

Product Manual

Smart Building Studio

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1. Aim of this Product Manual

This manual contains the following information:

- Installation of Smart Building Studio on your machine,
- Configuration of a Smart Office using this tool, and
- Information about configuration parameters.

For more information, visit the [MICROSENS](#) website and read the Smart Building Studio manual.



For your first steps, ensure that you are using an unconfigured Smart Director that is not currently in use but is reachable in your physical surroundings. After completing the configuration steps, you will send the new configuration to the specified Smart Director, which will erase or overwrite the previous configuration. Therefore, it is recommended to save the previous configuration first.

2. Introduction

2.1. Scope

This document describes new features, improvements, and bug fixes implemented and released in version 1.2.0 of the **Smart Building Studio** software. The requirements and procedures for installing the management software are also covered.

The skills required to understand and use this manual include basic knowledge of Ethernet and TCP/IP networks.

2.2. Intended Audience

This document is intended to serve as a detailed reference for network administrators and technicians involved in the operation, support, and maintenance of the MICROSENS management software.

3. About Smart Building Studio

Smart Building Studio (formerly known as Smart Office Config Designer), short SBS, is client-server software built using the Electron library that can be installed on a Windows operating system. Its purpose is to configure the Smart Director in combination with SLC/CSLC smart devices. The visual configurator can be used to prepare configuration scripts for lights, blinds, outlets, climate, scenes, and buttons. Using the integrated Setup Wizard, users can also manage all inputs and outputs of the Smart I/O devices and assign the corresponding controllers required for the configured building zones.

4. Requirements

4.1. Skills

- Basic knowledge of Ethernet and TCP/IP networks
- Knowledge of installing and executing programs
- Knowledge of using a Windows machine
- Training in using MICROSENS hardware and software
- Basic knowledge of how MICROSENS automation works

4.2. Machine

On the PC used to run Smart Building Studio, the following rights are required:

- Rights to use the ports
 - HTTPS server - 7443
 - HTTP server - 5000
 - Device discovery - 8340
- Rights to install and execute programs

 | We recommend using an account with administrator rights.

4.3. MICROSENS Hardware and Software

When configuring a physical system, at least one MICROSENS G6 device running a Smart Director app is required.

 | We recommend using the latest versions of Smart Director and Smart Building Studio in parallel and avoiding mixing different versions.

The programming languages used to create the configurator are:

- Back-end - Node.js (Express.js server used to serve static front-end files)
- Front-end - React.js

 | Currently, the MICROSENS Smart Office Configuration Designer is only available in English (UK).

5. Installation procedure

The installation process begins by double-clicking the installation icon.

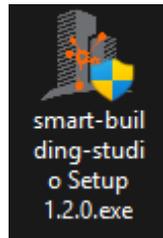


Figure 1. Installation icon

5.1. License agreement

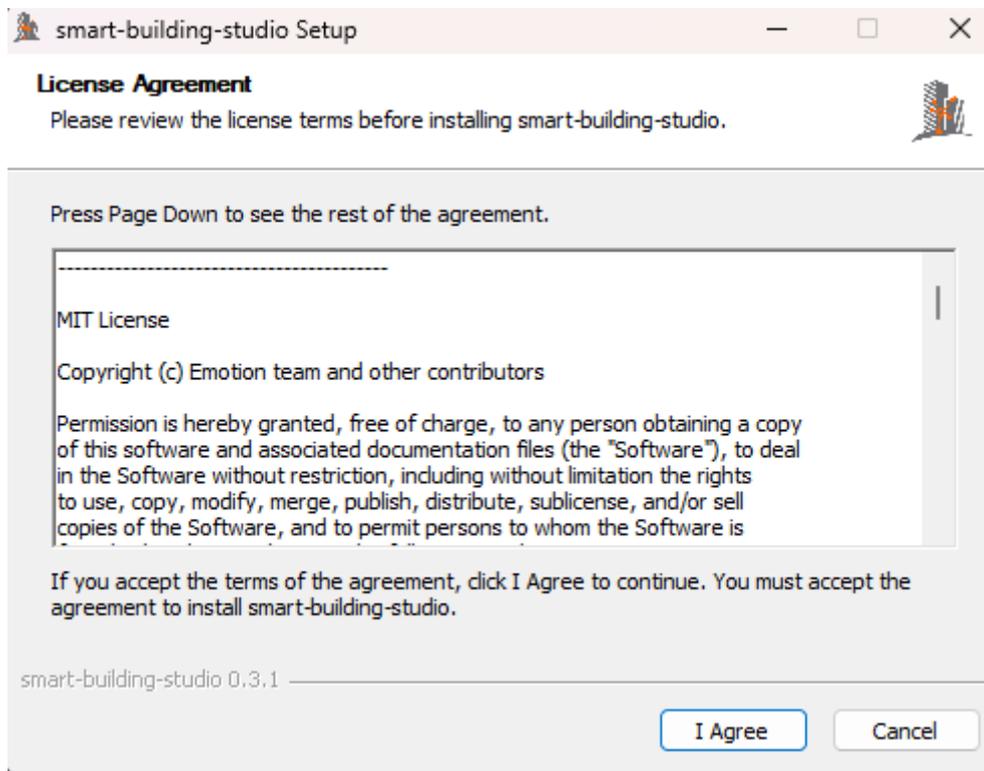


Figure 2. Installation first step

5.2. Choosing destination folder

Select the target installation folder and click Install.

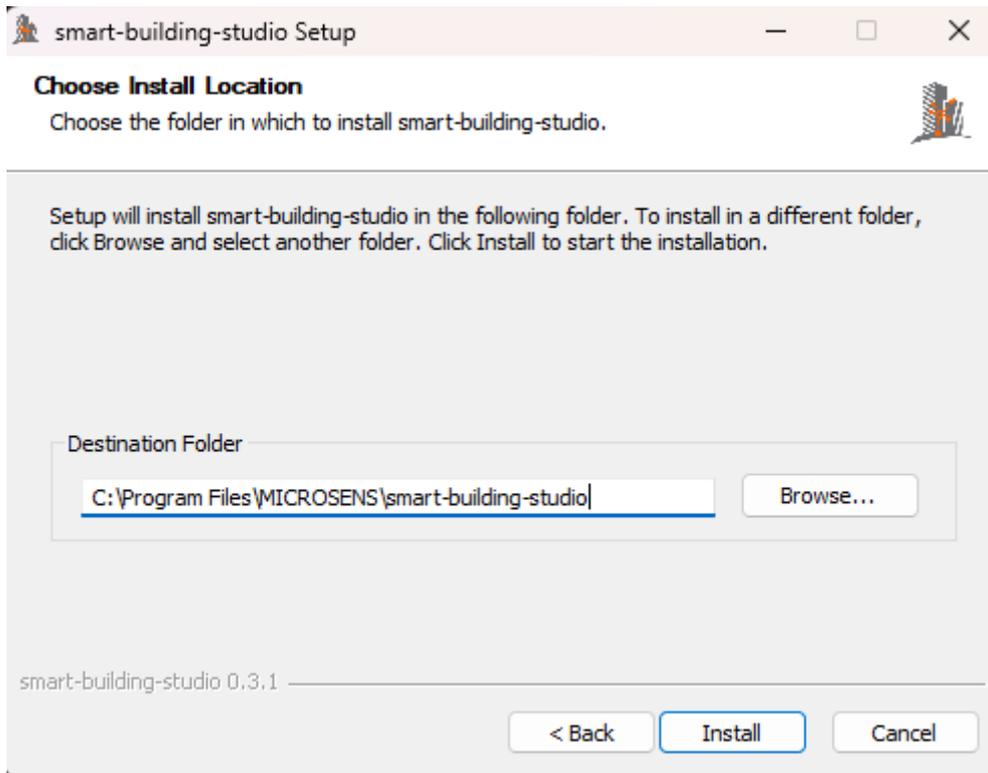


Figure 3. Installation middle step

5.3. Installation completed

If you want to run the application after installation, leave the "Run smart-building-studio" option selected. Otherwise, uncheck it and complete the installation.

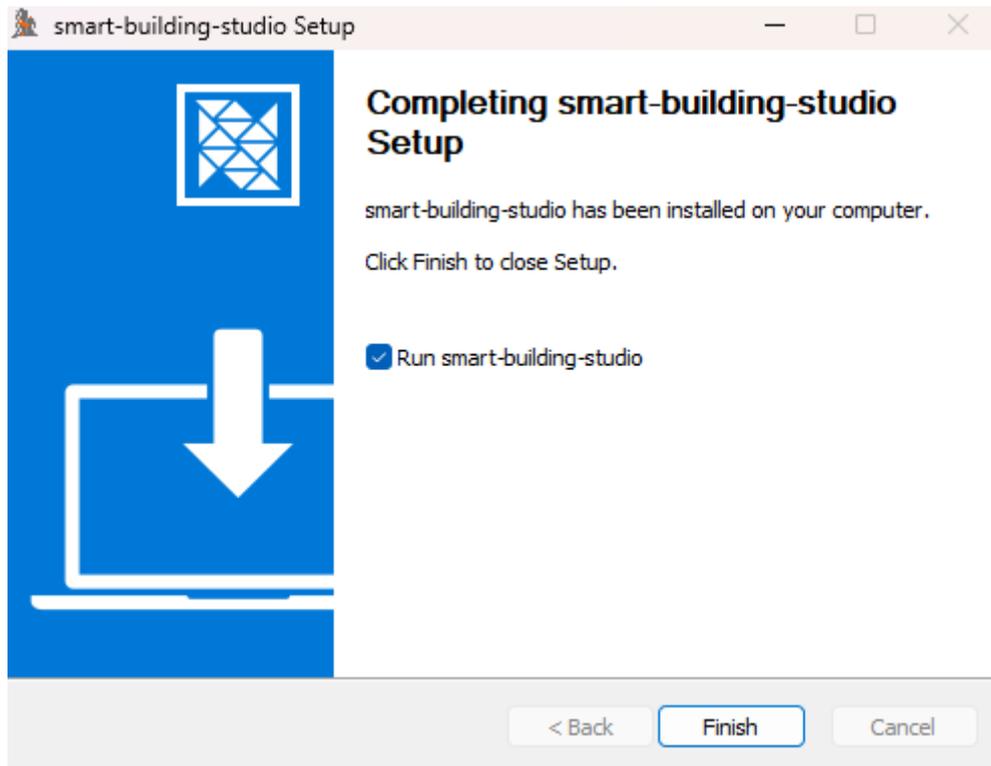


Figure 4. Installation final step

After installation, icons for the installed application will be created on the desktop and in the quick access toolbar. To uninstall the application, click the uninstall button in the Control Panel or quick access view.

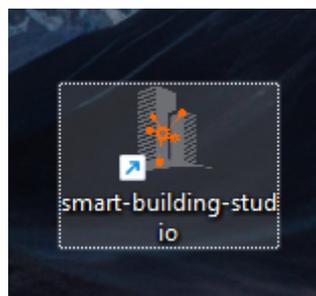


Figure 5. SBS icon

6. Smart Building Studio - start a new project

6.1. Preliminary view

In this view, it is possible to select one of three available options.

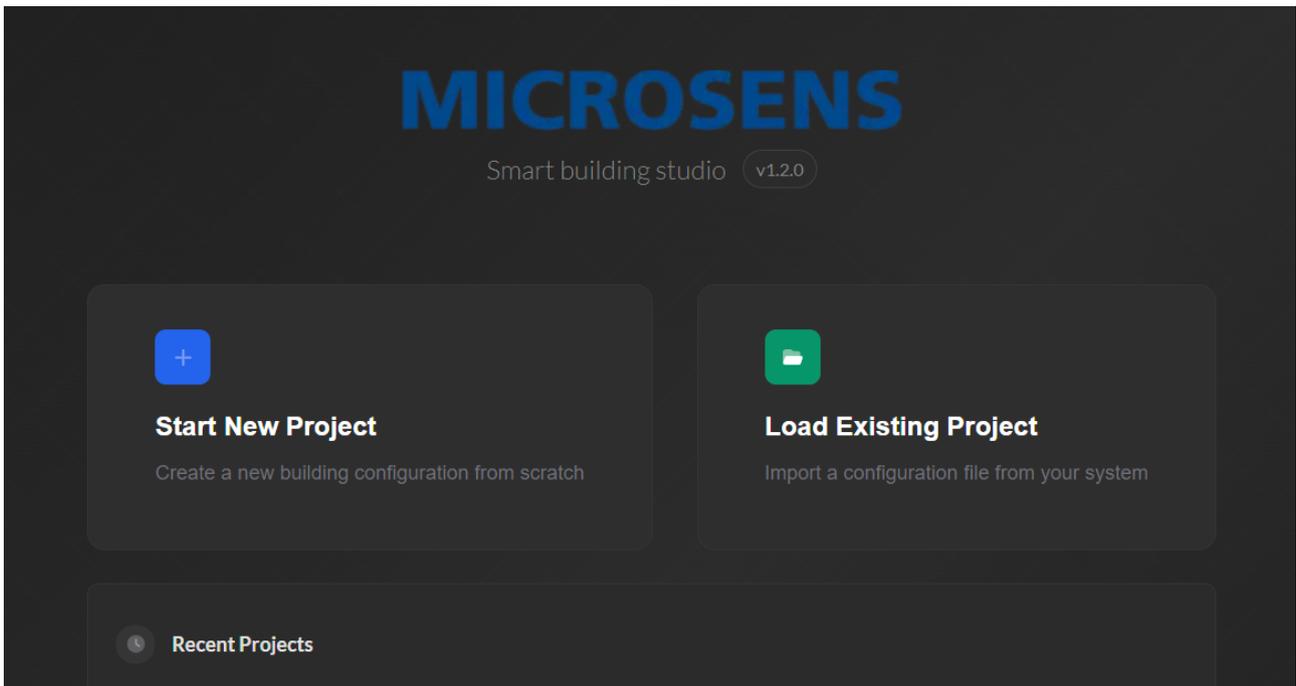


Figure 6. SBS start view

- A. **Start new project** - Allows the user to create a new, empty project.
- B. **Load existing project** - Manually loads a previously saved configuration file from the disk and requires user selection.
- C. **Recent projects** - Automatically loads the most recently saved configuration. Auto-save occurs every 1 minute, and updates are applied upon manual saving.

i | To start over, use the **Start new project** section.

6.2. New project details

In this view, you can define the basic parameters of the project draft. Enter the project name, specify the contact person responsible for the configuration, and optionally provide a project description.

New project details
Fill in basic project details

Project name

Contact person

Project description

Back Continue

Figure 7. Basic information configuration

-  The project name is used when downloading the configuration file to disk and as the script name uploaded to the Smart Director.
-  If left empty, a default name is automatically assigned.
-  All whitespace and special characters are filtered out, and the maximum allowed length is 35 characters.

When all required fields are filled in, click **Continue**.

6.3. Load Existing Project

Clicking `Load existing project` will open your file explorer. Navigate to the previously saved project, select the file, and open it to continue with the configuration.

7. SBS - Building Designer

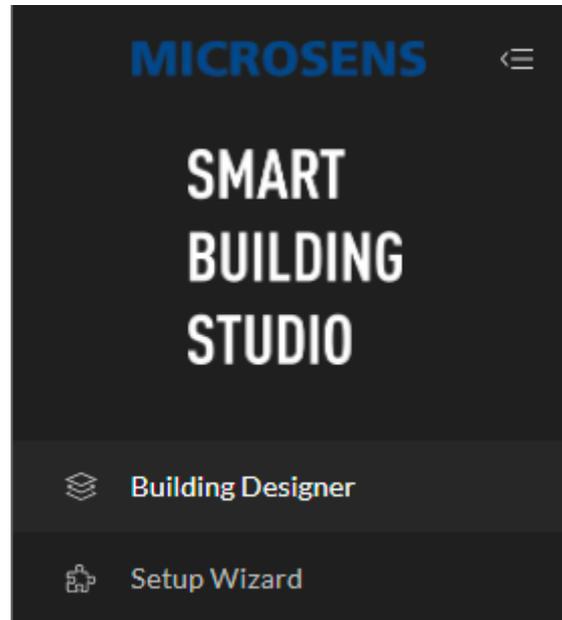


Figure 8. SBS main tree view

7.1. Visual editor

The view consists of two collapsible sidebars and a graphical editor in which shapes (rooms) or configuration elements can be drawn.

For configuration, the following options are available:

- Number 1. the **Module Selector** on the left side of the window
- Number 2. the **Configuration Panel** next to the element bar
- Number 3. the **Save** button
- Number 4. the **Project** tree view
- Number 5. the **Graphical editor**

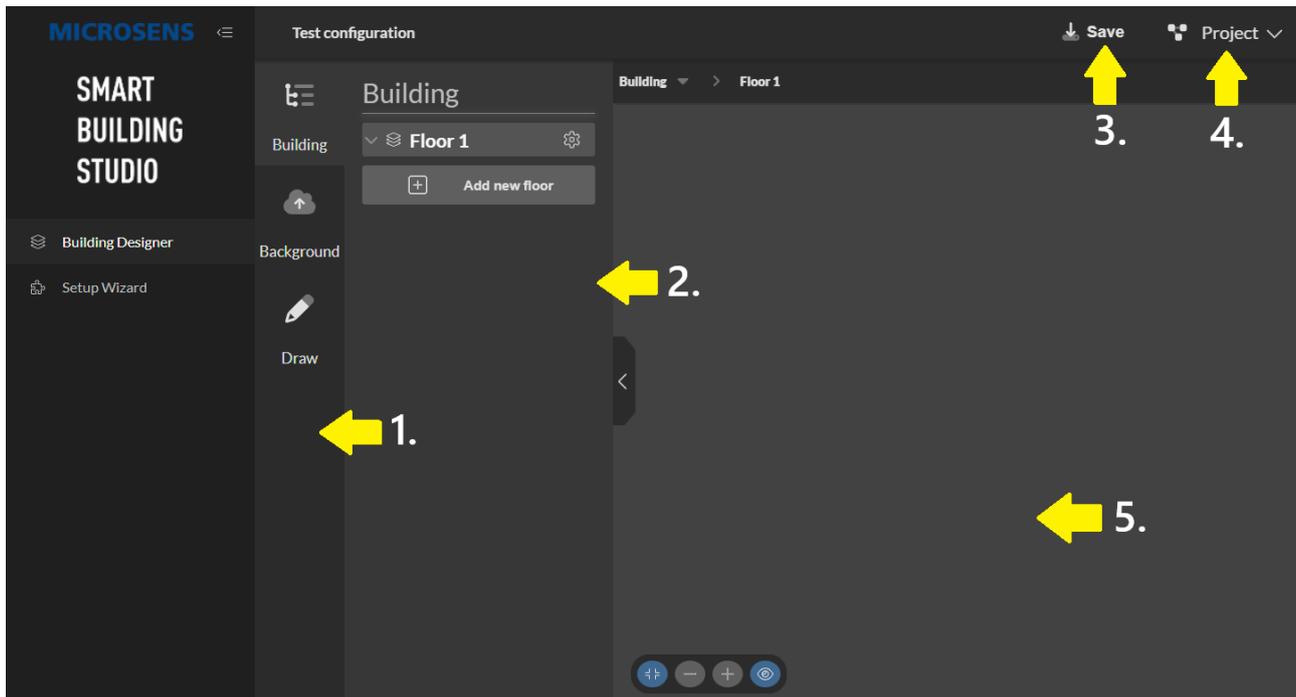


Figure 9. Visualization editor overview

7.1.1. Module Selector

This panel displays the buttons available for configuration. Depending on whether a floor or a room is selected, the number and type of buttons may vary.

7.1.2. Configuration Panel

This panel allows previewing the current building structure and navigating through the created zones (rooms). In this view, you can also create new floors, copy existing ones, or delete a floor together with all configured zones within it.

Right-clicking opens a context menu for rooms and floors, providing options for quick duplication and deletion.

7.1.3. Save button

The **Save** button, located next to the Project menu, saves the current project configuration to disk.

7.1.4. Project tree view

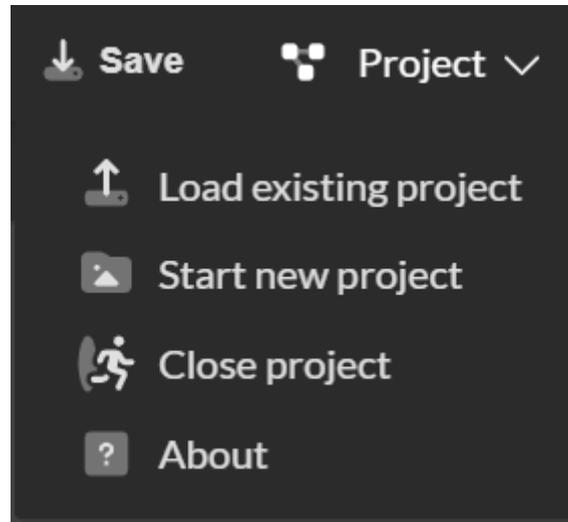


Figure 10. Project tree overview

The Project tree menu provides project-level actions:

- Load an existing project
- Start a new project
- Close the currently opened project
- Open the About window with application information

7.1.5. Graphical editor

This is a graphical editor canvas where shapes and icons can be created, sizes can be adjusted, and elements can be moved. The map can be zoomed in and out using the mouse scroll wheel or the + and - buttons on the configuration bar.

Selecting shapes in the editor is only possible when none of the elements from the element bar are active (enabled).

Once a shape is created, it can be moved and resized as required. Movement boundaries are defined by the graphical editor background image.

7.2. Floor configuration

At the beginning, no rooms or floors are shown in the [Configuration Panel](#) section. At least one floor must be available. To create a room on a floor, you can upload a background image to provide an overview of the floor layout.

For configuring floors and zones, three options are available:

7.2.1. Building Section

Used for adding and managing floors and rooms.

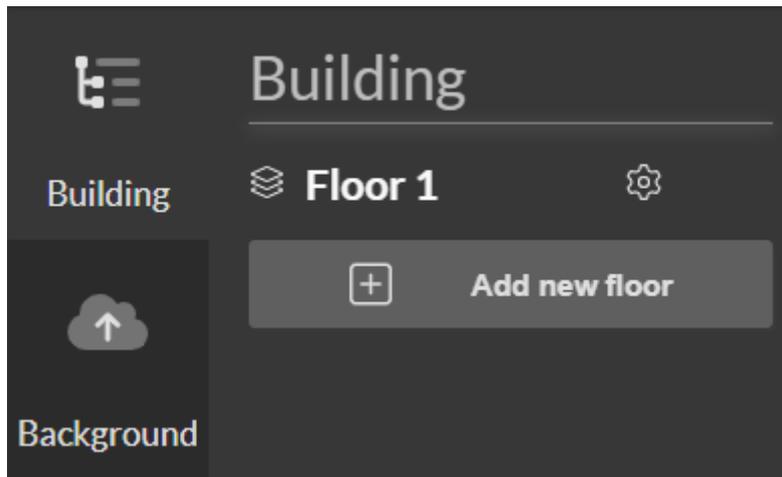


Figure 11. Building section

Click the **Add new floor** button to create an additional floor in the building. The **Settings gear** icon next to the selected floor opens options for customizing the floor. These settings are described later in this chapter.

7.2.2. Background Section

Allows users to upload a background image for a floor using the **Pick a Background** button. Supported formats include .svg, .png, and .jpg.

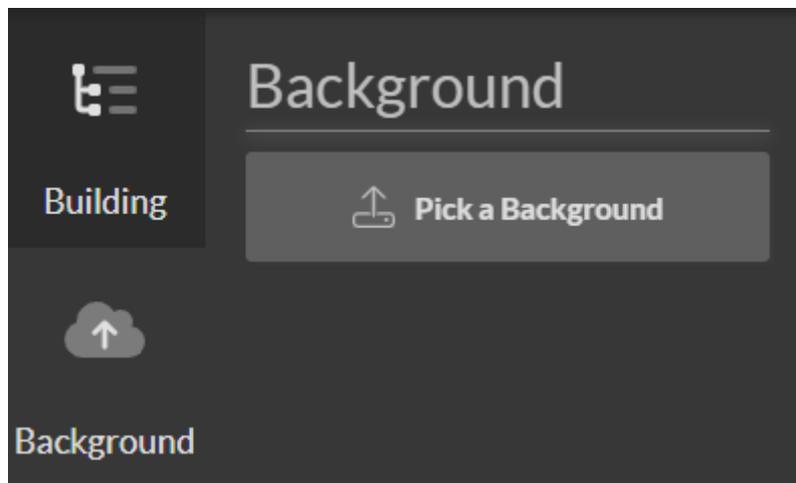


Figure 12. Background section

This interface allows users to manage the background for the floor plan.

Available actions:

- **Change Background** button - Uploads a new background image for the selected floor
- **Remove Background** button - Deletes the currently set background

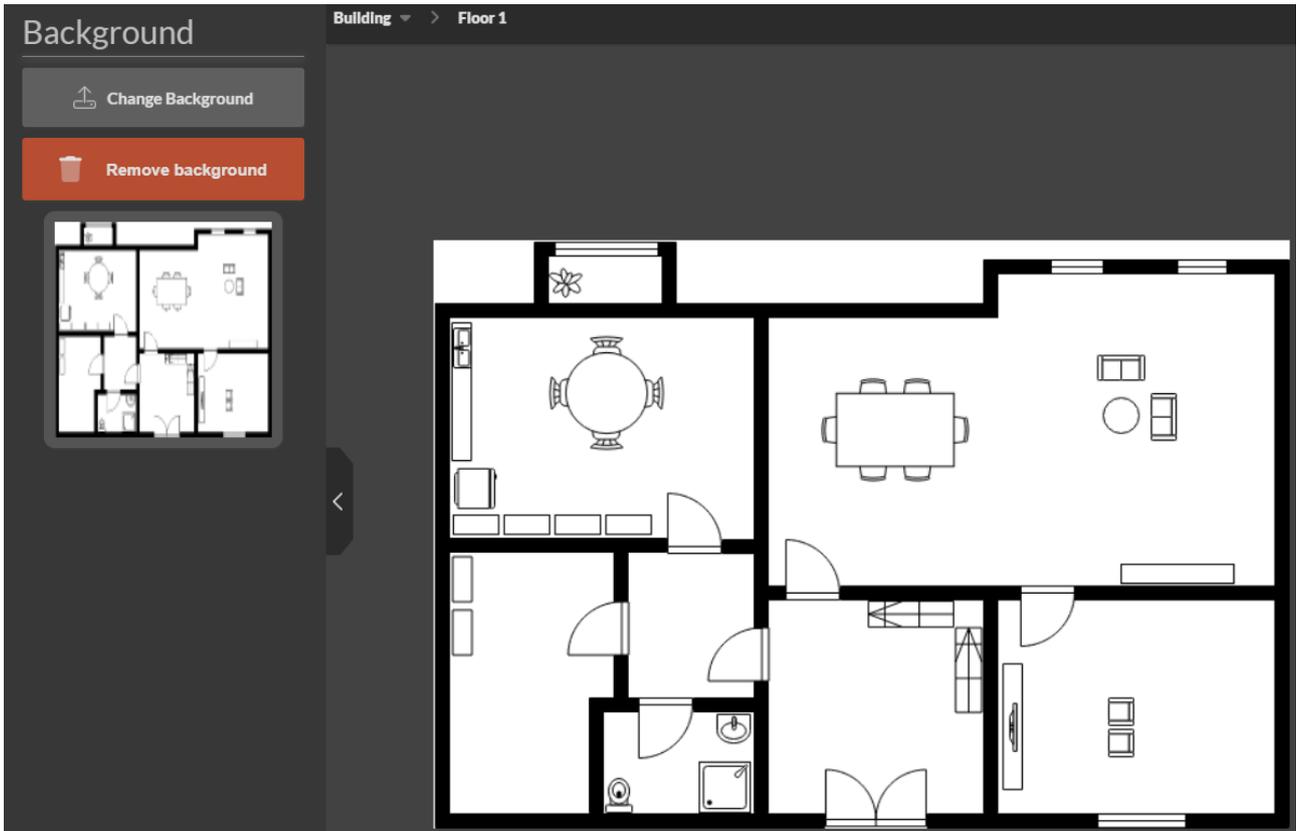


Figure 13. Background with uploaded PNG file

7.2.3. Draw Section

Enables the creation of room shapes.

- **Draw a polygon:**

This is a toggle button with two modes:

Enabled mode:

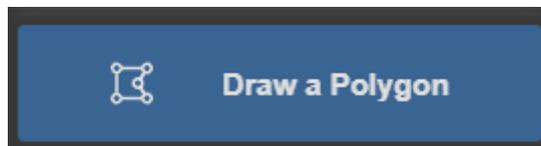


Figure 14. Draw a polygon selected button

Disabled mode:

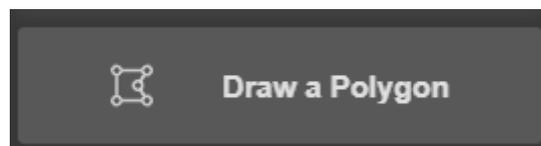


Figure 15. Draw a polygon deselected button

Drawing a shape begins and ends at the same clicked point. The shape is drawn

using the mouse, and points are added by pressing the left mouse button on the graphical editor canvas.

-  The last added point can be removed by pressing the **Ctrl + Z** key combination.
-  The **ESC** key can be used to interrupt the drawing action.

When the element is drawn correctly, a new polygon is added to the floor. If the polygon is drawn on a loaded image (see [Background Section](#)), the background of the shape is copied and used for the created zone.

• Draw a rectangle:

The button works in the same way as described in the **Draw a polygon** section.

With this tool, you can quickly create a rectangular zone. To draw a rectangle, click on the upper-left corner of the area where you want to place it, drag the mouse cursor to the lower-right corner, and release the mouse button. After completing the drawing, the rectangle is added to the floor as a new zone.

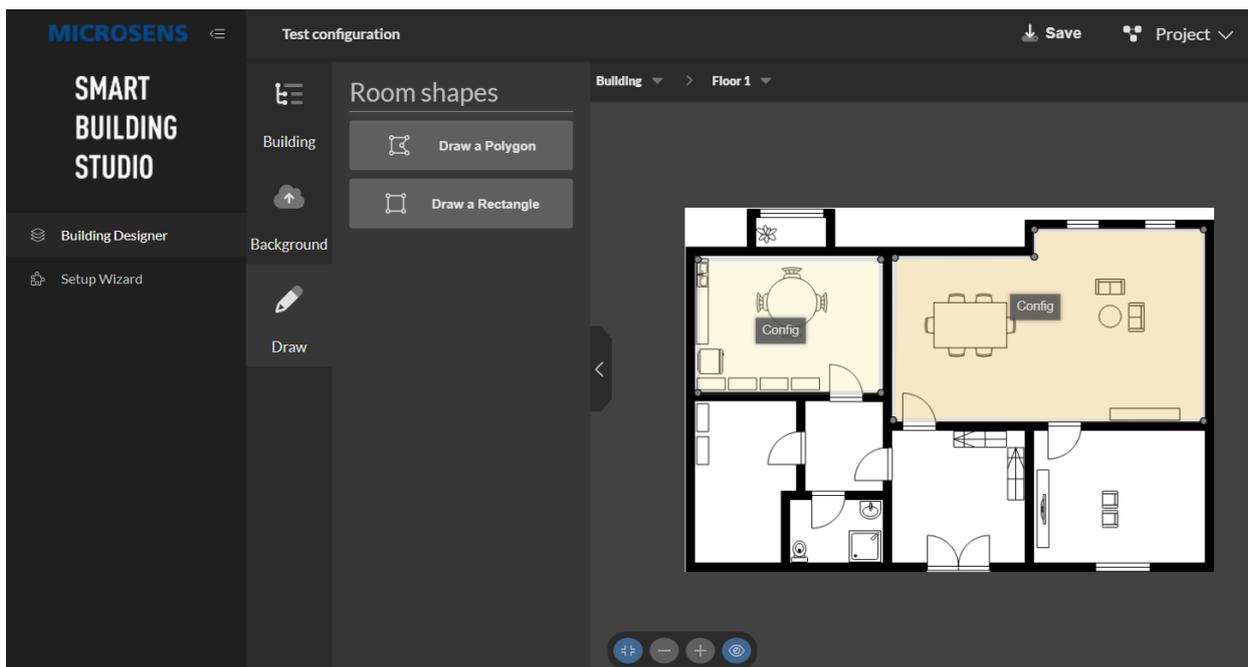


Figure 16. Example of correctly created rooms

-  The selected shape can be duplicated using **Ctrl + D** (the room and all its elements will also be duplicated).
-  The room can be deleted using the **DEL** key on the keyboard.

Selecting shapes in the editor is only possible when none of the elements from the element bar are active (enabled).

Once a shape is created, it can be moved and resized as required. Movement boundaries are defined by the graphical editor background image.

After initializing an element in the center of the shape, the "**Config**" button becomes available. Clicking this button automatically selects the room assigned to the created shape and opens its [Room Configuration](#).

7.3. Floor editor settings

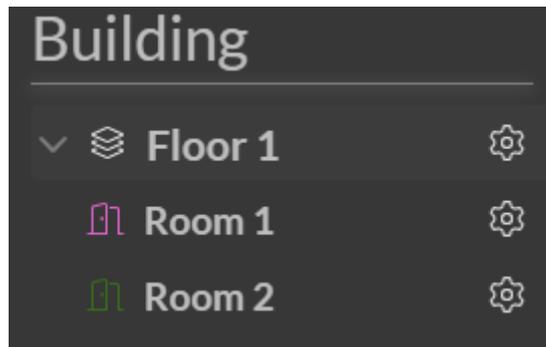


Figure 17. Configuration Panel - example view

When you click the **Settings** gear icon next to a floor or room, the Room configuration / Floor configuration dialog opens. In this dialog, you can:

- Change the name of the selected floor or room
- Create a copy using the **Duplicate room** button
- Remove it using the **Remove room** button

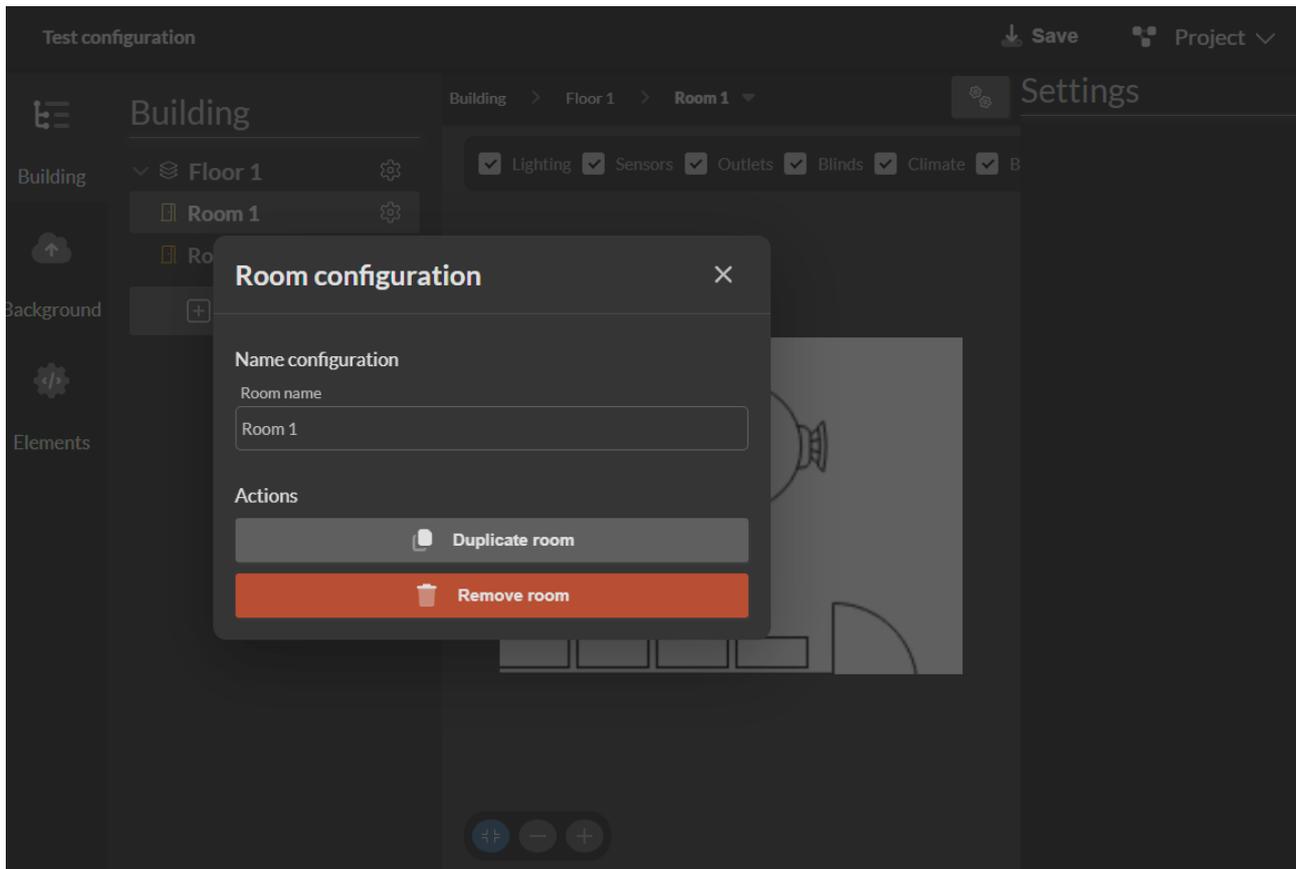


Figure 18. Room configuration view



Floors and rooms can be added or removed directly from the Building tree by right-clicking the desired floor or room and selecting the appropriate option from the context menu.

7.3.1. Lock/Unlock created room

Right-clicking a created room provides the Lock/Unlock option. Enabling the Lock function prevents any modifications to the position of the selected room, ensuring it remains fixed in place.

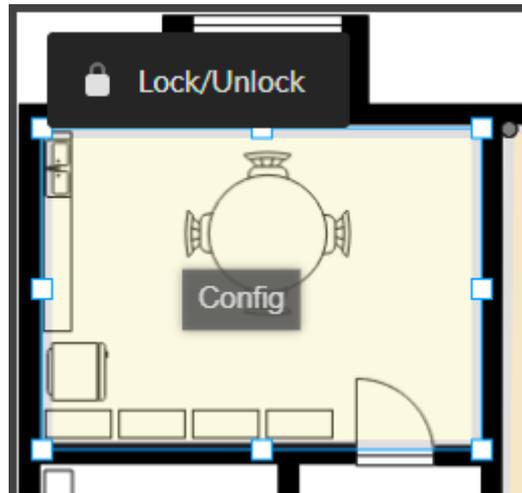


Figure 19. Room - lock example

7.4. Room Configuration

The Elements section is displayed when a previously created room is selected in [Draw Section](#), either by choosing it from the [Configuration Panel](#) list or by clicking directly on the room. Once visible, it provides access to the available elements. Each element can be placed on the uploaded floor plan either by dragging it from the Elements bar on the left side of the screen and dropping it onto the graphical editor, or by left-clicking the element in the Elements bar, which automatically places it at a random position on the editor.

The elements available in SBS are: Lighting, Sensors, Outlets, Blinds, Buttons, and Climate.

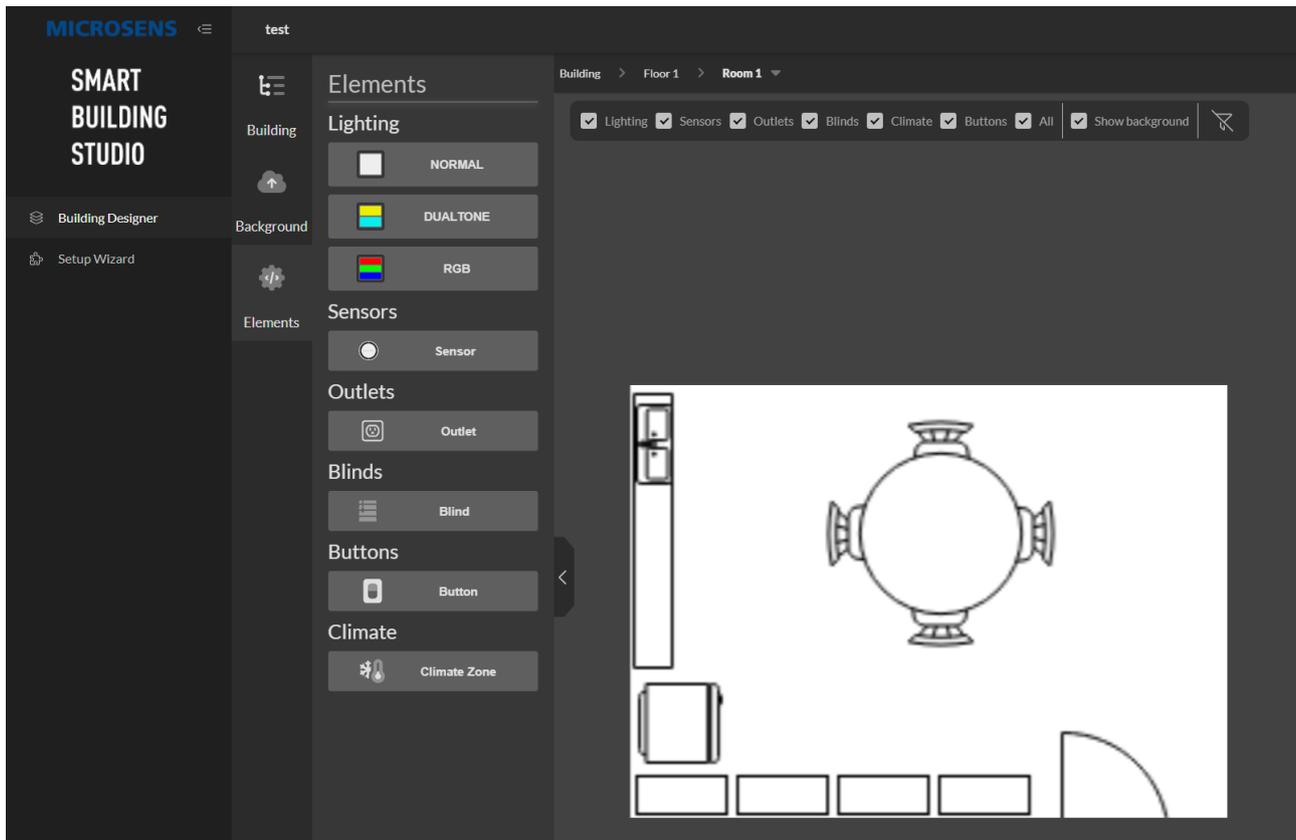


Figure 20. Room elements

7.4.1. Settings menu

Each room element can be configured individually. After clicking a specific element in the top bar, a **Settings menu** is displayed on the right side of the screen, where all parameters specific to that element can be adjusted. More information is available in the [Elements configuration](#) section.

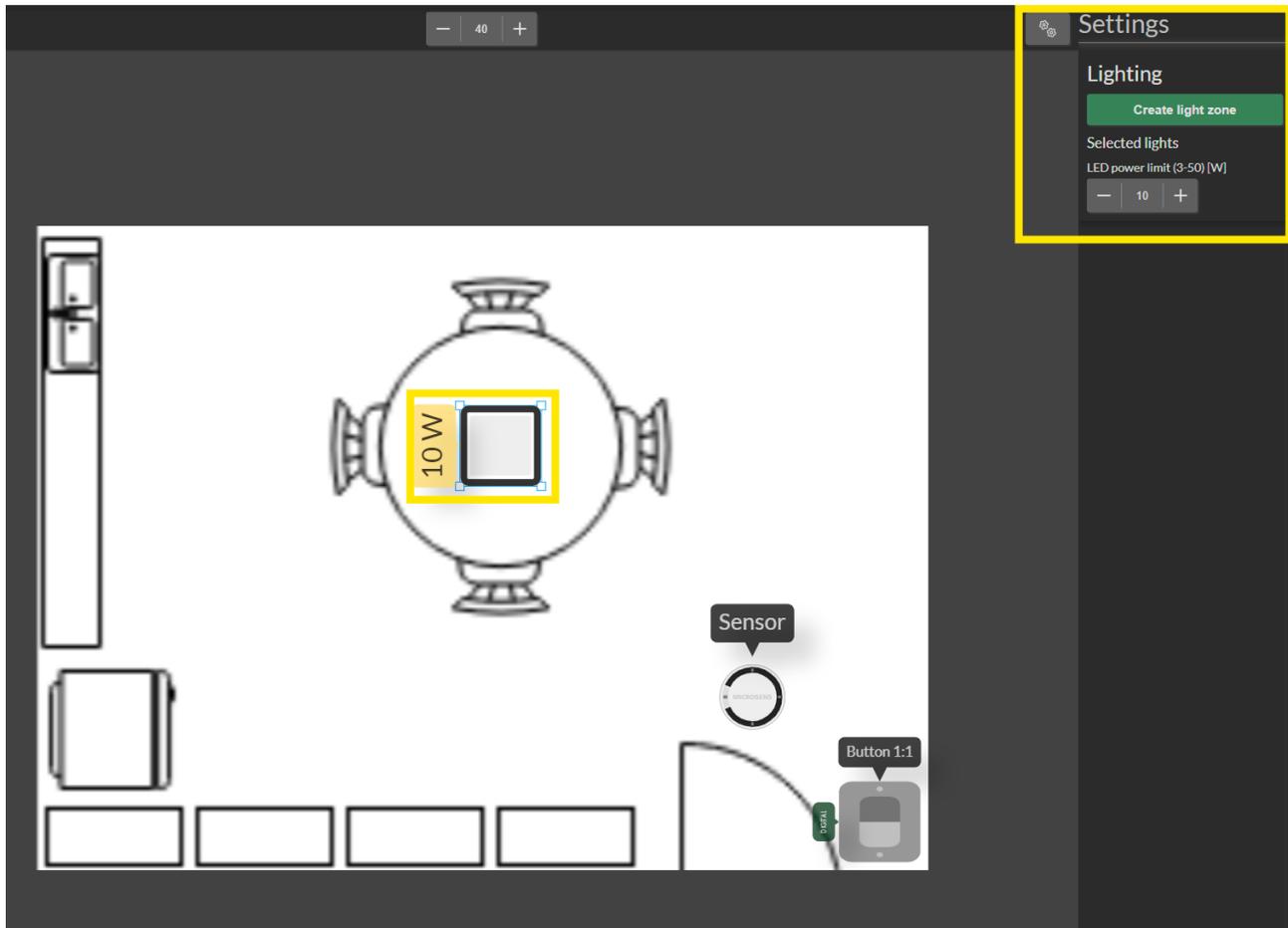


Figure 21. Example settings menu - Normal LED

7.4.2. Room elements

A) Lighting

- **RGB** - LED panel representing three colors: red, green, and blue. These luminaires can emit light in different mixed colors.
- **NORMAL** - LED panel with a single color or single channel.
- **DUALTONE** - LED panel representing warm and cold light with two channels that can be mixed later.

B) Sensors

Sensors represent physical devices that provide motion and environmental measurements (for example, temperature, brightness, humidity, or air quality). A sensor can be placed on the background like any other element. The selected type defines which attributes are available:

- PIR - Attributes: Motion, Temperature, Brightness, Humidity
- BASIC - Attributes: Motion, Temperature, Brightness, Humidity
- BASIC_BEACON - Attributes: Motion, Temperature, Brightness, Humidity, Beacon

- **ADVANCED** - Attributes: Motion, Temperature, Brightness, Humidity, TVOC, ECO2, AQI
- **ADVANCED_BEACON** - Attributes: Motion, Temperature, Brightness, Humidity, TVOC, ECO2, AQI, Beacon



When the Sensor as a single device option is enabled, all attributes of the selected type belong to one physical sensor device.

C) Outlets

An outlet refers to an electrical socket that can switch an appliance or lamp on or off.

D) Blinds

- **SIOC Blind** - The blind is connected to the digital outputs of a Smart Input/Output Controller.
- **SDIOC Blind** - The blind is connected to the digital outputs of a Digital Smart Input/Output Controller.
- **ENOCLEAN Blind** - The blind is connected to an EnOcean blind actuator that must be paired with the USB EnOcean dongle on the Smart Director.

E) Buttons

A button represents a physical wall switch used to control an appliance or lamp. Buttons are integrated into the system as digital signals and support different hardware types selectable in the Button Hardware list:

- **SIOC Button** - The button is connected to the digital inputs of a Smart Input/Output Controller.
- **SDIOC Button** - The button is connected to the digital inputs of a Digital Smart Input/Output Controller.
- **ENOCLEAN Button** - The button is connected to an EnOcean button actuator that must be paired with the USB EnOcean dongle on the Smart Director.



A button typically refers to a physical light switch (usually wall-mounted) used to control appliances or lighting.



Every clickable button is counted separately. A single mechanical switch may contain 1, 2, or 4 individual contacts, and each contact is treated as a separate button.

F) Climate

Climate valves are controlled by a Smart Input/Output Controller (analogue). Separate valves are used for heating and cooling.

- **SIOC** - Smart Input/Output Controller
- **EnOcean**



A maximum of 12 climate zones can be defined. Each zone must be

| assigned to a single room.

7.4.3. Element shape memory

The SBS visual configuration interface supports **element shape memory**, a feature that improves configuration efficiency by remembering the dimensions and visual style of the most recently added element. When a new component is placed on the graphical editor, subsequent elements inherit the shape and size of the previously added element, which helps create uniform layouts.

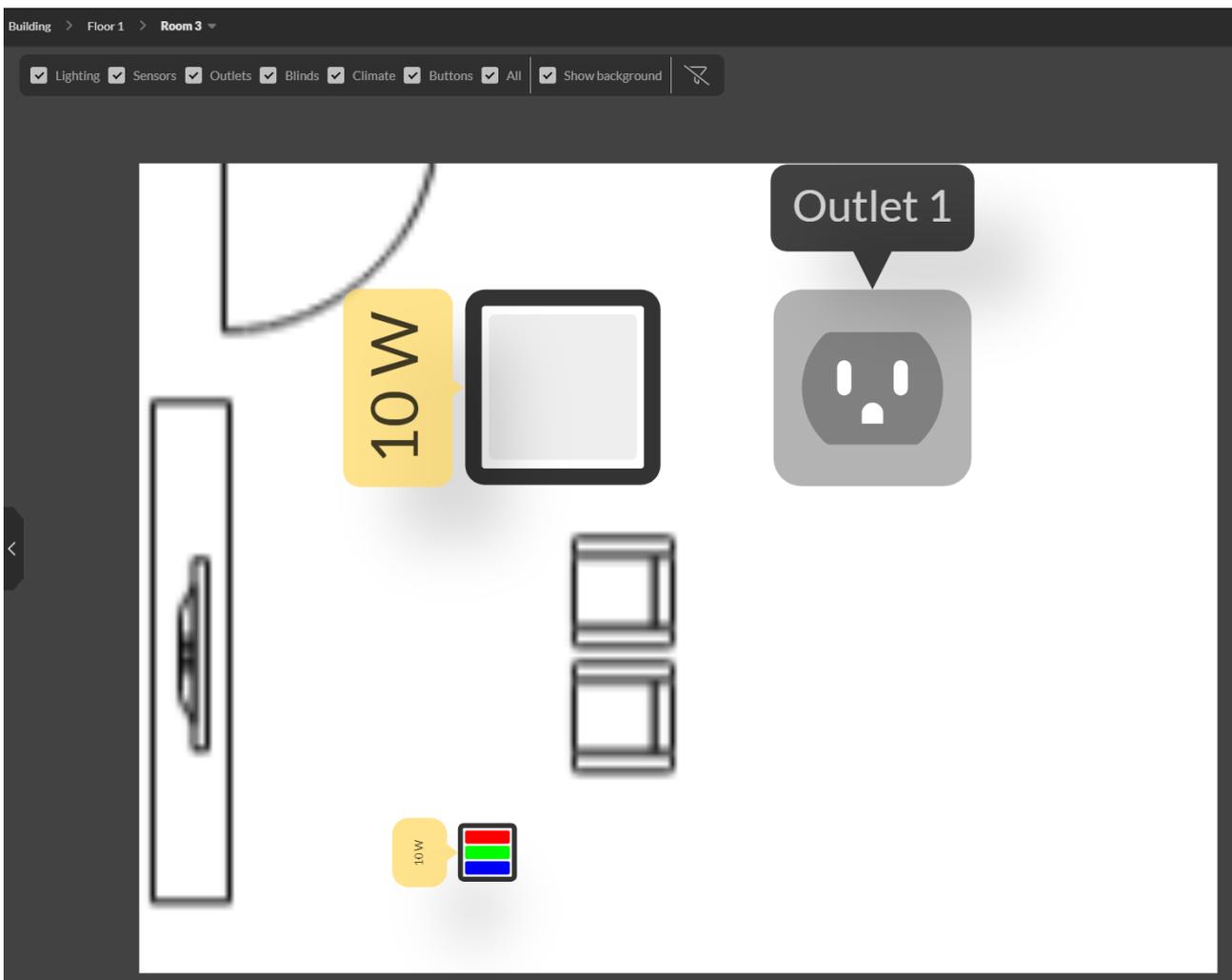


Figure 22. Room elements - element shape memory example

In the example shown, the first added element is a small RGB light. The following elements—a larger LED light and a power outlet—adopt the same dimensions, maintaining a consistent layout. This behavior reduces repetitive resizing and helps ensure visual consistency across configured components.

7.4.4. Filters

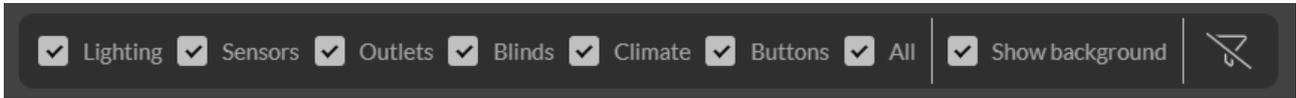


Figure 23. Elements filters

The filter bar allows users to control the visibility of different element categories within the workspace.

Functionality:

- Checked (✓) - The selected element category is fully visible.
- Unchecked (☐) - The element remains visible but is shown with reduced opacity (semi-transparent).

Available filters:

- Lighting - Controls the visibility of lighting elements.
- Sensors - Shows or dims sensor-related components.
- Outlets - Controls the visibility of electrical outlets.
- Blinds - Shows or dims blinds.
- Climate - Controls the visibility of climate-related elements.
- Buttons - Shows or dims button controls.
- All - Toggles visibility for all elements at once.
- Show Background - Enables or disables the background image.

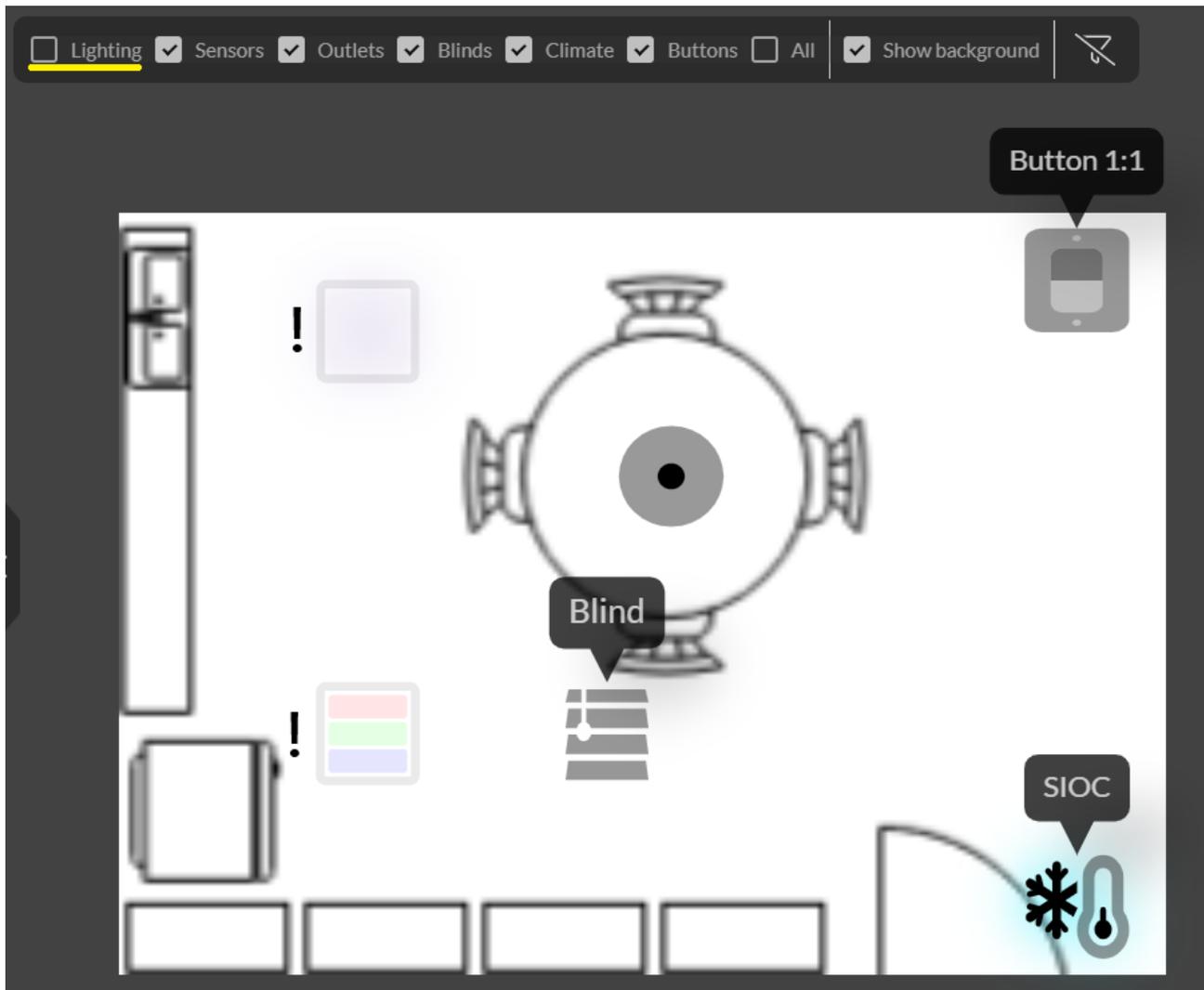


Figure 24. Elements filters - use example

This filtering system allows users to focus on specific elements while maintaining a clear overview of the workspace.

7.4.5. Zones

These specifications describe how to create and manage different zones in the editor:

A) Light zone

A light zone is created by selecting the required elements and clicking the "Create Light Zone" button in the [Settings menu](#). Each newly created light zone is marked with a random color that appears as the background of the element.

The Zone Hardware dropdown allows users to assign a specific lighting controller to a zone. Available options include different versions of SLC (V3 and V4) and CSLC V4 controllers. If a zone does not require a dedicated controller, the "NOT USED" option can be selected.

Required: [A\) Lighting](#) - NORMAL / RGB / DUALTONE Optional: [B\) Sensors](#), [C\) Outlets](#)

Maximum allowable number of light zones: 12

By default, each room contains five predefined scenes, which are displayed in the [Settings menu](#). All existing light zones within the room are automatically assigned to these scenes.

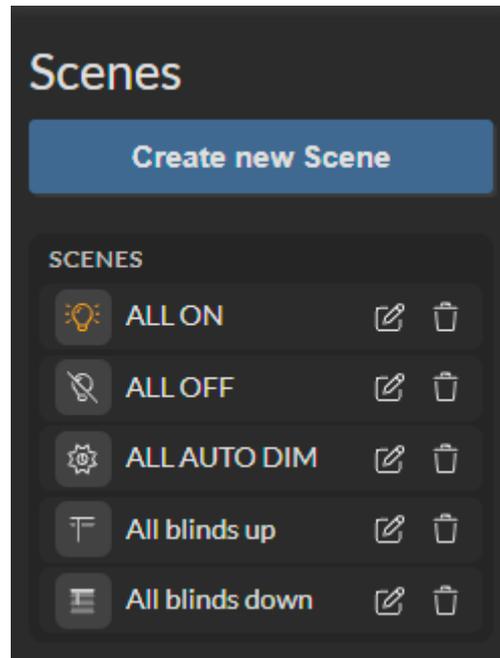


Figure 25. Default scene

B) Blind zone

Each [D\) Blinds](#) element placed on the [Graphical editor](#) automatically creates a new blind zone.

Required: SIOC Blind / SDIOC Blind / ENOCEAN Blind

Maximum allowable number of blind zones: 12

C) Climate zone

Each [F\) Climate](#) element placed on the [Graphical editor](#) automatically creates a new climate zone.

Required: SIOC / EnOcean

Maximum allowable number of climate zones: 12

7.4.6. Elements section

Elements can be selected or deselected using the CTRL + left mouse button combination on the element.

Selecting an element without using the key combination selects all elements within the same light zone (if the element belongs to one) and deselects all previously

selected elements (if they do not belong to that light zone).

Elements can also be selected by clicking and dragging the mouse while holding down the left mouse button.

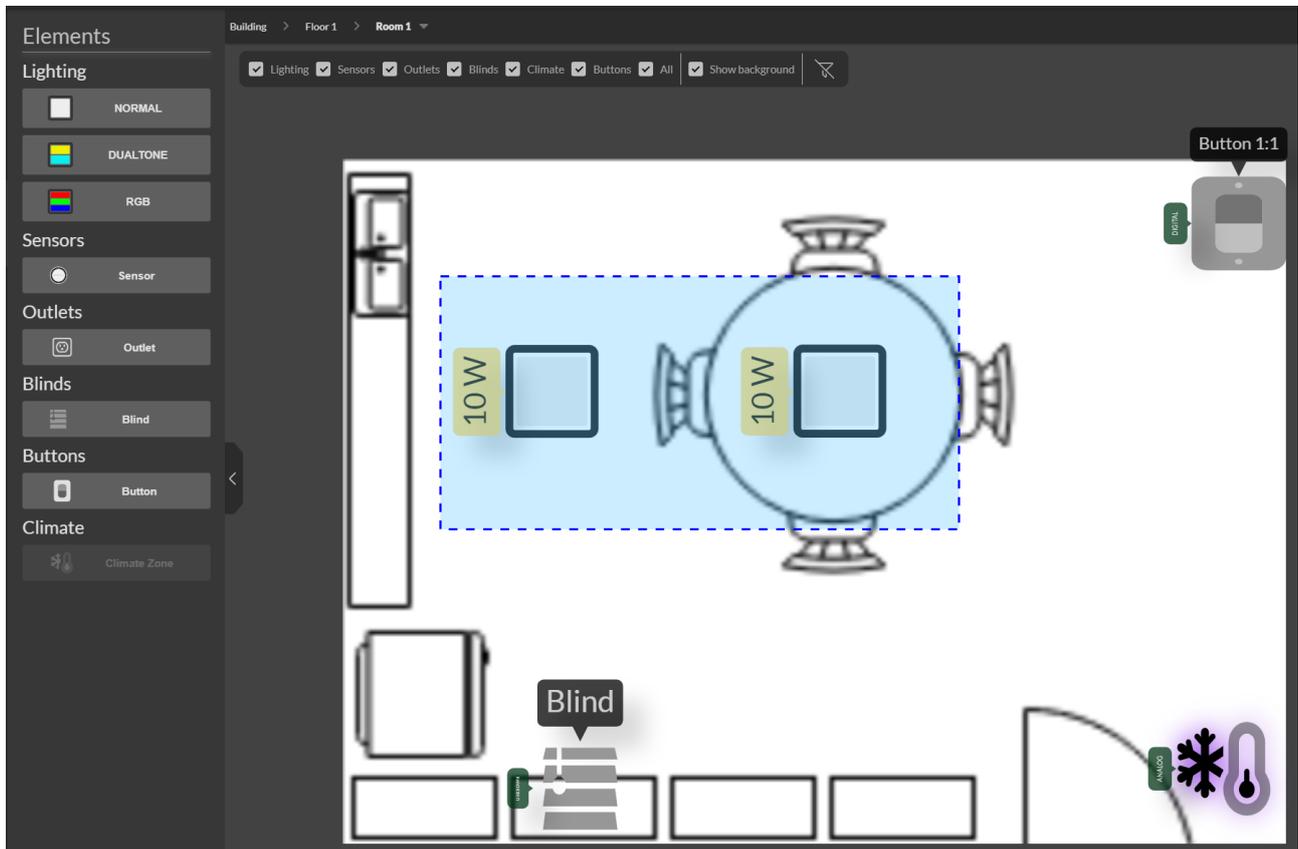


Figure 26. Selecting elements using the left mouse button

All elements can be selected. The available options in the Settings Bar dynamically adjust based on the selected elements.

Keyboard shortcuts available for selected elements:

- **CTRL + D** - Duplicates selected elements with an offset along the x-axis.



If the selected element belongs to a climate or blinds zone, or if all selected elements belong to a light zone, a new zone corresponding to the selected elements will also be created with parameters identical to those of the original zone components.

- **DEL** - Deletes selected elements.



Zones (lighting, climate, and blinds) associated with deleted elements are also removed.



If all LED elements are removed from a light zone, the entire zone is deleted, even if outlets and sensors remain deselected.

- **CTRL + C & CTRL + V** - Copy and paste elements



Creates a copy of selected elements and zones and allows them to be pasted at the mouse cursor position. This function is similar to duplicating elements.

7.4.7. Scene configuration

Each room provides access to scene configuration. A scene is available as a soft button in the web GUI and can also be triggered via assigned physical buttons.

A new scene can be created using the **Add new SCENE** button. After selecting this option, the Scene Configuration view opens. It contains configurable zone sections (Light Zones, Blind Zones, Climate Zones, and Outlets) as well as appearance settings.

A) Appearance

Allows the user to change the scene name and icon.

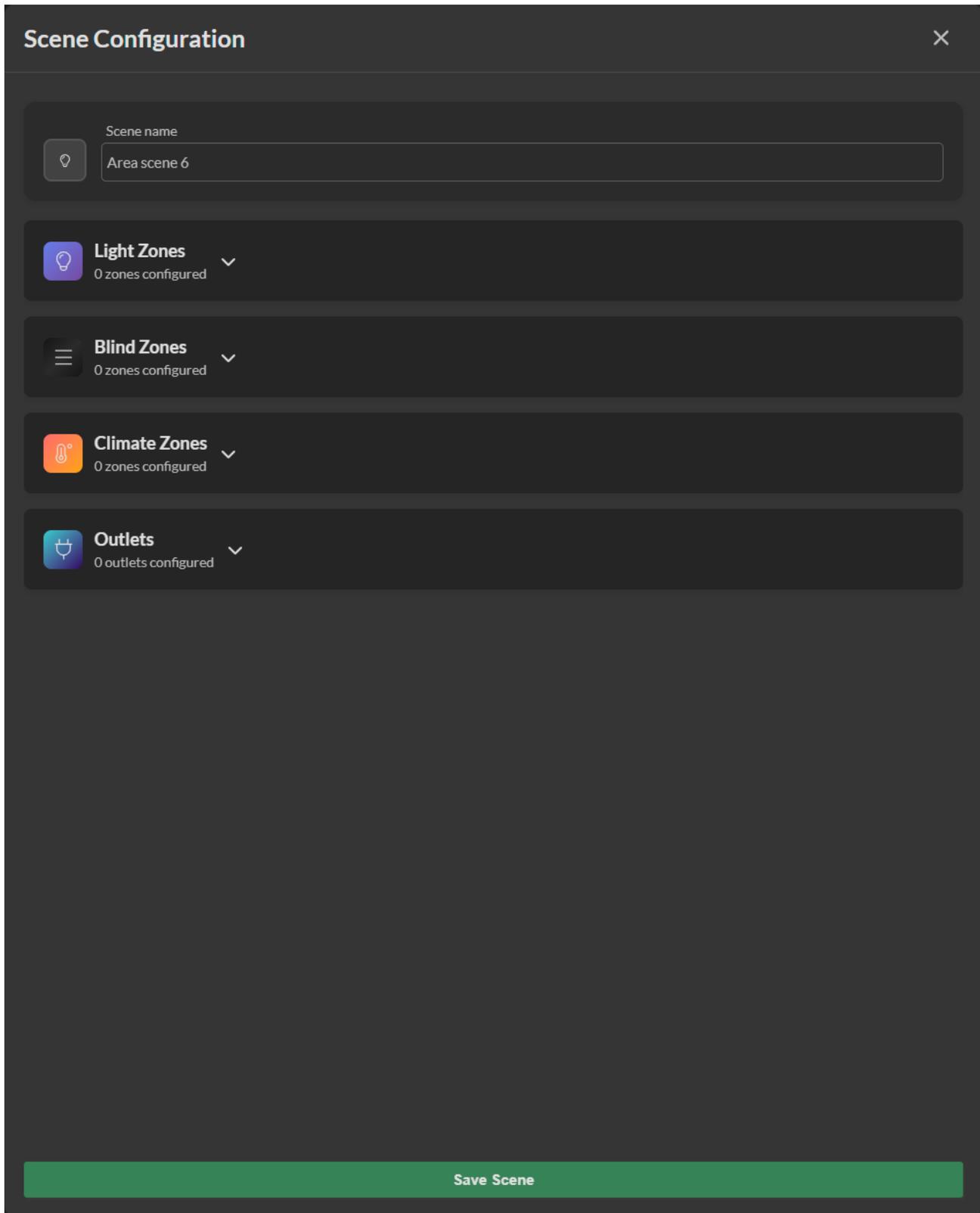


Figure 27. Add new scene window. Appearance configuration



Each zone section is collapsible. Clicking a zone section expands it and displays the available zones assigned to the room. Individual zones can then be selected and configured as part of the scene.

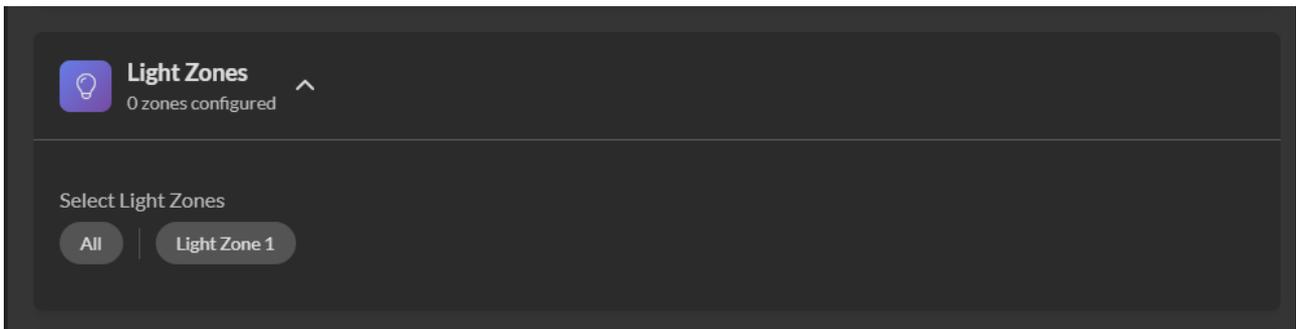


Figure 28. Add new scene window. Appearance configuration extended view

B) Lighting

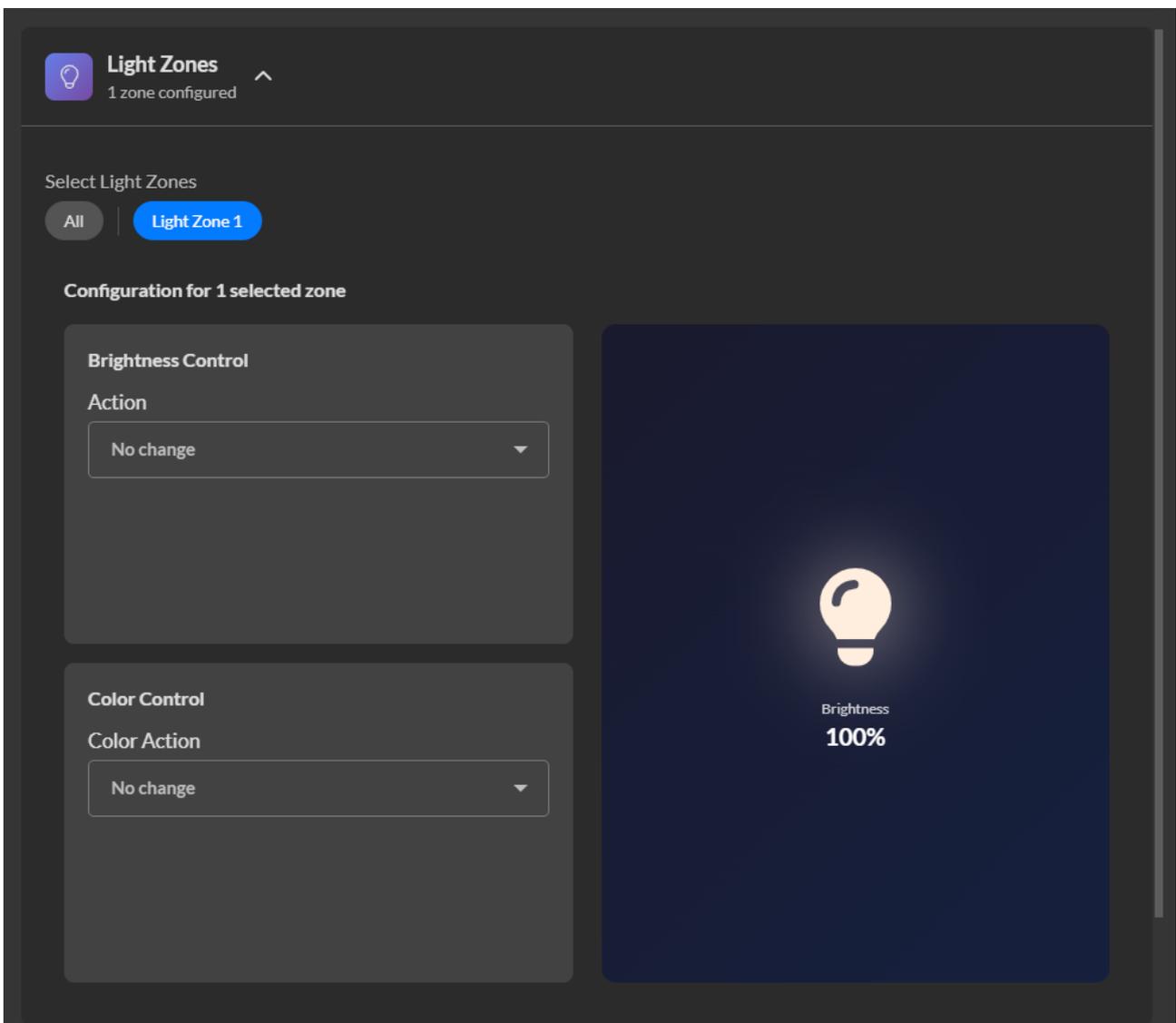


Figure 29. Add new scene window - Lighting configuration

The Lighting section defines how selected light zones behave when a scene is triggered.

Light Zones - List of available light zones within the room. A zone must be explicitly selected (by clicking on it) to activate and expand its configuration view. Only selected zones are affected by the scene.

Brightness Control Action - Defines how brightness is handled for the selected light zones.

Table 1. The description of the selection options for the Brightness Action.

Option	Description
NO_CHANGE	The scene does not modify the current brightness setting.
SET_DIMLEVEL	The brightness is set to the value defined by the dim level slider.
OFF_OR_DIMLEVEL	If the light is currently on, it will be turned off. If it is off, the defined dim level is restored.
USE_AUTODIM	The brightness is automatically adjusted based on ambient light conditions.
OFF_OR_AUTODIM	If the light is currently on, it will be turned off. If it is off, automatic dimming is enabled again.

Dim level - Defines the target brightness level applied by the scene when SET_DIMLEVEL or OFF_OR_DIMLEVEL is selected. Range: 0–100%.

Color Control / Color Action - Defines how the color temperature of the selected light zones is handled.

Table 2. The description of the selection options for the Color Action.

Option	Description
NO_CHANGE	The scene does not modify the current color temperature.
SET_COLOR	The color temperature is set using the color temperature slider.
HUMAN_CENTRIC	The color temperature is automatically adjusted based on the time of day.
COLDER	The color temperature is shifted toward colder (cool white) values.
WARMER	The color temperature is shifted toward warmer (warm white) values.

Color temperature - Defines the target light temperature when SET_COLOR or HUMAN_CENTRIC is selected. For HUMAN_CENTRIC, the effective range is 3000–6000 K.



Configuration controls are displayed only after at least one light zone has been selected and expanded.

C) Blinds

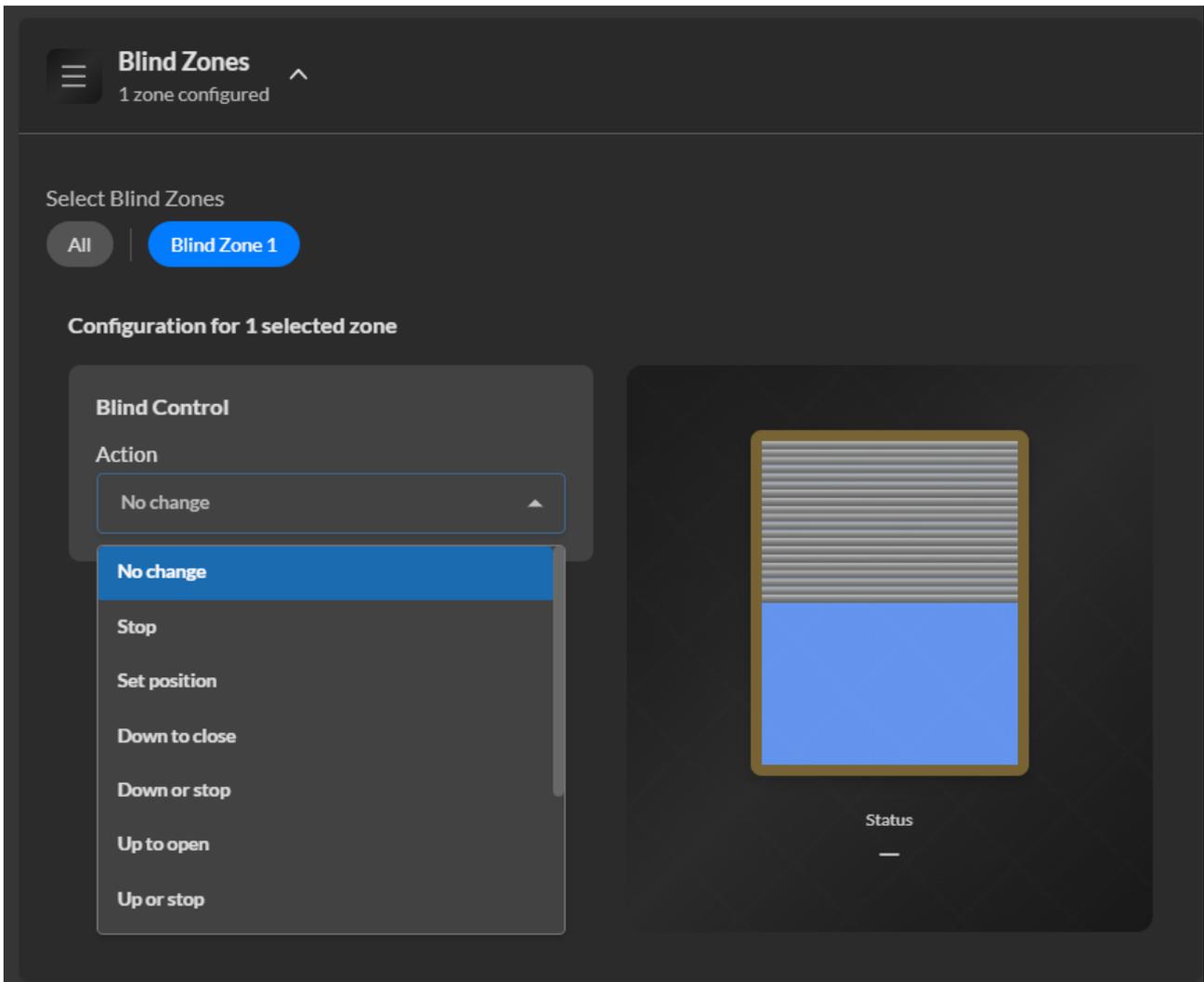


Figure 30. Add new scene window - Blinds configuration

The Blinds section defines how blind zones behave when a scene is triggered.

Blind Zones - List of available blind zones in the room. A blind zone must be selected by clicking on it to activate and expand its configuration view. Only selected zones are affected by the scene.

Blind Control / Action - Specifies the action executed for the selected blind zones when the scene is activated.

Table 3. The description of the available Blind Action options.

Option	Description
No change	The scene does not modify the current blind state.
Stop	Immediately stops blind movement.
Set position	Moves the blinds to a predefined position.

Option	Description
Down to close	Fully lowers the blinds to close them.
Down or stop	Lowers the blinds or stops them if they are already moving.
Up to open	Fully raises the blinds to open them.
Up or stop	Raises the blinds or stops them if they are already moving.
Up or stop or down	Allows movement in either direction or stops the blinds, depending on their current state.
Slats down	Adjusts the slats to a downward position.
Slats straight	Sets the slats to a neutral, straight position.
Slats up	Adjusts the slats to an upward position.



Configuration controls for blinds are displayed only after at least one blind zone has been selected and expanded.

D) Climate

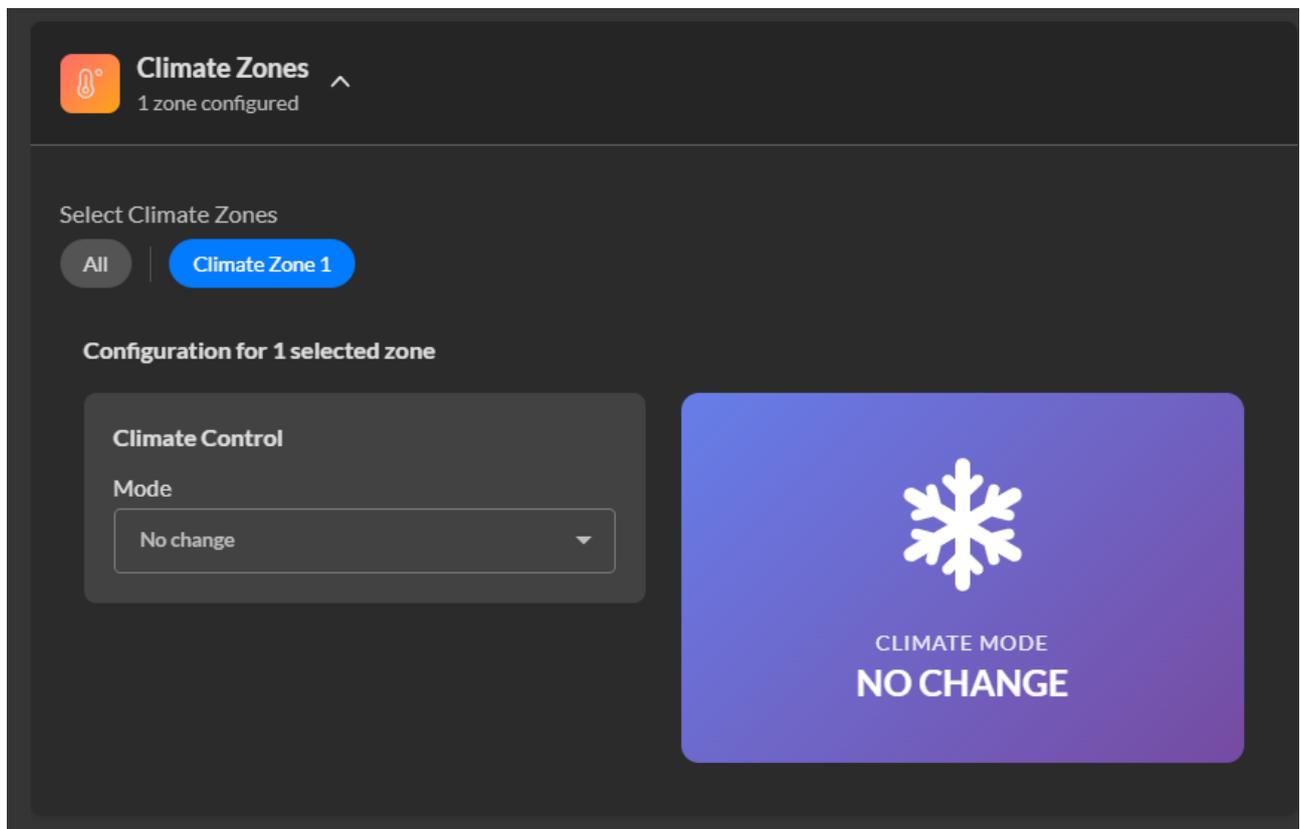


Figure 31. Add new scene window - Climate configuration

The Climate section defines how climate zones behave when a scene is triggered.

Climate Zones - List of available climate zones within the room. A climate zone must

be selected by clicking on it to activate and expand its configuration view. Only selected zones are affected by the scene.

Climate Control / Mode - Specifies the operating mode applied to the selected climate zones when the scene is activated.

Table 4. The description of the available Climate Mode options.

Option	Description
No change	The scene does not modify the current climate mode.
Off	Turns the climate system off for the selected zone.
Standby	Sets the climate system to standby mode with reduced activity.
Night Mode	Applies night-time settings optimized for energy saving and comfort.
Day Mode	Applies day-time comfort settings for normal operation.
Eco Mode	Activates an energy-efficient operating mode with reduced consumption.



Climate configuration controls are displayed only after at least one climate zone has been selected and expanded.

E) Outlets

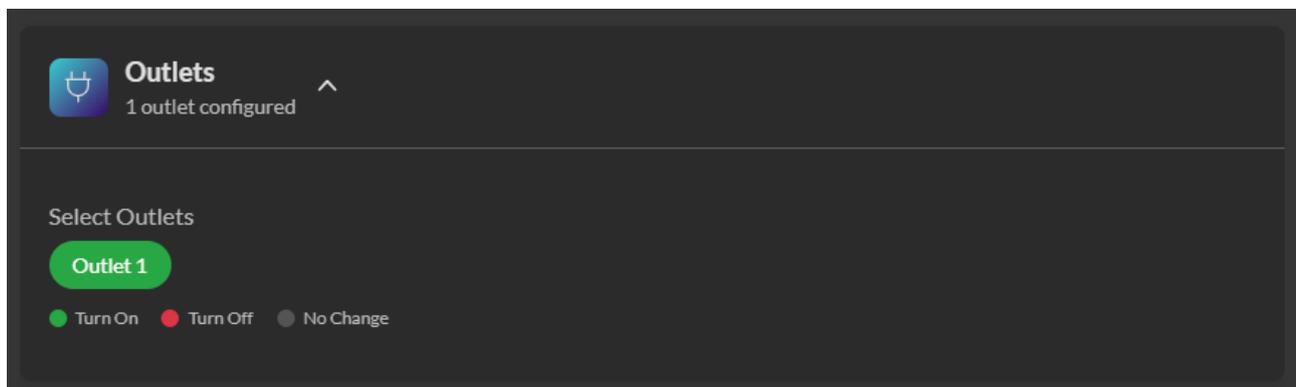


Figure 32. Add new scene window - Outlets configuration

The Outlets section defines the switching behavior of power outlets when a scene is triggered.

Select Outlets - List of available outlets in the room. An outlet must be selected by clicking on it to assign its behavior within the scene.

Outlet action state - For each selected outlet, one of the following states can be assigned:

Turn On - The outlet will be switched on when the scene is activated. Turn Off - The outlet will be switched off when the scene is activated. No Change - The scene does not modify the current state of the outlet.



Only outlets explicitly selected and assigned an action are affected by the scene.



After a scene has been successfully created and saved, it appears in the Scenes list together with the five default system scenes.

7.4.8. Elements configuration

The selected elements are displayed in the [Settings menu](#) on the right. Users can create zones from the selected elements, regardless of whether they include mixed components such as lights, blinds, or others.

A) Light zone element

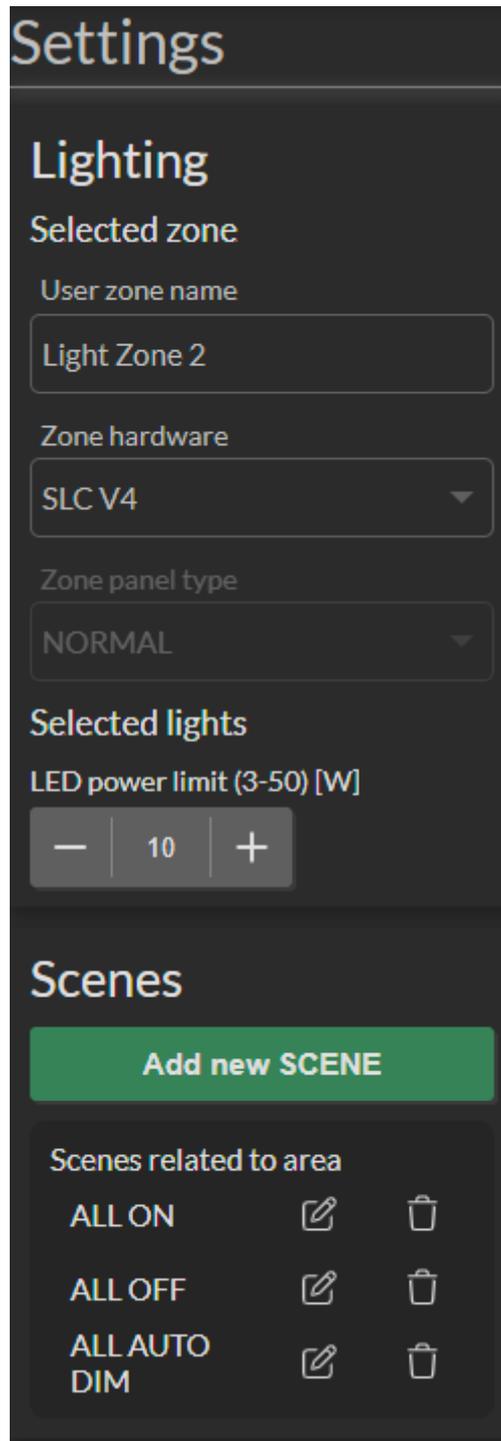


Figure 33. Settings window. Light configuration

I. User zone name

Allows the user to name the selected zone.

II. Zone hardware

Table 5. Lighting zone hardware selection options.

Model	Description	Ports
SLC V3	3-port Smart Lighting Controller V3	- Smart sensor port - 2x network uplink ports
SLC V4	6-port Smart Lighting Controller V4	- Smart sensor port - 6x network uplink ports
CSLC V4	24-port Central Smart Lighting Controller V4	- 2x Smart sensor ports - 24x network uplink ports

III. LED power limit

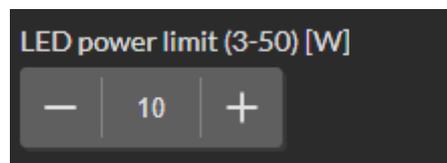


Figure 34. Light zone settings. LED power limit for a single element

For a single element, the power limit value is displayed.

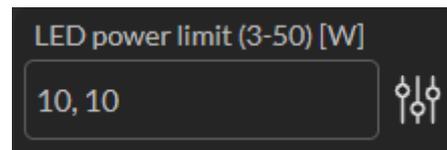


Figure 35. Light zone settings. LED power limit for a selected group

For a selected group of elements, the values of all connected elements are displayed, separated by commas (POWER_LIMIT_LED_1, POWER_LIMIT_LED_2).

-  Changing the power limit for a selected single element that is not part of a light zone changes the limit only for that element.
-  For a selected light zone group, the entered value is applied to all LED panels belonging to the selected zone.
-  To change the value of a single LED panel within a light zone, select the required element using CTRL + left mouse button.

IV. Zone panel type

The panel type is automatically selected based on the type of icon placed in the editor.

B) Climate zone element

For the selected climate zone element, the type of the element used is displayed. It is possible to choose hardware and configure the zone name (visible to the user).

I. User zone name

Allows the user to name the selected zone.

II. Zone hardware

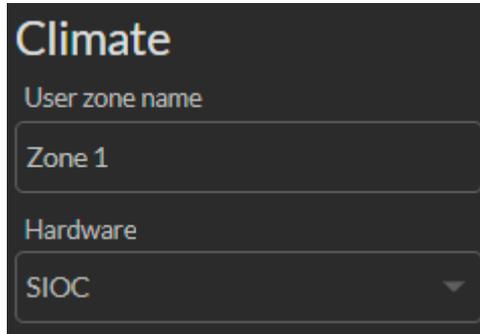


Figure 36. Climate zone settings

Table 6. Climate zone hardware options

Model	Description	Ports / interfaces
SIO	<ul style="list-style-type: none"> - PoE+ IO controller and/or external 24 VDC power supply - Supports field device supply: 24 V / 20 W - Object-oriented building automation - Direct power supply for sensors and actuators up to 20 W total 	<ul style="list-style-type: none"> - Field-device terminals for sensors and actuators, 24 VDC supply (max. 20 W total) - Ethernet uplink with PoE+ for data and power - Optional connection to a 6-Port GbE Micro Switch TP G6 PoE+ or 13-Port GbE Industrial Profi Line Modular Switch PoE+ as system accessories
ENOCEAN		

C) Blind zone element

For the selected blind zone element, the type of the element used is displayed. It is possible to choose hardware and configure the zone name (visible to the user).



Figure 37. Blind zone settings

I. User zone name

Allows the user to name the selected zone.

II. Zone hardware

Table 7. Blinds zone hardware options

Model	Description	Ports / interfaces
SIO	<ul style="list-style-type: none"> - PoE+ IO controller and/or external 24 VDC power supply - Supports field device supply: 24 V / 20 W - Object-oriented building automation - Direct power supply for sensors and actuators up to 20 W total 	<ul style="list-style-type: none"> - Field-device terminals for sensors and actuators, 24 VDC supply (max. 20 W total) - Ethernet uplink with PoE+ for data and power - Optional connection to a 6-Port GbE Micro Switch TP G6 PoE+ or 13-Port GbE Industrial Profi Line Modular Switch PoE+ as system accessories
SDIO	<ul style="list-style-type: none"> - PoE+ IO controller and/or external 24 VDC power supply - Supports field device supply: 24 V / 20 W - Object-oriented building automation - MQTT support for autonomous functionality - Direct power supply for sensors and actuators up to 20 W total 	<ul style="list-style-type: none"> - Field-device terminals for digital sensors and actuators, 24 VDC supply (max. 20 W total) - Ethernet uplink with PoE+ for data and power - Optional connection to a 6-Port GbE Micro Switch TP G6 PoE+ or 13-Port GbE Industrial Profi Line Modular Switch PoE+ as system accessories
ENOCEAN		

D) Button element

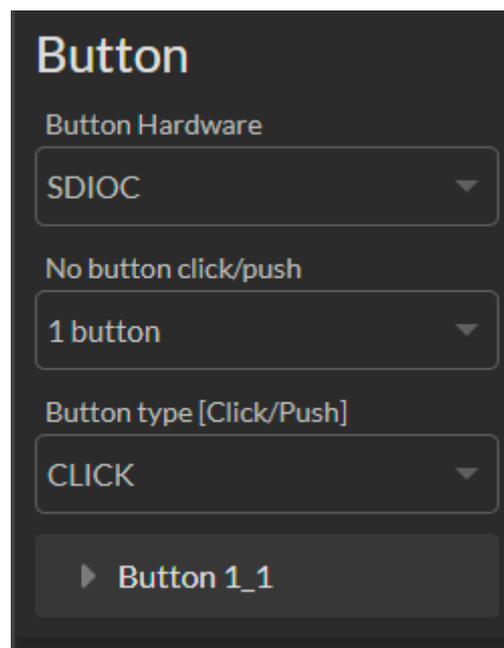


Figure 38. Selected button configuration options

I. Button hardware

The available hardware types for buttons are the same as for blinds (SIOC, SDIOC, and ENOCEAN).



The "EnOcean" button type requires the creation of four buttons of the same type.

II. Number of button click/push inputs

The "Number of button click/push inputs" dropdown menu allows the user to specify how many buttons are available for interaction. This selection determines how many physical or virtual buttons can trigger actions.

Table 8. Available button options

Option	Description
1 button	A single button is available for interaction.
2 buttons	Two buttons are available, allowing additional input options.
4 buttons	Four buttons are available, increasing the number of possible actions.
8 buttons	Eight buttons are available, providing maximum flexibility.

Selecting a higher number of buttons enables more complex interactions. Ensure that the correct number is selected according to the hardware or software configuration.

III. Button type [click/push]

The "Button type" dropdown menu allows users to select the interaction mode of the button. This setting determines whether the button functions as a momentary push button or as a standard click button.

Table 9. Available button type options

Option	Description
CLICK	The button registers a single action when pressed and released.
PUSH	The button remains active while it is pressed and deactivates upon release.

Selecting the appropriate button type ensures compatibility with the intended functionality. The CLICK mode is suitable for actions that require a single press, while the PUSH mode is suitable for continuous actions dependent on how long the button is held.

IV. Button 1 - tree view

Clicking **Button 1** allows editing the name of the selected button and configuring button scenes.

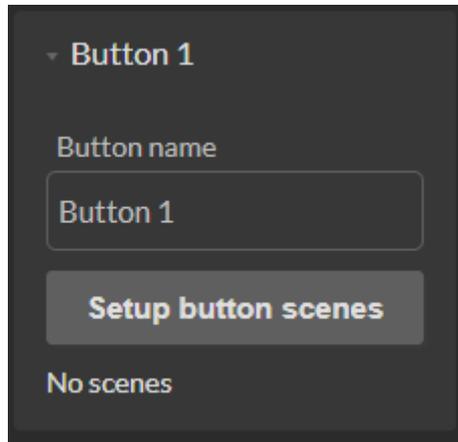


Figure 39. Selected button configuration options - expanded tree view

Scenes triggered by the button can be configured individually. Scene selection is available via the **Setup button scenes** button and by selecting scenes from the configured scene list.

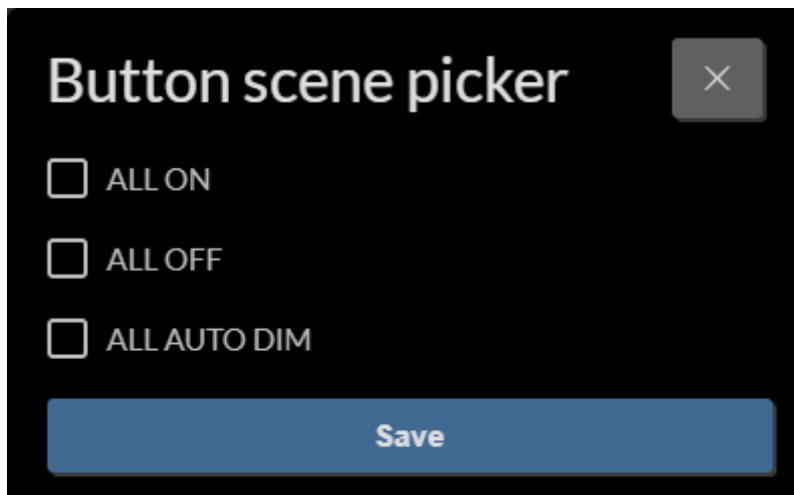


Figure 40. Selected button configuration options - button scene picker

Selected scenes are listed in the Button scenes section.

7.4.9. Icon toolbar panel

This panel contains configuration icons for the canvas editor.

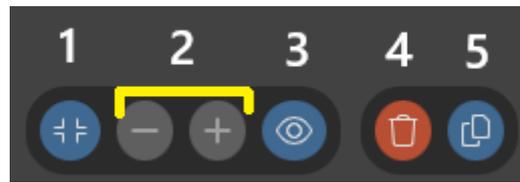


Figure 41. Graphical editor options

- Button **number 1** (Figure 28) centers the layout and adjusts its height and width to fit the available window size.
- Buttons **number 2** (Figure 28) zoom the layout in and out.
- Button **number 3** (Figure 28) is a toggle button. When enabled and a visualization exists in the floor editor, a preview of the elements inside the zone is displayed.



Buttons **number 4 and 5** are available only when elements are selected.

- Button **number 4** (Figure 28) deletes an element together with its internal elements.
- Button **number 5** (Figure 28) duplicates an element together with its internal elements.

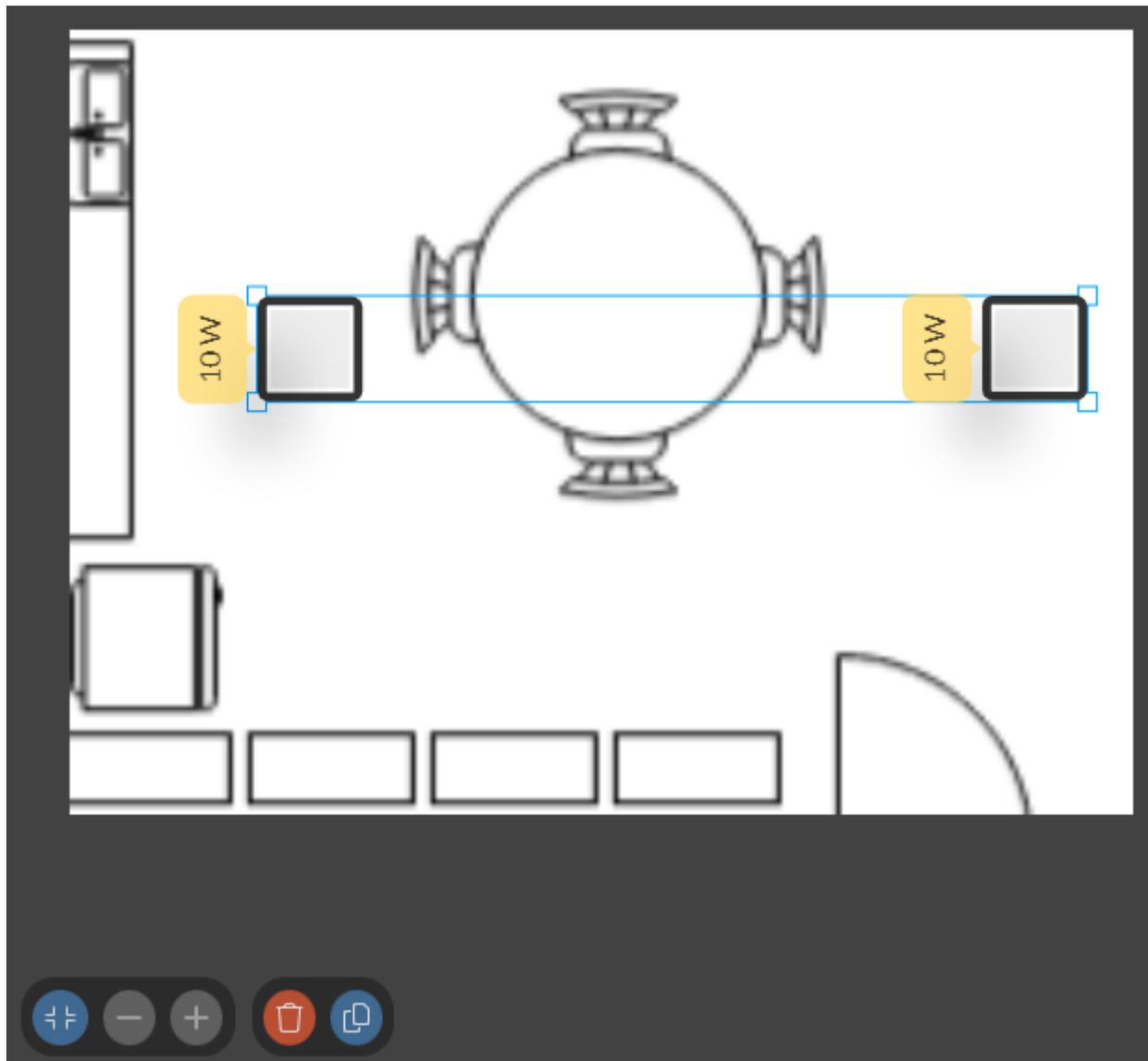


Figure 42. Available toggle button for selected elements

8. SBS - Setup Wizard

The Device IP & Room Assignment view is the first step of the configuration wizard. It is used to link the logical rooms created in the Building Designer to physical Smart Directors and to assign their IP addresses.

The view consists of seven steps. To perform the configuration, a network connection is required so that all devices requiring network access are visible.

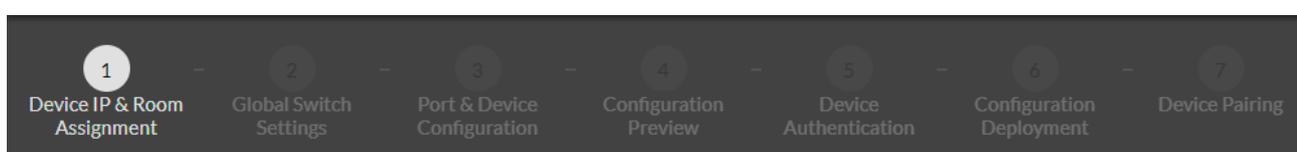


Figure 43. Setup wizard steps

Navigation between steps is available using the Next and Back buttons located in the bottom-left corner of the screen.



Figure 44. Navigation buttons



After leaving the Outputs view, all configured IP addresses and scripts will be deleted.

8.1. Device IP & Room Assignment

The view is divided into floors, with devices automatically assigned using an algorithm that determines the best possible match.

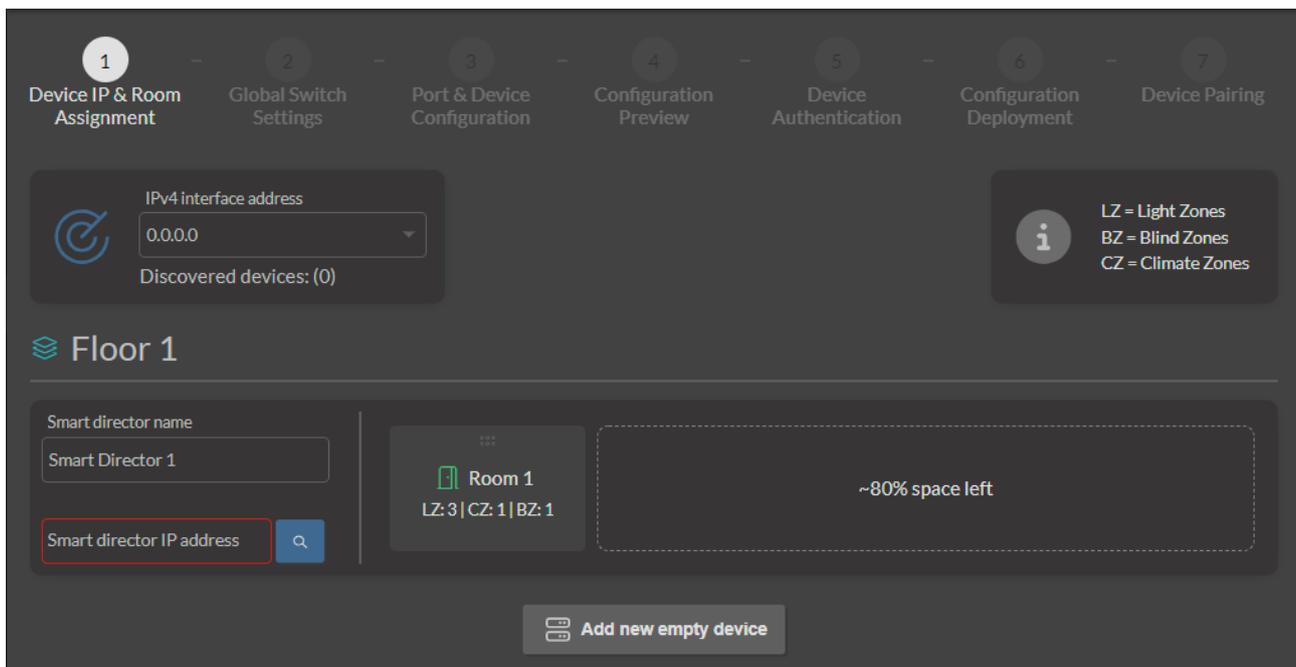


Figure 45. Device IP & Room Assignment view

- **IPv4 interface address** - A drop-down list in the upper-left card that allows you to select the IPv4 interface of the commissioning PC.



After an interface is selected, the system can scan the network segment, and the Discovered devices counter displays the number of Smart Directors detected on that interface.

- **Smart Director name** - An editable text field used to specify the logical name of the Smart Director (for example, Smart Director 1). This name is used later in other steps of the wizard and in reports.
- **Smart Director IP address** - A mandatory IPv4 address field that defines the management IP address of the selected Smart Director.



The adjacent Search button (magnifying glass icon) can be used to automatically discover devices in the subnet of the currently selected IPv4 interface and populate this field.

- The card displays counters for the assigned zones:

LZ - Light Zones, CZ - Climate Zones, BZ - Blind Zones.

The legend for these abbreviations is shown in the information panel on the right side of the view.

- The interface provides drag-and-drop panels for each device, allowing users to modify and adjust the automatically generated structure. The display shows individual rooms with their respective device counts (LZ, CZ, BZ) and the remaining available capacity for additional elements (for example, "~80% space left").



Tiles can be freely moved between devices. Dropping an element may be blocked if the number of zones assigned to the target device exceeds the allowable limit for that device.

Maximum allowable number of light zones per device: 12
Maximum allowable number of blind zones per device: 12
Maximum allowable number of climate zones per device: 1

Using the **Add new empty device** button, it is possible to add an empty device to the floor, to which existing zones can be transferred.

8.2. Global Switch Settings

The Global Switch Settings view is the second step of the commissioning wizard. It is used to define global device behavior, including supported IP protocols, discovery protocols, and time synchronization parameters.

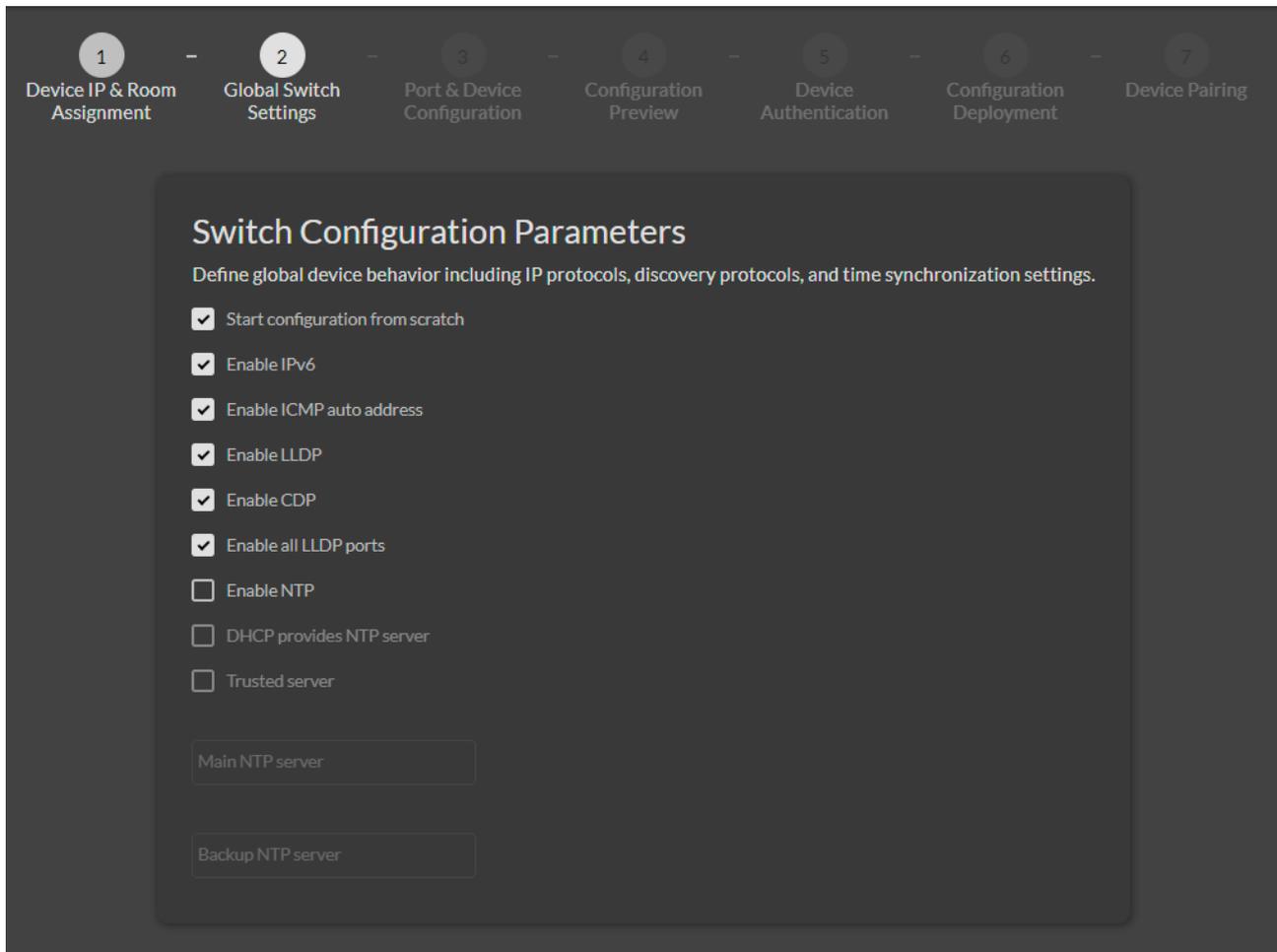


Figure 46. Switch Configuration Parameters view

The following options are available in the Switch Configuration Parameters panel:

- **Start configuration from scratch** - When enabled, the existing configuration on the device is cleared, and a new configuration is generated based on the wizard settings.
- **Enable IPv6** - Enables IPv6 support on the device.
- **Enable ICMP auto address** - Allows the device to use ICMP-based mechanisms for automatic IPv6 address configuration.
- **Enable LLDP** - Enables the Link Layer Discovery Protocol, allowing automatic discovery of directly connected network devices.
- **Enable CDP** - Enables the Cisco Discovery Protocol for interoperability with Cisco infrastructure.
- **Enable all LLDP ports** - Applies LLDP globally on all switch ports instead of enabling it per port.

Time synchronization options (NTP) are configured using the following fields:

- **Enable NTP** - Enables the Network Time Protocol on the device. When this option is enabled, the NTP-related parameters below become editable.

- **DHCP provides NTP server** - Instructs the device to obtain the NTP server address from DHCP option fields.
- **Trusted server** - Marks the configured NTP server as trusted for time synchronization.
- **Main NTP server** - IP address or hostname of the primary NTP server.
- **Backup NTP server** - IP address or hostname of the secondary NTP server used when the primary server is unreachable.

8.3. Port & Device Configuration

In this step, the logical room configuration is mapped to physical controller ports, and the maximum power of each controller type is defined.

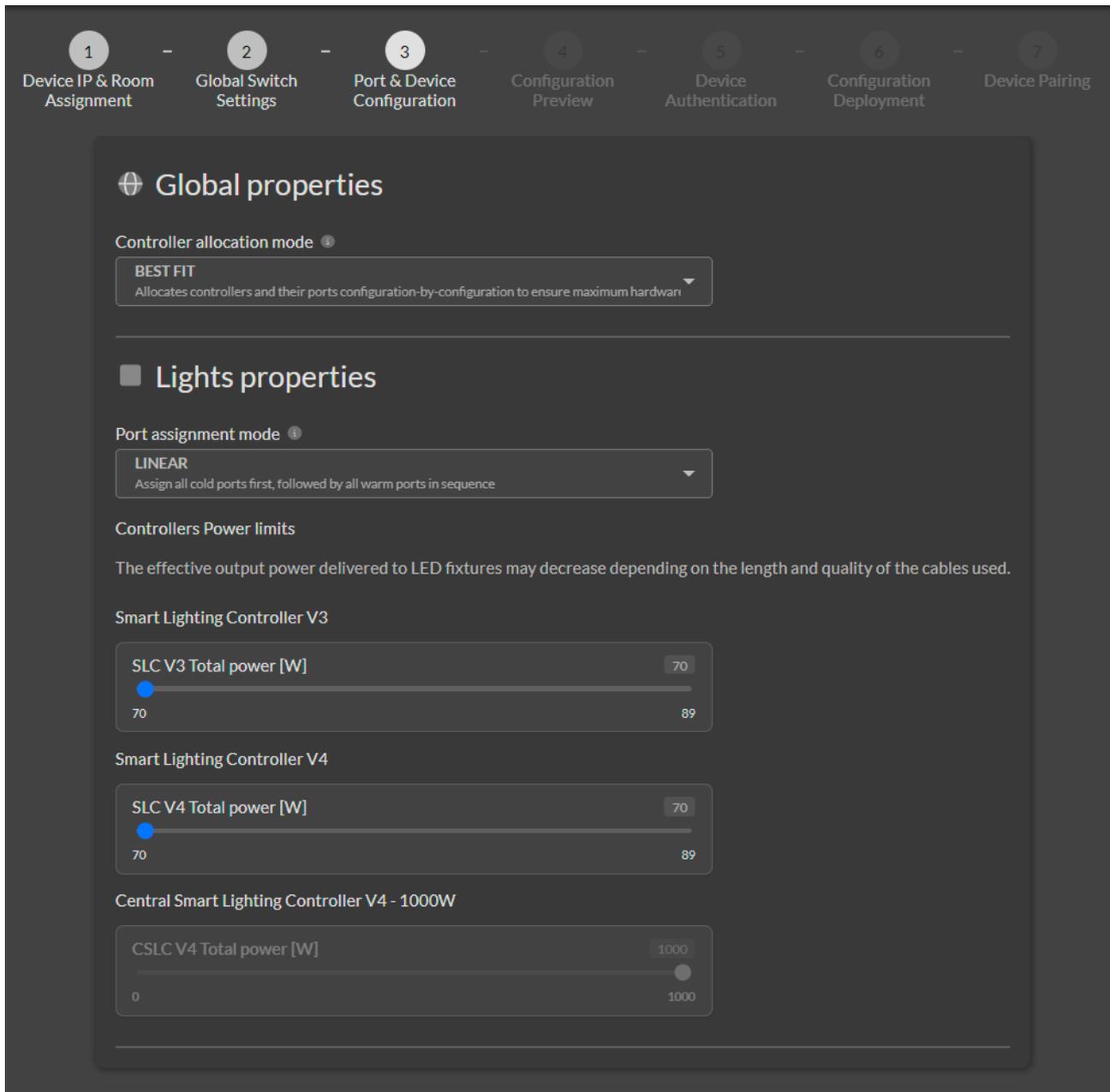


Figure 47. Port & Device Configuration view

Controller allocation mode defines how controllers and their ports are assigned to rooms:

8.3.1. Global properties

BEST FIT

Automatically allocates controllers and their ports across all rooms to achieve maximum hardware utilization. This mode is recommended when controller ports may be shared between rooms.

PER ROOM

Starts a new, independent controller configuration for each room. Controllers and their ports are not shared between rooms. This mode is recommended when each room requires isolated control logic.

MANUAL

Disables automatic allocation and enables manual control of controller usage. In this mode, additional sections for Lights, Blinds, Buttons, and Outlets become active, allowing a dedicated assignment method to be selected for each element type.

8.3.2. Light properties

Port assignment mode - Controls how LED fixtures are mapped to controller outputs.

- LINEAR - Assigns all cold ports first, followed by all warm ports in order.
- IN PAIRS - Assigns cold and warm ports as adjacent pairs (cold, warm, cold, warm).

Controllers power limits - Defines the maximum total output power for each controller model.

For each controller type, a slider (**Total power [W]**) specifies the allowed power budget.

8.3.3. Blinds properties

The Blinds properties define how blinds use controller outputs in [MANUAL](#) mode.

- Separate-1 - Each blind has a dedicated controller, reducing cable length.
- In-Pairs-2 - Two blinds share a controller, depending on their location.
- Packed-4 - Up to four blinds share the same controller, minimizing hardware costs.

8.3.4. Buttons properties

The Buttons properties define how button inputs are assigned to controllers when the Controller allocation mode is set to [MANUAL](#).

- Use existing Blinds Controller inputs first - Reuses free digital inputs on already configured Blinds Controllers before adding new controller modules.
- Start with new controller (shared with outlets) - Starts assignment on a new controller module whose inputs are shared between buttons and power outlets.

8.3.5. Outlet properties

The Outlet properties define how power outlets use controller outputs in [MANUAL](#) mode.

- Use up Blinds Controller outputs first - Reuses available outputs on existing Blinds

Controllers before assigning additional controller modules.

- Start with new controller for outlets - Begins assignment on a dedicated SDIOC controller module whose outputs are shared with power outlets.

8.4. Configuration preview

The Configuration Preview provides an overview of all generated controllers and their assignments before the configuration is exported to the devices. The view is divided into three tabs.

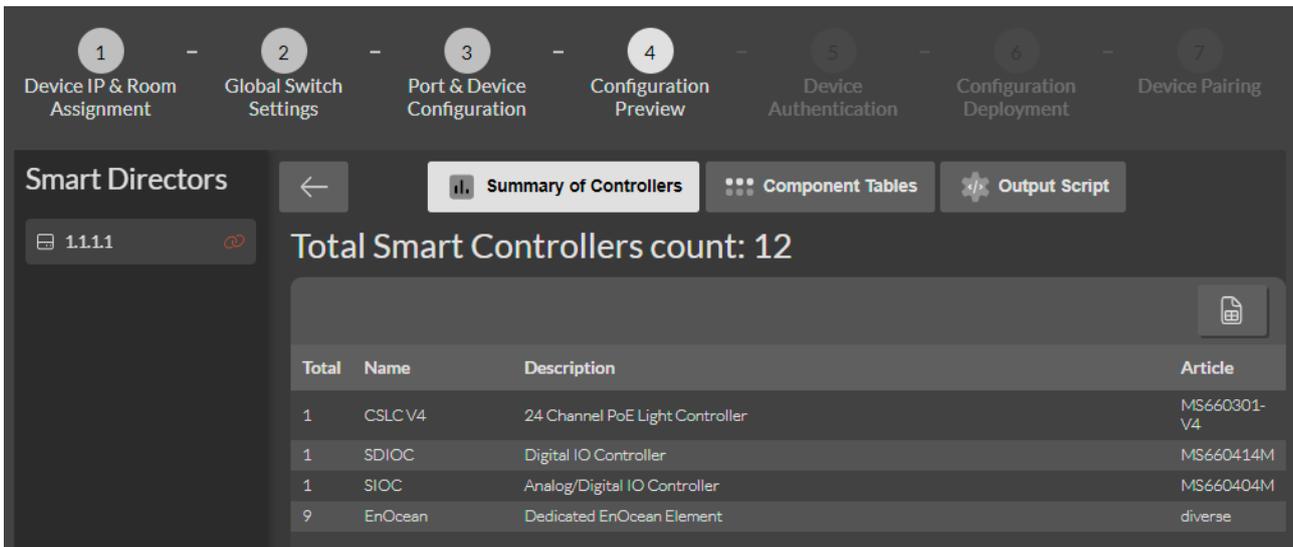


Figure 48. Configuration preview view

The left panel containing the list of IP addresses is used to select the currently configured device.

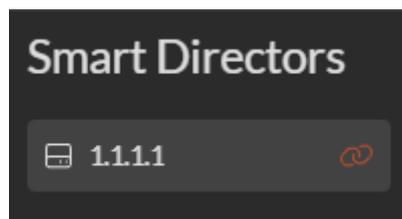


Figure 49. Smart Directors list

The selected element is highlighted in a bright color. The check icon indicates that the script for this device has been generated. The "chain" icon indicates the connection status with the device:

- Red - No authentication
- Green - Successful authentication

8.4.1. Summary of Controllers

Displays the total number of Smart Controllers created for the current project (Total Smart Controllers count). The table lists one row per controller type:

- Total - Number of instantiated controllers of a given type
- Name - Controller model identifier
- Description - Textual description of the controller
- Article - Ordering article number or reference

Total Smart Controllers count: 12

Total	Name	Description	Article
1	CSLCV4	24 Channel PoE Light Controller	MS660301-V4
1	SDIOC	Digital IO Controller	MS660414M
1	SIOC	Analog/Digital IO Controller	MS660404M
9	EnOcean	Dedicated EnOcean Element	diverse

Figure 50. Summary of controllers example table



The icon on the right side of the table exports the complete controller list to a CSV file.

8.4.2. Component Tables

The Component Tables tab provides detailed mapping between system zones and controller ports. Individual buttons at the top (Light, Sensor, Climate, Blind, Outlet, Button) switch between element categories.

Smart Directors

1.1.1.1

Light Sensor Climate Blind Outlet Button

System Zone Name	Controller Type	Light Group	Cold Group	Warm Group	Red Group	Green Group	Blue Group
Dimlevel_Zone_1	CSLCV4	CSLC_1_1(1-2)	-	-	-	-	-
Dimlevel_Zone_2	CSLCV4	CSLC_1_1.3	-	-	-	-	-
Dimlevel_Zone_3	CSLCV4	-	-	-	CSLC_1_1.4	CSLC_1_1.5	CSLC_1_1.6
Dimlevel_Zone_4	CSLCV4	-	CSLC_1_1(7-8)	CSLC_1_1(9-10)	-	-	-

Figure 51. Components table

8.4.3. Output Script

This section allows users to preview, compare, and export a generated script.

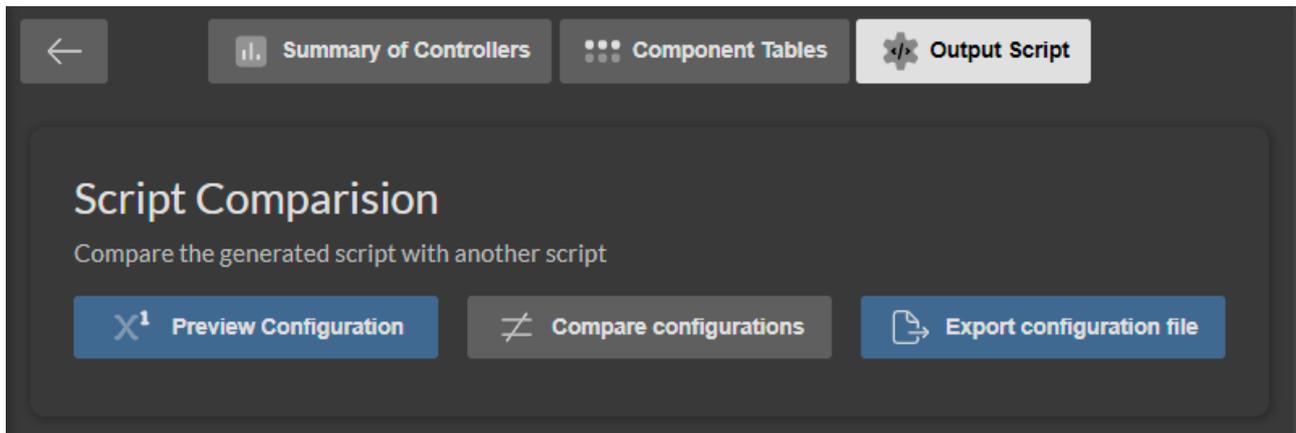


Figure 52. Script output tabs

A) Preview Configuration

- Opens a preview of the generated configuration script for inspection.

B) Compare Configuration

Compares the current script with another script (for example, an existing device configuration) to highlight differences.

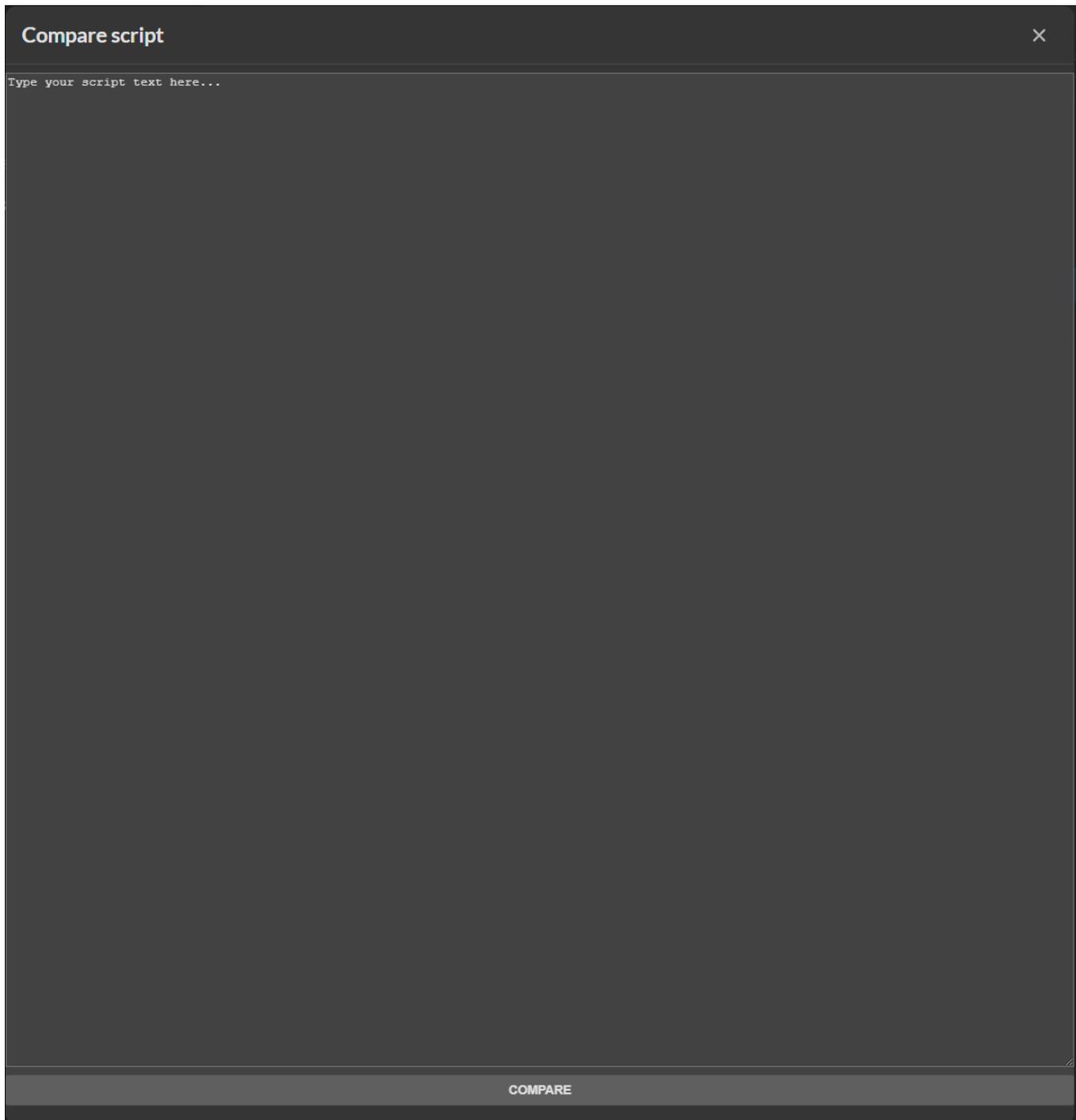


Figure 53. Compare script window

This feature allows users to compare two script versions by identifying differences between them.

How it works:

- **Input Script** - Users can manually enter or paste a script into the comparison window.
- **Comparison Process** - When the Compare button is clicked, the tool analyzes the differences between the input script and the existing script.

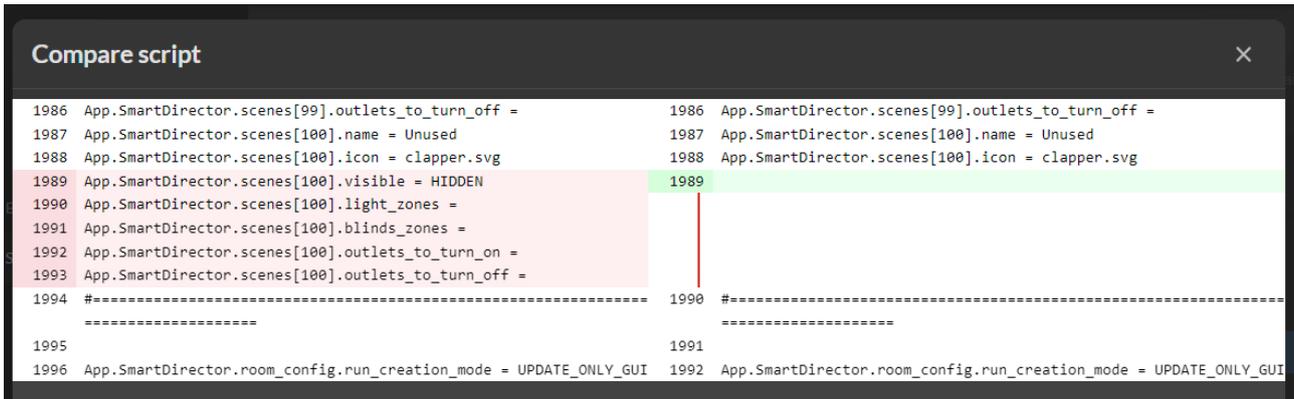


Figure 54. Compare script window

- Visual highlighting:
 - Differences are displayed side-by-side for easier comparison.
 - Highlighted sections (in red) indicate lines that differ between the two scripts.
- Clear Function - The Clear button resets the comparison window.

C) Export configuration file

- Exports the generated script as a configuration file that can be uploaded to the target devices.

8.5. Device Authentication

The Device Authentication view is the fifth step of the setup wizard. In this step, the application uses user-provided credentials to authenticate against all discovered devices before the configuration is deployed.

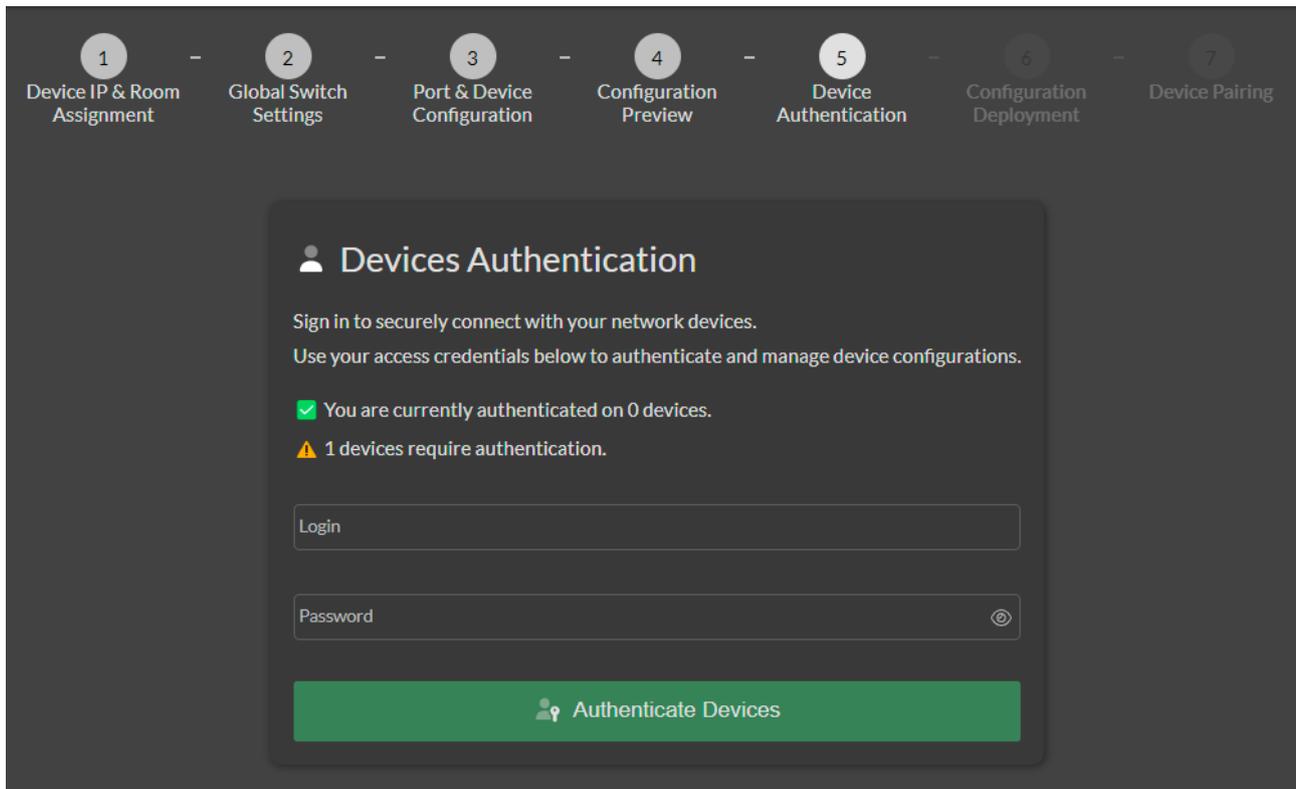


Figure 55. Login to device window

The panel contains the following elements:

- **Status message** - Indicates the current authentication state:
 - You are currently authenticated on X devices - Number of devices for which valid credentials are already stored.
 - Y devices require authentication - Number of devices that still require authentication.
- **Login** - Username used to access the network devices.
- **Password** - Password for the specified login.
- **Authenticate Devices** button - Confirms the entered credentials and attempts to log in to all devices that require authentication.

All devices authenticated successfully. Go to the next step to configure your devices.

Figure 56. Successful device authentication

If authentication is successful, the counters are updated and the devices become eligible for configuration deployment in the next step.

8.6. Configuration Deployment

In this step, the generated configuration is transferred to the authenticated devices.

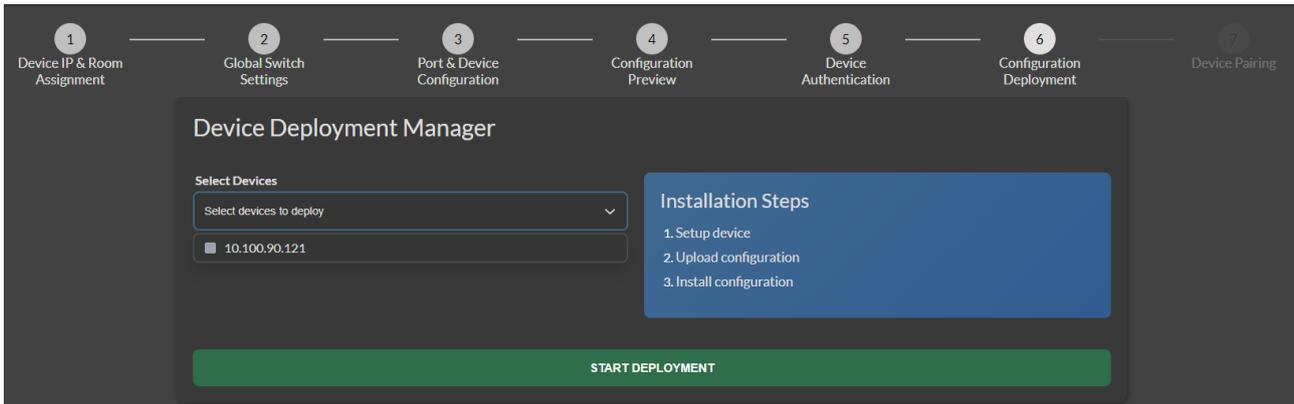


Figure 57. Configuration deployment view

The Configuration Deployment panel contains:

- **Select Devices** - A drop-down list containing all devices that are ready for deployment. Below the list, each device is displayed with its management IP address and a checkbox. Select one or more devices that should receive the current configuration.
- **Installation Steps** - An information panel summarizing the deployment workflow:
 - Setup device - Prepares the selected device for configuration update.
 - Upload configuration - Transfers the generated configuration file to the device.
 - Install configuration - Applies the uploaded configuration on the device.
- **START DEPLOYMENT** button - Starts the deployment process for all selected devices and executes the installation steps in the defined order.

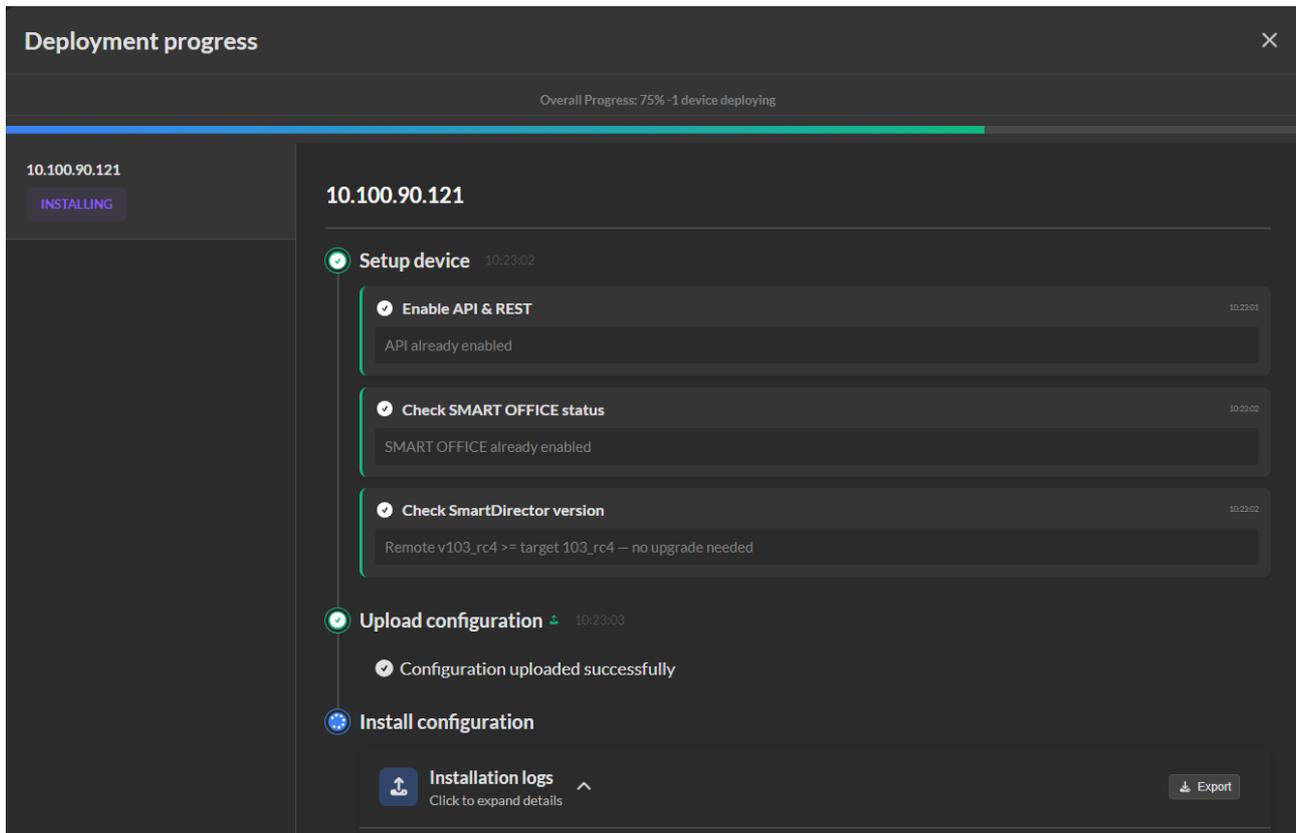


Figure 58. Configuration deployment uploading

After starting the deployment, a Deployment progress window is displayed. It shows the real-time status of the configuration installation on all selected devices.

The view contains:

- **Overall Progress bar** - Displayed at the top and indicates the global percentage of completed deployment and the number of devices currently being deployed.
- **Device list** (left panel) - Displays each target device by IP address together with its current state (for example, INSTALLING). Selecting a device displays detailed information for that device.
- **Per-device timeline** (main panel) - Grouped into the same three phases as in the previous step:
 - Setup device - Includes detailed subtasks such as Enable API & REST, Check SMART OFFICE status, and Check Smart Director version, each with its own result message and timestamp.
 - Upload configuration - Indicates whether the configuration file has been successfully uploaded.
 - Install configuration - Displays the status of the configuration installation on the device.
- **Installation logs** - Expandable section displaying detailed log entries for the selected device.



The Export button allows the installation log to be downloaded for

| offline analysis or documentation.

8.7. Device Pairing

The Device Pairing view is the final step of the setup wizard. In this step, each logical zone created by the configuration is linked to its corresponding physical field device.

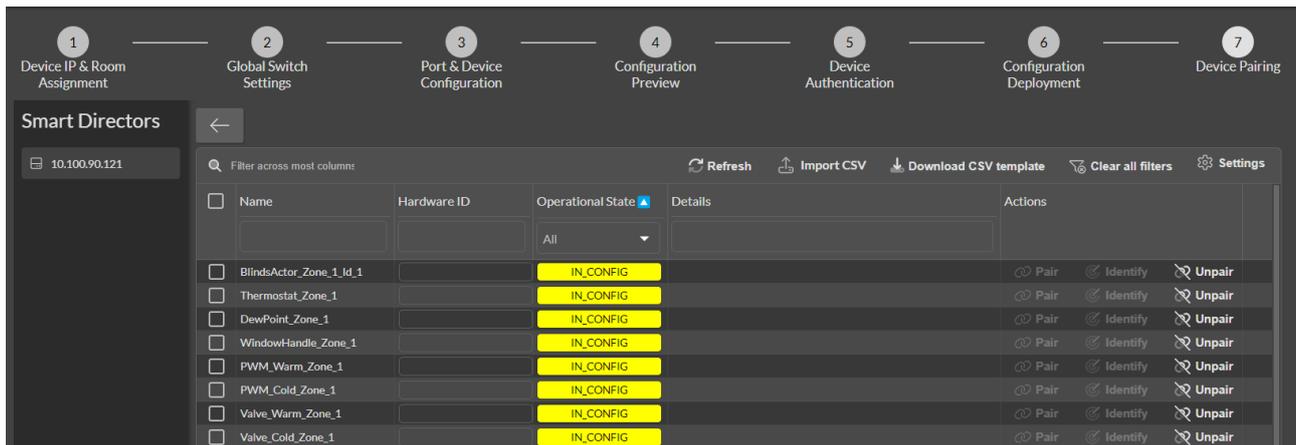


Figure 59. Device Pairing view

The view is divided into the following areas:

- **Selecting a Smart Director** - Loads its zones into the main table.
- **Filter and toolbar** (top of the table)
 - **Filter** across most columns - Text filter applied to all visible columns.
 - **Refresh** button - Reloads the current pairing status from the Smart Director.
 - **Import CSV** button - Imports a CSV file containing predefined hardware IDs and pairing information.
 - **Download CSV template** button - Downloads an empty CSV template with the correct column structure for bulk pairing.
 - **Clear all filters** button - Resets all active filters.
 - **Settings** button - Opens additional options related to the pairing view.

The table contains the following columns:

- **Name** - Logical name of the zone (for example BlindsActor_Zone_1_Id_1, Thermostat_Zone_1, Valve_Warm_Zone_1).
- **Hardware ID** - Unique identifier of the physical device associated with the zone. This field is populated automatically during pairing or via CSV import.
- **Operational State** - Current state of the zone (for example IN_CONFIG while the configuration is being prepared).
- **Details** - Additional diagnostic or status information.
- **Actions** - Per-zone actions:
 - **Pair** - Starts the pairing procedure between the logical zone and a physical

device, writing the hardware ID into the zone.

- Identify - Triggers a visual or acoustic signal on the paired device to confirm that the correct hardware is associated with the zone.
- Unpair - Removes the existing association between the zone and the hardware device and clears the Hardware ID field.



Checkboxes in the first column allow selecting multiple zones for batch operations (for example when importing or updating pairings via CSV).

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