10 to 60 seconds <b>40 seconds</b>	Time for which the display illuminated remains switched after the last button-press. The setting is made in increments of 2 seconds. A factor between 5 and 30 must be entered.
Function, rocker switch 1 to 3	<b>Rocker</b> Scene Master dimming None	Setting of function of the buttons. Setting <b>Rocker switch</b> : Adjacent buttons are combined to form a rocker and work as channel buttons. Setting <b>Scene</b> : Both buttons work as scene buttons. Setting <b>Master dimming</b> : The dimmer actuators in a recalled scene can be dimmed. Setting <b>None</b> : The buttons have no function.
Channel index, left button of rocker switch 1 to 3	In the setting as a rocker switch: 17 to 40 <b>17 to 19</b> In the setting as a scene button: 1 to 16 <b>1 to 3</b>	Connecting the buttons with the desired operating channel. Values 17 to 40 correspond to the channels 1 to 24. Values 1 to 16 correspond to the scenes 1 to 16.

Channel index, right button of rocker switch 1 to 3	1 to 16 <b>1 to 3</b>	Connecting the buttons with the desired operating channel. Values 1 to 16 correspond to the scenes 1 to 16.
☐ Settings, channel		
Local Operation	<b>On</b> Off	Blocks local operation for the device channel.
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Sum status / transmission repetitions	<b>On</b> Off / transmit 2x...11x Off / transmit 4x (without connection)	<b>On:</b> The transmitter evaluates the received status messages and displays them as a sum status. If individual status messages fail, then the transmitter will repeat its telegram up to three times. <b>Off/Transmit x times:</b> The evaluation and display of the sum status is deactivated. The number of telegram repetitions is prescribed. In this setting, no transmission errors are displayed. <b>Off/Transmit 4x (without connection):</b> Reserved for sensors which transmit without a connection.

## 20.2.1 Information window

During channel selection in the **Information** window, the following texts are adapted.

Scene name 1 to 16	Designations of scenes 1 to 16 (maximum 15 characters).
Channel name 1 to 24	Designations of channels 1 to 24 (maximum 15 characters).

**i** The texts are used as channel or scene designations during programming of the hand-held transmitter and are identical with the action area.

## 20.3 Radio wall transmitter

The parameters described below apply to the products **Radio wall transmitter, 1-gang, System 55, 3-gang, System 55**.

Description	Values	Comment
☐ Device settings		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Channel 1	<b>Rocker</b> Scene	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .
Channel 2 <i>Only for multi-channel devices</i>	<b>Rocker</b> Scene	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .
Channel 3 <i>Only for multi-channel devices</i>	<b>Rocker</b> Scene	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .

Channel 4 <i>Only for multi-channel devices</i>	<b>Rocker Scene</b>	Setting the buttons of the channel as channel buttons <b>Rocker switch</b> or scene buttons <b>Scene</b> .
☐ Settings, channel/scene		
Local Operation	<b>On</b> <b>Off</b>	Blocks local operation for the device channel.
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Sum status / transmission repetitions	<b>On</b> <b>Off / transmit 2x...11x</b> <b>Off / transmit 4x (without connection)</b>	<b>On:</b> The transmitter evaluates the received status messages and displays them as a sum status. If individual status messages fail, then the transmitter will repeat its telegram up to three times. <b>Off/Transmit x times:</b> The evaluation and display of the sum status is deactivated. The number of telegram repetitions is prescribed. In this setting, no transmission errors are displayed. <b>Off/Transmit 4x (without connection):</b> Reserved for sensors which transmit without a connection.

## 20.4 Radio universal transmitter

The parameters described below apply to the product **Radio universal transmitter, 2-gang, Mini**.

Description	Values	Comment
☐ Device settings		
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Repeater mode	<b>On</b> <b>Off</b>	In addition to its other functions, the device can be used as a repeater. When the function is switched on, all received telegrams are repeated.
Switching edge E1	Falling <b>Rising</b>	Specifies whether input 1 reacts to a rising or a falling edge. Rising: Control with NO contact push-button Falling: Control with NC contact push-button
Switching edge E2	Falling <b>Rising</b>	Specifies whether input 2 reacts to a rising or a falling edge. Rising: Control with NO contact push-button Falling: Control with NC contact push-button
Operating mode	Scene <b>1-gang switching/dimming/venetian blind</b> 1-gang automatic function 2-gang	Setting of the transmission behaviour suitable for operation concept and the connected operating elements. <b>Scene:</b> 2 scene buttons. Control with push-button contacts. <b>1-gang Switching/Dimming/Venetian</b>



switching/dimming/toggling  
2-gang automatic function  
Scenes for signal contact  
2-gang Venetian blind

**blind:** 1 channel, both inputs operate the same channel. Activation with 2 push-button contacts, e.g. series push-button (2-surface operation).

**1-gang automatic function:** 1 channel, both inputs operate the same channel. Control with 2 switching contacts, e.g. with Venetian blind clock.

**2-gang switching/dimming/toggling:** 2 channels, each input operates its own channel. Each control with push-button contact (1-surface operation).

**2-gang automatic function:** 2 channels, each input operates its own channel. Activation with switching contact, e.g. switch, motion detector, timer.

**Scenes for signal contact:** E1 operates two scenes. When closing and opening, the respective scene is recalled. Control with switching contact.

**2-gang Venetian blind:** 2 channels, each input operates its own channel. Control with push-button contacts (2-surface operation).

☐ Settings, channel/scene

Local Operation            **On**  
   **Off**

Blocks local operation for the device channel.

Manual commissioning    **On**  
   **Off**

Blocks manual commissioning for the device channel. In the **Off** setting, the device can no longer be reset to the factory setting.

Sum status /  
transmission repetitions    **On**  
   **Off / transmit 2x...11x**  
   **Off / transmit 4x (without connection)**

**On:** The transmitter evaluates the received status messages and displays them as a sum status. If individual status messages fail, then the transmitter will repeat its telegram up to three times.

**Off/Transmit x times:** The evaluation and display of the sum status is deactivated. The number of telegram repetitions is prescribed. In this setting, no transmission errors are displayed.

**Off/Transmit 4x (without connection):** Reserved for sensors which transmit without a connection.

## 20.5 Radio switch actuators

The parameters described below apply to the products **Radio switching/momentary-contact actuator 1-gang Mini, 2-gang Mini, 1-gang Mini zero-voltage, 1-gang DRA, Radio switching actuator, 1-gang intermediate plug.**

Description	Values	Comment
-------------	--------	---------

☐ Device settings

Manual commissioning    **On**  
   **Off**

Blocks manual commissioning for all device channels. In the **Off** setting, the device can no longer be reset to the factory setting.



<p>Repeater mode <i>Only for actuators in the Mini and adapter designs</i></p> <p>☐ Settings, channel</p>	<p>On <b>Off</b></p>	<p>In addition to its other functions, the device can be used as a repeater. When the function is switched on, all received telegrams are repeated.</p>
<p>Manual commissioning</p>	<p><b>On</b> Off</p>	<p>Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.</p>
<p>Operating mode</p>	<p><b>Switching</b> Toggling Flashing Continuous on Continuous off</p>	<p><b>Switching:</b> After switching on, the device remains stable in the "On" state, and stable in the "Off" state after switch-off.</p> <p><b>Toggling:</b> The device switches "On" when any channel button of a radio transmitter is pressed and "Off" when the button is released. It is irrelevant whether the "On" or "Off" channel button is pressed.</p> <p><b>Flashing:</b> Switch-on starts the flashing and switch-off stops the flashing. The default flash frequency is 1 Hz. This frequency is also the maximum flash frequency. The flash frequency can be changed using the parameter. The parameter <b>Switch-off delay</b> is used for the pulse time and the parameter <b>Switch-on delay</b> for the pause time.</p> <p><b>Continuous on:</b> The device switches "On" continuously. All operations of radio transmitters and the <b>Prog</b> button are ignored.</p> <p><b>Continuous off:</b> The device switches "Off" continuously. All operations of radio transmitters and the <b>Prog</b> button are ignored.</p>
<p>Local Operation</p>	<p><b>On</b> Off</p>	<p>Blocks the output for operation using the button Prog.</p>
<p>Manual switch-off of the run-on time</p>	<p>On <b>Off</b></p>	<p>Allows manual switch-off of a running run-on time. If the parameter is switched off, then a switch-off command will also switch the actuator on. This parameter is directly connected to the <b>Run-on time</b> parameter.</p>
<p>Switch-on delay</p>	<p><b>0 s ... 24 h</b></p>	<p>The load switches on after a delay. Repeated switch-on commands restart the delay time. If the load has not yet been switched on due to the delay when a switch-off command comes, then the load will remain off. In <b>Flashing</b> operating mode, the pause time is set using this parameter.</p> <p>Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.</p>
<p>Switch-off delay</p>	<p><b>0 s ... 24 h</b></p>	

		<p>The load switches off after a delay. Repeated switch-off commands restart the delay time. If the load has not yet been switched off due to the delay when a switch-on command comes, then the load will remain on.</p> <p>In <b>Flashing</b> operating mode, the pulse times are set using this parameter.</p> <p>Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.</p>
Run-on time	0 s ... 24 h	<p>As soon as a run-on time has been entered, the actuator will no longer remain on permanently, but only for the length of the run-on time. The run-on time is restarted if actuation is repeated. This parameter is directly connected to the <b>Manual switch-off of run-on time</b> parameter.</p> <p>Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.</p>
Behaviour after the end of the disabling function	<p>On</p> <p>Off</p> <p><b>no change</b></p> <p>Last value</p>	<p>Defines the behaviour of the output when a block is removed.</p>
Manual saving of the scene values	<p><b>On</b></p> <p>Off</p>	<p>Disables the saving of the current actuator state (On/Off) as scene value in an actuator for a command via a transmitter.</p>
Behaviour on voltage return	<p><b>Off</b></p> <p>On</p> <p>Last value</p>	<p>Behaviour of the output after voltage return.</p> <p>Mini design: Mains voltage return</p> <p>RMD design: Bus voltage return</p>
Timer behaviour, voltage return	<p><b>Off</b></p> <p>Restart</p>	<p>Specifies whether the timers for switch-on delay, switch-off delay and run-on time remain off after voltage return or whether they restart. Directly connected to the parameters <b>Switch-on delay</b>, <b>Switch-off delay</b> and <b>Run-on time</b>.</p>
Switch-off warning	<p>On</p> <p><b>Off</b></p>	<p>If the switch-off warning is active, the light is not switched off directly. The light goes off 30, 15 and 6 seconds before permanent switch-off. During the switch-off warning, a switch-on telegram effects direct switch-on. It is not possible to terminate the time using a switch-off telegram.</p>
Priority, lock-out protection	<p>0...4</p> <p><b>1</b></p>	<p>Specifies the priority for recalling and removing a scene of type <b>Lock-out protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.</p>
Priority, restraint	<p>0...4</p> <p><b>2</b></p>	<p>Specifies the priority for recalling and removing a scene of type <b>Restraint</b> for</p>

Priority, wind alarm	0...4 <b>3</b>	the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.  Specifies the priority for recalling and removing a scene of type <b>Wind alarm</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, sun protection	0...4	Specifies the priority for recalling and removing a scene of type <b>Sun protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, twilight	0...4	Specifies the priority for recalling and removing a scene of type <b>Twilight</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Switch-off on brightness overshoot	<b>On</b> <b>Off</b>	Allows automatic switch-off according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches off automatically when the brightness setpoint is greatly exceeded. Note: This parameter is not yet active, as a light controller has not yet been implemented.
Switch-on on brightness undershoot	<b>On</b> <b>Off</b>	Allows automatic switch-on according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches on automatically when the brightness setpoint is greatly undershot. We recommend only using the parameter in connection with the parameter <b>Switch-off on brightness overshoot</b> . Note: This parameter is not yet active, as a light controller has not yet been implemented.
Invert switching output	<b>On</b> <b>Off</b>	Inverts the switching output from NO contact function (factory setting) to NC contact function
Minimum switching repeat time	<b>100 ms ... 10 sec</b>	Limits the switching speed of the device by increasing the value, in order to protect the load, for example. Only when the set time has elapsed is switching possible again. The last command during the blocking time is executed after a delay. The switching repeat time starts after each switching operation.
Operating hours	0...65535 h <b>Current value</b>	The time is counted during which the load is physically switched on (relay contact closed). This parameter can be reset to "0", for example after exchanging the load. The <b>Reset</b> button is used to reset the counter to "0". The device must be programmed to apply the change.

## 20.5.1 Information window

During channel selection in the **Information** window, the following settings can be made or values displayed.

**i** The value can be updated using the arrow next to the display values.

Load state	The load can be switched on or off.
Restraint	Display of forced position status.
Switching cycle counter	Display of the switching cycles with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total operating hours	Display of the operating hours since the start of operation.
Operating hours	Display of the operating hours since the last restart in the <b>Settings</b> window.

## 20.6 Radio Venetian blind actuators

The parameters described below apply to the products **Radio blind actuator, 1-gang DRA/1-gang Mini, Radio blind control button, 1-gang**.

Description	Values	Comment
☐☐ Device settings		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Allow extension unit operation <i>Only for shutter cover</i>	<b>On</b> Off	Allows operation via wired extensions.
Repeater mode <i>Only for actuators in the Mini and adapter designs</i>	On <b>Off</b>	In addition to its other functions, the device can be used as a repeater. When the function is switched on, all received telegrams are repeated.
☐☐ Settings, channel		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Operating mode	<b>Roller shutter</b> Venetian blind Awning	<b>Rolling shutter:</b> A rolling shutter or an awning is controlled for which the Fabric-stretching function is required. <b>Venetian blind:</b> A Venetian blind is controlled. <b>Awning:</b> An awning is controlled for which the Fabric-stretching function is required.
Local Operation	<b>On</b> Off	Blocks the output for operation using the <b>Prog</b> button or operation using the Venetian blind cover.
Behaviour on voltage return	<b>No change</b> Configured value	Behaviour of the output after voltage return. Mini design: Mains voltage return RMD design: Bus voltage return
Configured venetian blind position	<b>0%...100%</b>	If the value <b>Configured position</b> is entered for the parameter <b>Behaviour after voltage return</b> , then the blind/shutter position set here is approached.

Configured slat position	<b>0%</b> ...100%	If the value <b>Configured position</b> is entered for the parameter <b>Behaviour after voltage return</b> , then the slat position set here is approached.
Behaviour at end of the disabling function	<b>no change</b> Last value Down Open	Defines the behaviour of the output when a block is removed.
Manual saving of the scene values	<b>On</b> Off	Disables the saving of the current Venetian blind position as scene value in an actuator for a command via a transmitter.
Priority, lock-out protection	0...4 <b>1</b>	Specifies the priority for recalling and removing a scene of type <b>Lock-out protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, restraint	0...4 <b>2</b>	Specifies the priority for recalling and removing a scene of type <b>Restraint</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, wind alarm	0...4 <b>3</b>	Specifies the priority for recalling and removing a scene of type <b>Wind alarm</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, sun protection	0...4	Specifies the priority for recalling and removing a scene of type <b>Sun protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, twilight	0...4	Specifies the priority for recalling and removing a scene of type <b>Twilight</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Slat change-over time Fabric-stretching time	<b>0 ms</b> ... 10 sec <b>300 ms</b> ... 10 s	Absolute time for changing-over Venetian blind slats. The fabric stretching time can also be set here for the Awning operating mode.
Running time	1 ... 600 sec <b>120 sec</b>	Absolute time which the blind/shutter requires from the top to the bottom end position. The entry is essential if scene or position movements are to occur.
Minimum change-over-time	300 ms ... 10 sec <b>1 sec</b>	Minimum interruption time when changing directions. Increasing the minimum change-over time will cause less wear on the motors.
Invert movement direction	On <b>Off</b>	Inverts the activation of the relay outputs. During inverted operation, the relay outputs <b>Up</b> and <b>Down</b> should be activated in reverse. This is required, for example, for controlling skylights.
Operating hours up	0 ... 65553 h <b>Current value</b>	The time is counted during which the load is physically switched on (relay contact closed).

Operating hours down 0 ... 65553 h  
**Current value**


This parameter can be reset to "0", for example after exchanging the load.

The time is counted during which the load is physically switched on (relay contact closed).

This parameter can be reset to "0", for example after exchanging the load.

## 20.6.1 Information window


During channel selection in the **Information** window, the following settings can be made or values displayed.

 The value can be updated using the arrow next to the display values.

Position value, venetian blind	The position value of the Venetian blind can be changed.
Position value, slat	The position value of the slat can be changed.
Restraint	Display of forced position status.
Lock-out protection	Display of the lock-out protection status
Switching cycle counter UP	Display of the switching cycles in the UP direction with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total UP operating hours	Display of the operating hours in the UP direction since the start of operation.
Operating hours UP	Display of the operating hours in the UP direction since the last restart in the <b>Settings</b> window.
Switching cycle counter DOWN	Display of the switching cycles in the DOWN direction with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total DOWN operating hours	Display of the operating hours in the DOWN direction since the start of operation.
Operating hours DOWN	Display of the operating hours in the DOWN direction since the last restart in the <b>Settings</b> window.

## 20.7 Radio switching/Venetian blind actuator

The parameters described below apply to the product **Radio switching/momentary contact actuator, 8-gang / blind actuator, 4-gang DRA**.

Description	Values	Comment
 Device settings		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Channel 1, 5	Switching <b>Venetian blind</b>	Specifies whether Channels 1 and 5 work as switching or Venetian blind outputs.
Channel 2, 6	Switching <b>Venetian blind</b>	Specifies whether Channels 2 and 6 work as switching or Venetian blind outputs.
Channel 3, 7		

	Switching <b>Venetian blind</b>	Specifies whether Channels 3 and 7 work as switching or Venetian blind outputs.
Channel 4, 8	Switching <b>Venetian blind</b>	Specifies whether Channels 4 and 8 work as switching or Venetian blind outputs.
☐ Settings, Switching channel		
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Operating mode	<b>Switching</b> Push-button Flashing Continuous on Continuous off	<p><b>Switching:</b> After switching on, the device remains stable in the "On" state, and stable in the "Off" state after switch-off.</p> <p><b>Push-button:</b> The device switches "On" when any channel button of a radio transmitter is pressed and "Off" when the button is released. It is irrelevant whether the "On" or "Off" channel button is pressed.</p> <p><b>Flashing:</b> Switch-on starts the flashing and switch-off stops the flashing. The default flash frequency is 1 Hz. This frequency is also the maximum flash frequency. The flash frequency can be changed using parameters. The parameter <b>Switch-off delay</b> is used for the pulse time and the parameter <b>Switch-on delay</b> for the pause time.</p> <p><b>Continuous on:</b> The device switches "On" continuously. All operations of radio transmitters and the <b>Prog</b> button are ignored.</p> <p><b>Continuous off:</b> The device switches "Off" continuously. All operations of radio transmitters and the <b>Prog</b> button are ignored.</p>
Local Operation	<b>On</b> <b>Off</b>	Blocks local operation for the device channel.
Manual switch-off of the run-on time	<b>On</b> <b>Off</b>	Allows manual switch-off of a running run-on time. If the parameter is switched off, then a switch-off command will also switch the actuator on. This parameter is directly connected to the <b>Run-on time</b> parameter.
Switch-on delay	<b>0 s ... 24 h</b>	The load switches on after a delay. Repeated switch-on commands restart the delay time. If the load has not yet been switched on due to the delay when a switch-off command comes, then the load will remain off. In <b>Flashing</b> operating mode, the pause time is set using this parameter.



Switch-off delay	0 s ... 24 h	<p>Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.</p>
		<p>The load switches off after a delay. Repeated switch-off commands restart the delay time. If the load has not yet been switched off due to the delay when a switch-on command comes, then the load will remain on.</p>
		<p>In <b>Flashing</b> operating mode, the pulse times are set using this parameter.</p>
		<p>Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.</p>
Run-on time	0 s ... 24 h	<p>As soon as a run-on time has been entered, the actuator will no longer remain on permanently, but only for the length of the run-on time. The run-on time is restarted if actuation is repeated. This parameter is directly connected to the <b>Manual switch-off of run-on time</b> parameter.</p>
		<p>Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.</p>
Behaviour after the end of the disabling function	<p>Off On <b>No change</b> Last value</p>	<p>Behaviour of the output when a block is removed.</p>
Manual saving of the scene values	<p><b>On</b> Off</p>	<p>Disables the saving of the current actuator state (On/Off) as scene value in an actuator for a command via a transmitter.</p>
Behaviour on voltage return	<p><b>Off</b> On Last value</p>	<p>Behaviour of the output after bus voltage return.</p>
Timer behaviour, voltage return	<p><b>Off</b> Restart</p>	<p>Specifies whether the timers for switch-on delay, switch-off delay and run-on time remain off after voltage return or whether they restart. Directly connected to the parameters <b>Switch-on delay</b>, <b>Switch-off delay</b> and <b>Run-on time</b>.</p>
Switch-off warning	<p>On <b>Off</b></p>	<p>If the switch-off warning is active, the light is not switched off directly. The light goes off 30, 15 and 6 seconds before permanent switch-off. During the switch-off warning, a switch-on telegram effects direct switch-on. It is not possible to terminate the time using a switch-off telegram.</p>
Priority, lock-out protection	<p>0...4 <b>1</b></p>	<p>Specifies the priority for recalling and removing a scene of type <b>Lock-out protection</b> for the channel. 1 is the</p>

Priority, restraint	0...4 <b>2</b>	highest priority and 4 the lowest. 0 means no priority. Specifies the priority for recalling and removing a scene of type <b>Restraint</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, wind alarm	0...4 <b>3</b>	Specifies the priority for recalling and removing a scene of type <b>Wind alarm</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, sun protection	<b>0</b> ...4	Specifies the priority for recalling and removing a scene of type <b>Sun protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, twilight	<b>0</b> ...4	Specifies the priority for recalling and removing a scene of type <b>Twilight</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Switch-off on brightness overshoot	<b>On</b> <b>Off</b>	Allows automatic switch-off according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches off automatically when the brightness setpoint is greatly exceeded. Note: This parameter is not yet active, as a light controller has not yet been implemented.
Switch-on on brightness undershoot	<b>On</b> <b>Off</b>	Allows automatic switch-on according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches on automatically when the brightness setpoint is greatly undershot. We recommend only using the parameter in connection with the parameter <b>Switch-off on brightness overshoot</b> . Note: This parameter is not yet active, as a light controller has not yet been implemented.
Invert switching output	<b>On</b> <b>Off</b>	Inverts the switching output from NO contact function (factory setting) to NC contact function
Minimum switching repeat time	<b>100 ms</b> ... 10 sec	Limits the switching speed of the device by increasing the value, in order to protect the load, for example. Only when the set time has elapsed is switching possible again. The last command during the blocking time is executed after a delay. The switching repeat time starts after each switching operation.
Operating hours	0...65535 h <b>Current value</b>	The time is counted during which the load is physically switched on (relay contact closed). This parameter can be reset to "0", for example after exchanging the load. The <b>Reset</b> button is used to reset the counter to "0". The device must be programmed to apply the change.

☐ Settings, Venetian blind channel

Manual commissioning	<b>On</b> Off	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Operating mode	<b>Roller shutter</b> Venetian blind Awning	<b>Rolling shutter:</b> A rolling shutter or an awning is controlled for which the Fabric-stretching function is required. <b>Venetian blind:</b> A Venetian blind is controlled. <b>Awning:</b> An awning is controlled for which the Fabric-stretching function is required.
Local Operation	<b>On</b> Off	Blocks the output for operation using the <b>Prog</b> button or operation using the Venetian blind cover.
Behaviour on voltage return	<b>No change</b> Configured value	Behaviour of the output after voltage return. Mini design: Mains voltage return RMD design: Bus voltage return
Configured venetian blind position	<b>0%...100%</b>	If the value <b>Configured position</b> is entered for the parameter <b>Behaviour after voltage return</b> , then the blind/shutter position set here is approached.
Configured slat position	<b>0%...100%</b>	If the value <b>Configured position</b> is entered for the parameter <b>Behaviour after voltage return</b> , then the slat position set here is approached.
Behaviour at end of the disabling function	<b>no change</b> Last value Down Open	Defines the behaviour of the output when a block is removed.
Manual saving of the scene values	<b>On</b> Off	Disables the saving of the current Venetian blind position as scene value in an actuator for a command via a transmitter.
Priority, lock-out protection	0...4 <b>1</b>	Specifies the priority for recalling and removing a scene of type <b>Lock-out protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, restraint	0...4 <b>2</b>	Specifies the priority for recalling and removing a scene of type <b>Restraint</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, wind alarm	0...4 <b>3</b>	Specifies the priority for recalling and removing a scene of type <b>Wind alarm</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, sun protection	0...4 <b>0</b>	Specifies the priority for recalling and removing a scene of type <b>Sun protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.

Priority, twilight	<b>0...4</b>	Specifies the priority for recalling and removing a scene of type <b>Twilight</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Slat change-over time Fabric-stretching time	<b>0 ms ... 10 sec</b> <b>300 ms ... 10 s</b>	Absolute time for changing-over Venetian blind slats. The fabric stretching time can also be set here for the Awning operating mode.
Running time	1 ... 600 sec <b>120 sec</b>	Absolute time which the blind/shutter requires from the top to the bottom end position. The entry is essential if scene or position movements are to occur.
Minimum change-over-time	300 ms ... 10 sec <b>1 sec</b>	Minimum interruption time when changing directions. Increasing the minimum change-over time will cause less wear on the motors.
Invert movement direction	On <b>Off</b>	Inverts the activation of the relay outputs. During inverted operation, the relay outputs <b>Up</b> and <b>Down</b> should be activated in reverse. This is required, for example, for controlling skylights.
Operating hours up	0 ... 65553 h <b>Current value</b>	The time is counted during which the load is physically switched on (relay contact closed). This parameter can be reset to "0", for example after exchanging the load.
Operating hours down	0 ... 65553 h <b>Current value</b>	The time is counted during which the load is physically switched on (relay contact closed). This parameter can be reset to "0", for example after exchanging the load.

## 20.7.1 Information window

During channel selection in the **Information** window, the following settings can be made or values displayed.

**i** The value can be updated using the arrow next to the display values.

Switching mode of operation:	
Switching cycle counter	Display of the switching cycles with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total operating hours	Display of the operating hours since the start of operation
Operating hours	Display of the operating hours since the last restart in the <b>Settings</b> window.
Venetian blind operating mode:	
Position value, venetian blind	The position value of the Venetian blind can be changed.
Position value, slat	The position value of the slat can be changed.
Restraint	Display of forced position status.

Lock-out protection	Display of the lock-out protection status
Switching cycle counter UP	Display of the switching cycles in the UP direction with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total UP operating hours	Display of the operating hours in the UP direction since the start of operation.
Operating hours UP	Display of the operating hours in the UP direction since the last restart in the <b>Settings</b> window.
Switching cycle counter DOWN	Display of the switching cycles in the DOWN direction with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total DOWN operating hours	Display of the operating hours in the DOWN direction since the start of operation.
Operating hours DOWN	Display of the operating hours in the DOWN direction since the last restart in the <b>Settings</b> window.

## 20.8 Radio dimmer actuators and radio control units

The parameters described below apply to the products **Radio dimming actuator, 1-gang DRA, 4-gang DRA, 1-gang Mini** and **DALI radio control unit, 1-gang Mini, Radio control unit 1-10 V, 1-gang Mini**.

Description	Values	Comment
☐ Device settings		
Parallel operation <i>Only dimmer actuator 4k RMD</i>	<b>Channel 1,2,3,4</b> Channel (1+2),3,4 Channel (1+2+3),4 Channel (1+2+3+4) Channel (1+2), (3+4)	Two to four outputs can be switched together to boost power. The parameter is only changed over for the display in the project design interface. The actual setting must be made on the device.
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Repeater mode <i>Only dimmer actuator 1k mini and radio control units</i>	<b>On</b> <b>Off</b>	In addition to its other functions, the device can be used as a repeater. In the <b>On</b> setting, the device repeats all the received telegrams.
☐ Settings, channel		
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Operating mode	<b>Normal operation</b> Continuous on Continuous off	<b>Normal operation:</b> The output can be operated with radio transmitters and the <b>Prog</b> button. <b>Continuous on:</b> The output switches to "On" continuously. All operations of radio transmitters and the <b>Prog</b> button are ignored. <b>Continuous off:</b> The output switches to "Off" continuously. All operations of radio transmitters and the <b>Prog</b> button are ignored.
Local Operation		

	<b>On</b> <b>Off</b>	Blocks the output for operation using the button Prog.
Switch-on brightness	1... <b>100 %</b>	During brief operation, the output switches on at the set switch-on brightness. Note: If the value is above the set maximum brightness or below the minimum brightness, then the system will switch to the appropriate limit value.
Switch-on delay	<b>0 s</b> ... 24 h	The load switches on after a delay. Repeated switch-on commands restart the delay time. If the load has not yet been switched on due to the delay when a switch-off command comes, then the load will remain off.  Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.
Switch-off delay	<b>0 s</b> ... 24 h	The load switches off after a delay. Repeated switch-off commands restart the delay time. If the load has not yet been switched off due to the delay when a switch-on command comes, then the load will remain on. In <b>Flashing</b> operating mode, the pulse times are set using this parameter. Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.
Dim up ramp	<b>0 s</b> ...24 h	Time between switch-on and reaching switch-on brightness. The light is switched on at minimum brightness and then dimmed to the switch-on brightness. Only applies to switch-on with transmitters (short operation). If scenes are recalled or switching uses logic modules, the switch-on brightness is approached using so-called soft dimming (not configurable).
Dim down ramp	<b>0 s</b> ...24 h	Time until reaching minimum brightness. The light is dimmed to minimum brightness and then switched off. Only applies to switch-off with transmitters (short operation). If scenes are recalled or switching uses logic modules, the system switches off directly.
Dimming adjustment time	1 ... 60 s <b>4 sec</b>	Time from minimum brightness until reaching maximum brightness (dimming speed).
Run-on time	<b>0 s</b> ... 24 h	As soon as a run-on time has been entered, the actuator will no longer remain on permanently, but only for the length of the run-on time. The run-on

Manual switch-off of the run-on time	On Off	<p>time is restarted if actuation is repeated. This parameter is directly connected to the <b>Manual switch-off of run-on time</b> parameter.</p> <p>Note: The set times apply to operation using radio transmitters. The relay is switched immediately when the <b>Prog</b> button is pressed.</p> <p>Allows manual switch-off of a running run-on time. If the parameter is switched off, then a switch-off command will also switch the actuator on. This parameter is directly connected to the <b>Run-on time</b> parameter.</p>
Behaviour after the end of the disabling function	0% 100% no change Last value	Defines the behaviour of the output when a block is removed.
Manual saving of the scene values	On Off	Disables the saving of the current brightness value as scene value in an actuator for a command via a transmitter.
Behaviour on voltage return	Off On Configured brightness Last value	Determines the behaviour of the output after mains voltage return. For RMD design: Bus voltage return.
Brightness on voltage return	0 ... 100 %	<p>Brightness value, set by the output after voltage return (mains voltage/bus voltage). The parameter <b>Behaviour after voltage return</b> must be set to <b>Configured brightness</b>.</p> <p>Note: If the value is above the set maximum brightness or below the minimum brightness, then the system will switch to the appropriate limit value.</p>
Switch-off warning	On Off	<p>If the switch-off warning is active, then, during switch-off, the systems dims to minimum brightness within 30 seconds and only then switches off. If the parameter <b>Dim down ramp</b> is configured as longer than 30 s, then the length of the dim down ramp is applied. If, during the dim down operation, another command is given, e.g. switch on or scene recall, then the switch-off warning stops and the command is executed. A switch-off command restarts the time for the switch-off warning.</p>
Priority, lock-out protection	0...4 1	Specifies the priority for recalling and removing a scene of type <b>Lock-out protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, restraint	0...4 2	Specifies the priority for recalling and removing a scene of type <b>Restraint</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.




Priority, wind alarm	0...4 <b>3</b>	Specifies the priority for recalling and removing a scene of type <b>Wind alarm</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, sun protection	0...4	Specifies the priority for recalling and removing a scene of type <b>Sun protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, twilight	0...4	Specifies the priority for recalling and removing a scene of type <b>Twilight</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Switch-off on brightness overshoot	<b>On</b> <b>Off</b>	Allows automatic switch-off according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches off automatically when the brightness setpoint is greatly exceeded. Note: This parameter is not yet active, as a light controller has not yet been implemented.
Switch-on on brightness undershoot	<b>On</b> <b>Off</b>	Allows automatic switch-on according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches on automatically when the brightness setpoint is greatly undershot. We recommend only using the parameter in connection with the parameter <b>Switch-off on brightness overshoot</b> . Note: This parameter is not yet active, as a light controller has not yet been implemented.
Minimum brightness	1...67 % <b>5 %</b>	Specifies the minimum settable brightness. Note: If parameters or scene values are set to a level lower than the minimum brightness, then the system will dim to minimum brightness.
Maximum brightness	75 % ... <b>100 %</b>	Specifies the maximum settable brightness. Note: If parameters or scene values are set to a level higher than the maximum brightness, then the system will dim to maximum brightness.
Dimming principle <i>Only radio dimmer actuators</i>	<b>Universal</b> Phase cut on Phase cut off LED phase cut on LED phase cut off	<b>Universal dimming principle:</b> Automatic calibration to the load, dimming principle, phase cut-on or phase cut-off. Connection of incandescent lamps, HV halogen lamps, Tronic-Transformers with halogen lamps or dimmable inductive transformers with halogen or LED lamps.  <b>Phase control dimming principle:</b> Connection of incandescent lamps, HV halogen lamps, dimmable inductive transformers with halogen or LED lamps.

		<p><b>Reverse phase control dimming principle:</b> Connection of incandescent lamps, HV halogen lamps, TRONIC Transformers with halogen lamps.</p> <p><b>LED phase cut-on:</b> Setting for phase-dimmable HV-LED or compact fluorescent lamps that can be dimmed according to the phase cut-on principle.</p> <p><b>LED phase cut-off:</b> Setting for phase-dimmable HV-LED or compact fluorescent lamps that can be dimmed according to the phase cut-off principle.</p>
Hotel function	<p>On</p> <p>Off</p>	<p>If the hotel function is activated, the system will dim to 20 % brightness when a switch-off command is made. Switch-off is only possible with a forced position command. Note: If the minimum brightness is set to greater than 20 %, then the system dims to the set minimum brightness when the hotel function is activated.</p>
Operating hours	<p>0...65535 h</p> <p><b>Current value</b></p>	<p>The time is counted during which the load is physically switched on. This parameter can be reset to "0", for example after exchanging the load. The <b>Reset</b> button is used to reset the counter to "0". The device must be programmed to apply the change.</p>

## 20.8.1 Information window

During channel selection in the **Information** window, the following settings can be made or values displayed.

 The value can be updated using the arrow next to the display values.

Current dimming value <i>Only dimmer actuators</i>	The load can be dimmed using the slider or a brightness value entry.
Load state <i>Only dimmer actuators</i>	The load can be switched on or off.
Restraint <i>Only dimmer actuators</i>	Display of forced position status.
Switching cycle counter	Display of the switching cycles with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total operating hours	Display of the operating hours since the start of operation.
Operating hours	Display of the operating hours since the last restart in the <b>Settings</b> window.

Display dimming principle <i>Only dimmer actuators</i>	Display of the used dimming principle.
---	--

## 20.9 Radio button, light system

The parameters described below apply to the product **Radio switching/dimming top unit, 1-gang System 2000**.

Description	Values	Comment
☐ Device settings		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Allow extension unit operation <i>Only for shutter cover</i>	<b>On</b> Off	Allows operation via wired extensions.
☐ Settings, channel		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Operating mode	<b>Normal operation</b> Continuous on Continuous off	<b>Normal operation:</b> The output can be operated with radio transmitters, with the button and with a connected extension. <b>Continuous on:</b> The output switches to "On" continuously. All operations of radio transmitters, of the button and of connected extensions are ignored. <b>Continuous off:</b> The output switches to "Off" continuously. All operations of radio transmitters, of the button and of connected extensions are ignored.
Local Operation	<b>On</b> Off	Blocks the output for operation using the button.
Manual switch-off of the run-on time	On <b>Off</b>	Allows manual switch-off of a running run-on time. If the parameter is switched off, then a switch-off command will also switch the actuator on. This parameter is directly connected to the <b>Run-on time</b> parameter.
Switch-on brightness	1... <b>100</b> %	During brief operation, the output switches on at the set switch-on brightness. Note: If the value is above the set maximum brightness or below the minimum brightness, then the system will switch to the appropriate limit value.
Switch-on delay	<b>0 s</b> ... 24 h	The load switches on after a delay. Repeated switch-on commands restart the delay time. If the load has not yet been switched on due to the delay when a switch-off command comes, then the load will remain off.


Switch-off delay	<b>0 s ... 24 h</b>	The load switches off after a delay. Repeated switch-off commands restart the delay time. If the load has not yet been switched off due to the delay when a switch-on command comes, then the load will remain on.
Dim up ramp	<b>0 s...24 h</b>	Time between switch-on and reaching switch-on brightness. The light is switched on at minimum brightness and then dimmed to the switch-on brightness. Only applies to switch-on with transmitters (short operation). If scenes are recalled or switching uses logic modules, the switch-on brightness is approached using so-called soft dimming (not configurable).
Dim down ramp	<b>0 s...24 h</b>	Time until reaching minimum brightness. The light is dimmed to minimum brightness and then switched off. Only applies to switch-off with transmitters (short operation). If scenes are recalled or switching uses logic modules, the system switches off directly.
Dimming adjustment time	<b>1 ... 60 s</b> <b>4 sec</b>	Time from minimum brightness until reaching maximum brightness (dimming speed).
Run-on time	<b>0 s ... 24 h</b>	As soon as a run-on time has been entered, the actuator will no longer remain on permanently, but only for the length of the run-on time. The run-on time is restarted if actuation is repeated. This parameter is directly connected to the <b>Manual switch-off of run-on time parameter</b> .
Behaviour after the end of the disabling function	On Off <b>no change</b> Last value	Defines the behaviour of the output when a block is removed.
Manual saving of the scene values	<b>On</b> Off	Disables the saving of the current brightness value as scene value in an actuator for a command via a transmitter.
Behaviour on voltage return	<b>Off</b> On Configured brightness Last value	Determines the behaviour of the output after mains voltage return. For RMD design: Bus voltage return.
Brightness on voltage return	<b>0 ... 100 %</b>	Brightness value, set by the output after voltage return (mains voltage/bus voltage). The parameter <b>Behaviour after voltage return</b> must be set to <b>Configured brightness</b> . Note: If the value is above the set maximum brightness or below the minimum brightness, then the system will switch to the appropriate limit value.

Switch-off warning	On Off	If the switch-off warning is active, then, during switch-off, the systems dims to minimum brightness within 30 seconds and only then switches off. If the parameter <b>Dim down ramp</b> is configured as longer than 30 s, then the length of the dim down ramp is applied. If, during the dim down operation, another command is given, e.g. switch on or scene recall, then the switch-off warning stops and the command is executed. A switch-off command restarts the time for the switch-off warning.
Priority, lock-out protection	0...4 1	Specifies the priority for recalling and removing a scene of type <b>Lock-out protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, restraint	0...4 2	Specifies the priority for recalling and removing a scene of type <b>Restraint</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, wind alarm	0...4 3	Specifies the priority for recalling and removing a scene of type <b>Wind alarm</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, sun protection	0...4	Specifies the priority for recalling and removing a scene of type <b>Sun protection</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Priority, twilight	0...4	Specifies the priority for recalling and removing a scene of type <b>Twilight</b> for the channel. 1 is the highest priority and 4 the lowest. 0 means no priority.
Switch-off on brightness overshoot	On Off	Allows automatic switch-off according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches off automatically when the brightness setpoint is greatly exceeded. Note: This parameter is not yet active, as a light controller has not yet been implemented.
Switch-on on brightness undershoot	On Off	Allows automatic switch-on according to the brightness. If the parameter is set to <b>On</b> , then the light controller switches on automatically when the brightness setpoint is greatly undershot. We recommend only using the parameter in connection with the parameter <b>Switch-off on brightness overshoot</b> . Note: This parameter is not yet active, as a light controller has not yet been implemented.
Minimum brightness	1...67 % 5 %	Specifies the minimum settable brightness. Note: If parameters or scene values are

Maximum brightness	75 % ... <b>100 %</b>	set to a level lower than the minimum brightness, then the system will dim to minimum brightness. Specifies the maximum settable brightness. Note: If parameters or scene values are set to a level higher than the maximum brightness, then the system will dim to maximum brightness.
Hotel function	On <b>Off</b>	If the hotel function is activated, the system will dim to 20 % brightness when a switch-off command is made. Switch-off is only possible with a forced position command. Note: If the minimum brightness is set to greater than 20 %, then the system dims to the set minimum brightness when the hotel function is activated.
Operating hours	0...65535 h <b>Current value</b>	The time is counted during which the load is physically switched on. This parameter can be reset to "0", for example after exchanging the load. The <b>Reset</b> button is used to reset the counter to "0". The device must be programmed to apply the change.

## 20.9.1 Information window

During channel selection in the **Information** window, the following settings can be made or values displayed.

 The value can be updated using the arrow next to the display values.

Current dimming value	The load can be dimmed using the slider or a brightness value entry.
Load state	The load can be switched on or off.
Restraint	Display of forced position status.
Switching cycle counter	Display of the switching cycles with the factor 10, e.g. the value 5 x 10 is displayed for 50 switching cycles.
Total operating hours	Display of the operating hours since the start of operation.
Operating hours	Display of the operating hours since the last restart in the <b>Settings</b> window.

## 20.10 Radio energy sensors

The parameters described below apply to the products **Radio energy sensor, 1-gang intermediate plug**, **Radio energy sensor, 1-gang Mini**, **Radio energy sensor, 4-gang DRA**.

Description	Values	Comment
☐ Device settings		
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Repeater mode <i>Not for RMD devices</i>	<b>On</b> <b>Off</b>	In addition to its other functions, the device can be used as a repeater. In the

Transmission mode	Single <b>Double</b>	<b>On</b> setting, the device repeats all the received telegrams.  The transmission of all measured value telegrams is repeated to guarantee increased transmission security (no unsecured transmission). It is possible to switch over to simple transmission.
☐ Settings, channel		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Transmit voltage	<b>On</b> Off	Transmits the current voltage value.
Transmit current	<b>On</b> Off	Transmits the current current value.
Transmit effective output	<b>On</b> Off	Transmits the average effective output. If negative values are displayed, then effective output is fed in, e.g. via a photovoltaic system.
Transmit apparent output	<b>On</b> Off	Transmits the current apparent output value.
Transmit idle output	<b>On</b> Off	Sends the current fundamental oscillation idle power value. If negative values are displayed, this is a capacitive idle power. Positive values show an inductive idle power.
Transmit absolute effective energy	<b>On</b> Off	Transmits the cumulative value of the effective energy. If negative values are displayed, then effective energy is fed in, e.g. via a photovoltaic system.
Effective energy	-1073741823...107374182- 3 Wh <b>0 Wh</b> (or current value)	Displays the currently cumulated effective energy. The value can be reset to 0 or set to any other value.
Transmission interval	1 ... 60 min <b>15 min</b>	The current consumption data is transmitted at the interval set here at the latest. Changes to the effective output cause fresh transmission, however only after one minute at the earliest.
Rel. threshold value, effective output	1 ... 50 % <b>10%</b>	The transmission of consumption data can be coupled to the change in effective output. The basis is always the most recently transmitted effective output value. If the percentage change entered here is exceeded, then all the measured values are resent.
Abs. threshold value, effective output	0 ... 2000 W <b>1 W</b>	A lower threshold value of the effective output can be entered here, to avoid frequent transmission in the lower power range. Event-controlled transmission is only active above this threshold value.
Suppression length, effective output	<b>0 ms</b> ... 300 s	Triggers for event-controlled transmission are often switch-on and switch-off operations. In order to avoid



Averaging length	0.2 ... 300 s <b>1 sec</b>	<p>incorrect measured values due to switch-on peaks, this parameter can be used to enter a suppression period. The measured values are only transmitted if the effective output is still above or below the relative threshold value after the set time.</p> <p>In the case of effective output, it is not the current value which is transmitted, as with other measured values, but the average value. It is possible to set the period for average value formation here.</p>
------------------	-------------------------------	---

## 20.10.1 Information window

During channel selection in the **Information** window, the following settings can be made or values displayed.

**i** The value can be updated using the arrow next to the display values.

Measuring status	value is real/ out of service	value is real: Device being operated out of service: Device error
	no fault/ value is corrupted due to failure	no fault: Measurement active value is corrupted due to failure: The sensor is not supplying valid measured values.
	in commission	Not used.
	time synchronisation active	Not used.
	Acknowledged	Not used.
	no alarm	Not used.

Voltage	Displays the current voltage value.
Current	Displays the current current value.
Effective output	Displays the current effective output.
Idle output	Displays the current idle output. If negative values are displayed, this is a capacitive idle power. Positive values show an inductive idle power.
Apparent output	Displays the current apparent output.
Absolute effective energy	Displays the current absolute effective energy. If negative values are displayed, then effective energy is fed in, e.g. via a photovoltaic system.
Effective energy	Displays the current effective energy.

## 20.11 Radio transformer intermediate plug

Description	Values	Comment
☐ Device settings		
Repeater mode	On <b>Off</b>	In addition to its other functions, the device can be used as a repeater. When the function is switched on, all received telegrams are repeated.

☐ Settings, channel

Local Operation	<b>On</b> Off	With this device, the parameter has no function.
Manual commissioning	<b>On</b> Off	With this device, the parameter has no function
Sum status / transmission repetitions	<b>On</b> Off / transmit 2x...11x Off / transmit 4x (without connection)	With this device, the parameter has no function

## 20.12 Mobile gate

Description	Values	Comment
☐ Device settings		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Repeater mode	<b>On</b> <b>Off</b>	In addition to its other functions, the device can be used as a repeater. When the function is switched on, all received telegrams are repeated.
IP address	<b>192.168.0.23</b>	Setting of the IP address
Subnet mask	<b>255.255.255.0</b>	Setting of the subnet mask.
Standard gateway	<b>192.168.0.1</b>	Setting of the Standard Gateway.
DHCP	<b>On</b> Off	Activate the DHCP client. Automatic allocation of the network configuration via a DHCP (Dynamic Host Configuration Protocol). When DHCP is activated, on each switch-on, the eNet server requests its IP address from the DHCP server, along with the subnet mask, standard gateway and, if necessary, DNS address.
☐ Settings, channel		
Manual commissioning	<b>On</b> Off	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Local Operation		With this device, the parameter has no function.
Sum status / transmission repetitions	<b>On</b> Off / transmit 2x...11x Off / transmit 4x (without connection)	<b>On:</b> The transmitter evaluates the received status messages and displays them as a sum status. If individual status messages fail, then the transmitter will repeat its telegram up to three times. <b>Off/Transmit x times:</b> The evaluation and display of the sum status is deactivated. The number of telegram repetitions is prescribed. In this setting, no transmission errors are displayed. <b>Off/Transmit 4x (without connection):</b> Reserved for sensors which transmit without a connection.

Scene name 1 to 16	Free text, maximum 15 characters <b>Scene 1 to 16</b>	Scene designations of scenes 1 to 16. Is named automatically with the action area of the transmitting channel.
Channel name 1 to 24	Free text, maximum 15 characters <b>Channel 1 to 24</b>	Channel designations of channels 1 to 24. Is named automatically with the action area of the transmitting channel.

## 20.13 Repeater

The parameters described below apply to the product **Radio repeater intermediate plug**.

Description	Values	Comment
☐ Device settings		
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.

## 20.14 Radio sun sensor

The parameters described below apply to the product **Radio sun sensor Solar**.

Description	Values	Comment
☐ Device settings		
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for all device channels. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
☐ Settings, channel		
Manual commissioning	<b>On</b> <b>Off</b>	Blocks manual commissioning for the device channel. In the <b>Off</b> setting, the device can no longer be reset to the factory setting.
Local Operation	<b>On</b> <b>Off</b>	Blocks the output for operation using the button.
Sum status / transmission repetitions	<b>On</b> <b>Off / transmit 2x...11x</b> <b>Off / transmit 4x (without connection)</b>	<p><b>Off / transmit 4x (without connection):</b> To save energy, the sum status is off. Each actuator is not contacted individually, but all are contacted at the same time.</p> <p><b>On:</b> The transmitter evaluates the received status messages and displays them as a sum status. If individual status messages fail, then the transmitter will repeat its telegram up to three times (not recommended for this device).</p> <p><b>Off/Transmit x times:</b> The evaluation and display of the sum status is deactivated. The number of telegram repetitions is prescribed. In this setting, no transmission errors are displayed.</p>

### 20.14.1 Information window

The most recently transmitted brightness is displayed in the **Information** window.

**Gira**  
**Giersiepen GmbH & Co. KG**  
Elektro-Installations-  
Systeme

Industriegebiet Mermbach  
Dahlienstraße  
42477 Radevormwald

Postfach 12 20  
42461 Radevormwald

Deutschland

Tel +49(0)21 95 - 602-0  
Fax +49(0)21 95 - 602-191

[www.gira.de](http://www.gira.de)  
[info@gira.de](mailto:info@gira.de)