

bmLINK

Commissioning instructions



ZUMTOBEL

Legal information

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Document number

bmLINK, Commissioning instructions
5.0 | 06.2021 | en

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1 How to use these instructions

We are pleased that you have chosen this *Zumtobel Lighting GmbH* product. So that you can get the most from these instructions, this section provides the following information:

- Signs and icons in these instructions
- Further information
- Target audience of these instructions
- Software version

We are pleased that you have chosen this *Zumtobel Lighting GmbH* product. So that you can get the most from these instructions, this section provides the following information:

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Signs and icons in these instructions

The following signs and icons are used in these instructions:

Sign/icon	Explanation
1.	Individual steps in the instructions are numbered.
▷	Single-step instructions are indicated by the ▷ icon at the beginning of the line.
➡	After a step has been described, a description of the expected results will follow. These results are indicated by the ➡ icon at the beginning of the line.
—	Requirements which need to be checked before carrying out a step are indicated by —.
i	Notes can be recognised by the i icon. In addition, notes are identified by the word Note .
[Bold text]	Bold text indicates words that are shown on a device display or software user interface.
	Danger and safety instructions are indicated by this icon. Safety and warning information is labelled and classified using the following words: DANGER indicates an immediate danger. This could lead to death or severe injury if not avoided. WARNING indicates a potentially dangerous situation. This could lead to death or severe injury if not avoided. CAUTION indicates a potentially dangerous situation. This could lead to minor injury or damage to property if not avoided. Attention indicates a situation involving potential damage. If it is not avoided, the product or something in the vicinity may be damaged.

Table 1: Signs and icons in these instructions

Further information

More information on the *bmLINK Tool* app and the *bmLINK* devices can be found in our product and system documentation.

If you should have any further questions, please contact your sales partner.

General information on our products can be found on our website:

www.zumtobel.com

Target audience of these instructions

These instructions are aimed at technicians who wish to commission and configure previously installed *bmLINK* devices (*Bluetooth* transmitters and receivers) in order to establish a Bluetooth mesh network for switching lighting on and off. General functions of the *bmLINK* web application and the *bmLINK Tool* app are also described.

Software version

These instructions are based on software version 1.27 of the iOS app *bmLINK Tool* and software version 202007 of the *bmLINK* web application.

2 bmLINK system description

bmLINK is a system comprising Bluetooth transmitters and receivers designed for creating a Bluetooth mesh network (Bluetooth Mesh 1.0) in order to connect DALI-compliant control gear.

The devices are commissioned and configured via the *bmLINK Tool* app.

Product	Description
<i>bmLINK Sender</i>	Wireless Bluetooth transmitter with momentary-action switch input, which establishes wireless communication with wireless receivers (<i>bmLINK Receiver</i> and <i>bmLINK mini Receiver</i>) in order to transmit selected DALI control signals and sensor data.
<i>bmLINK Receiver</i>	Wireless Bluetooth receiver with sensor input (L' 230 V AC), which receives the selected DALI control signals sent by a wireless transmitter (<i>bmLINK Sender</i> and <i>bmLINK mini Sender</i>) and forwards the data to DALI luminaires and feeds back sensor data. The <i>bmLINK Receiver</i> can also transmit DALI control signals directly selected for Local control as well as sensor data to other <i>bmLINK Receivers</i> and <i>bmLINK mini Receivers</i> .
<i>bmLINK mini Sender</i>	Wireless Bluetooth transmitter with momentary-action switch input, which establishes wireless communication with wireless receivers (<i>bmLINK Receiver</i> and <i>bmLINK mini Receiver</i>) in order to transmit selected DALI control signals and sensor data. The voltage supply is provided via the DALI control line.
<i>bmLINK mini Receiver</i>	Wireless Bluetooth receiver with sensor input, which receives the selected DALI control signals sent by a wireless transmitter (<i>bmLINK Sender</i> and <i>bmLINK mini Sender</i>) and forwards the data to DALI luminaires and feeds back sensor data. The voltage supply is provided via the DALI control line. The <i>bmLINK mini Receiver</i> can also transmit DALI control signals directly selected for Local control as well as sensor data to other <i>bmLINK Receivers</i> and <i>bmLINK mini Receivers</i> .

Table 2: *bmLINK* product overview



Note

The *bmLINK* and *bmLINK mini* devices are compatible with each other and can be used in the same network.

The following schematic diagram shows how *bmLINK* devices and the *bmLINK Tool* app are used.

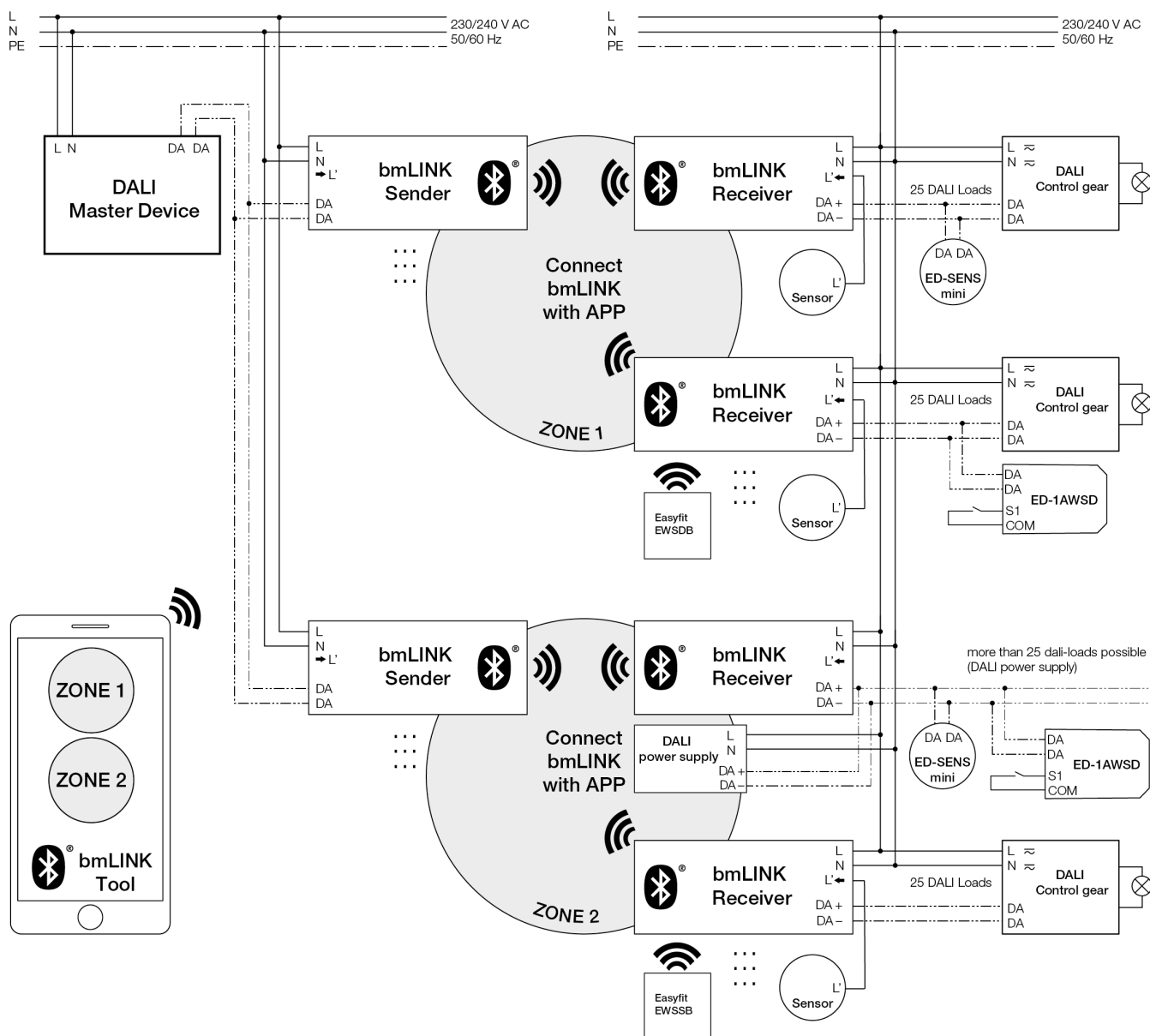


Figure 6: System diagram using *bmLINK Receiver* and *bmLINK Sender* as an example

* Wireless momentary-action switches can only be used for *Local control* (e.g. Presence sensing with daylight linking). For more information see Section [Assigning EnOcean switches in a zone](#) [62]

System limits – bmLINK Receiver and bmLINK Sender hardware

- Max. 25 DALI loads or 50 mA per DALI-compliant output

Line length: DALI control line



Note

If the maximum line length is exceeded, it may no longer be possible to operate the system.

Conductor cross-section	Maximum DALI line length
2 × 0.50 mm ²	100 m
2 × 0.75 mm ²	150 m
2 × 1.50 mm ²	300 m

Table 3: Maximum DALI line length



Note

More information can be found in the installation instructions for the devices in question.

Construction site function

During initial commissioning of luminaires with integrated *bmLINK Receiver* or *bmLINK mini Receiver*, note the 'construction site function'. This behaviour only affects luminaires that have not yet been assigned to a network. As soon as the luminaire is supplied with voltage, the following behaviour can be seen:

1. Luminaire initialisation phase:

The luminaire switches on to a control value of 100%.

2. Luminaire test phase:

1. The luminaire switches to a control value of 20% for 1.5 sec.
2. The luminaire flashes 3 times at 100% every 1 sec. and then retains the 100% value for at least 5 sec.
If the luminaire is a TW luminaire, every 1 sec. it flashes 1 time at 100% cool-white and 1 time at 20% warm-white, and then illuminates at a control value of 100% with 3,000 K for at least 5 sec.
If the luminaire is a self-contained emergency luminaire, it additionally flashes 5 times at 20% every 1 sec.

Next steps - variant 1: at least 1 DALI-2 or eD sensor is detected on the bus.

3. The luminaire switches to a control value of 20%.
4. If a DALI-2 or eD sensor reports motion, the luminaire switches on to a control value of 100% for 10 sec. and then to 20% for 2 sec.

– or –

4. If no motion is reported, the luminaire remains at a control value of 20% (step 5 is skipped).
5. Each time additional motion is reported, the luminaire switches to a control value of 100% for 10 min. and then back to 20%.

Next steps - variant 2: no DALI-2 or eD sensor is detected on the bus.

3. The luminaire switches to a control value of 100%.

4. If the sensor input (L' if a *bmLINK Receiver* is connected) reports motion, the luminaire switches to a control value of 20% for 5 sec.

If additional motion is reported, the luminaire switches to 100% for 10 min.

If no further motion is reported, the luminaire remains at a control value of 20%.

– or –

4. If no L' sensor is connected the luminaire remains at a control value of 100%.

3 Software for commissioning

The *bmLINK* devices are commissioned and maintained via the *bmLINK Tool app*.

The *bmLINK* web application is available for the easy creation and management of commissioning and maintenance projects.

3.1 bmLINK web application

The *bmLINK* web application can be accessed online by navigating to the address <https://bmlink-platform.zumtobel.com> in a browser.

It enables you to easily plan and create commissioning and maintenance projects for *bmLINK* devices, as well as assign zones within a building and manage project team members. The *bmLINK* devices then need to be assigned and configured on site using the *bmLINK Tool app*.

Webbrowser

The *bmLINK* web application requires *Google Chrome* version 70 or higher with *JavaScript* enabled and an existing internet connection.



Note

If an unsupported browser is used, a note appears in the web application with information about supported browsers.

3.2 bmLINK Tool app

The *bmLINK Tool app* is available for download from the *Apple App Store*. The *bmLINK Tool app* can be used to connect *bmLINK* devices to a Bluetooth mesh network, assign zones, and configure and monitor the devices.

The app enables the devices to be commissioned on site and also offers basic project management functions.

Supported devices

The *bmLINK Tool app* requires an *iOS* device with *iOS 12+* and *Bluetooth* enabled, as well as an existing internet connection (WLAN or mobile data).

3.3 Overview of functions

Function	bmLINK Tool app	bmLINK web application
Log in / create user account	Yes	Yes
Reset password	Yes	Yes
Create, edit project	Yes	Yes
Create project report	No	Yes
Invite collaborators, revoke access right	Yes	Yes
Change user roles of collaborators	Yes	Yes
Create, edit area	Yes, with limitations	Yes
Create zones	Yes	Yes
Link zones	No	Yes
Time-linked events (scheduling)	No	No
Create, edit profiles	Yes	Yes
Assign a device	Yes	No
Test network quality	Yes	No
Update device firmware	Yes	No

Table 4: Comparison of functions offered by the app and web application

4 Creating a commissioning plan with the bmLINK web application

The web application enables you to easily plan and create commissioning and maintenance projects for *bmLINK* devices, as well as assign zones within a building and manage project team members.

4.1 Overview of the bmLINK web application

The following contains an overview of the general functions in the *bmLINK* web application:

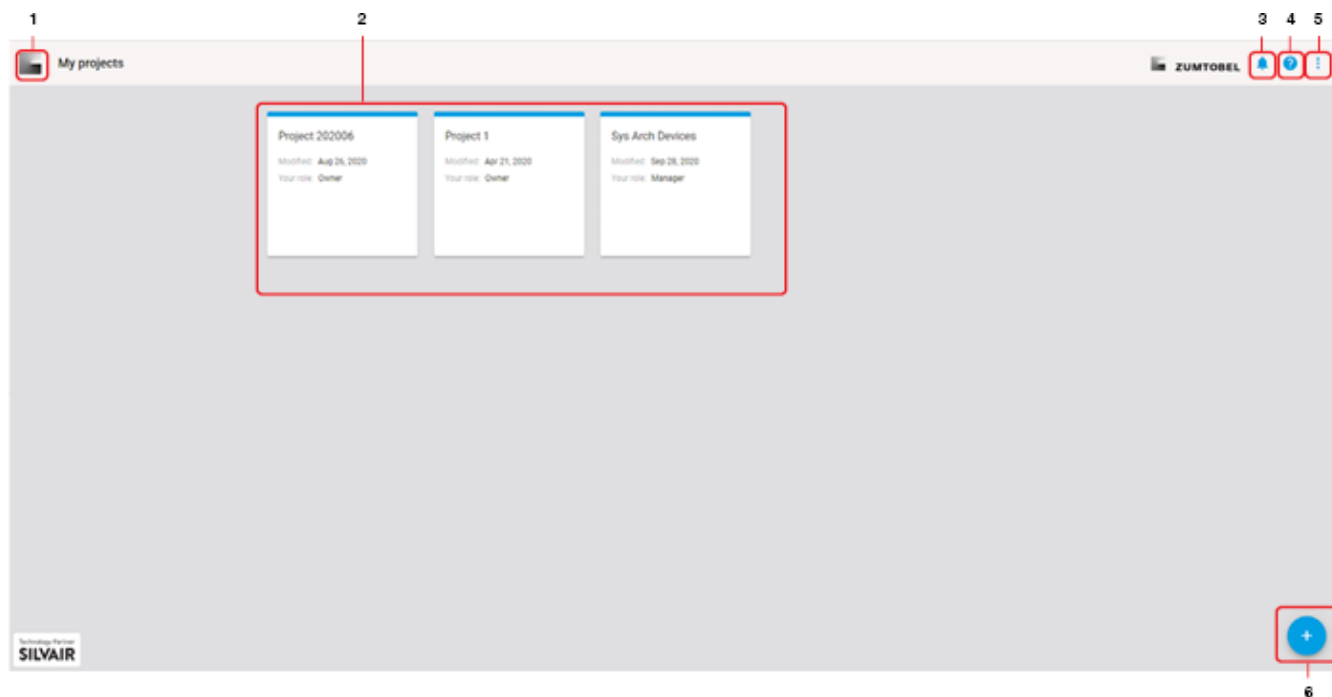


Figure 7: View of the bmLINK web application

	Function	Brief description
(1)	Back	If, for example, you are in the "Version notes" view, tap the logo to return to the "My projects" view.
(2)	Project overview	All projects are displayed here. Tap the project you wish to manage.
(3)	Notifications	Tap this icon to get an overview of all versions of the web application.
(4)	Help	Tap this icon to view the help section. The following information is displayed here: • Help centre: User manuals and other documents on functions in a <i>bmLINK</i> lighting system • Link to download the app • Version notes: overview of all versions of the web application • Terms of use • Privacy policy
(5)	Context menu	You can change the language and log out of the web application via the context menu.
(6)	Create a new project	Tap this button to create a new project.

Table 5: Functions in the bmLINK web application

4.2 Logging in / creating a new user

Logging in as an existing user

Requirement:

- You already have a user account.

1. Open the website <https://bmlink-platform.zumtobel.com/> in a browser.

➡ The **LOG IN** view is displayed.

2. Enter your login data.
3. Set the language if necessary.



Note

bmLINK supports the following languages:

- German
- English
- Spanish
- French
- Korean
- Chinese (simplified)
- Chinese (traditional)

LOG IN

4. Tap the button.

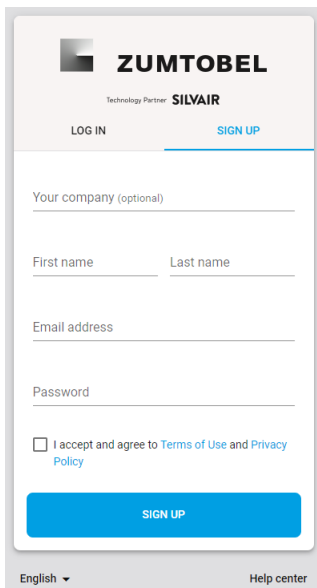
➡ The **My projects** view is displayed.

For more information see Section [Projects](#) ¹⁷

Creating a new user account

1. Open the website <https://bmlink-platform.zumtobel.com/> in a browser and select **SIGN UP**.

➡ The **SIGN UP** view opens.



2. Complete the registration form. Accept the terms of use and privacy policy by enabling the checkbox.
3. Set the language if necessary.
4. Tap the button.
 - ➡ The new user account is created.
 - ➡ A verification email is sent to the email address provided.
5. Open the email and confirm the activation of the account.
 - ➡ The new user account is activated.

SIGN UP

4.3 Creating a project, area and zone

After you log in, the **My projects** view is displayed.

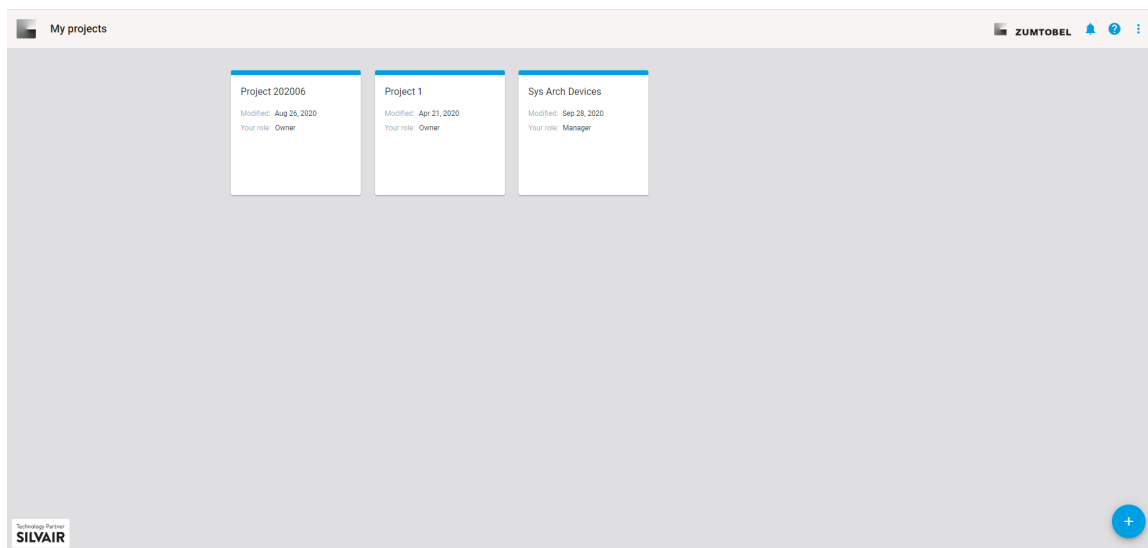


Figure 8: “My projects” view (sample view with created projects)

Creating a project



1. Tap the button.
➔ The **Create project** dialogue is displayed.

Create project

Project name
Project name is required

Latitude Longitude
e.g. 50.09739 e.g. 19.89161

CANCEL CREATE

2. Enter a name for the new project.
3. Add the longitude and latitude if applicable.



Note

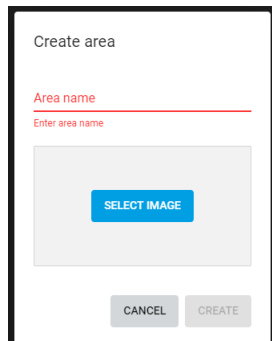
The project longitude and latitude cannot be used in version 202007 yet.

CREATE

4. Tap the button.
➔ The new project is created and is displayed in the **My projects** view.
➔ Projects are sorted by their date of creation. The most recent projects are always displayed first.

Creating an area

1. Tap the project to be opened.
➡ The detail view for the project opens.
2. Tap the button.
➡ The **Create area** dialogue is displayed.



3. Enter a name for the new area.
4. Tap the button or insert the graphic using the drag and drop function.

i

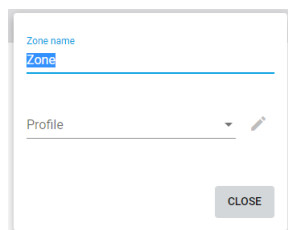
Note

The graphic must be in JPG or PNG format and must not exceed 10 MB.

5. Tap the button.
➡ The area is created in the project.

Creating a new zone

1. Select the project and area in which the new zone is to be created.
2. At the point where you want to create the new zone, click on the area or graphic.
➡ The dialogue for creating a zone is displayed.



3. Enter a name for the zone and select a profile.
4. Tap the button.
➡ The new zone is created and positioned as a cross in the area at the point where the context menu was opened. The zone can be moved and freely positioned in the area or graphic by left-clicking and dragging it.

4.4 Configuration

This section contains the following information:

- [Projects](#) ¹⁷
- [Zones](#) ²⁷
- [Profiles](#) ³¹
- [Resetting your password](#) ⁴¹
- [Logging out](#) ⁴¹

4.4.1 Projects

The web application enables you to manage projects.

This section contains the following information:

- [Creating and editing projects](#) ¹⁷
- [Inviting/managing collaborators](#) ¹⁹
- [Changing user roles](#) ²⁰
- [Creating and editing areas](#) ²²
- [Creating a project report](#) ²⁴
- [Updating the project version](#) ²⁶



Note

Version 202007 and higher include the **Gateways** function. This function is not currently supported by *bmLINK*.

Creating and editing projects

Creating a project



1. Log into the web application.
 - ➔ All projects to which you have access are displayed.
2. Tap the button.
– or –
 2. In the **My projects** view, open the drop-down menu next to the name of the selected project and tap the **Create project** button.
 - ➔ The **Create project** dialogue is displayed.

The dialog box titled 'Create project' contains the following fields and buttons:

- Project name**: A text input field with a red error message 'Project name is required' below it.
- Latitude**: A text input field with a placeholder 'e.g. 50.09739'.
- Longitude**: A text input field with a placeholder 'e.g. 19.89161'.
- CANCEL** and **CREATE** buttons at the bottom.

3. Enter a name for the new project.
4. Add the longitude and latitude if applicable.



Note

The project longitude and latitude cannot be used in version 202007 yet.



5. Tap the button.
 - ➔ The new project is created and is displayed in the **My projects** view.
 - ➔ Projects are sorted by their date of creation. The most recent projects are always displayed first.

Editing a project



1. Open the **My projects** view.
2. Tap the context menu for the project to be edited.
 - ➔ The available options are displayed.
3. Tap **Edit**.

– or –

1. Open the project to be edited.
2. Tap **Edit project** in the navigation bar.
 - ➔ The **Edit project** dialogue is displayed.
4. Change the project name.
5. Change the longitude and latitude.
6. Tap the button.
 - ➔ The change to the project is saved.



Deleting a project

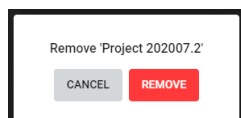


Note

Only users with the **Owner** role can delete projects.



1. Open the **My projects** view.
2. Tap the context menu for the project to be edited.
 - ➔ The available options are displayed.
3. Tap **Remove**.
 - ➔ A confirmation prompt is displayed.




4. Tap the button.
 - ➔ The selected project is deleted.



Note

Projects with active devices cannot be deleted. The devices must first be removed in order to delete the project.

Inviting/managing collaborators

Multiple collaborators can work together on a project, configuring the project and carrying out commissioning.

All collaborators in a project can edit the project, carry out commissioning and invite other collaborators or remove existing collaborators.

Only the collaborator with the **Owner** user role can delete a project. This user role is assigned to the project creator by default, but can be transferred to another collaborator.

For more information see Section [Changing user roles](#)

Inviting collaborators to a project



1. Open the **My projects** view.
2. Tap the context menu for the project to be edited.
 - ➔ The available options are displayed.
3. Tap **Collaborators**.
 - ➔ The **Collaborators** view is displayed.

– or –

2. Open the project.
3. Tap **Collaborators** in the navigation bar.
 - ➔ The **Collaborators** view is displayed.
4. Tap the button.
 - ➔ The **Invite collaborators** dialogue is displayed.



Invite collaborators

Email address
example@company.org

Separate emails with a comma

☒ **End User**
Can only view the project and control the light.
Cannot make any changes.

☐ **Installer**
Can make changes in the project. Can add and
manage devices.

☐ **Manager**
Can manage collaborators, make changes in the
project, add and manage devices.

CANCEL
SEND INVITATION

5. Enter the email addresses of the collaborators to be invited.
6. Select the user role for the collaborators to be invited.
7. Tap the button.
 - ➔ Invitations are sent to the specified email addresses.



Note

The invitations contain a link to the project. A user account must already exist for the collaborator in order for them to be able to open the link.

Revoking collaborator access

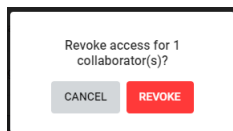


REVOKE ACCESS

REVOKE

1. Open the project and tap the **COLLABORATORS** button.
- ➔ The **Collaborators** view is displayed.
2. Enable the checkboxes next to the collaborators to be removed.
3. Tap the button.

➔ A confirmation prompt is displayed.



4. Tap the button.

➔ The selected collaborators are removed from the project and no longer have access to it.



Note

The collaborator with the **Owner** user role cannot be removed. To remove this collaborator from the project, the user role must first be transferred to a different collaborator.

For more information see Section [Changing user roles](#) ²⁰

Changing user roles

bmLINK offers different user roles for managing projects. Collaborators can be assigned different rights for working on the project using the user roles. The different user roles can be assigned to multiple collaborators, except for the **Owner** user role which can only be assigned to one person per project.

Function	Owner	Manager	Installer	End user
Invite/manage collaborators	Yes	Yes	No	No
Change user role	Yes	Yes	No	No
Manage project and carry out commissioning	Yes	Yes	Yes	No
Remove yourself/own user from the project	Yes, but only if the role has been transferred beforehand	Yes	Yes	Yes
Delete project	Yes	No	No	No
Control lighting	Yes	Yes	Yes	Yes

Table 6: User roles



Note

For more information on the **End user** role see Section [User rights](#) ⁹⁷

Changing user roles

Requirement:

— The **Owner** or **Manager** user role is assigned to you.

1. Open the project and in the navigation bar tap **Collaborators**.

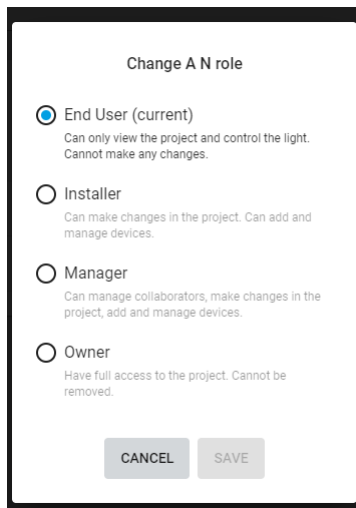
➔ The **Collaborators** view is displayed.

2. Tap the context menu for the collaborator to be edited.

➔ The available options are displayed.

3. Tap **Change role**.

➔ The dialogue is displayed.



Change A N role

☒ End User (current)
Can only view the project and control the light.
Cannot make any changes.

☐ Installer
Can make changes in the project. Can add and manage devices.

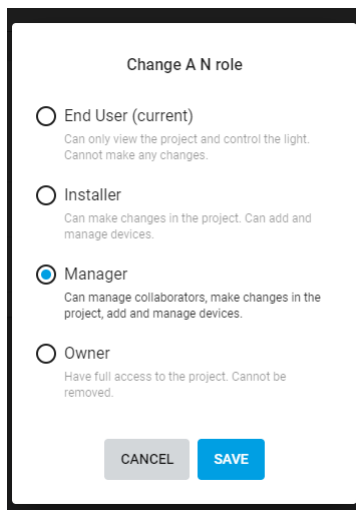
☐ Manager
Can manage collaborators, make changes in the project, add and manage devices.

☐ Owner
Have full access to the project. Cannot be removed.

CANCEL SAVE

4. Select the user role to be assigned.

➔ The **SAVE** button is active.



Change A N role

☐ End User (current)
Can only view the project and control the light.
Cannot make any changes.

☐ Installer
Can make changes in the project. Can add and manage devices.

☒ Manager
Can manage collaborators, make changes in the project, add and manage devices.

☐ Owner
Have full access to the project. Cannot be removed.

CANCEL SAVE

- ➔ If the **Owner** user role is being transferred to another person, the **TRANSFER** button is displayed.



Note

The **Owner** user role can only be transferred to another person by the current **Owner**.

SAVE

or

TRANSFER

5. Tap the button.

- ➔ The user role is assigned to the collaborator, or the **Owner** user role is transferred.



Note

The **Owner** user role can only be assigned to one collaborator at a time. If this user role is reassigned, the current **Owner** automatically loses this role and is given the **Manager** user role.

Creating and editing areas

At least one areas must be created in each project. Areas form the basis of each project. They delimit areas in which zones are created in order to control multiple devices with each other.

Creating an area

1. Tap the project to be opened.
➔ The detail view for the project opens.
2. Tap the button.
➔ The **Create area** dialogue is displayed.



3. Enter a name for the new area.

SELECT IMAGE

4. Tap the **SELECT IMAGE** button or insert the graphic using the drag and drop function.



Note

The graphic must be in JPG or PNG format and must not exceed 10 MB.

CREATE

5. Tap the button.
 - ➔ The area is created in the project.

Editing an area



1. Open the project containing the area to be changed.
2. Tap the context menu for the area to be edited.
 - ➔ The available options are displayed.
3. Tap **Edit**.
 - ➔ The **Edit area** dialogue is displayed.

4. Change the properties (graphic, name).
5. Tap the button.
 - ➔ The change to the area is saved.

SAVE

Deleting an area



1. Open the project containing the area to be deleted.
2. Tap the context menu for the area to be edited.
 - ➔ The available options are displayed.
3. Tap **Remove**.
 - ➔ A confirmation prompt is displayed.

REMOVE

4. Tap the button.
 - ➔ The selected area is deleted.



Note

Areas with active devices cannot be deleted. The devices must first be removed in order to delete the area.

Creating a project report

To get an overview of your projects, the *bmLINK* web application provides the option of creating a project report with all project information and saving this report.

The project report is divided into six sections and contains the following information:

1. Project:
The project overview contains general information about the project. This includes:
 - 1.1. Project name, place, project version
 - 1.2. Date and time of creation, date and time of last update
 - 1.3. Number of areas and zones in the project
 - 1.4. Number of devices (in general, as well as sorted by type of device and device function)
 - 1.5. Project status
2. Areas:
The area overview contains general information about the areas. The information is displayed individually for each area. This includes:
 - 2.1. Area name, area ID, graphic
 - 2.2. Date and time of creation, date and time of last update
 - 2.3. Number of zones in the area
 - 2.4. Number of devices (in general, as well as sorted by type of device and device function)
 - 2.5. Number of wireless momentary-action switches
 - 2.6. Area status
3. Zones:
The zone overview contains general information about the zones. The information is displayed individually for each zone. This includes:
 - 3.1. Zone name, zone ID
 - 3.2. Date and time of creation and commissioning, date and time of last update
 - 3.3. Profiles enabled in the zone, including control mode
 - 3.4. Names of zones that can jointly control the zone in question if zones are linked
 - 3.5. Number of devices (sorted by type of device and device function)
 - 3.6. Detailed information on the devices (e.g. device name, date of commissioning, device status)
 - 3.7. Zone status
4. Profiles:
The profiles used in the project, including the control mode and configurations, are displayed. The number of zones and devices which can be used to control the profile in question is displayed.
5. Linked zones:
The name of the linked zone and the type of control (uni-directional or bi-directional linking) is displayed.
6. Collaborators:
All collaborators assigned to the project are displayed, along with their email address, user role and status.



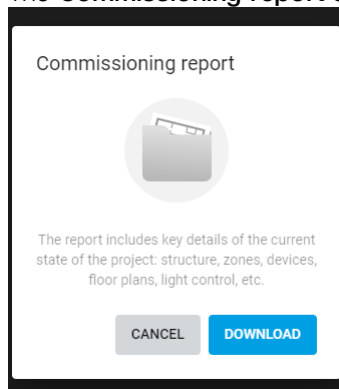
Note

A brief explanation of some of the data given in the project report is summarised in the glossary under "Glossary: project report".
For more information see Section [Glossary](#) ⁸⁷⁾

Creating a project report

To create and save the project report, proceed as follows:

1. Open the project for which the report is to be created.
2. In the navigation bar, tap **Report**.
 ➔ The **Commissioning report** dialogue is displayed.



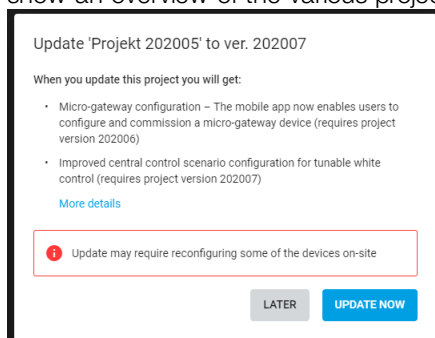
3. Tap the button.
 ➔ The report is saved as an HTML file.

Updating the project version

The *bmLINK* web application is constantly being further developed. New versions of the web application may introduce new functions, improvements and changes that are not compatible with the functions of devices in existing projects or that require on-site adjustments (e.g. reconfiguration). For this reason projects are not automatically updated to the new version when the web application is updated. Projects must be updated manually. This gives you the option of updating your project to the latest version at the right time or continuing to use an older version, if necessary, without having to reconfigure the entire project, for example.

Updating a project

1. Open the **My projects** view.
 - ➔ All available projects are displayed.
2. Tap the context menu for the project to be edited.
 - ➔ The available options are displayed.
3. Tap **Update**.
- or –
3. Open the project and tap on the version to be updated at the top right.
 - ➔ A dialogue with further information on the update is displayed. Tap **More details** to show an overview of the various project versions.



UPDATE NOW

4. Tap the button.
 - ➔ The project is updated.

4.4.2 Zones

A zone comprises a group of devices that are to be controlled together. Zones do not depend on the features of the rooms (e.g. on the rooms themselves). Rooms can be assigned to multiple zones.

All zones of an area are displayed in the area. The status of a zone is displayed as a graphic.

Icon	Description
	The zone is ready for commissioning.
	Zone commissioning is complete. Devices have been added and configured.
	Warning The zone has been commissioned, but the device configuration is faulty or devices cannot be found. For more information see Section Troubleshooting ^[89]

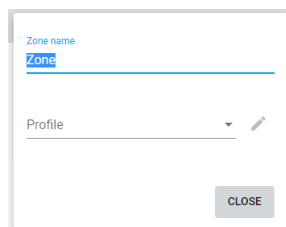
Table 7: Zone icons

This section contains the following information:

- [Creating a new zone](#) ^[27]
- [Editing a zone](#) ^[28]
- [Deleting a zone](#) ^[28]
- [Linking zones](#) ^[29]
- [Viewing the status of the zone](#) ^[30]

Creating a new zone

1. Select the project and area in which the new zone is to be created.
2. At the point where you want to create the new zone, click on the area or graphic.
 - ➔ The dialogue for creating a zone is displayed.

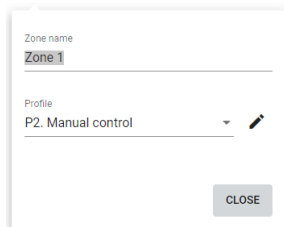


3. Enter a name for the zone and select a profile.
4. Tap the button.
 - ➔ The new zone is created and positioned as a cross in the area at the point where the context menu was opened. The zone can be moved and freely positioned in the area or graphic by left-clicking and dragging it.

CLOSE

Editing a zone

1. Right-click on the zone to be edited to open the context menu.
➡ The available options are displayed.
2. Tap **Edit**.
➡ The dialogue for editing the zone is displayed.

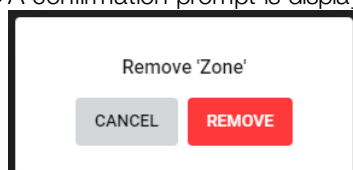


3. Adjust the settings.
➡ The changes are saved automatically.
4. Tap the button to close the dialogue.

CLOSE

Deleting a zone

1. Right-click on the zone to be edited to open the context menu.
➡ The available options are displayed.
2. Tap **Remove**.
➡ A confirmation prompt is displayed.



REMOVE

3. Tap the button.
➡ The selected zone is deleted.



Note

Zones with active devices cannot be deleted. The devices must first be removed in order to delete the zone.

Linking zones

In connection with local control, linking zones allows for lighting to be controlled across zones via a wireless momentary-action switch or presence detector. Zones can be linked in two ways:

- **Uni-directional linking:** cross-zone lighting control only works in one direction. One zone can control the others with its linked zones, but the others cannot control that zone.
Example: zone A and zone B have been linked. The lighting in zone B can be switched from zone A. The lighting in zone A cannot be switched from zone B, however.
- **Bi-directional linking:** cross-zone lighting control works from every zone.
Example: zone A and zone B have been linked. Regardless of which zone (zone A or zone B) the lighting is switched in, the change always applies to both zones (zone A and zone B).

1. Right-click on the zone from which lighting is to be controlled to open the context menu.

2. Tap **Link zone**.

➡ The view for linking zones is displayed.

3. Under **Controls**, add the zones to be linked to the selected zone under the desired control option (wireless momentary-action switch or presence detector).

➡ The linked zones are controlled by the selected zone (**uni-directional linking**).

4. Under **Is controlled by**, add the zones to be linked to the selected zone under the desired control option (wireless momentary-action switch or presence detector).

➡ The linked zones are controlled by the selected zone and can also control the selected zone (**bi-directional linking**).

i

Note

When controlling lighting across zones, ensure that zones with suitable profiles are linked to each other.

- Positive example of linking zones:
Zone A has been assigned the **Presence sensing** profile and **Zone B** the **Absence sensing** profile. If the light is manually switched on in **Zone B**, it remains on as long as presence is reported in **Zone A**.
- Negative example of linking zones:
Zone A has been assigned the **Manual control** profile and **Zone B** the **Absence sensing** profile. Since the lighting in **Zone B** can only be switched off manually using the wireless momentary-action switch, the lighting in the zones cannot be controlled together.

Viewing the status of the zone

The commissioning status can be seen at any time in the *bmLINK* web application.

1. Right-click on the zone to be edited to open the context menu.
 - ➡ The available options are displayed.
 2. Tap **Zone details**.
- or –
1. Press **CTRL** and left-click or **CMD** and left-click (for iOS operating systems) on the zone to be edited.
 - ➡ An overview of the zone is displayed.



i

Note

- The following information is displayed for the zone:
 - Zone name
 - Profile selected for the zone
 - Warnings (if any)
For more information see Section [Warnings for zones](#) ⁸⁹⁾
 - Number of devices assigned to the zone
 - Relays included in the zone
 - Proxies included in the zone
 - List of devices included in the zone, along with their function (Proxy, Relay, EnOcean, ALS, Emergency)
- The following device information can also be displayed by tapping the corresponding device in the list:
 - Device type (luminaire, presence detector or ambient light sensor)
 - Date of commissioning
 - Date of last configuration
 - Device function (e.g. Proxy)
 - EnOcean switch (momentary-action switch connected to the EnOcean adapter)
 - Firmware version
 - Warnings (if any)
For more information see Section [Warnings for devices](#) ⁸⁹⁾

4.4.3 Profiles

bmLINK Tool provides the option of using different “scenarios” (control modes) for the lighting control. Existing profiles can be selected for this purpose or can be adapted to suit individual needs. In software version 1.27 and higher there are different profiles for local and central control (*Local control* and *Central control*).

- **Local control:** *Local control* refers to systems in which only the *bmLINK Receiver* or *bmLINK mini Receiver* is used, as these systems take on the role of the local control device. In this case all profiles or scenarios except **Central control** can be configured.
- **Central control:** *Central control* refers to systems in which all *bmLINK* devices (*Receiver* and *Sender*) are used together with a central control device (e.g. when using with *LITECOM*). In this case only the profile or scenario **Central control** can be configured.

The following control modes (**Scenarios**) are available:

Control mode	Brief description
Central control	A <i>bmLINK Sender</i> takes on the role of a gateway and exchanges DALI commands with the <i>bmLINK Receivers</i> via the Bluetooth mesh network. The lighting is controlled via a central control device (e.g. <i>LITECOM</i>), which communicates with the connected luminaires and sensors via the <i>bmLINK</i> devices. The lighting cannot be controlled manually.
Manual control	All luminaires in a zone are switched on and off or brightened/dimmed manually via a momentary-action switch. If there is a power failure, the luminaires switch to the previously set value once the power supply is restored.
Vacancy sensing (absence linking)	All luminaires in a zone are switched on and off or brightened/dimmed manually via a momentary-action switch. The luminaires are also automatically switched off as soon as the sensors report absence.
Vacancy sensing with daylight harvesting (absence and daylight linking)	All luminaires in a zone are switched on and off or brightened/dimmed manually via a momentary-action switch. The luminaires are also automatically switched off as soon as the sensors report absence. The luminaire control value is also automatically adapted in relation to the daylight.
Occupancy sensing (presence linking)	All luminaires in a zone are automatically switched on as soon as the sensors report presence and are switched off as soon as absence is reported again. The luminaires can also be switched off or dimmed manually via a momentary-action switch.
Occupancy sensing with daylight harvesting (presence and daylight linking)	All luminaires in a zone are automatically switched on as soon as the sensors report presence and are switched off as soon as absence is reported again. The luminaire control value is also automatically adapted in relation to the daylight. The luminaires can also be switched off or dimmed manually via a momentary-action switch.
Multiple scenes (scene linking)	All luminaires in a zone are switched on and off or brightened/dimmed manually. Up to four scenes can also be defined, which are recalled via a momentary-action switch. For more information see Section Assigning EnOcean switches in a zone ^[62]

Table 8: Overview of the scenarios



Note

The **Photocell** and **Central control for dual output** scenarios are not supported by *bmLINK*.

Creating a new profile

1. Tap a zone.
➡ An overview of the zone is displayed.
2. Open the drop-down menu next to the profile.
3. Select **New profile**.
➡ The dialogue for creating a new profile is displayed.

Create new profile

PN Profile name
Profile name is required

Scenario

CANCEL CREATE

4. Enter a name for the profile and select a control mode under **Scenario**.
5. Adjust the settings if applicable.
6. Tap the button.
➡ The profile is created and used for the selected zone.

SAVE

Deleting a profile

1. Tap on a zone.
➡ A brief description of the zone is displayed.
2. Tap the pencil icon.
➡ The dialogue for editing the existing profile is displayed.



3. Tap the button.
➡ A confirmation prompt is displayed.
4. Tap the button.
➡ The profile is deleted.



Note

The profile can only be deleted if it is not being used in any other zone.

Editing the control mode (scenario) of the profiles

The control mode (**Scenario**) of the profiles can be adapted as desired by the user. Either the existing default profiles can be adapted or new profiles can be created.

1. Tap on a zone.
➡ A brief description of the zone is displayed.
2. Open the drop-down menu next to the zone and select **New profile**.
➡ The dialogue for creating a new profile is displayed.

– or –

2. Tap the pencil icon.
➡ The dialogue for editing the existing profile is displayed.

3. Enter a name or change the existing name.
4. Select the desired control mode under **Scenario**.
5. Adjust the settings.

SAVE AS

6. Tap the button.

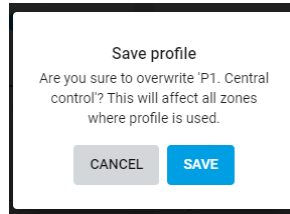
➡ The settings are saved and the new profile is used for the selected zone in the project.

– or –

SAVE

6. Tap the button.

➡ A confirmation prompt is displayed.



SAVE

7. Tap the button.

➡ The settings are saved and the new profile is used for all zones in the project.

Available values for control mode (**Scenario**) **Central control**:

Function	Parameter	Brief description
GENERAL		
Default light level	Light level	Luminaire control value as soon as they are switched on.
	Fade time	Time until the luminaires reach the defined control value (Light level) after being switched on.
Low/high-end trim	Min	Minimum control value that the luminaires can switch to.
	Max	Maximum control value that the luminaires can switch to.
Power up behavior	Keep light off	After mains power is restored, the lighting remains switched off.
	Restore	After mains power is restored, the luminaires switch to the control value they had before the mains failure.
	Defined light level	After mains power is restored, the luminaires switch to a user-defined control value. i Note In the Central control scenario, the Power up behavior must always be set to Defined light level.
SCENES		
Scene A	Light level	Set default scene enabled: luminaire control value, as soon as default scene A has been enabled.
Scene B	Light level	Set default scene enabled: luminaire control value, as soon as default scene B has been enabled.

Table 9: Available values for "Central control"

Available values for control mode (**Scenario**) **Manual control**:

Function	Parameter	Brief description
GENERAL		
Default light level	Light level	Luminaire control value as soon as they are switched on.
	Fade time	Time until the luminaires reach the defined control value (Light level) after being switched on.
Low/high-end trim	Min	Minimum control value that the luminaires can switch to.
	Max	Maximum control value that the luminaires can switch to.
Power up behavior	Keep light off	After mains power is restored, the lighting remains switched off.
	Restore	After mains power is restored, the luminaires switch to the control value they had before the mains failure.
	Defined light level	After mains power is restored, the luminaires switch to a user-defined control value.
SCENES		
Scene A	Light level	Set default scene enabled: luminaire control value, as soon as default scene A has been enabled.
Scene B	Light level	Set default scene enabled: luminaire control value, as soon as default scene B has been enabled.

Table 10: Available values for "Manual control"

Available values for control modes (**Scenarios**) **Vacancy sensing** and **Occupancy sensing**:

Function	Parameter	Function
GENERAL		
Occupied	Light level	Luminaire control value as soon as they are switched on (presence has been reported).
	Timeout	Time during which the luminaires retain the control value before they switch to the new control value (e.g. luminaires are switched off (0%) and then switched on (100%)). Each time motion is detected, the time jumps back to 0.
	Fade time	Time that it takes the luminaires to switch to the control value during presence.
Prolonged	Light level	Control value retained after the interruption period (Occupied timeout).
	Timeout	Time until the luminaires switch to the control value (Prolonged light level) after the interruption period (Occupied timeout).
	Fade time	Time until the luminaires switch to the control value (Prolonged light level) after the interruption period (Occupied timeout) has been active.
Vacant	Light level	Control value retained after the interruption period (Prolonged timeout). The control value must be greater than 0%.
	Fade time	Time until the luminaires switch to the control value (Vacant light level) after the interruption period (Prolonged timeout).
Low/high-end trim	Min	Minimum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).
	Max	Maximum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).

Power up behavior	Keep light off	After mains power is restored, the lighting remains switched off.
	Restore	After mains power is restored, the luminaires switch to the control value they had before the mains failure.
	Defined light level	After mains power is restored, the luminaires switch to a user-defined control value.
Manual override timeout	Time	Time until the luminaires – after being switched off or on or dimmed/brightened manually – switch to the control value defined for automatic control (default values for presence and absence). Each manual operation or each reported motion restarts the Manual override timeout . Example: the Manual override timeout is 10 minutes. As soon as the lighting is switched on manually via the wireless momentary-action switch (control value 70%), a 10 minute timer starts, after which the lighting switches back to the control value defined for presence linking (“Occupancy sensing”), which is 100%.
SCENES		
Scene A	Light level	Set default scene enabled: luminaire control value, as soon as default scene A has been enabled.
Scene B	Light level	Set default scene enabled: luminaire control value, as soon as default scene B has been enabled.

Table 11: Available values for “Vacancy sensing” and “Occupancy sensing”

Available values for control mode (**Scenario**) **Occupancy sensing with daylight harvesting**:

Function	Parameter	Function
GENERAL		
Occupied	Light level	Luminaire control value as soon as they are switched on (presence has been reported).
	Timeout	Time during which the luminaires retain the control value before they switch to the new control value (e.g. luminaires are switched off (0%) and then switched on (100%)). Each time motion is detected, the time jumps back to 0.
	Fade time	Time that it takes the luminaires to switch to the control value during presence.
	Keep light above minimum value	When this function is enabled, the lighting stays at the defined minimum control value as long as the Occupied mode is active.
Prolonged	Light level	Control value retained after the interruption period (Occupied timeout).
	Timeout	Time during which the luminaires retain the control value (Prolonged light level) after the interruption period (Occupied timeout).
	Fade time	Time until the luminaires switch to the control value (Prolonged light level) after the interruption period (Occupied timeout) has been active.
	Keep light above minimum value	When this function is enabled, the lighting stays at the defined minimum control value as long as the Prolonged mode is active.
Vacant	Light level	Control value retained after the interruption period (Prolonged timeout). The control value must be greater than 0%.
	Fade time	Time until the luminaires switch to the control value (Vacant light level) after the interruption period (Prolonged timeout).
	Keep light above minimum value	When this function is enabled, the lighting stays at the defined minimum control value as long as the Vacant mode is active.

Low/high-end trim	Min	Minimum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).
	Max	Maximum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).
Power up behavior	Keep light off	After mains power is restored, the lighting remains switched off.
	Restore	After mains power is restored, the luminaires switch to the control value they had before the mains failure.
	Defined light level	After mains power is restored, the luminaires switch to a user-defined control value.
Manual override timeout	Time	Time until the luminaires – after being switched on or dimmed/brightened manually – switch to the control value defined for automatic control (default values for presence and absence). Each manual operation or each reported motion restarts the Manual override timeout . Example: the Manual override timeout is 10 minutes. As soon as the lighting is switched on manually via the wireless momentary-action switch (control value 70%), a 10 minute timer starts, after which the lighting switches back to the control value defined for presence linking ("Occupancy sensing"), which is 100%.
SCENES		
Scene A	Light level	Set default scene enabled: luminaire control value, as soon as default scene A has been enabled.
Scene B	Light level	Set default scene enabled: luminaire control value, as soon as default scene B has been enabled.

Table 12: Available values for "Occupancy sensing with daylight harvesting"

Available values for control mode (**Scenario**) **Vacancy sensing with daylight harvesting**:

Function	Parameter	Function
GENERAL		
Occupied	Light level	Luminaire control value as soon as they are switched on.
	Timeout	Time during which the luminaires retain the control value before they switch to the new control value (e.g. luminaires are switched off (0%) and then switched on (100%)). Each time motion is detected, the time jumps back to 0.
	Fade time	Time that it takes the luminaires to switch to the control value during presence.
	Keep light above minimum value	When this function is enabled, the lighting stays at the defined minimum control value as long as the Occupied mode is active.
Prolonged	Light level	Control value retained after the interruption period (Occupied timeout).
	Timeout	Time during which the luminaires retain the control value (Prolonged light level) after the interruption period (Occupied timeout).
	Fade time	Time until the luminaires switch to the control value (Prolonged light level) after the interruption period (Occupied timeout).
	Keep light above minimum value	When this function is enabled, the lighting stays at the defined minimum control value as long as the Prolonged mode is active.

Vacant	Light level	Control value retained after the interruption period (Prolonged timeout). The control value must be greater than 0%.
	Fade time	Time until the luminaires switch to the control value (Vacant light level) after the interruption period (Prolonged timeout).
	Keep light above minimum value	When this function is enabled, the lighting stays at the defined minimum control value as long as the Vacant mode is active.
Low/high-end trim	Min	Minimum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).
	Max	Maximum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).
Power up behavior	Keep light off	After mains power is restored, the lighting remains switched off.
	Restore	After mains power is restored, the luminaires switch to the control value they had before the mains failure.
	Defined light level	After mains power is restored, the luminaires switch to a user-defined control value.
Manual override timeout	Time	Time until the luminaires – after being switched on or dimmed/brightened manually – switch to the control value defined for automatic control (default values for presence and absence). Each manual operation or each reported motion restarts the Manual override timeout . Example: the Manual override timeout is 10 minutes. As soon as the lighting is switched manually via the wireless momentary-action switch (control value 70%), a 10 minute timer starts, after which the lighting switches back to the control value defined for absence linking ("Vacancy sensing"), which is 0%.
SCENES		
Scene A	Light level	Set default scene enabled: luminaire control value, as soon as default scene A has been enabled.
Scene B	Light level	Set default scene enabled: luminaire control value, as soon as default scene B has been enabled.

Table 13: Available values for "Vacancy sensing with daylight harvesting"

Available values for control mode (**Scenario**) **Multiple scenes**:

Function	Parameter	Brief description
General parameters for the scenes		
Low/high-end trim	Min	Minimum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).
	Max	Maximum control value that the luminaires can switch to, where they are switched either automatically (presence detector) or manually (wireless momentary-action switch).
Power up behavior	Keep light off	After mains power is restored, the lighting remains switched off.
	Restore	After mains power is restored, the luminaires switch to the control value they had before the mains failure.
	Defined light level	After mains power is restored, the luminaires switch to a user-defined control value.

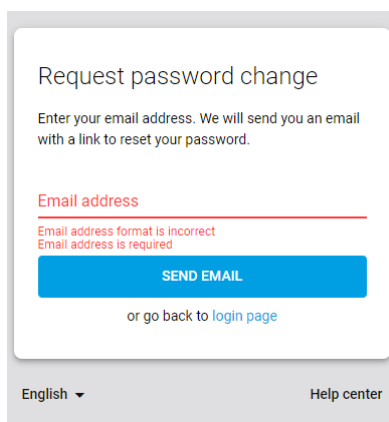
Individual parameters for the scenes		
Scene name		Name of the scene
Scene properties	Static scene	One control value can be set for the lighting in the static scene. To select this option, none of the checkboxes under Scene properties should be ticked.
	Automatic scene	With the automatic scene, the Occupied , Prolonged and Vacant modes can be configured as desired by the user. Available parameters: • Fade time • Timeout (interruption period) • Light level (control value)
	Automatic scene with daylight linking	Enabling this tick mark additionally allows you to enter the minimum control value for the lighting.

Table 14: Available values for "Multiple scenes"

4.4.4 Resetting your password

If you do not remember your password you can reset it. Proceed as follows:

1. Open the website <https://bmlink-platform.zumtobel.com/> in a browser.
2. In the **LOG IN** area, click on the **Don't remember your password?** link.




3. Enter your email address and tap the button.
➡ An email with the link to reset your password is sent to the specified address.
4. Follow the instructions in the email.

4.4.5 Logging out



1. Tap the button.
2. Tap **Logout**.
➡ You are logged out. The **LOG IN** view is displayed.



Note

You can only use the web application again if you log in again.

5 Carrying out commissioning with the bmLINK Tool app

The *bmLINK Tool* app can be used to connect *bmLINK* devices to a Bluetooth mesh network, assign zones, and configure and monitor the devices.

5.1 Interface description

Navigation principles

There are different buttons in the *bmLINK Tool* app for commissioning, configuration and maintenance.

Button	Description
	Back Use this button to go to the previous view. This button is available in every view.
	Menu Use this button to open the menu. This button is available in every view. The Log out and Send logs functions are displayed in every view. Other functions depend on the current view.
	Add Use this button to create a new project or create a new area or add a new collaborator, depending on the view. In a zone, you can use this button to add new devices.
	Context menu This button opens a menu with different functions depending on the context.
 	Option not selected – option selected (multiple choice) This button marks the multiple options available, from which more than one may be chosen. As soon as an option is selected, it is highlighted.
	Cancel The current change is cancelled. Any settings changed during this session are not saved.

Table 15: Navigation principles

5.2 Commissioning

Commissioning comprises the following steps:

1. [Establishing a Bluetooth connection](#) ⁴³
2. [Logging in / creating a new user](#) ⁴³
3. [Creating projects, areas and zones](#) ⁴⁵
4. [Adding and configuring a device](#) ⁴⁷

5.2.1 Establishing a Bluetooth connection



Note

- The maximum distance between the mobile device and *bmLINK* device is 15 m with a direct line of sight.
- The wireless signal range may be disrupted by other Bluetooth or WLAN devices.

The following steps are required:

▷ Enable Bluetooth on the smartphone.

5.2.2 Logging in / creating a new user

When you start the *bmLINK Tool* app for the first time, or after you have logged out of the app, the **Log in** view is displayed and you have to log into your user account. If you do not have a user account yet, you must create an account.



Note

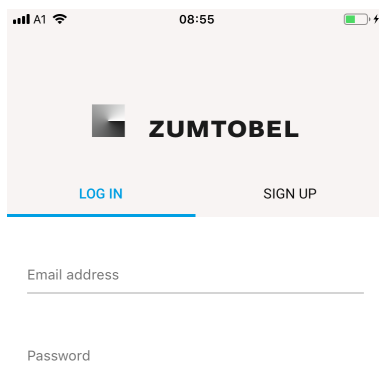
Once you have logged in, you will remain logged in until you log out again using the **Log out** function. For more information see Section Logging out

Logging in as an existing user

Requirement:

— You already have a user account.

1. Open the *bmLINK Tool* app.
 ➡ The **LOG IN** view is displayed.



2. Enter your email address and password.

LOG IN

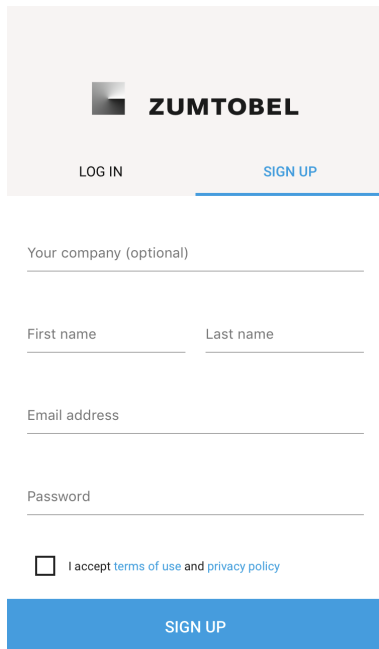
3. Tap the button.

➔ The **Projects** view is displayed.
For more information see Section [Projects](#) ⁴⁹

Creating a new user account

1. Open the *bmLINK Tool* app and select **SIGN UP**.

➔ The **SIGN UP** view opens.



ZUMTOBEL

LOG IN SIGN UP

Your company (optional)

First name Last name

Email address

Password

☐ I accept [terms of use](#) and [privacy policy](#)

SIGN UP

2. Complete the registration form. Accept the terms of use and privacy policy by enabling the checkbox.

3. Tap the button.

➔ The new user account is created and the app switches to the **LOG IN** view.
An activation link is sent to the specified email address.

4. Open the verification email and confirm the activation of the account.

➔ The new user account is activated.

SIGN UP

5.2.3 Creating a project, area and zone

After you log in, the **Projects** view is displayed.

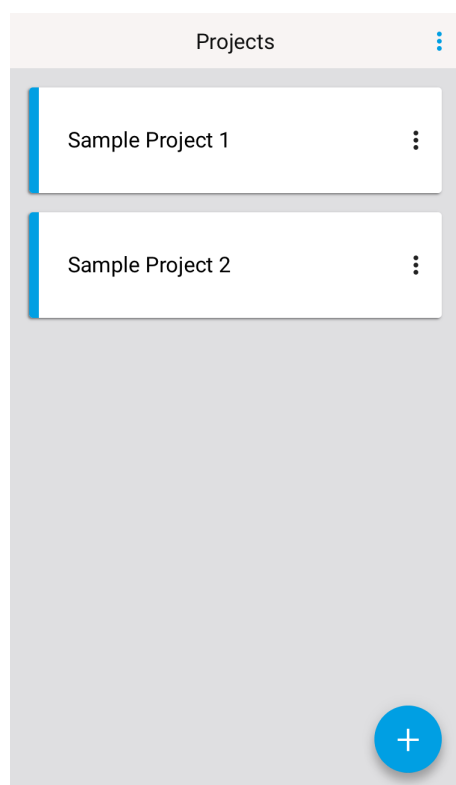


Figure 9: "Projects" view (example)

Creating a new project



1. Tap the button.
➔ The **New project** dialogue is displayed.


New project
CREATE

Project name

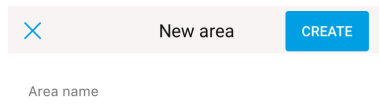


2. Enter a name for the new project.
3. Tap the button.
➔ The new project is created and is displayed in the **Projects** view.
➔ Projects are sorted by their date of creation. The most recent projects are always displayed first.

Creating a new area



1. Tap the project to be opened.
➡ The **Area** view opens.
2. Tap the button.
➡ The **New area** dialogue is displayed.



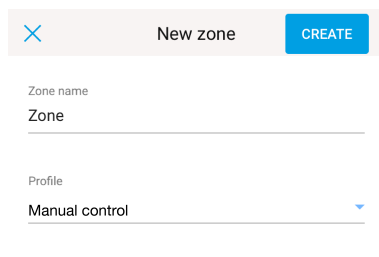
3. Enter a name for the new area.
4. Tap the button.
➡ The area is created in the project.



Creating a new zone



1. Select the project and area in which the new zone is to be created.
2. Tap the button.
➡ The **New zone** dialogue is displayed.



3. Enter a name for the zone and select a profile.
4. Tap the button.
➡ The new zone is created.
New zones are added to the end of the list in the list view each time.



5.2.4 Assigning a device

Once the zones have been created, devices can be assigned to the zones.

Assigning devices to a zone

Requirements:

- The connection between the *bmLINK* device and *bmLINK Tool* is established via Bluetooth. For more information see Section [Establishing a Bluetooth connection](#)
- The mobile device is located within signal range of devices which have already been added.
- The zone is selected.

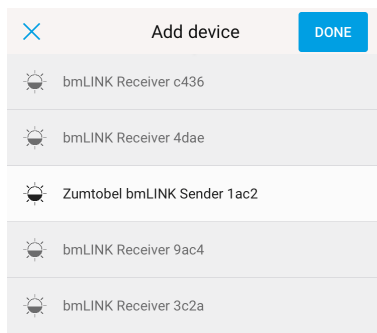


Note

To prevent communication errors, the mobile device must be located within signal range of devices which have already been added and must be connected to the Bluetooth mesh network. Otherwise the device configuration may be faulty.



1. Tap the button.
➔ A list of all Bluetooth devices found is displayed.



NEAR ALL

2. Change the number of devices displayed by moving the slider.



Note

Moving the slider closer to **LOCAL** reduces the number of devices displayed. Only devices in the vicinity are displayed.

3. Tap the name of the device to be added.
➔ The dialogue opens and the status LED of the selected device flashes. If the device is a *bmLINK Receiver* or *bmLINK mini Receiver*, the connected luminaires also flash.

Zumtobel bmLINK mini Receiver fecc
The device should be drawing attention. Do you want to add it to the FSL1 - new Sensor MainBoard - v10R11 - Touch Fix?

CANCEL

ADD

[Add this device to a another zone](#)

ADD

4. To add the selected device, tap the button.
➔ The selected device is added to the zone.



Note

As soon as the device has been added successfully, the configuration is started. Configuration runs in the background, so you can start adding the next device straight away. Up to 5 devices can be configured at one time.

– or –

4. If the selected device is not the desired device but you know that it needs to be assigned to another zone, tap **Assign device to another zone**.



Note

Devices that have been assigned to another zone still need to be configured.

– or –

CANCEL

4. Tap the button.
5. Close the **Add device** view once all of the required devices have been added to the zone.



Note

Closing the **Add device** view before configuration is complete will cause the configuration to be faulty and the zone will need to be reconfigured later.

5.3 Configuration

This section provides an overview of the functions in the *bmLINK Tool* app. It also shows you how to configure *bmLINK* devices.

5.3.1 Projects

The *bmLINK Tool* app enables you to manage projects.

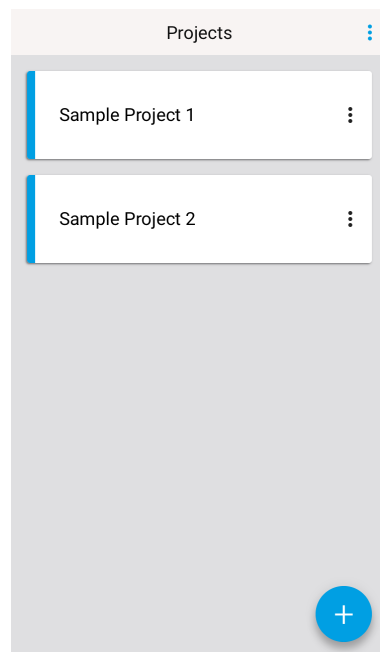
This section contains the following information:

- [Creating and editing projects](#) ⁴⁹
- [Inviting and managing collaborators](#) ⁵¹
- [Changing user roles](#) ⁵³
- [Creating and editing areas](#) ⁵⁵

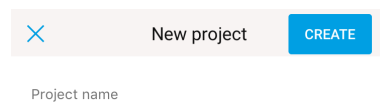
Creating and editing projects

Creating a new project

1. Log into the *bmLINK Tool* app and open the **Projects** view.
 ➔ All projects to which you have access are displayed.



2. Tap the button.
 ➔ The **New project** dialogue is displayed.



3. Enter a name for the new project.
4. Tap the button.
 ➔ The new project is created and is displayed in the **Projects** view.
 ➔ Projects are sorted by their date of creation. The most recent projects are always displayed first.



Changing a project name



1. Open the **Projects** view.
2. Tap the context menu next to the project to be edited.
 - ➔ The available options are displayed.
3. Tap **Edit**.
 - ➔ The **Edit project** dialogue is displayed.
4. Change the project name.
5. Tap the button.
 - ➔ The change to the project is saved.



Deleting a project

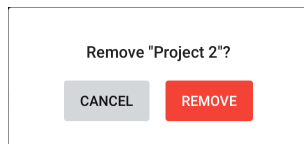


Note

Only users with the **Owner** role can delete projects.



1. Open the **Projects** view.
2. Tap the context menu next to the project to be edited.
 - ➔ The available options are displayed.
3. Tap **Remove**.
 - ➔ A confirmation prompt is displayed.
4. Tap the button.
 - ➔ The selected project is deleted.





Note

Projects with active devices cannot be deleted. The devices must first be removed in order to delete the project.

Inviting/managing collaborators

Multiple collaborators can work together on a project, configuring the project and carrying out commissioning.

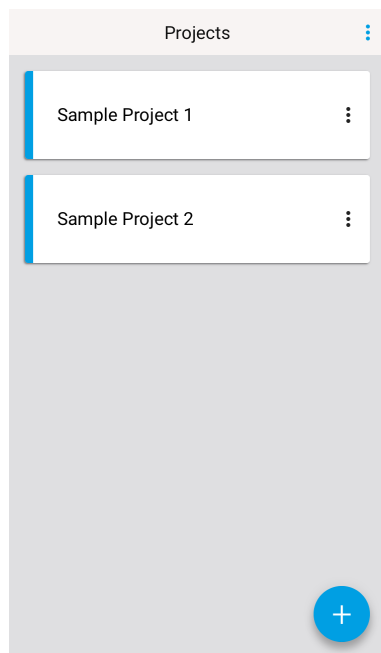
All collaborators in a project can edit the project, carry out commissioning and invite other collaborators or remove existing collaborators.

Only the collaborator with the **Owner** user role can delete a project. This user role is assigned to the project creator by default, but can be transferred to another collaborator.

For more information see Section [Changing user roles](#) [53]

Inviting collaborators to a project

1. Open the **Projects** view.



2. Tap the context menu next to the project to which you want to invite collaborators.

➡ The available options are displayed.

3. Tap **Collaborators**.

➡ The **Collaborators** view is displayed.

4. Tap the button.

➡ The **Invite collaborators** dialogue is displayed.

5. Enter the email addresses of the collaborators to be invited.

6. Select the user role for the collaborators to be invited.

SEND

7. Tap the button.

➡ Invitations are sent to the specified email addresses.

**Note**

The invitations contain a link to the project. A user account must already exist for the collaborator in order for them to be able to open the link. Users who have not yet opened the link in the invitation are marked in the **Collaborators** view with the information **PENDING INVITATION**.

Revoking collaborator access



1. Open the **Projects** view.
2. Tap the context menu next to the project to be edited.

➡ The available options are displayed.
3. Tap **Collaborators**.

➡ The **Collaborators** view is displayed.
4. Enable the checkboxes next to the collaborators to be removed.

☒ Gregory Beck☒ Joshua Salazar

REVOKE ACCESS

5. Tap the button.

➡ A confirmation prompt is displayed.

Revoke access for 2 collaborators?

CANCEL

REVOKE

**Note**

To avoid accidental deletion, the **REVOKE** button only becomes active after 3 seconds.

REVOKE

6. Tap the button.

➡ The selected collaborators are removed from the project and no longer have access to it.

**Note**

The collaborator with the **Owner** user role cannot be removed. To remove this collaborator from the project, the user role must first be transferred to a different collaborator.

For more information see Section [Changing user roles](#) ²⁰

Changing user roles

bmLINK offers different user roles for managing projects. Collaborators can be assigned different rights for working on the project using the user roles. The different user roles can be assigned to multiple collaborators, except for the **Owner** user role which can only be assigned to one person per project.

Function	Owner	Manager	Installer	End user
Invite/manage collaborators	Yes	Yes	No	No
Change user role	Yes	Yes	No	No
Manage project and carry out commissioning	Yes	Yes	Yes	No
Remove yourself/own user from the project	Yes, but only if the role has been transferred beforehand	Yes	Yes	Yes
Delete project	Yes	No	No	No
Control lighting	Yes	Yes	Yes	Yes

Table 16: User roles



Note

For more information on the **End user** role see Section [User rights](#) ⁹⁷

Changing user roles

Requirement:

- The **Owner** or **Manager** user role is assigned to you.



Note

The **Owner** user role can only be transferred to another person by the current Owner.



1. Open the **Project** view.

2. Tap the context menu for the collaborator to be edited.

➔ The available options are displayed.

3. Tap **Collaborators**.

➔ The **Collaborators** view is displayed.

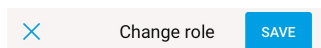


4. Tap the context menu next to the user, whose role should be changed.

➔ The available options are displayed.

5. Tap **Change role**.

➔ The **Change role** dialogue is displayed.



An Na role

☐ End User

Can only view the project and control the light. Cannot make any changes.

☒ Installer

Can make changes in the project. Can add and manage devices.

☐ Manager (Current)

Can manage collaborators, make changes in the project, add and manage devices.



6. Select the new user role.

7. Tap the button.

➔ The new user role is assigned to the collaborator, or the **Owner** user role is transferred.

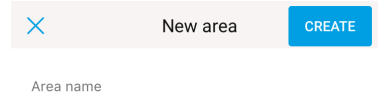


Creating and editing areas

Creating an area



1. Select a project.
 2. Tap the button.
- ➔ The **New area** dialogue is displayed.



The dialog box titled "New area" has a close button (X) on the left and a "CREATE" button on the right. Below the title is a text input field labeled "Area name".

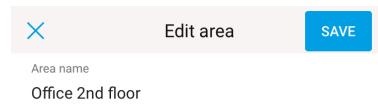
3. Enter a name for the new area.
 4. Tap the button.
- ➔ The area is created in the project.



Editing an area



1. Select a project.
 2. Tap the context menu next to the area to be edited.
- ➔ The available options are displayed.
3. Tap **Edit**.
- ➔ The **Edit area** dialogue is displayed.



The dialog box titled "Edit area" has a close button (X) on the left and a "SAVE" button on the right. Below the title is a text input field labeled "Area name" containing the text "Office 2nd floor".

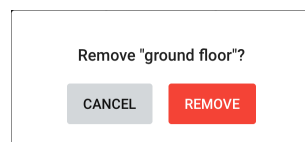
4. Change the area name.
 5. Tap the button.
- ➔ The changes to the area are saved.



Deleting an area



1. Select a project.
 2. Tap the context menu next to the area to be edited.
- ➔ The available options are displayed.
3. Tap **Remove**.
- ➔ A confirmation prompt is displayed.



The dialog box titled "Remove 'ground floor'?" has two buttons: "CANCEL" and "REMOVE".

4. Tap the button.
- ➔ The selected area is deleted.



Note

Areas with active devices cannot be deleted. The devices must first be removed in order to delete the area.

5.3.2 Zones

A zone comprises a group of devices that are to be controlled together.

The status of a zone is displayed as a graphic.

Icon	Description
	The zone is ready for commissioning.
	Zone commissioning is complete. Devices have been added and configured.
	Warning The zone has been commissioned, but the device configuration is faulty or devices cannot be found. For more information see Section Troubleshooting ^[89]

Table 17: Zone icons

This section contains the following information:

- [Creating and editing zones](#) ^[56]
- [Overview of the "Zones" view](#) ^[58]
- [Creating scenes for the zone](#) ^[59]
- [Assigning EnOcean switches in a zone](#) ^[62]
- [Setting the colour temperature](#) ^[64]
- [Testing luminaires](#) ^[65]

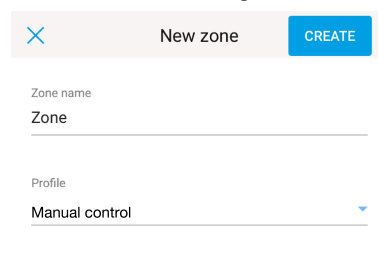
Creating and editing zones

Creating a zone



1. Select the area in which the new zone is to be created.
2. Tap the button.

➡ The **New zone** dialogue is displayed.



3. Enter a name for the zone and select a profile.
 4. Tap the button.
- ➡ The new zone is created.
New zones are added to the end of the list in the list view each time.

CREATE

Editing a zone



1. Open the list view in the **Zones** view.
2. Tap the context menu next to the zone to be edited.
 - ➔ The available options are displayed.
3. Tap **Edit**.

➔ The **Edit zone** dialogue is displayed.

✕
Edit zone
SAVE

Zone name

Zone 1

Profile

Central control

Central control

The light is controlled by a central controller.

4. Adjust the settings.
5. Tap the button.
 - ➔ The changes are saved.

SAVE

Deleting a zone



1. Open the list view in the **Zones** view.
2. Tap the context menu next to the zone to be deleted.
 - ➔ The available options are displayed.
3. Tap **Remove**.

➔ A confirmation prompt is displayed.

Remove "Zone 1"?

CANCEL

REMOVE

4. Tap the button.
 - ➔ The selected zone is deleted.

REMOVE



Note

Zones with active devices cannot be deleted. The devices must first be removed in order to delete the zone.

Overview of the “Zones” view

The following contains an overview of the general functions in the **Zones** view:

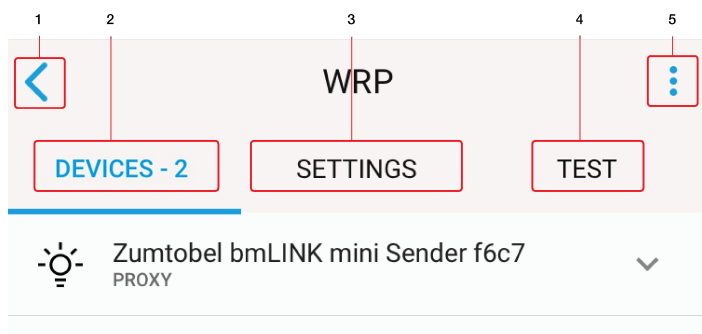


Figure 10: Zone view – “DEVICES - X” tab

	Function	Brief description
(1)	Back	Tap the button to return to the list view of the zones.
(2)	DEVICES - X	Overview of the devices assigned to the zone. The number in the tab title indicates the number of devices assigned to the zone.
(3)	SETTINGS	The settings for the entire zone can be defined in this view. The following options are available: - Adjust profile settings For more information see Section Adjust profiles ^[66] - Create scenes (scenes A and B) - Calibrate daylight linking For more information see Section Calibrate sensors for daylight linking ^[93]
(4)	TEST	Test function which can be used to test the lighting function and locate faulty luminaires.
(5)	Context menu	Tapping this button displays more configuration options for zones.

Table 18: Functions in the “Zones” view

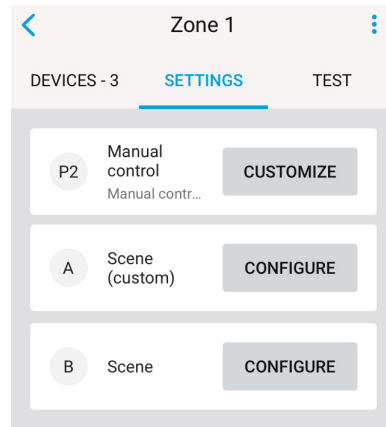
Creating default scenes for the zone

Two default scenes can be created for each zone, which are enabled via the wireless momentary-action switch. In version 202007 and higher, these scenes can be enabled and preconfigured directly in the *bmLINK Tool* web application.

For more information see Section [Profiles](#)³¹⁾

Creating/customising default scenes

1. Select a zone.
➡ The view for the selected zone opens.
2. Tap **SETTINGS**.
➡ The **SETTINGS** view is displayed.



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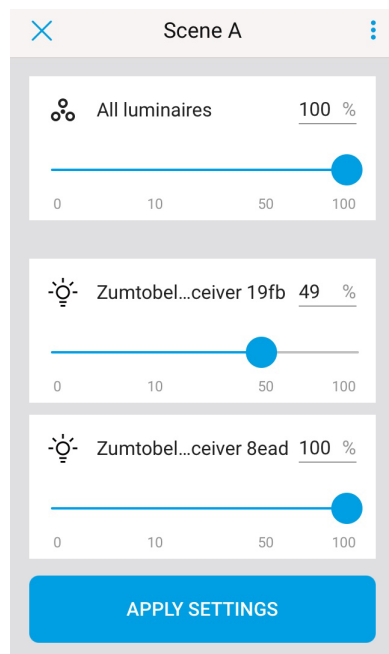
Note

- The status of the default scene is also displayed:
 - No status: the scene has been preconfigured in the web application but not customised yet.
 - Status **empty**: the scene has not been preconfigured or customised.
 - Status **custom**: the scene has been created and/or customised in the app.
- Scenes can only be configured when all devices are part of the zone and have been correctly configured, i.e. there are no errors.

CONFIGURE

3. Tap the button for the scene to be configured.

➡ The **Scene A** or **Scene B** view is displayed.



4. Define the control value for all or individual luminaires.

Tap the  icon next to the luminaire name to locate the luminaire in the field.

APPLY TO ZONE

5. Tap the button.

➡ The settings are saved.

Resetting/removing default scenes

Scenes can be reset to the default settings or removed from a zone.

Requirements:

- Scenes with status **custom** can be reset to their preconfigured settings.
- Scenes that have not been preconfigured yet can be removed from the zone.

1. Select a zone.
➡ The view for the selected zone opens.
2. Tap **SETTINGS**.
➡ The **SETTINGS** view is displayed.



3. Tap the context menu.
➡ Possible options are displayed.
 4. Tap **Restore scene** (for scenes with the **custom** status).
➡ The scene is reset to its preconfigured settings.
- or –
4. Tap **Remove scene** (for scenes with no status).
➡ The scene is removed from the zone.

Assigning EnOcean switches in a zone

With *Local control* (all control modes except **Central control**) wireless momentary-action switches can also be used to manually control the lighting in a zone.

Supported wireless momentary-action switches:

- *Easyfit EWSSB User Interface Single*
- *Easyfit EWSDB User Interface Double*

Assigning wireless momentary-action switches in a zone

Requirements:

- A *bmLINK Receiver* or *bmLINK mini Receiver* has been selected which is located within the wireless signal range of the switch.
- The wireless momentary-action switch has a QR code that can be used for connection.



Note

- If there are problems finding a device that can be used as an EnOcean adapter, tap the  icon to locate the luminaire visually.
- The wireless momentary-action switch is only ever permitted to be assigned to one device, even if the devices are located in different zones.
- If the distance between the EnOcean adapter and the wireless momentary-action switch is too great, the luminaires cannot be manually switched.
- A device is not permitted to take on the role of EnOcean adapter and proxy at the same time.

1. Open the zone in which the wireless momentary-action switch is to be used.
2. In the **DEVICES - X** view, select the *bmLINK Receiver* or *bmLINK mini Receiver* that you want to take on the role of EnOcean adapter.
3. Enable **EnOcean** in the network settings.
 - ➔ When the function is first enabled a prompt appears, asking whether the app has permission to access the camera.
4. Tap **OK** to allow access to the camera.
5. Read the QR code on the back of the wireless momentary-action switch.
 - ➔ The wireless momentary-action switch is connected to the EnOcean adapter.
6. Press the wireless momentary-action switch to test the function.
 - ➔ If the wireless momentary-action switch is assigned correctly, all luminaires in the zone switch to the set control value.
 - ➔ If all luminaires do not switch to the set control value, check whether the switch was assigned correctly. For more information see Section [Troubleshooting](#)⁹⁰



Note

To remove the wireless momentary-action switch from the zone again, disable the **EnOcean** function in the network settings.

Default setting for the Easyfit EWSSB User Interface Single wireless momentary-action switch

- Briefly press the momentary-action switch to switch the lighting on/off.
- Hold down the momentary-action switch to brighten and dim lighting.

Default setting for the Easyfit EWSDB User Interface Double wireless momentary-action switch

- Left momentary-action switch:
 - Briefly press the momentary-action switch down to switch the lighting off.
 - Briefly press the momentary-action switch up to switch the lighting on.
 - Hold the momentary-action switch down to dim lighting.
 - Hold the momentary-action switch up to brighten lighting.
- Right momentary-action switch:
 - Briefly press the momentary-action switch down to recall scene B.
 - Briefly press the momentary-action switch up to recall scene A.
 - Hold the momentary-action switch down to adjust TW luminaires to a warmer colour temperature.
 - Hold the momentary-action switch up to adjust TW luminaires to a cooler colour temperature.

More information on the scenes can be found in Section [Creating scenes for the zone](#)^[59]



Note

Manual override timeout has been enabled:

In connection with the **Vacancy/Occupancy sensing** and **Vacancy/Occupancy sensing with daylight linking** profiles, when the **Manual override timeout** function is enabled, the timer is automatically restarted as soon as a momentary-action switch is pressed. To return to mains operation directly, the left momentary-action switch must be briefly pressed up (ON).
For more information see Section [Profiles](#)^[31]

Settings for the Easyfit EWSDB User Interface Double wireless momentary-action switch when using the “Scene control” profile

- Left momentary-action switch:
 - Briefly press the momentary-action switch down to recall Scene 1.
 - Briefly press the momentary-action switch up to recall Scene 2.
 - Hold the momentary-action switch down to dim lighting.
 - Hold the momentary-action switch up to brighten lighting.
- Right momentary-action switch:
 - Briefly press the momentary-action switch down to recall Scene 3.
 - Briefly press the momentary-action switch up to recall Scene 4.
 - Hold the momentary-action switch down to adjust TW luminaires to a warmer colour temperature.
 - Hold the momentary-action switch up to adjust TW luminaires to a cooler colour temperature.

More information on the **Scene control** profile can be found in Section [Profiles](#)^[31]



Note

Further information on wireless momentary-action switches can be found in the document **EnOcean switch – Best practices for efficient setup** (<https://bmblink-platform.zumtobel.com/assets/manuals/enocan-switch.pdf>).

Setting the colour temperature

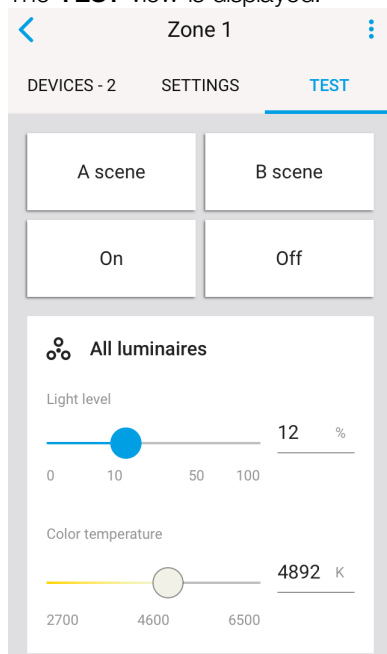
Tunable White provides the option to dynamically change the light of an LED within the white light range. Colour temperatures from 2,700 to 6,500 K can be flexibly set. The colour temperature is set separately from the intensity of the luminaires and therefore does not affect daylight linking or scene linking, or manually set control values for luminaires. The colour temperature in a zone can either be set using the *bmLINK Tool* app or the wireless momentary-action switch.

Requirements:

- TW luminaires are part of the zone.
- The devices in the Bluetooth mesh network support *Tunable White*.
- The devices have Silvar firmware version 2.15 or higher.

Setting the colour temperature using the bmLINK Tool app

1. Select a zone.
 - ➔ The view for the selected zone opens.
2. Tap **TEST**.
 - ➔ The **TEST** view is displayed.



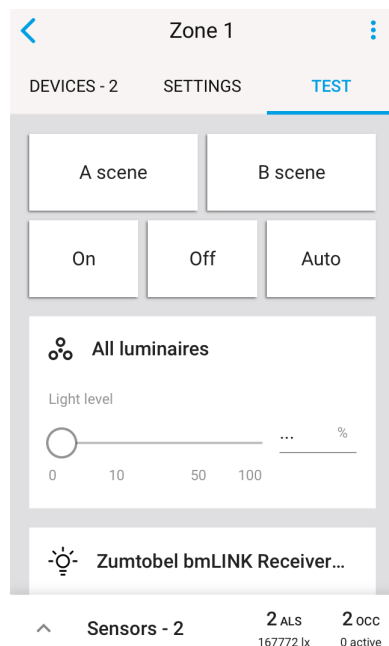
3. Set the control value for the colour temperature using the slider or enter the value manually.
 - ➔ The colour temperature is set for the TW luminaires in the zone.

Setting the colour temperature using the wireless momentary-action switch

- ▷ Right momentary-action switch: hold the momentary-action switch down to adjust the TW luminaires to a warmer colour temperature.
- ▷ Right momentary-action switch: hold the momentary-action switch up to adjust the TW luminaires to a cooler colour temperature.

Testing luminaires

1. Select a zone.
➡ The view for the selected zone opens.
2. Tap **TEST**.
➡ The **TEST** view is displayed.



3. Select the function to be tested (**A scene**, **B scene**, **On**, **Off**, **Auto**).
 ➡ **A scene/B scene**: luminaires in the zone switch to the defined control value.
 ➡ **Off**: all luminaires in the zone switch off.
 ➡ **On**: all luminaires in the zone switch on.
 ➡ **Auto**: the settings for zone automatic lighting control are enabled.

i

Note

- To visually locate all luminaires assigned to the zone, tap the  icon next to **All luminaires**. This function can also be used to identify faulty luminaires in a zone.
- In zones with the **Scene control** profile, **A scene** and **B scene** test options are not displayed.
- If the zone includes sensors, these are also listed in this view. There is also an indication of whether or not these sensors are active and their function.
 - **ALS**: ambient light sensor
 - **OCC**: presence detector
- In version 1.26 and higher, the lux value measured by the sensor is also displayed as soon as the advanced sensor view is opened

5.3.3 Adapting profiles

Once all devices have been assigned to a zone, the settings (e.g. control value) can be adapted. Different parameters are available depending on which profile is selected.

For more information see Section [Profiles](#) ³¹

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Note

Editing the profiles in the *bmLINK Tool* app automatically creates a new profile that is then available in the web application as well. This user-defined profile is only valid for the zone in which the settings were defined, however.

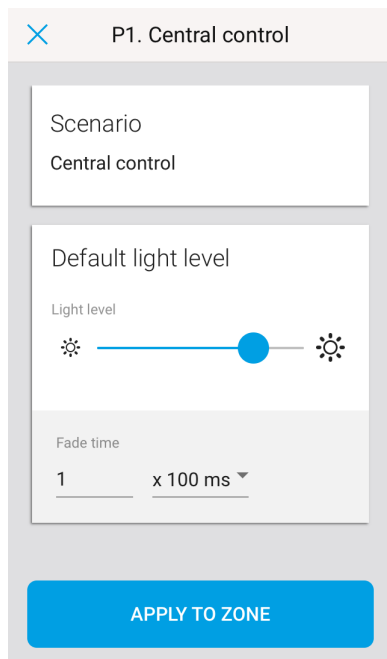
Editing profiles

1. Select a zone.
➡ The view for the selected zone opens.
2. Tap **SETTINGS**.
➡ The **SETTINGS** view is displayed.



CUSTOMIZE

3. Tap the button.
➡ The profile view is displayed.



4. Adjust the settings.

APPLY TO ZONE

5. Tap the button.

- ➡ The devices assigned to the zone apply the new settings.
- ➡ The profile is displayed in the **SETTINGS** view with the new name **Custom profile**.

The following profile settings are available, depending on the control mode (**Scenario**) in question:

Parameter	Brief description
Default light level	• Light level: luminaire control value as soon as they are switched on. • Fade time: time until the luminaires reach the defined control value after being switched on.
Occupied	• Light level: luminaire control value as soon as they are switched on. • Timeout: time during which the luminaires retain the control value until the new control value is switched to. Each time motion is detected, the time jumps back to 0. • Fade time: time until the control value that the luminaires switch to in Occupied mode is reached.
Prolonged	• Light level: control value retained after the timeout (Occupied timeout). • Timeout: time until the luminaires switch to the control value (Prolonged light level) after the timeout (Occupied timeout). • Fade time: time until the luminaires switch to the control value (Prolonged light level) after the timeout (Occupied timeout) has been active.
Vacant	• Light level: control value retained after the timeout (Prolonged timeout). The value must be greater than 0. • Fade time: time until the luminaires switch to the control value (Vacant light level) after the timeout (Prolonged timeout).
Low/high-end trim	• Min: minimum control value that the luminaires can switch to. • Max: maximum control value that the luminaires can switch to.
Manual override timeout	Time until the luminaires – after being switched off or on or dimmed/brightened manually – switch to the control value defined for automatic control (default values for presence and absence). Each manual operation or each reported motion restarts the Manual override timeout .

Table 19: Profile settings

5.3.4 Devices

All devices that have been assigned to a selected zone are listed in the **DEVICES - X** view (X stands for the number of devices in the selected zone). Each device is displayed in the overview with its name and properties.

The following contains an overview of the **DEVICES - X** view.

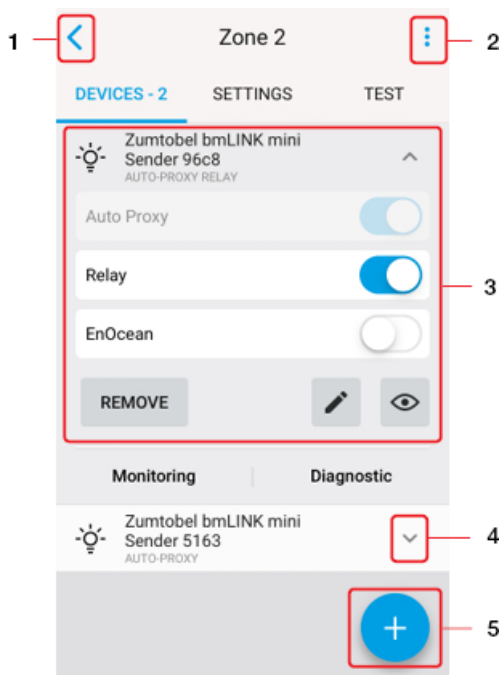


Figure 11: “DEVICES - X” view

	Function	Brief description
(1)	Back	Use this button to go back to the previous view.
(2)	Context menu	Tap this button to open the context menu.
(3)	Advanced view for the selected device	Tap a device to open the advanced view. This view is where you can configure the network settings for the selected device, locate the device or remove it. You can also view a diagnostic report for the selected device.
(4)	Show/hide the advanced view	Tap this button to open or close the advanced view.
(5)	Add device	Use this button to add more devices. For more information see Section Assigning a device ⁴⁷⁾

Table 20: Functions in the “DEVICES - X” view

Locating a device

Since the individual devices are only displayed in the app using their device ID, it can be difficult to locate a specific device. To locate devices, proceed as follows:



– or –



1. Select a device in the device overview.
2. Tap one of the two buttons for a device.
 - ➔ If the status LED for the device you are looking for flashes, the device has been successfully located.
 - ➔ If the status LED for the device you are looking for does not flash, repeat step 2 for the next device in the list.



Note

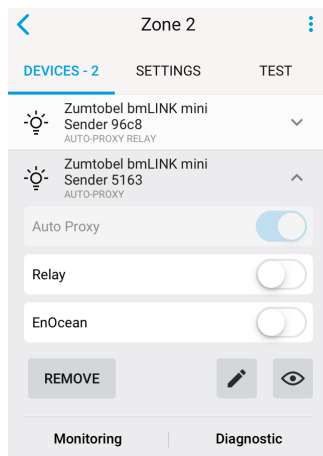
A device that is located must send a response. If no response is received (because the device is disconnected from the power, for example), the following error message appears: “[Device name] is not available.”

Renaming a device

The device ID is used as the device name by default. To make it easier to differentiate between devices, the device name can be changed, e.g. to identify devices that are configured as a **Proxy**, relay node (**Relay**) or EnOcean adapter (**EnOcean**).

Proceed as follows:

1. Select the zone containing the device to be renamed.
2. Select the device by tapping it.
 - ➔ The advanced view for the device opens.



3. Tap the button.
 - ➔ The **Edit** dialogue is displayed.
4. Change the device name.
5. Tap the button.
 - ➔ The changed name is saved for the device.



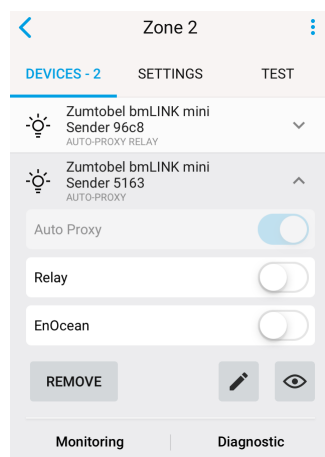
Note

As soon as the device is removed from the project, the entered name is deleted. If the device is reassigned to a project, the default name of the device appears again.

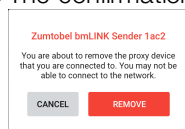
Removing a device from the network

If a device has an error or has been assigned to the wrong zone, you can remove it from the network. Proceed as follows:

1. Open the zone containing the incorrectly assigned device.
2. Select the device to be removed by tapping it.
- ➔ The advanced view for the device opens.



3. Tap the button.
- ➔ The status LED for the selected device flashes.
- ➔ The confirmation prompt for removing the device is displayed.



4. Tap the button.
- ➔ The device is deleted and removed from the network.
- ➔ The device is reset to its factory settings.



Note

If a device cannot be removed (e.g. the device is out of range of the network or the device has been manually reset), it can be hidden in the app. Instead of the **REMOVE** button, the **HIDE** button is displayed. Tap this button to hide the device so that it is no longer displayed in the device list or in the project report and can no longer report any faults. The device can be restored later. For more information see Section [Showing hidden devices](#) ⁷¹

REMOVE

REMOVE

Hidden devices

Devices that could not be removed because they were out of range of the network or were manually reset are displayed as greyed out in the app. To remove these devices, they must first be restored.

Showing/restoring hidden devices



1. Open the zone.
 The **DEVICES - X** view is displayed.
2. Tap the button.
3. Tap **Show hidden devices**.
 The hidden devices are displayed, but are greyed out.



Note

The **Show hidden devices** button is only available if there are hidden devices in the zone.



4. Select the hidden device to be restored.
 Possible options are displayed.
5. Tap the button.
 The device is located.
6. Tap the **RESTORE** button.
 The list is updated.
 The device is restored and is once again part of the project.



Note

If the connection to the device cannot be restored, an error message appears. To correct the error, proceed as described in Section [Troubleshooting](#)⁸⁹.

5.3.5 Network settings

The *bmLINK Tool* app can be used to configure the following network parameters for each device in a zone:

Parameters	Description
Proxy	If this function is enabled, the device works as an intermediary for establishing a Bluetooth mesh network connection with the mobile device via the <i>bmLINK Tool</i> app. There are two types of proxy: • Static Proxy: project version 202004 and Silvair firmware version 2.16 or lower • Auto Proxy: project version 202005 and Silvair firmware version 2.17 or higher i Note • The Proxy function must be enabled for at least one device in a Bluetooth mesh network. • The <i>bmLINK Tool</i> app automatically ensures that this function is enabled for at least one device. • Only disable or remove the Static Proxy function for a device if you have enabled this function for another device in the zone. Otherwise the app will no longer be able to establish a connection to the Bluetooth mesh network and you will need to reset everything. • The Auto Proxy makes it so that manual configuration of proxies in a zone is no longer necessary. Every <i>bmLINK</i> device within range of the mobile device is enabled as a proxy when needed.
Relay	If this function is enabled, the device works as a relay node in the Bluetooth mesh network and forwards messages to other devices.
EnOcean	If this function is enabled, the device works as an EnOcean adapter: it converts the data received by the wireless EnOcean switch and then forwards it to other devices in the Bluetooth mesh network.

Table 21: Network parameters

i	Note To ensure optimal performance, it is a good idea to always enable no more than one network option (Relay, Proxy or EnOcean) on one device.
----------	---

Testing the network

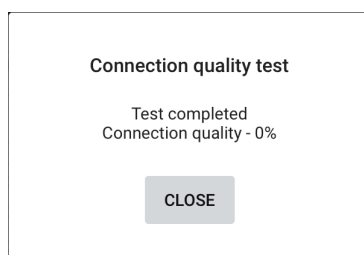
The *bmLINK Tool* app provides the option of using a connection test to test the availability and quality of the Bluetooth mesh network.

To test the connection quality, proceed as follows:

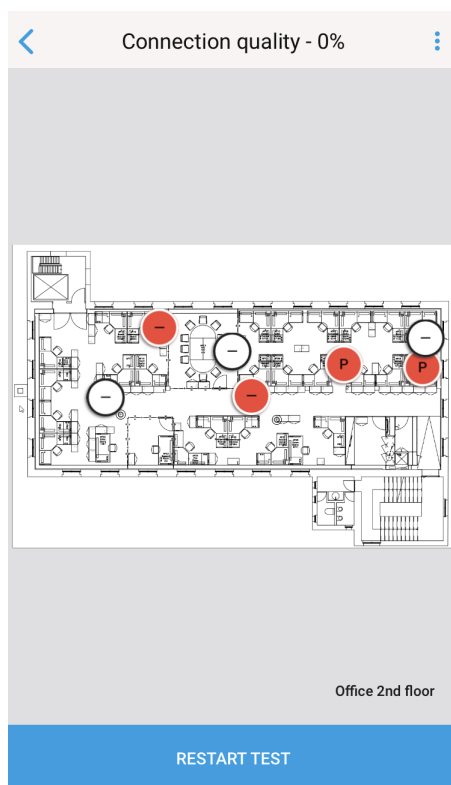


1. Select the area for which the connection quality is to be tested.
 2. Tap the context menu next to the area.
 - ➔ The available options are displayed.
 3. Tap **Network quality**.
 - ➔ An overview of all zones is displayed.
 4. Tap the button.
 - ➔ The connection test starts.
- The test result shows the network efficiency as a percentage.

START TEST



A visual display of the network connection is shown. Problem areas are marked in red.



Note

Once you have carried out the connection test and identified some network problems, you can adjust the network settings to improve the quality of the network.
For more information see Section [Application notes on network settings](#)^[74]

Application notes on network settings

Relay (relay nodes)

- In small rooms, all devices can be installed within range of each other (a range of no more than 10 m – 15 m between the nodes is practical) and no relay nodes need to be defined.
- Larger rooms with 20 to 30 devices generally require some devices to be configured as relay nodes so that the network functions reliably. In larger systems it is a good idea to configure approx. 10% of the devices as relay nodes in order to ensure that messages are forwarded reliably.

Proxy for mobile devices

- The **Proxy** function enables the mobile device on which the *bmLINK Tool* app is running to connect to the Bluetooth mesh network.
- A proxy can only ever be connected to one mobile device. If another mobile device is to be used to access the network, another device needs to be configured as a proxy.
- The **Proxy** function must be enabled for at least one device in a Bluetooth mesh network. The *bmLINK Tool* app automatically ensures that this function is enabled for at least one device.
- It is not a good idea to switch the proxy on or off manually, as this is usually done by the app itself.
 - If network problems occur, the app automatically adjusts the proxy settings in order to ensure an optimal connection.
- Do not enable the **Proxy**, **Relay** or **EnOcean** functions on the same device. This can impact the performance of the node in question.



Note

Ensure that there is always at least one device that is configured as a proxy. Otherwise a connection can no longer be established with the network.

Recommendations for optimal settings

To ensure fast and efficient performance of the Bluetooth mesh network, please note the following recommendations:

1. Do not configure more than 10% of the nodes as relays. A higher number leads to an enormous increase in network utilisation and strongly impacts the overall performance of the network and lighting control.
2. Distribute relay nodes as evenly as possible across the network.



Note

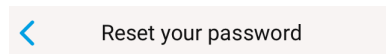
When to add a relay node depends on the topology of the zone. If the zone is large and the nodes are far apart, problems may occur with message transmission. In this case, enable some of the more removed nodes as relays.

5.3.6 Resetting your password

If you do not remember your password you can reset it. Proceed as follows:

1. In the **LOG IN** area, click on the **Don't remember your password?** link.

➡ The **Reset your password** view is displayed.



Enter your email address. We will send you a link to create a new password.

Email address



2. Enter your email address and tap the button.
➡ An email with the link to reset your password is sent to the specified address.
3. Follow the instructions in the email.

5.3.7 Logging out



1. Tap the button.
2. Tap **Log out**.
➡ You are logged out. The **Log in** view is displayed.



Note

You can only use the app again if you log in again.

5.4 Maintenance

This section contains the following information:

- [Device diagnostics](#) ^[76]
- [Sending logs](#) ^[77]
- [Repairing a configuration](#) ^[78]
- [Updating the firmware](#) ^[81]

5.4.1 Device diagnostics

If problems occur with a device, the diagnostics function can be used to read out important information on the device in question. This includes, for example:

- Firmware version
- Operating time
- Time since last error
- Control device parameters

The *bmLINK Tool* app also supports some manufacturer-specific functions, e.g. **DALI Bus Reset**.

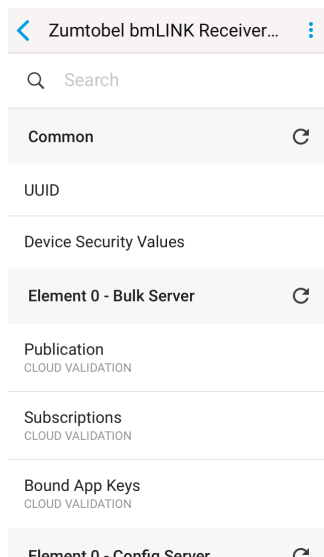


Note

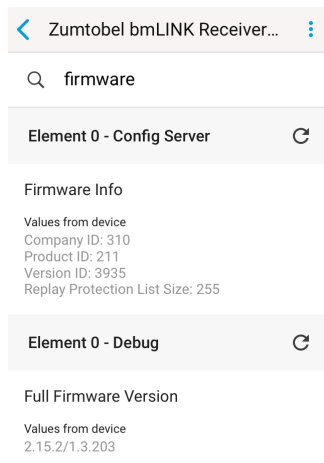
- The **DALI Bus Reset** function is used to reset and readdress all of the DALI devices connected to a *bmLINK mini Receiver* or *bmLINK Receiver*.
- If devices connected to a *bmLINK mini Receiver* or *bmLINK Receiver* are replaced, a **DALI Bus Reset** must then be performed in order to re-initialise the replaced device.

Viewing a diagnostic report

1. Select the **DEVICES - X** view.
2. Tap the device for which a diagnostic report is to be viewed.
➔ The advanced view for the device opens.
3. Tap the **Diagnostic report** button.
➔ All of the data for the selected device is displayed.



4. Insert the data to be displayed in the search box.
 ➔ Only the desired data for the selected device is displayed.



5. Tap the context menu in the top right corner.
 ➔ The menu opens.
6. Tap **All properties** in order to update all of the data.

– or –

6. Tap the entry to be updated.

– or –



6. Tap the button to update the data for the area in question.
 ➔ Updated data is displayed.

5.4.2 Sending logs

If problems occur when commissioning devices, you can have a log created and send it for analysis, for example.



1. Tap the context menu in the top right corner.
 ➔ The menu opens.
2. Tap **Send logs**.
 ➔ A menu with options for sending the report is displayed.
3. Select **Send via email**.
4. Include a brief description of the problem (optional).
5. Send the log.

5.4.3 Repairing a configuration

If the configuration of a device fails or is cancelled by the user, or if a device is added using the **Assign device to another zone** function, the device in question cannot be used until the configuration has been repaired.

**Note**

During a repair, the configuration stored on the device is replaced by the configuration stored in the cloud.

If devices are not configured or are incorrectly configured in a zone, this will be displayed in the zone overview. For more information see Section [Zones](#) ^[27]

In the device overview, the devices to be configured can be identified by the icon next to the device name.

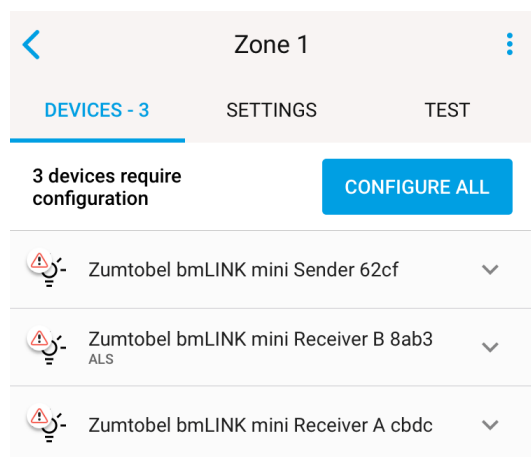


Figure 12: Sample overview display containing devices that are not configured or are incorrectly configured

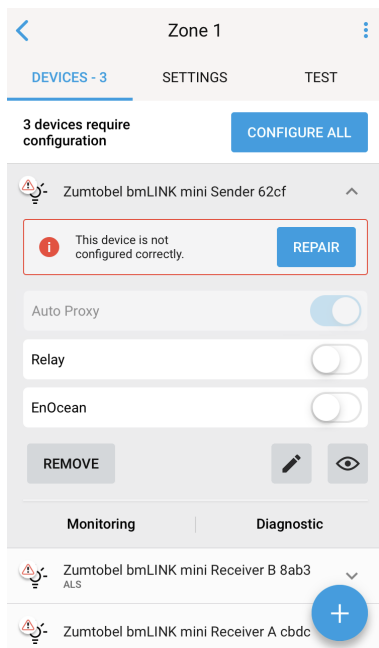
Configuration can be carried out for:

- A single device
- All of the devices to be configured for a zone
- All of the devices in a zone

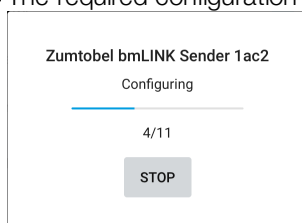
Repairing the configuration of a single device



1. Select the **DEVICES - X** view.
2. Select the device to be repaired by tapping it.
➡ The advanced view for the device opens.



3. Tap the button.
➡ The required configuration is applied to the selected device.



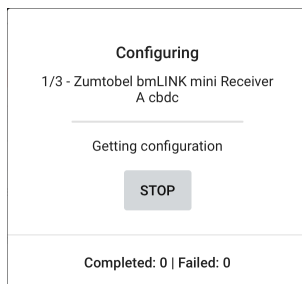
- ➡ The message **Successfully configured** appears.

Configuring all devices that are not configured for a zone at one time

Devices that are assigned to a zone while another zone is being configured (e.g. using the **Assign device to another zone** function) must be configured in order to be fully functional.



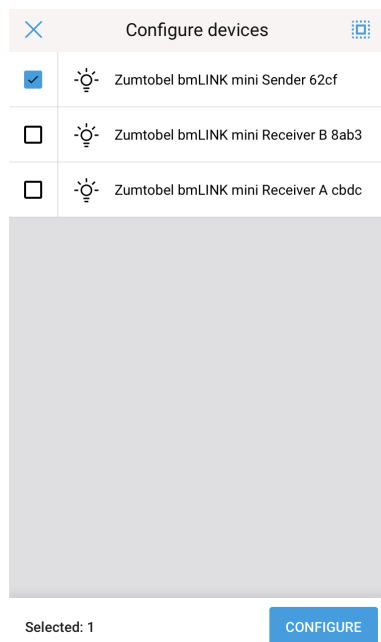
1. Select the **DEVICES - X** view.
2. Tap the button.
➡ The required configuration for the zone is applied to all devices, one after the other.



Reconfiguring all devices in a zone



1. Select the **DEVICES - X** view.
2. Tap the context menu.
 - ➔ The available options are displayed.
3. Tap **Full reconfiguration**.
 - ➔ The overview of all devices in the zone is displayed.



4. Select the devices to be configured by enabling the checkboxes.
5. Tap the button.
 - ➔ The selected devices are reconfigured.
 - ➔ The message **Successfully configured** appears.

5.4.4 Updating the firmware

This section describes how to carry out over-the-air updates to firmware on the *bmLINK* devices.

This function can be used to update devices that have already been added to a Bluetooth mesh network. Up to four devices can be updated at one time.

Two different firmware updates can be performed via the *bmLINK Tool* app. Silvair firmware and application (external) firmware are provided for the *bmLINK* devices.

- Silvair firmware: firmware for the *Bluetooth qualified mesh stack*. This firmware applies to all *bmLINK* devices equally and is automatically loaded in the app.
- External firmware: external DALI firmware for the supported DALI devices. This firmware is available on the website www.zumtobel.com/bmLINK for all device types (e.g. firmware for the *bmLINK mini Receiver*).

It is a good idea to update the Silvair firmware as a minimum as soon as an update becomes available. The order in which updates take place does not generally matter.



Note

- Information on the current firmware version of the devices can be viewed via the device diagnostics function or via the zone status in the web application.
For more information see Section [Device diagnostics](#)^[76] or [Viewing the status of the zone](#)^[30]
- The devices must be within range of the mobile device during the update.



WARNING

As soon as the firmware of a device has been updated, it is no longer possible to reset it to an earlier firmware version.

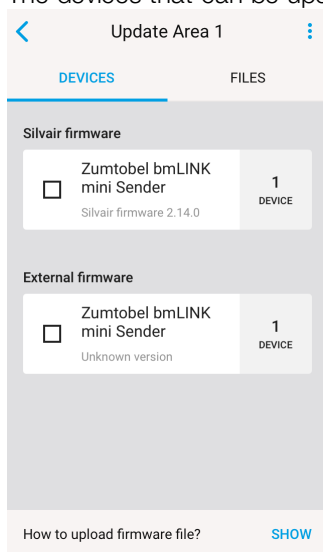
Updating the Silvair firmware

Requirements:

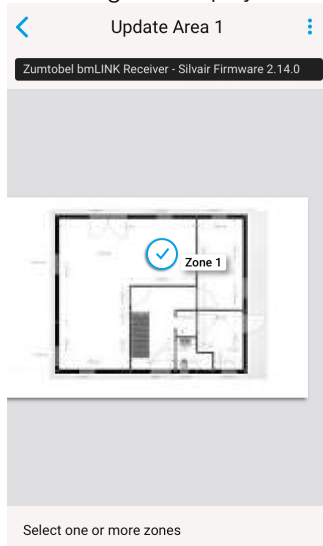
- The mobile device is connected to the internet (via WLAN or mobile data).
- The devices are located within range of the mobile device.



1. Select the **Area**, **Zone** or **DEVICES - X** view.
2. Tap the context menu.
 - ➔ The available options are displayed.
3. Tap **Update devices**.
 - ➔ The **Update [name of area]** view is displayed.
 - ➔ The devices that can be updated are displayed.



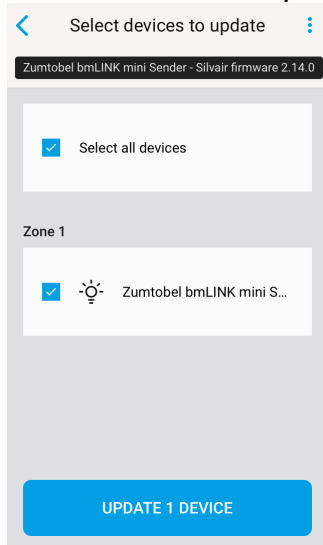
4. Enable the checkboxes to update the Silvair firmware.
5. Tap the button.
 - ➔ The dialogue is displayed.



NEXT

6. Select the zones and tap the button.

➔ The **Select devices to update** view is displayed.



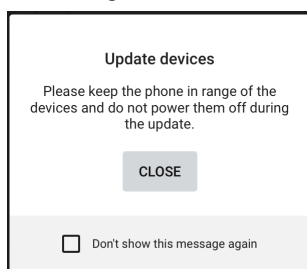
7. Enable the checkbox for **Select all devices** or the checkboxes for individual devices.

UPDATE 1 DEVICE

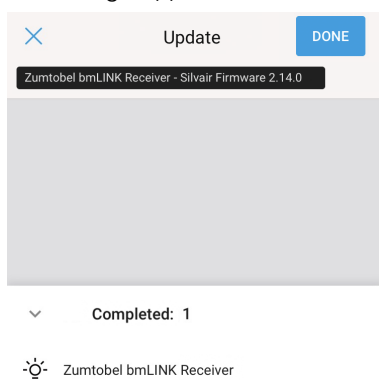
8. Tap the button.

➔ The devices are updated.

➔ A message about the update appears.



➔ A message appears to confirm that the update was successful.



DONE

9. Tap the button to return to the **Update devices** view.

Preparing the external firmware for the update

The external firmware is individually provided for each *bmLINK* device type and can be downloaded from the website www.zumtobel.com/bmLINK.

Requirement:

- The marked firmware file has been copied to the mobile device.



1. Select the *.zip file on the mobile device.
2. Tap the icon.
3. Select the **Copy to “bmLINK Tool”** option.
 - ➔ The file is added to the *bmLINK Tool* app.
 - ➔ The **Update external firmware** option is available in the app.

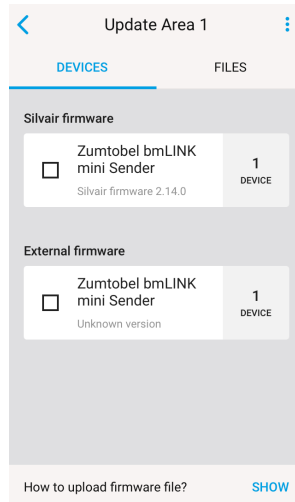
Updating the external firmware

Requirements:

- The marked firmware file has been copied to the mobile device.
- The mobile device is connected to the internet (via WLAN or mobile data).
- The devices are located within range of the mobile device.

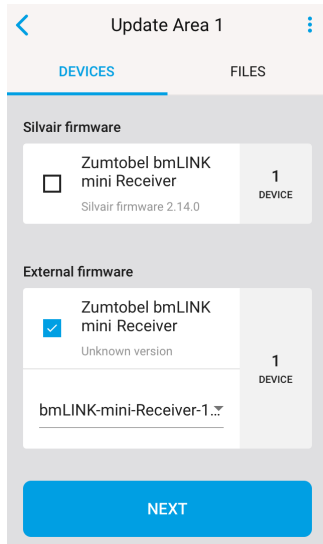


1. Select the **Area, Zone** or **DEVICES - X** view.
2. Tap the context menu.
 - ➔ The available options are displayed.
3. Tap **Update devices**.
 - ➔ The **Update [name of area]** view is displayed.
 - ➔ The devices that can be updated are displayed.



4. Enable the checkboxes to update the external firmware.

5. Select the external firmware file.



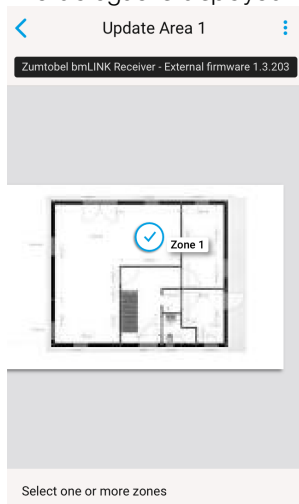
Note

When updating the external firmware, ensure that each *bmLINK* device type has its own firmware file.

NEXT

6. Tap the button.

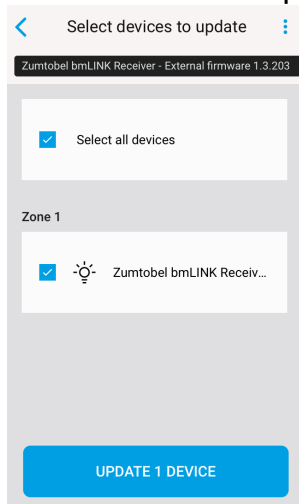
➡ The dialogue is displayed.



NEXT

7. Select the zones and tap the button.

➡ The **Select devices to update** view is displayed.



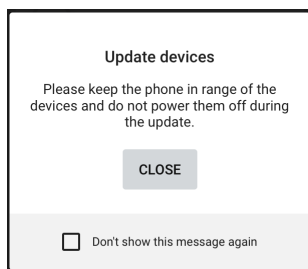
8. Enable the checkbox for **Select all devices** or the checkboxes for individual devices.

UPDATE 1 DEVICE

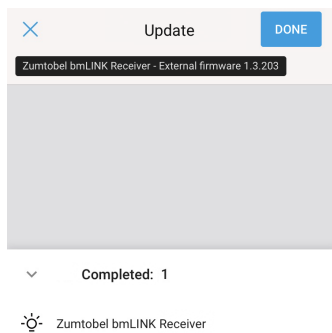
9. Tap the button.

➡ The devices are updated.

➡ A message about the update appears.



➡ A message appears to confirm that the update was successful.



– or –

➡ A message appears, indicating that the update was not successful.
For more information see Section [Troubleshooting](#) ⁸⁹

DONE

10. Tap the button to return to the **Update devices** view.

i

Note

Further information on updating the firmware can be found in the document **OTA firmware update for devices already in a Bluetooth mesh network** (<https://bmlink-platform.zumtobel.com/assets/manuals/ota-firmware-update.pdf>).

6 Appendix

This section contains the following information:

- [Glossary](#)⁸⁷
- [Troubleshooting](#)⁸⁹
- [Tips and tricks](#)⁹³

6.1 Glossary

Glossary: general

Term	Explanation
ALS	Ambient light sensor that assumes control for daylight linking in a zone.
Bluetooth mesh	With Bluetooth mesh, multiple Bluetooth devices are connected in a network where all nodes are able to establish a connection with each other.
Node	General subscriber in a wireless network.
Proxy	Proxy for connecting mobile devices to a Bluetooth mesh network.
Relay node	Relay nodes forward received packets, enabling messages to be passed on even to more removed nodes.
Tunable White	Option of dynamically changing the light of the LED in the white light range. Colour temperatures from 2700 K to 6500 K, for example, can be variably set using a control. The LED luminaires achieve high colour rendering of at least Ra 80 to Ra 90.
TW luminaire	Luminaire that supports Tunable White. There are two types of TW luminaires: • Luminaires that consist of at least two individual lamps, one for warm-white and one for cool-white. • Luminaires that have one individual lamp that supports Tunable White.
Zone	A combination of multiple rooms and/or groups, created in order to be able to control the addressed devices it contains together. Zones do not depend on the features of the rooms.

Table 22: Glossary: general

Glossary: project report

Term	Explanation
Commissioned on	Timeframe during which devices were added to the project. It does not matter whether the added devices are still part of the project or not.
Last Update	Time at which the project was last edited (the name or longitude/latitude adjusted). This does not take into account times when areas, zones or devices are added or adjusted, or when the configuration is adjusted.
Mesh devices	Number of devices that were added to the project and are part of the Bluetooth mesh network. Devices are also sorted by type of device and device function: Type of device: • Luminaires • Presence detectors • Ambient light sensors Function: • EnOcean adapters • Proxies • Relays • ALS

Table 23: Glossary: project report

6.2 Troubleshooting

Inactive devices

During device assignment, devices may be greyed out in the device list or marked with the  icon. These devices cannot be assigned to the zone.

Problem	Solution
The device was not enabled.	▷ Contact the manufacturer to enable the device.
The device is out of range.	1. Get closer to the device. 2. Update the device list. 3. Try to assign the device again.

Table 24: Problems with inactive devices

Devices not connected / hidden devices

Devices removed from a project but still connected to the Bluetooth mesh network are hidden or greyed out in the app. This problem may occur if the devices are faulty, not working or are switched off, or if the devices have been reset to their factory settings or manually removed from the network.

It may even be the case that while removing devices from the network, they are no longer connected to the Bluetooth mesh network. When this occurs, the following error message appears: “[Device name] is out of range.”

To delete these devices from the network anyway, the connection to the network must be established via a proxy.

There are two options for each of these two cases:

Option 1:

1. Connect to another device on the network.
2. Reset this device to its factory settings.
3. Reassign this device to the zone as a Proxy.
4. If you were able to connect to the network, remove the desired device from the network.

Option 2:

1. Assign a new device to the zone as a Proxy. The device can also be part of another zone.
2. Remove the desired device from the network.
3. Reconfigure the entire zone if you wish to remove the Proxy from the zone again.

Locating faulty luminaires in the zone

If after devices are assigned to the zone some luminaires are faulty, these can be located using the zone test function.



1. In the zone view, open the **TEST** view.
 - ➡ The fully-functioning luminaires in the zone start to flash.
 - ➡ The faulty luminaires in the zone do not flash.
- or –
2. Reduce the control value of the luminaires via the slider.
 - ➡ The fully-functioning luminaires in the zone are dimmed.
 - ➡ The faulty luminaires in the zone are not dimmed.

Wireless momentary-action switch not supported

When the QR code for a wireless momentary-action switch is read, the following message appears: “The device is not supported.” The wireless momentary-action switch cannot be assigned in the zone.



Note

Further information on wireless momentary-action switches can be found in the document **EnOcean switch – Best practices for efficient setup** (<https://bmlink-platform.zumtobel.com/assets/manuals/enocan-switch.pdf>).

Firmware update has failed

The firmware update may sometimes fail.



Note

There are several reasons why the firmware update may fail. More detailed information on errors and further information on over-the-air updates can be found in the document **OTA firmware update for devices already in a Bluetooth mesh network** (<https://bmlink-platform.zumtobel.com/assets/manuals/ota-firmware-update.pdf>).

Warnings for zones

Error message	Problem	Solution
Calibration required	The sensor for daylight linking has not been calibrated yet or the sensor has been removed from the zone.	▷ Calibrate the sensor. For more information see Section Calibrating sensors for daylight linking ⁹³
Configuration required	The following problems are possible: • The internet connection was interrupted. • The connection between the mobile device and <i>bmLINK</i> device was interrupted. • The zone was edited (e.g. the profile was changed).	▷ The devices must be manually configured. For more information see Section Repairing a configuration ⁷⁸
Scenes configuration required	The following problems are possible: • The scenes were not correctly configured or the configuration process was interrupted. • Additional devices have been assigned to the zone.	▷ The scene must be configured correctly. For more information see Section Zone settings ⁵⁹
Risk of exceeding the RPL limit	An RPL error (<i>Replay Protection List</i>) may occur if there is a risk that the RPL threshold will be exceeded. The following problems are possible: • A device (luminaire, sensor or wireless momentary-action switch) has been assigned to a zone. • A device has been reconfigured or the profile has been adapted. • The project has been opened from a mobile device on which the app has only just been installed.	▷ Contact the support department to resolve the problem: bmLINK-support@zumtobelgroup.com

Table 25: Error messages for zones

Warnings for devices

Error message	Problem	Solution
Some features are not supported by the device and may not work as expected.	The device does not meet the requirements for the profile and cannot support all settings in the app.	▷ Check the firmware version of the device and update it if necessary. For more information see Section Updating the firmware ⁸¹
Risk of exceeding the RPL limit. Please check User manual.	An RPL error (<i>Replay Protection List</i>) may occur if there is a risk that the RPL threshold will be exceeded. The following problems are possible: • A device (luminaire, sensor or wireless momentary-action switch) has been assigned to a zone. • A device has been reconfigured or the profile has been adapted. • The project has been opened from a mobile device on which the app has only just been installed.	▷ Contact the support department to resolve the problem: bmLINK-support@zumtobelgroup.com
This device is not configured correctly.	Device configuration was interrupted or the device was not correctly configured.	▷ Repair the device configuration. For more information see Section Repairing a configuration ⁷⁸
The scenes on this device are not configured correctly.	Scene configuration may have failed.	▷ Configure the scene again. For more information see Section Zone settings ⁵⁹

Table 26: Error messages for devices

6.3 Tips & tricks

- [Integrating bmLINK in lighting management systems](#) ^[93]
- [Calibrating sensors for daylight linking](#) ^[93]
- [Connecting emergency luminaires to LITECOM via bmLINK](#) ^[96]
- [User rights](#) ^[97]

6.3.1 Integrating bmLINK in lighting management systems

bmLINK Sender and *bmLINK mini Sender* are recognised by lighting management systems (e.g. *LITECOM*) as a luminaire and as an *ED-SENS mini*.

6.3.2 Calibrating sensors for daylight linking

To use the **Presence sensing with daylight linking** and **Absence sensing with daylight linking** profiles, the luminaires and sensors must be optimally calibrated for daylight linking. You can calibrate them directly via the *bmLINK Tool* app.



Note

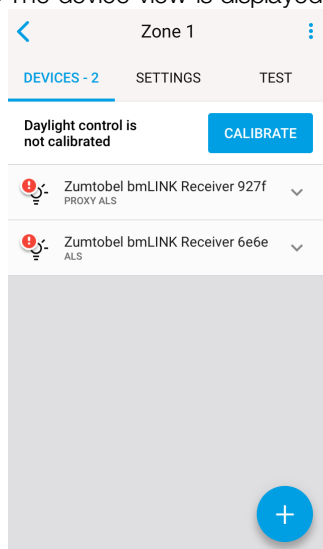
In version 1.27 and higher, multiple sensors can be calibrated at the same time.

Requirement:

- The zone where the sensors are calibrated does not have any faults.

Calibrating sensors

1. Open the zone for which daylight linking is to be calibrated.
 2. Open the **DEVICES - X** view.
- ➡ The device view is displayed.



CALIBRATE

3. Tap the button.



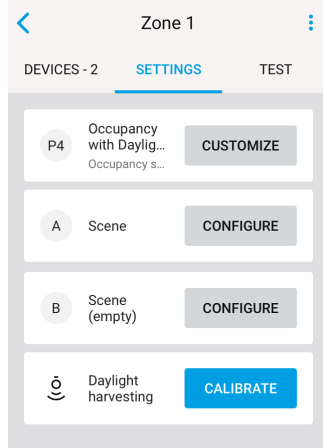
Note

The button is only active if the zone contains an ambient light sensor.

– or –

2. Open the **SETTINGS** view.

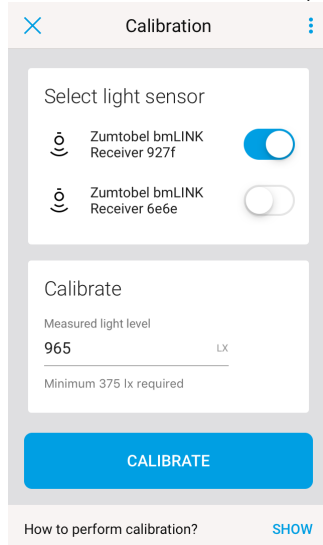
➔ An overview of the settings is displayed.



CALIBRATE

3. Tap the button for **Daylight harvesting**.

➔ The **Calibration** view is displayed.



4. Select the sensor to be calibrated.

➔ The luminaire with the sensor starts to flash.

5. Position the luxmeter under the sensor, at the height at which the luminaire should retain the desired control value.

6. Enter the lux value in the **Measured light level** field.

7. Tap on the display outside the field or tap the **Done** button.

➔ The app checks to see whether the entered value is greater than or equal to the minimum defined control value.

8. Tap the button.

➔ Calibration of the ambient light sensor is complete.

➔ The settings are applied to all devices in the zone.

CALIBRATE

More configuration options

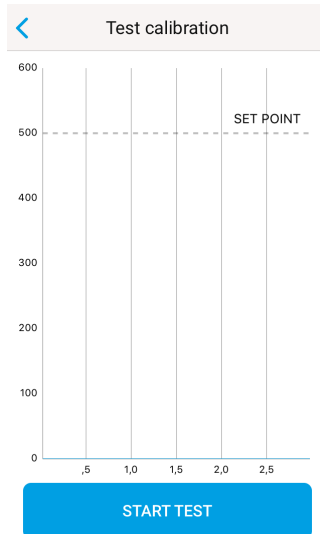
Function	Brief description
Light level	Move the slider to adjust the control value for the entire zone.
Daylight controller	If the luminaires behave in an unexpected way (e.g. occasionally switching on and off, oscillating), the control device setting can be adjusted via the slider (Slow – Fast). The following settings are recommended: • Adjust the response speed • Move the slider left (Slow) if luminaires oscillate • Move the slider right (Fast) if the control value is adjusted too slowly i Note Tap the Run test button to test the settings. After testing, the slider moves back to its initial position (middle).

Table 27: More configuration options

Testing the calibration



1. In the **Calibration** view, tap the icon to open the context menu.
 - ➔ The available options are displayed.
2. Tap **Test calibration**.
 - ➔ The **Test calibration** view is displayed



3. Set a value between 0.5 and 2.5.
4. Tap the button.
 - ➔ All luminaires switch to the defined control value.
 - ➔ The test results shows how the luminaires switch to the control value.
 - ➔ If oscillation occurs or other faulty configurations, the calibration must be repeated. The problem may be able to be resolved by adjusting the Daylight controller setting.



Note

Further information on daylight linking can be found in the document **Daylight harvesting** (<https://bmlink-platform.zumtobel.com/assets/manuals/daylight-harvesting.pdf>).

6.3.3 Connecting emergency luminaires to LITECOM via bmLINK

Self-contained emergency luminaires can be used in a *LITECOM* system. The *LITECOM* "Emergency lum. (self-cont.)" app provides the following basic functions:

- Monitoring the functionality of self-contained emergency luminaires
- Performing regular function tests:
The *LITECOM* system tests in cyclical intervals whether the emergency lighting is still functioning. The results of the emergency lighting tests are recorded centrally in a test book. The test book can also be exported.

Detailed information on project design, commissioning and the function of the *LITECOM* system can be found in the *LITECOM* product manuals.

If emergency luminaires are connected via *bmLINK* devices and an emergency luminaire reports an error in *LITECOM*, the following causes must be considered:

- Communication error: communication between the *bmLINK* devices and the emergency luminaire was interrupted.
 - The *bmLINK* devices (transmitter and receiver) are not connected or the connection was interrupted.
 - The wireless signal range is insufficient, e.g. the distance between the devices is too great or the structural circumstances have changed.
- The emergency luminaires are in emergency operation, i.e. the voltage supply to the *bmLINK Receiver* or *bmLINK mini Receiver* has been interrupted.

6.3.4 User rights

Collaborators with the “End user” role can also be added to a project. End users can view the project and its related areas and zones, but cannot make any changes to the project. End users can only control the lighting. For more information see Section [Changing user roles](#) ^[53]

Control options available to end users

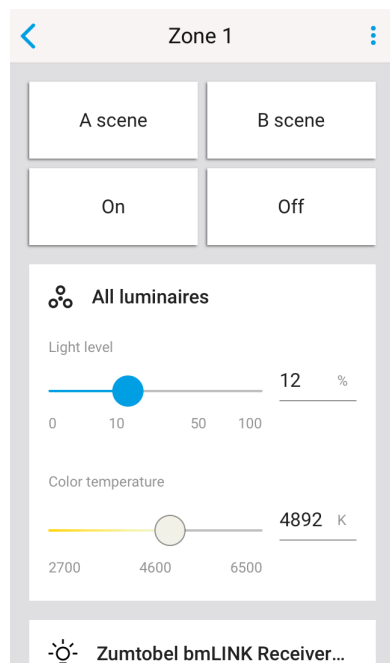


Figure 13: Zone view as seen by an end user

Collaborators with the “End user” role can choose from the following options for controlling the lighting:

- Enable default scenes:
The **Scene A** and **Scene B** buttons can be used to enable the preconfigured default scenes via the app.
- Switch the lighting on and off:
The **On** and **Off** buttons can be used to switch the lighting in the zone on and off.
- Set the control values for light level and colour temperature:
The control values for light level and colour temperature can be set for all or individual luminaires.