Wireless Basic®

Software User Manual

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User Manual

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1	Introduction

Dear Customer, thank you for choosing a Wireless Basic® emergency lighting system. Wireless Basic® combines tried and tested self-control luminaires from RP-Technik with state-of-the-art Bluetooth Low Energy Mesh networking technology, giving you the operating and maintenance convenience of a centrally monitored emergency lighting system. You also have the option of synchronising the data from your emergency light installation with the LIGHTLINX® cloud for enhanced data security and ease of handling.

Note: To set up your Wireless Basic® luminaire and (optionally) synchronise with the cloud, you will need a tablet or smartphone with Android or iOS operating system and the Wireless Basic® app. Details about system requirements and how to install the app can be found in Section 4.2.2 on page 10. Tablets and smartphone are freely available to buy.

1.1	About this manual

From Section 2 onwards, this manual provides a comprehensive introduction to the concept of Wireless Basic®, explaining both the emergency light function and how to link to the cloud. A summary of the key technical data can be found in Section 3. A major part of the manual is dedicated to descriptions of typical processes (in Chapter 4), resulting from the basic conditions of a typical commissioning and subsequent operation and maintenance.

For impatient readers: You will find the detailed instructions for starting up your Wireless Basic® system in Section 4.1**Fehler! Verweisquelle konnte nicht gefunden werden.** on page 10. A complete explanation of all the Wireless Basic® app's functions follows in Section 5.

1.2	Differences due to different screen sizes

The user interface of the Wireless Basic app varies depending on the screen size. On smaller screens, for example, the title bar is collapsed and several functions are displayed in a submenu.

Tablet   Smartphone
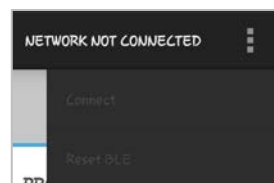
2	Release Notes of the Wireless Basic App

- Version 1.03f
    - Lifesign data added to central.
    - Bugfix on getting gps coordinates.
    - Bugfix on creating statusflags while saving central settings.
    - Color adjustment in the project overview.
- Version 1.03e
    - New data fields fort the central node.
    - Changes in the synchronization of the central settings.
    - Bugfix during IoTHub disconnects.
- Version 1.03d
    - Fixed a bug in the synchronisation of status messages and events*.
- Version 1.03c
    - Import/export now also considers images of the projects.
    - New function "Reset local (app) checkbook" in the checkbook view.
    - Changed message texts for deassociation.
    - Fixed a bug in the deassociation with the tablet/mobile phone directly connected luminaire.
    - Name of the control panel is synchronised with the cloud*.
- Version 1.03b
    - Improvement of the upload of the central configuration data to the cloud*.
- Version 1.02zb
    - Change in the formatting of the test book PDF.
    - Bugfix of the test book display.
- Version 1.02z
    - Adaptation to the Android API version 30.
    - Article numbers are synchronised with the cloud* and queried.
- Version 1.02y
    - Building plans are now correctly synchronised during parallel creation/editing.
    - Deletion of building plans, luminaire groups and luminaires is correctly transferred to other devices.
    - Bug fixes for default values of the test interval settings.
    - Improvement in the data synchronisation process with the cloud*.
- Version 1.02x
    - Bugfix for the service function "Reset test book".
- Version 1.02w
    - Improvement of the service function "Deassociate luminaires".
    - Bugfix for the display of the privacy policy and terms of use after changing the language.
- Version 1.02v
    - When reinstalling the app, the set language of the mobile device is adopted, provided it is supported by the app.
    - Bugfix in the central mode when confirming the terms of use.
- Version 1.02u
    - Translation for "Manual entry" added.
    - Status query can be cancelled.
    - Bugfix in the synchronisation of luminaire data with the cloud*.

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* Only applies to projects created in online mode and synchronised with the cloud ("Online Projects").

3   What is Wireless Basic®?

3.1   In a nutshell

Wireless Basic® combines the function of self-contained emergency self-control luminaries with the operating convenience of a centrally monitored and centrally configurable system. All luminaires are fitted with a Bluetooth module and together form a BLE mesh network. Once you use the Wireless Basic® app on your end device to access one of the luminaires at one point in the building, you can directly access all other luminaires in the network, too. The app allows you to set the operating mode of all luminaires, to dim them and run tests as well as calling up test results and documentation of these. You can also set up function and capacity tests to run automatically in this way.

During or after the commissioning process, you can use your end device to save all data from your project to the LIGHTLINX® cloud, in order to manage your projects centrally and make them accessible from other devices. It doesn't matter whether the luminaires are installed in a location where there is an Internet connection available or not.

In addition the Wireless Basic App offers a central display function of the status of your installation and thus fulfils the demands from DIN VDE V 0108-100-1:2018-12 and OVE E 8101:2019.

3.2   The Wireless Basic® luminaires

Wireless Basic® luminaires are self-contained single-battery luminaires. Each luminaire is fitted with a battery to bridge the intended autonomy time in case of mains power fail. This battery is automatically charged or recharged during normal operation (i.e. when there is a power supply).

3.2.1   Self-control functions

Wireless Basic® luminaires are what is known as self-contained luminaires with the following functions:

- **Power failure recognition and emergency mode**: If the power supply is interrupted, the luminaire recognises this and switches to emergency mode (battery mode). Battery mode is maintained for the duration of the autonomy time until the luminaire switches off.
- **Maintained mode (DS) and non-maintained mode (BS)**: Each luminaire is configured to one of these two operating modes. Illuminants from luminaires in maintained mode are permanently activated whereas illuminants in non-maintained mode only activate their illuminant in emergency mode.
- **Dimming**: Every Wireless Basic® luminaire has a dimming function, which allows the brightness of luminaires to be reduced in maintained mode. Dimming is only enabled in normal mode. When in emergency mode, even a dimmed luminaire switches to full (undimmed) brightness.
- **Function test**: The luminaire tests its illuminant and battery to ensure they are working properly. It does this by switching over for a few seconds and activating the illuminant.
- **Capacity test**: The luminaire switches to battery mode and activates its illuminant to check whether the battery can maintain this mode for the intended autonomy time. The capacity test may therefore last several hours and requires the battery to be fully charged.
- **Automatic testing**: The luminaire can autonomously perform both function and capacity tests at set intervals. Please note that automatic capacity tests in particular are not permitted in all countries or regions. Automatic tests can therefore be activated and deactivated.
- **Manual testing**: The luminaire also allows function and capacity tests to be run through direct instruction from the Wireless Basic® app: the user can request luminaires to run tests instantly from the app.
- **Data log**: Each luminaire has an internal memory where test results, power supply failure and power supply return events can be stored for up to 5 years.
- **Menu**: The luminaire has a test push button, linked to menu navigation, in order to run tests and other functions (self-control).

- **Display LEDs:** The luminaire has three colour LEDS (green, yellow, red) to indicate its current status, any active tests and potential errors.

If operating *with* the wireless Bluetooth module, the menu navigation mentioned is replaced by the corresponding control functions of the Wireless Basic® app and is not therefore available on the luminaire, i.e. the test push button has no function. This is normal.

Labelling: Each Wireless Basic® luminaire is clearly labelled using a unique, four-digit alpha-numerical device address, which is attached to the luminaire housing so that it can be read from the outside. This device address is also displayed in the app and serves to identify the luminaire in the project and in test documentation.

3.2.2 Bluetooth and wireless characteristics

The integrated Bluetooth wireless module turns every Wireless Basic® luminaire into a Bluetooth device which is displayed in the list of devices on your end device.

Note: The requirements of various standards (e.g. EN 60598-2-22) mean that the luminaires are only radio-enabled in normal mode and cease their send and receive operation during battery mode (e.g. should the power supply fail and during capacity tests) to ensure that only the illuminant is supplied with power.

3.3 The Wireless Basic® app

The Wireless Basic® app provides the functions listed below to communicate with luminaires and to configure and test them (and thus to maintain them). In order to do this, the luminaires belonging to an installation are combined into a so-called project. From that point on, they form a permanent part of this project where individual luminaires, groups of luminaires or even all the project's luminaires can be operated at the same time, tested and their test results documented.

3.3.1 Emergency light functions

The app's emergency light functions relate to the installation's luminaires. The app can manage any number of installations on one device.

- **Managing projects:** The app stores one or more projects and can therefore manage several installations *on one device*.
- **Project master data:** A project involves a set of master data (project name as well as address and GPS coordinates of the site) for project identification and localisation. The latter is important when using the cloud functionality.
- **Project-wide test settings:** Settings for automatic function and/or capacity tests are also saved for the project. These apply to all luminaires in the project. The settings are transferred from the app to each luminaire; the luminaires then run the tests autonomously.
- **Defining groups:** One or more groups, which later contain the luminaires, can be defined within a project. Any name can be given to the groups. All luminaires in a group can be operated or tested together.
- **Recognising and adding luminaires:** The app recognises luminaires within the wireless range of the end device and displays them so they can be selected. Luminaires selected by the user are added to the project (associated with it). Associated luminaires are encrypted and can then no longer be accessed by third parties.
- **Identifying luminaires:** Associated luminaires can be switched on/off from the app to check the wireless connection and to identify them. A flashing function is also available for identification purposes.
- **Configuring luminaires:** Each luminaire can be programmed to an operating mode (maintained mode (DS) / non-maintained mode (BS)) and also dimmed in normal mode. What's more, any name can be given to luminaires so that special requirements can be taken into account in the documentation.
- **Displaying luminaires in the building plan:** Building plans can be stored in the app and luminaires can be positioned on them.
- **Running tests manually:** Function and capacity tests can also be run manually in settings where automatic testing is not wanted or is not permitted by local legislation.

- **Calling up test results and luminaire statuses**: The app can read and display the individual data log for all luminaires. This can be done for individual luminaires, groups of luminaires or even all luminaires at once.
- **Generating test logs**: On request, the app will generate a test log from the test results, which can be exported locally.

3.3.2   Associating luminaires

In this context, "associate" means assigning a luminaire to a project using the Wireless Basic® app.

- A *non-associated* luminaire is recognised by the app as a "new" luminaire and can be added to a project. It is therefore "associated" and protected from external access by means of a network code. If another search is carried out on the app (especially by devices belonging to third parties), this luminaire cannot be seen and can no longer be associated or contacted by third parties. It now forms part of the project.
- An *associated* luminaire forms part of a project. It can only be seen within this project and only by users with access to this project and cannot therefore be integrated into other projects. It can however be removed from the project again by "disassociating" it. This process involves removing the network code and allowing the luminaire to again be recognised as a "new" luminaire and integrated into other projects.

Note: When supplied from the factory, Wireless Basic® luminaires are *non-associated*.

3.3.3   Online and offline projects and online and offline mode

The app manages projects in two separate memory areas: an offline and an online area. These differ in whether they are synchronised with the cloud or not. The user can switch between both areas; they correspond to two different app operating modes.

- Online mode: To use online mode, the user has to log in with their personal username and password, as stored in the LIGHTLINX® cloud database. Projects created in this mode are synchronised with the cloud and allow the cloud functions to be used. These include automatic backup and restoration, should the end device be lost or damaged, for example.
- Offline mode: The user does not have to log in to use this mode. Projects created in this mode never make any form of contact with the cloud and are excluded from the cloud functions. In order to back them up and restore them anyway, this mode has an export/import function. The user assumes sole responsibility for data safety when using this function.

Depending on the operating mode selected, the projects are referred to as online or offline projects.

Note: In order to use online mode, the user must have a login for the LIGHTLINX® web portal. Users can create this login themselves using the app or registering at www.lightlinx.com.

Note: Use of the online mode and all cloud functions is optional. The operator decides whether it is appropriate for a project to be run with our without the cloud. This decision can be changed later on if required. If the operator decides not to use online mode or the cloud functions, tasks such as backing up/archiving and if necessary restoring project data are the sole responsibility of the user. An export/import function is provided in the app for this purpose. It makes the project data available as a file, enabling it to be archived.

3.3.4   Central display of the system state

The app has an operating mode for displaying the status of a previously selected project at a central location. When central mode is activated, the end device queries the status of all luminaires at an adjustable interval and shows it clearly on the display with the traffic light colours green, yellow and red:

- Green: The luminaire system is ready for operation and works without errors.
- Yellow: The luminaire system and/or the displaying device are operating in battery mode. This state is also displayed if individual luminaires of the system are operating in battery mode.
- Red: There is a fault in the luminaire system.

Note: Automatic synchronisation with the LIGHTLINX® cloud does not take place.

If a central display of the system status is required by local regulations, ensure that a terminal device remains within range of the installed luminaires on site and set this up for central mode. More on this in section 5.14. For proper function and display, the device must be permanently supplied with charging current.

3.4   App cloud functions in online mode

Projects created in online mode (see section above) are saved by the app to the cloud-based database of the LIGHTLINX® web portal when in online mode. The project, its master data and the data from all luminaires, including their data logs and test logs, can therefore be seen in LIGHTLINX®, where they can also be managed. The following actions are then possible:

- **Backup**: Restoration of project data from the cloud if the end device used to set up the installation has been lost, has become unusable or the project data on it has been deleted by mistake.
- **Archiving test logs**: The cloud stores all test logs so they can be viewed anywhere and at any time.
- **Convenient management**: Projects can also be managed in the cloud, forwarded to third parties and shared with them. More on this in Section 3.5.

3.4.1   What do I do if there are gaps in wireless coverage

In online mode, the Wireless Basic® app needs an internet connection in order to log in and to exchange data with the cloud. If it has no connection, it will work independently of the cloud and save all relevant data on the end device. This means that Wireless Basic® luminaires can also be installed in locations where there is no Internet connection. In such cases, proceed as follows:

1. Log into the app's online mode somewhere where you have an Internet connection.
2. Wait until the app has finished synchronising data with the cloud.
3. Don't log out then and remain in online mode (leave the app running).
4. Go to the installation site and start up the luminaires or perform maintenance etc.
5. Again don't log out then and remain in online mode (app continues to run).
6. The next time you have an Internet connection, the app will upload the new data produced on site to the cloud.

3.5   Cloud function in the LIGHTLINX® web portal

All projects created in online mode using one single login can be seen on the LIGHTLINX® web portal when using these login details. The following are then available in LIGHTLINX®:

- a map showing the locations of all projects,
- a table showing all projects,
- the master data of all projects,
- detailed information about all luminaires in all projects,
- the building plans containing the luminaires in them,
- all test logs uploaded by that time.

Convenient management functions are also provided in LIGHTLINX® to allow users to

- manage and organise projects,
- share projects with others (e.g. for joint servicing using several end devices),
- forward projects to third parties.

For a more detailed picture of the cloud functionality in LIGHTLINX®, please refer to the LIGHTLINX® documentation.

3.6 User rights

User rights in Wireless Basic® and LIGHTLINX® regulate the type of access a specific user has for a specific project. This means that one and the same user with the same login may have different rights for different projects.

The Wireless Basic® app distinguishes between two different levels of authorisation:

- Technician (full access): entitled to all changes to the project (master data, settings, assigning luminaires, ...)
- Caretaker (read-only access): not permitted to make any changes to the project, but may undertake status updates and update the cloud.

Also, each project has one "Project admin" who is the virtual "owner" of the project.

3.6.1 Rules for online projects

The following rules apply to the assignment of authorisation levels for online projects:

- Upon creation: The user who creates a project is the project admin and has the access authorisation of a technician (highest authorisation level) for this project.
- Sharing: If the project admin shares the project with another user, he or she remains the project admin, retains technician-level access and can specify whether the share recipient is to have technician or caretaker rights for the project.
- Sharing: If some other user (not project admin) shares with another user a project he or she has received by means of sharing, the highest authorisation level he or she can pass on is the level he or she currently holds (a lower level can however be passed on if available).
- Handover: If the project admin passes on the project to another user, he or she loses all access to the project, and the recipient becomes the technician and project admin for this project. All sharings issued for this project cease to apply.
- Handover: If a user (not project admin) passes onto another user a project he or she has received by means of sharing, all sharings which he or she has issued cease to apply, he or she loses all access to the project, and the recipient "inherits" his or her authorisation level.

3.6.2 Rules for offline projects

The following rule applies to the assignment of authorisation levels for offline projects: The user who creates a project has the highest authorisation level (technician) for this project. If another user also gains access to this project by means of data being exported and

imported on his or her device, he or she also has the highest authorisation level (technician). In other words, the rights to a project remain unchanged in the event of forwarding by means of data being exported and imported.

Note: This is why the data export/import function does not exist in the app's online mode.

3.7   Clearance codes for using the cloud function

Users, who create online projects and want to start up the luminaires they contain, need a login (user name, password) to log into the LIGHTLINX® cloud. The app and/or LIGHTLINX® web portal provide a form for creating such an account.

As part of the login process, when new users log into LIGHTLINX® for the first time with their new user name and password, they are asked to enter a clearance code. You will find a valid code in the quick-start instructions enclosed with every Wireless Basic® luminaire. So when logging in, be sure to have the instructions for *one* of your luminaires to hand. The codes provided with the luminaires are generally identical. If you find two or more different codes for your luminaires, simply use one of them.

Purpose of the clearance code: By entering the code, you demonstrate to the cloud that you own or are involved with Wireless Basic® luminaires. This system should prevent users or bots, who randomly "find their way" to the LIGHTLINX® page with maliciously created logins, from blocking the database.

3.8	GDPR, data protection, data security

Data protection: Wireless Basic® was developed in consideration of the requirements of the General Data Protection Regulation (GDPR) and only stores a minimum amount of personal data or data which could be linked to individuals. More specifically:

1. Name and e-mail address of every user who creates and/or processes online projects and registers with LIGHTLINX® for this purpose. The e-mail address must belong personally to the user and he or she must have access to it in order to complete the registration process and reset the password if required. This data is saved in the cloud and the Wireless Basic® app.
2. For every project, a project name and, as an option, the address, GPS coordinates and building plans for the building in which the project luminaries are installed. The user may select any name for the project but it must not be left empty. All other data is voluntary. The GPS coordinates of the building are used in LIGHTLINX® to indicate the correct position of a project on the map. This data is saved in the Wireless Basic® app and, if the cloud function is being used, also in the cloud.

Optional cloud use: Wireless Basic® users are free to use the cloud and the functions associated with it. If storage of the data stated above in the cloud is not compatible with the principles of the user or his or her client, there is no need to use this function. The same applies to the data relating to the project location.

Storage location: Data saved in the cloud is stored on servers rented for LIGHTLINX®and based in Amsterdam, Holland.

Terms of use: Details about using the app are provided in the conditions of use which are displayed for the user when he or she first uses the Wireless Basic®app. The user must accept these conditions in order to use the app. The conditions of use text can be viewed at any time in the app and in LIGHTLINX®.

Privacy Policy: The data protection declaration is displayed for the user once he or she has agreed to the conditions of use. This contains details applicable to the use of general and personal data. There is also a passage describing the use of personal data for marketing purposes. The user can agree to or reject such use. The user can also withdraw this decision at a later date if he or she chooses to do so. The data protection declaration text can be viewed at any time in the app and in LIGHTLINX®.

Data security: If the cloud functions are used as described above, the cloud-based authentication with user name and password and the cloud database result in the following security functions:

- **Enhanced data security**: Access to online projects is only granted to a logged-in user, who created these projects and/or has explicitly been granted access rights to them by another user.
- **Restoration**: If an end device breaks or is lost, projects saved in the cloud can be transferred from the cloud to another device where they can then be managed.

Note: If you do not use the cloud functions, the above security functions provided by the cloud are not available. In such cases, the user is responsible for preventing unauthorised access to offline projects by locking the end device. He or she is also responsible for producing a backup of the project data for restoration in a worst case scenario and for safely archiving this.

4　Technical data

4.1　Luminaires

The most important characteristics of all Wireless Basic® luminaries at a glance:

- Autonomous single-battery luminaire with integrated self-test function according to DIN EN 60598-1, DIN EN 60598-2-22, DIN EN 7010 and DIN EN 1838.
- Self-control function as outlined in Section 3.2.1
- Operating modes: Maintained mode, non-maintained mode
- Dimming when in mains operation (100 levels)
- Bluetooth 4.1 with BLE networking technology
- Wireless range according to Bluetooth specification <25m
- Integrated automatic test log, can be accessed using the app (stored for 5 years)

4.2　The app

The Wireless Basic® app is available at the Google play Store with the keyword "Wireless Basic".

4.2.1　Installation

- Download the app from the above website as an APK file.
- Find the file in the file system on your end device and tap on it.
- The system will ask whether you want to install the app. Confirm with "Yes".
- The app will be ready to launch shortly thereafter.

4.2.2　System requirements

System requirements for the Android or iOS end devices to run the Wireless Basic® app:

- Operating system: min. Android version 6 ("Marshmallow") or min. iOS version 14.2
- Bluetooth 4.1 with BLE
- 64 MB of free memory (Flash)
- Display of 800 x 1280 pixels or more (DSVGA)

Additional requirement for using the cloud function:

- Internet access

5	Handling

5.1	Commissioning

The following sections guide you through the standard commissioning procedure for your Wireless Basic® luminaires.

Important: When starting up your Wireless Basic® luminaires, it is absolutely **essential** that you have a Smartphone or tablet with an operating system (see Section 4.2.2).

5.1.1 Working online or offline?

As an option, Wireless Basic® installations can be protected against unauthorised access and data loss by the cloud functions of the Wireless Basic® app. These functions also greatly simplify management and maintenance of the installation. The manufacturer therefore recommends using the cloud functions, but this is not compulsory.

Before commencing with commissioning, therefore clarify with the official operator of the building or emergency light system whether they want you to use the cloud functions for this system. An overview of the data saved by the cloud can be found in Section 3.8 on page 9 under Item 2.

Note: If the operator does want the cloud functions to be used, as the commissioning technician, you will need your own credentials (login) for the LIGHTLINX® web portal. Log into the app with these access details, commission the luminaires and later on hand over the project to the operator, who must also have access details for LIGHTLINX®. For details of the personal data which the cloud saves each time it is accessed by a user, refer to Section 3.8 on page 9 Item 1.

5.1.2 Installing the Wireless Basic® app

If you've not already done so, install the Wireless Basic® app on your end device. The app can be downloaded from the Google play Store or the Apple app store. Details on the installation can be found in Section 4.2.1


5.1.3 Launching the Wireless Basic® app

Launch the app by tapping the app icon on your start screen. Your device's operating system will ask for your permission for RP Wireless Basic® to access the device location (see below, Figure 1 – numbers are given to the bottom left in each figure).

Tip: If you allow RP Wireless Basic® to access the device location, this makes it easier for you to enter the building address later on. It is best to select "Always allow".

The Wireless Basic® logo (Figure 2) appears briefly, then you are taken to the app's login screen (Figure 3). If the cloud functions are to be used for the installation ("Online project"), select "**Login**"and continue with the following section. If not, select "**Offline mode**" and go onto Section 5.1.6 on page 14.
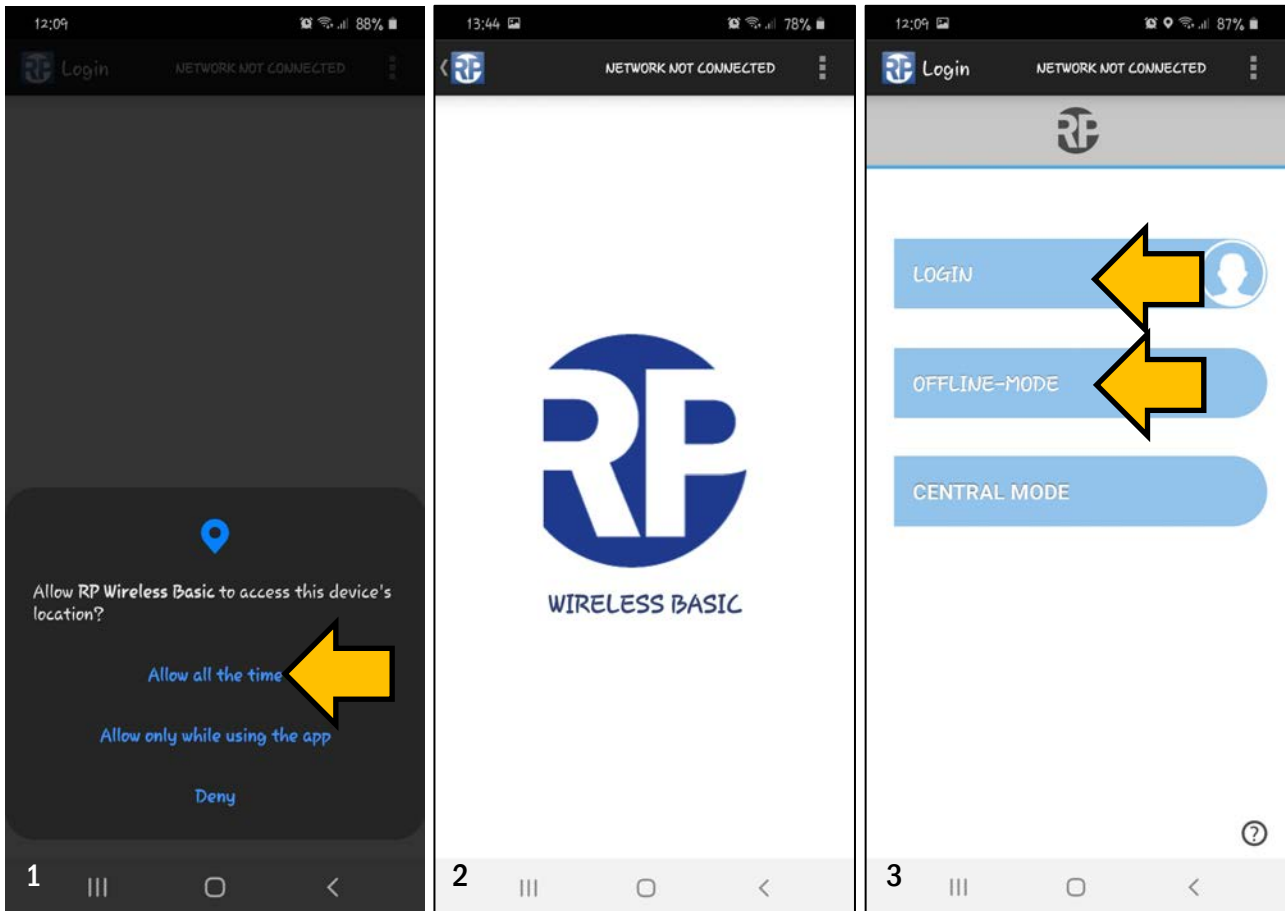
5.1.4   Logging in with "Login" (for online projects)

Note: Skip this section if you are working offline and are not using the cloud functions for this installation.

Note: You will need a fully functional Internet connection to log into the app with LIGHTLINX® access details or to create LIGHTLINX® access details. So make sure that your device is connected to the Internet beforehand.

When you select this operating mode by tapping on "Login" (see Figure 3 above) for online projects, you are initially taken to the login page for LIGHTLINX® (Figure 4). To go to the input form for name and password on devices with a small screen, you may have to scroll down (Figures 4+5+6).

Log in by entering your LIGHTLINX® access details in the "Username" and "Password" fields and tapping on "Sign in". If you do not yet have any access details, tap on "Sign up now" to create some. **To do this, you will need an e-mail address with an inbox you have access to.**

Create your LIGHTLINX® access details as follows:

1. Enter the user name and password you want to use in the "Username" and "New Password" fields (Figure 7).
2. Enter the password again in the "Confirm New Password" field (Figure 7).
3. Under "Email Address", enter your e-mail address and tap on "Send verification code" (Figure 7).
4. An e-mail will be sent to you from "Microsoft on behalf of LIGHTLINX". This contains a numerical code.
5. Enter this code in the "Verification code" field and tap on "Verify code" (Figure 8).
6. Then enter your own name in the "Surname" and "Given Name" fields (Figure 9).
7. Tap on "Create" (Figure 9).
8. Your access details are thereby created and you are automatically logged into the app.
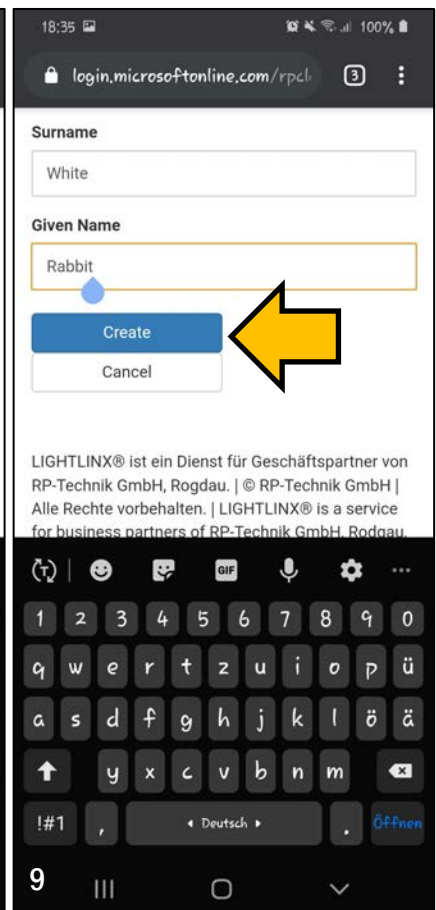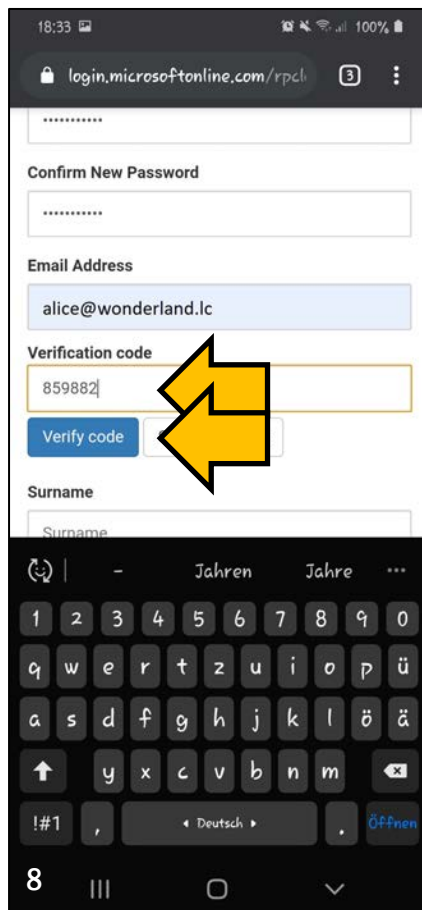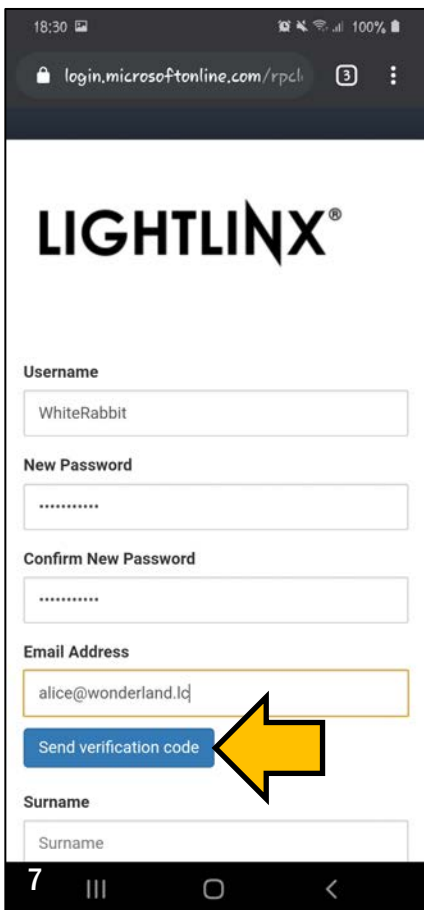
5.1.5   Logging in with "Offline mode" (for offline projects)

Note: Skip this section if you have logged in according to the above section (go to Section 5.1.6).

When you select this operating mode by tapping on "Offline mode" (see Figure 3 above), you are taken straight into the app. There is no need to enter a password.

Note: Offline mode is not protected by a password. When working on offline projects, please therefore ensure that your end device is protected against unauthorised access by taking appropriate security measures (password, fingerprint sensor, facial recognition, etc.).

5.1.6   Conditions of use and data protection declaration

When you first log in using either online or offline mode, the conditions of use and data protection declaration for Wireless Basic® and LIGHTLINX® are displayed in turn.

- You have to accept the terms of use in order to use the app and LIGHTLINX® (Figure 10). Read the terms through carefully and then agree by ticking "I agree" under the text. You have to scroll right to the bottom to see this (Figure 11).
- In accordance with the GDPR (Article 6, Paragraph 1, Section f), Section IX. of the data protection declaration contains a passage governing the processing of personal data for marketing purposes. You can agree to or reject this as you deem appropriate. Also read through the data protection declaration and tick "I agree" or "I do no agree" right at the bottom below the text (Figure 12).
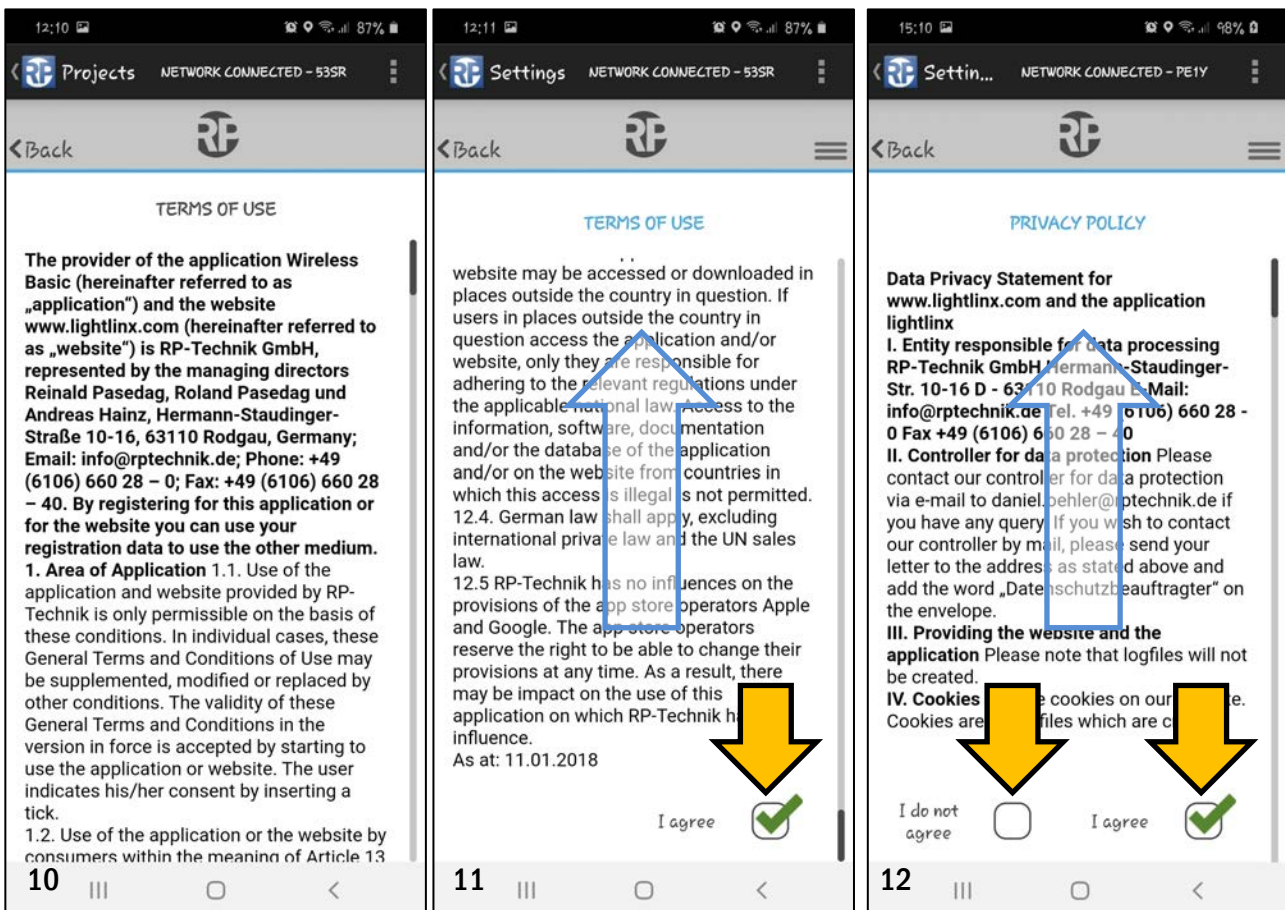
5.1.7 Creating a new project and entering master data

What is known as a project must be created for every installation. A project manages all associated Wireless Basic® luminaires along with their settings, the location of the installation incl. GSP coordinates, settings for automatic tests and as an option building plans with the locations of all luminaires.

At least 2 luminaires should be assigned to a project. If only one luminaire is assigned to a project, it will not establish radio communication due to the lack of other luminaires and will signal that it is not within reach. This resets the luminaire and the internal timer, which means that the weekly and monthly tests are not performed properly.

A maximum of 50 luminaires should be managed in a project. A larger number is possible but can result in technical limitations in the communication of the luminaires. Installations with more than 50 luminaires should be divided into several projects.

Once you have logged into the app, you will see a list of all projects available. When you use the app for the first time, the list will be empty and no projects will be displayed (Figure 13).

Add a new project by clicking on "Add" in the bottom left (Figure 13).

You will now be able to see the "New Project" view where you enter details of the project (Figure 14). Enter a name for the new project here under "Project name" and under "Location" enter the building name and address of the building where the installation is taking place.

Tip: When launching the app (see Section 5.1.3), if you allowed the app to access the location, and if you are in the building for the installation and your device has a fully functional Internet connection, you can greatly simplify this step by simply tapping on "Location". The app then uses the end device's GPS sensor to determine your location and enter this into the "Location" entry fields. What's more, if possible, the corresponding postal address is accessed via the Internet and also entered automatically.

5.1.8 Setting test intervals and saving the project

Now scroll down and under the "Test interval" heading set the intervals at which automatic function and capacity tests are to be run for all luminaires (Figure 15).
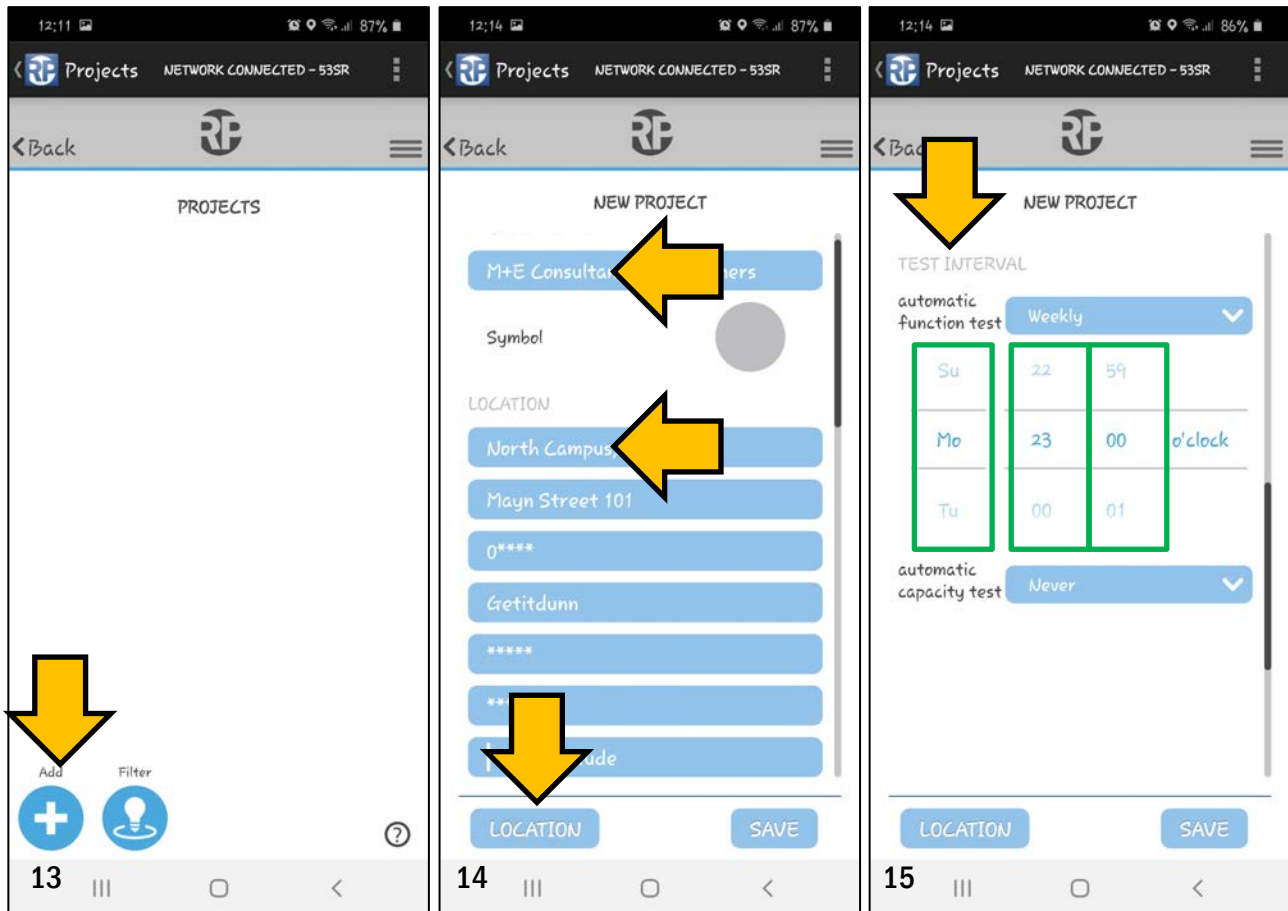
A) Automatic function tests

The blue drop-down list provides you with options for running function tests. These are "Never", "Daily", "Weekly" and "Monthly" (Figure 15). Depending on your choice, one or more spin controls are displayed below. These can be used to set more details (see green framed boxes in Figure 15).

- **"Never":** No automatic function tests are run.
- **"Daily":** Tests are run daily at a fixed time (spin controls for hour and minute of start time).
- **"Weekly":** Tests are run weekly on a weekday at a fixed time (spin controls for weekday, hour and minute of start time, this scenario is shown in Figure 15).
- **"Monthly":** Tests are run monthly on a fixed date at a fixed time (spin controls for day of the month, hour and minute of start time).

B) Automatic capacity tests (capacity tests)

Here you can select an interval from the blue drop-down list and specify the date and time of the first test using the spin control (Figure 16; you may have to scroll right to the bottom for the time). Automatic tests run at the selected interval after this initial test. The options for this are:

- **"Never":** No automatic capacity tests are run.
- **"3 Months":** A test is run every three months.
- **"6 Months":** A test is run every six months.
- **"12 Months":** Test is run every 12 months (this scenario is shown in Figure 16).

Note: Automatic capacity tests are not permitted in all countries. Find out what rules apply to your location.

Then **save** the settings and save the whole project by tapping on "Save" (Figure 16, bottom right).
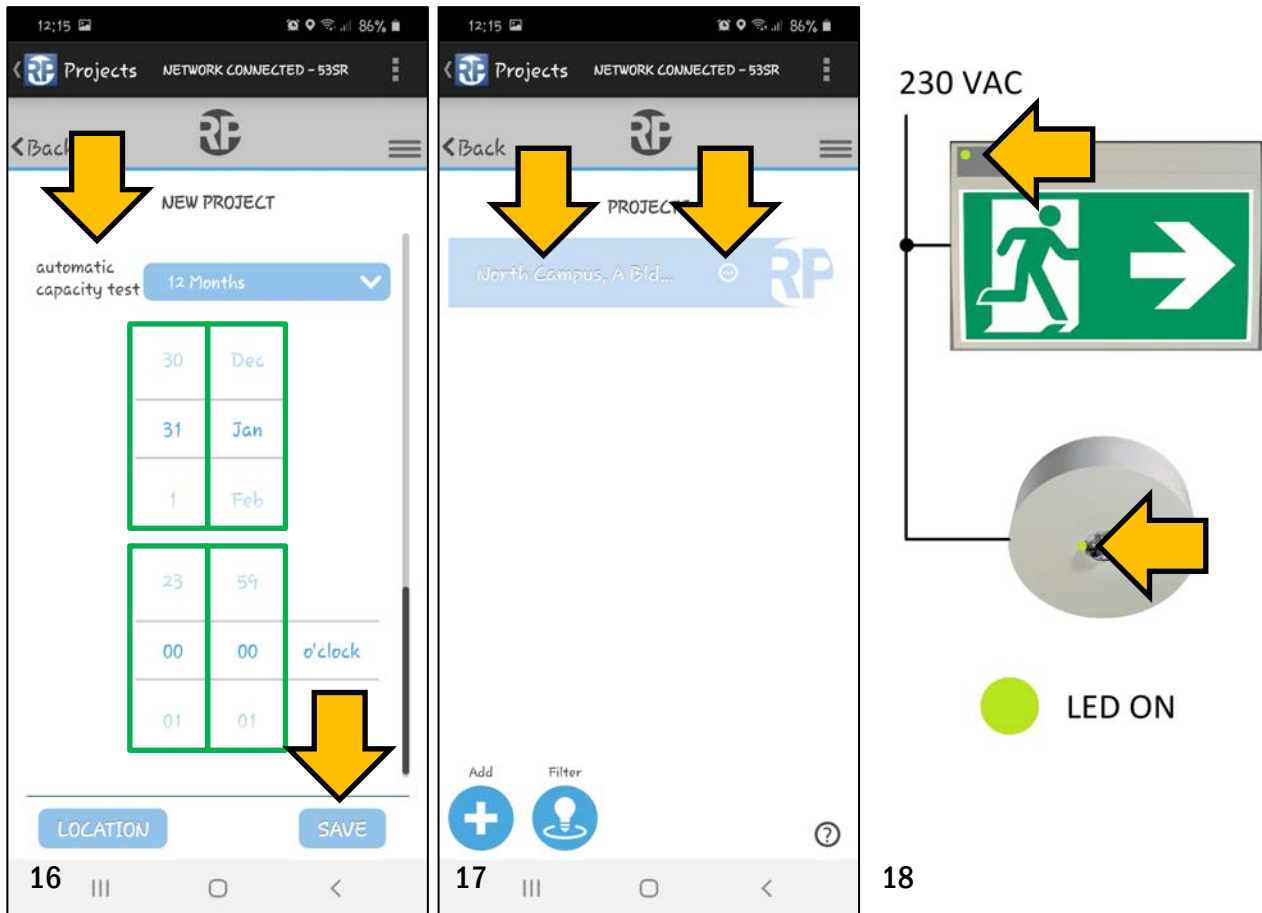
Once saved, you are automatically taken back to the project overview. The newly created project is now displayed here (Figure 17). You can view and, if necessary, correct the configured settings by tapping on the symbol of three dots in a circle (Figure 17, right arrow).

5.1.9 Installing luminaires and setting up the power supply

Install all your Wireless Basic® luminaires and set up the power supply. After a short while, the green status LED for each luminaire should light up and remain lit up permanently (Figure 18).

If this is not the case for one of the luminaires, check the power supply. Also make sure that all components and plug connectors within the luminaires are engaged and connected properly. Check the fit of the wireless module too.

Note: To continue with the commissioning process, all luminaires must be supplied with power from the mains. Only then are the luminaires in wireless mode and only then can they be detected and configured by the Wireless Basic® app.

5.1.10 Creating groups

Luminaires in Wireless Basic® are basically managed in groups. A project therefore always contains one or more groups, which in turn contain luminaires. So create one or more groups as required by your installation.

In the project overview (Figure 17), tap on the name of the new project (Figure 17, left arrow). You will now be able to see the overview of the project groups (Figure 19). To add a group, tap on "Add" in the group overview (Figure 19, bottom left). The new group is shown as a blue bar (Figure 20). Use the on-screen keypad to enter a name for the group and tap on the green "OK" to save the new name.

Repeat for each group that you want to create (Figure 21).

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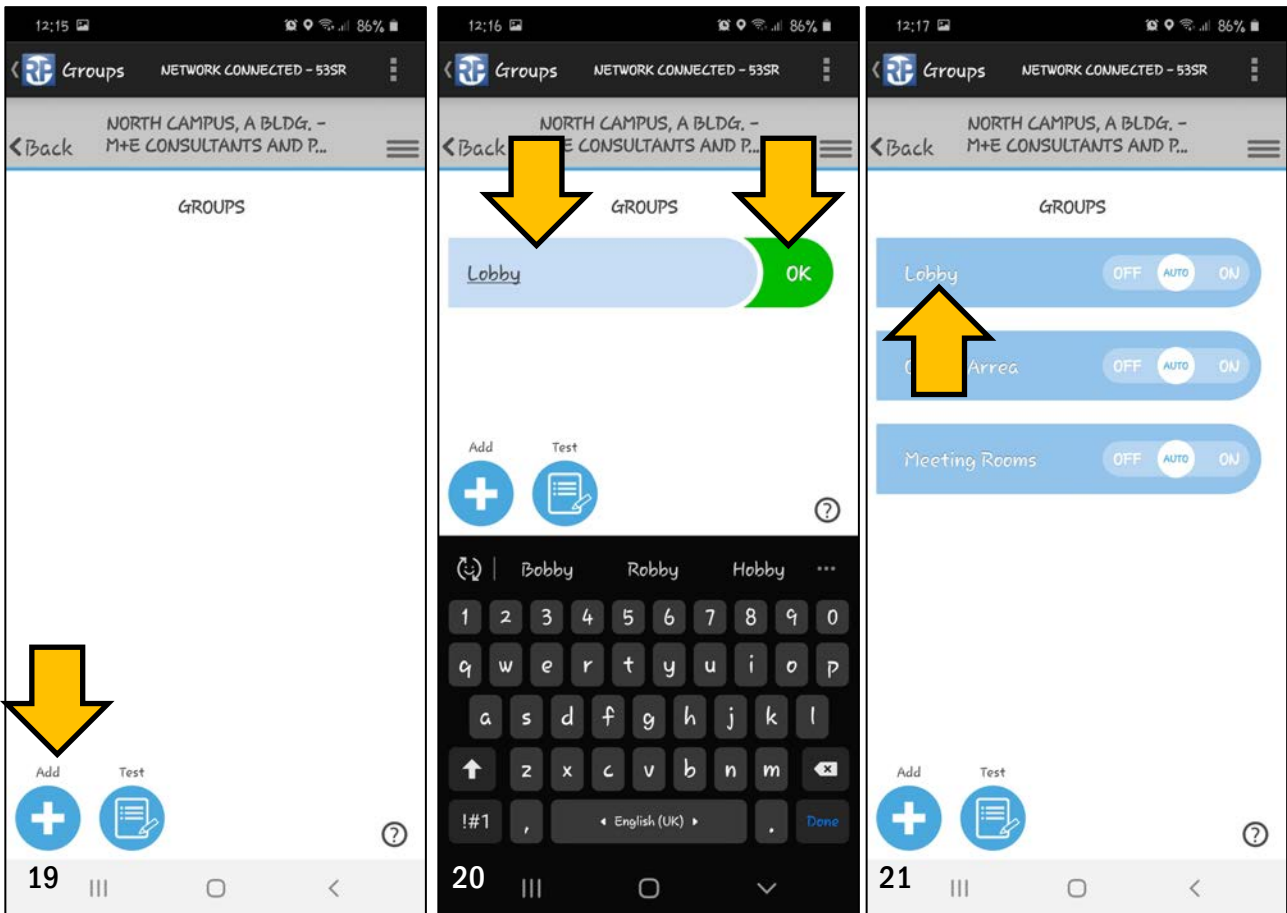
5.1.11   Detecting and adding luminaires

To add luminaires to a group, open the group by tapping on the group name (Figure 21, arrow). You will now be able to see the overview of luminaires in the selected group (Figure 22).

Tap on "Add" in the bottom left. This takes you to the "New Lights" view (Figure 23).

Ensure that "Network connected" is displayed in the title bar (Figure 23, upper arrow).

- If it is, the address of one of the luminaires present should be displayed next to the writing.
- If not, wait a moment. The app will automatically attempt to contact recognised luminaires. While this is happening, messages such as "Scan…" or "Connection being established" will be displayed.

When "Network connected" is shown in the title bar, tap on "Refresh" in the bottom left. The app now fills the display with the device addresses of all recently recognised luminaires which are available to the project (Figure 24). To the right of each device address you will see a grey circle, which can be used to select the luminaire. You may need to scroll down to see all luminaire addresses.

Tap on the grey circle to select luminaires for the group. Your choice is indicated by a small green tick (Figure 25). If you want to select all luminaires, tap on the grey circle next to the word "All" at the top of the list.

To add the selected luminaires to the project and group, tap on "OK" in the bottom left (Figure 25). A message appears notifying you that the selected luminaires are now being added to the project and can therefore no longer be seen for other projects (Figure 26). Confirm this message by tapping on "OK". The luminaires are now added.

Note: The process of adding luminaires (known in the app as "associating") may take several seconds per luminaire. This is because it is a multi-stage communication process in which a network code is negotiated with each individual luminaire and verified. This process is used to securely block the luminaire from unauthorised access by third parties.

Note: The luminaires are associated one after another. The individual steps are displayed against a blue background. At the bottom of the screen on the right, you will find a "Cancel" button which you can use to cancel the process. If you press this button, the association currently underway is completed but any associations still waiting to be made are discarded and the corresponding luminaires remain non-associated.
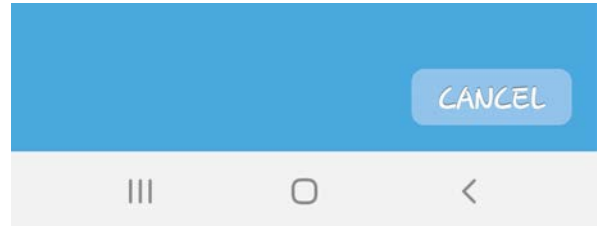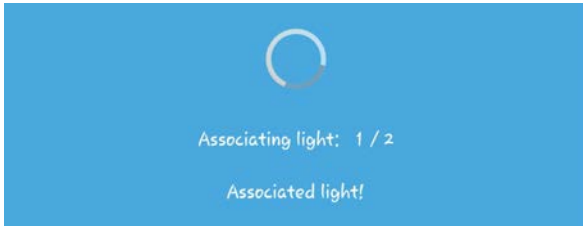
5.1.12   Testing association: identifying luminaires

After the association, the list of luminaires in the group most recently selected is displayed again (Figure 27).

You can check the association by tapping on "ID" at the bottom. This identification function allows all luminaires in the group to flash a couple of times. So you can be sure that the group contains the right luminaires.

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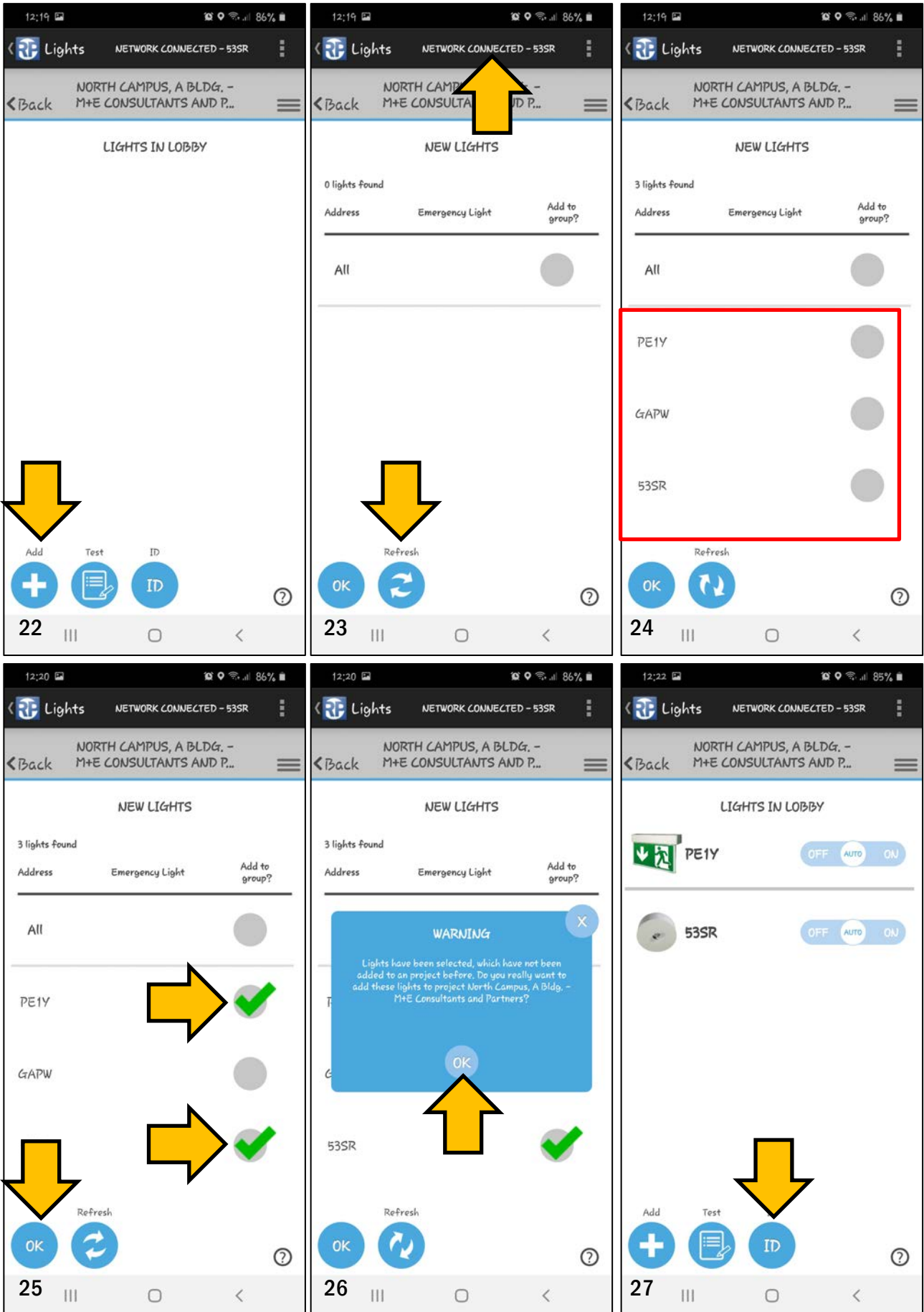
5.1.13 Configuring luminaires

Each luminaire needs to be correctly configured for operation. This means that the right operating mode (maintained mode / non-maintained mode) needs to be assigned and other settings may also be required. To enter the configuration view for a luminaire, tap on the name / device number of the relevant luminaire in the group view (Figure 27). You can now see the configuration view for this luminaire. In addition to the setting options mentioned, this also shows you detailed information about the luminaire, such as version and luminaire type.

Luminaires in non-maintained mode (Figure 28):

- Move the "Configuration" slider to "BS" (non-maintained mode).

Luminaires in maintained mode (Figure 29):

- Move the "Configuration" slider to "DS" (maintained mode).
- If desired, dim the luminaire by ticking "Dimming" and use the slider to the right of this to set the desired brightness. Dimming only takes effect when in mains operation; during battery operation, the luminaire switches to full brightness.

Other options (optional, Figure 30):

- You have the option of naming each luminaire (Figure 30, left arrow).
- You can temporarily activate or deactivate each luminaire using the "OFF-AUTO-ON" slider (Figure 30, right arrow). When in the "OFF" position, the luminaire is deactivated and when in the "ON" position, it is activated. When in the "AUTO" position, the luminaire is switched into the DS or BS operating mode set in the luminaire configuration (see above).
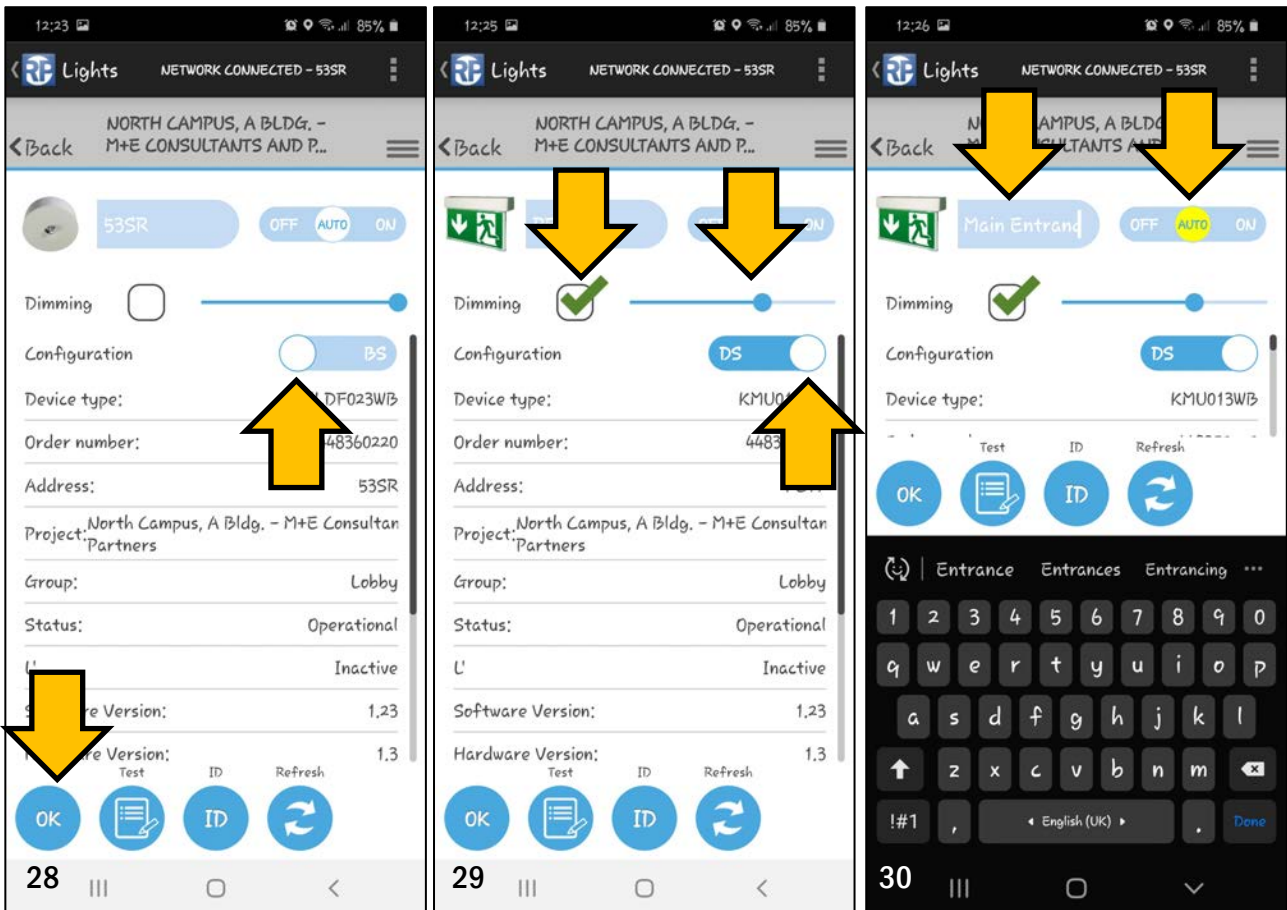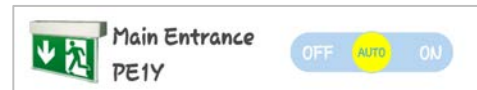
Note: The white circle on the "OFF-AUTO-ON" slider turns yellow when the luminaire's illuminant is active.

5.1.14 Completing setup

To complete the setup process, now ensure that all luminaires are switched into the right operating mode. This can be done very simply.

1. Once you have configured the last luminaire and completed the configuration by tapping on OK, you are taken back to the group view showing the luminaires of the associated group (Figure 31).
2. In the top left you will see "Back", tap on this once to go to the group view for the project (Figure 32). Each group has its own "OFF-AUTO-ON" slider here which can be used to switch ALL luminaires in this group at the same time.
3. Move the slider for each group once to "ON" or "OFF" (Figure 32), and then to "AUTO" (Figure 33). All luminaires in all groups are then switched to "AUTO" and will switch to their set operating mode (DS/BS).

You system's commissioning now is

ALMOST COMPLETE!
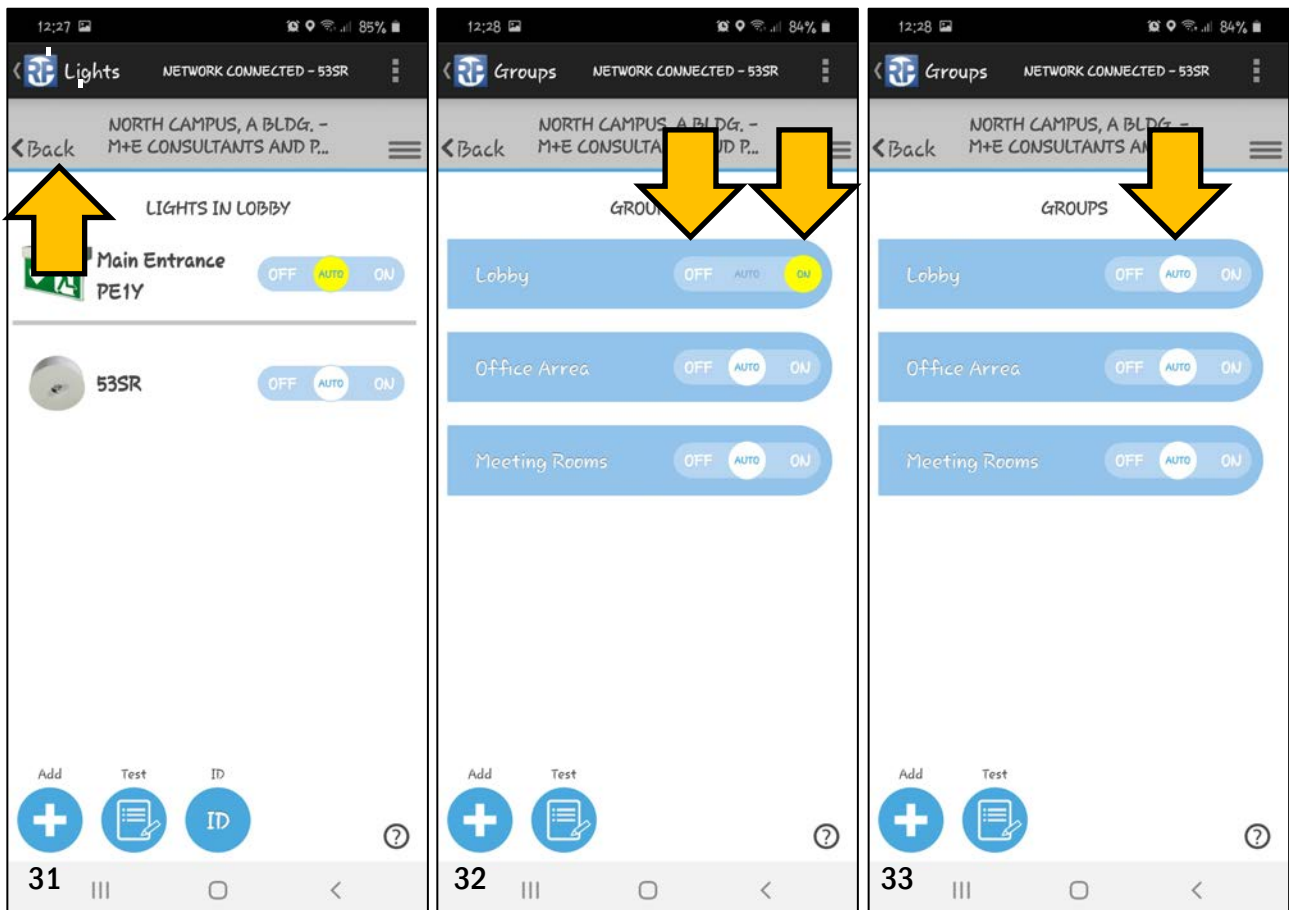
5.1.15 Charging batteries (24h)

Before you finally run a capacity test, the luminaires must be charged for 24 hours (otherwise the test cannot be run).

230 V AC ON

5.1.16 Running capacity test

To run the final capacity test, proceed as follows:

1. Log into the Wireless Basic® app.
2. In the app, navigate to the project so that you see the list of groups in the project (Figure 34).
3. Tap on "Test" in the bottom left. The test menu appears (Figure 35).
4. Tap on "Capacity Test". The app launches the test in all groups and therefore in all luminaires. A progress bar appears. You can close this by tapping on "x" (Figure 36). The test will continue anyway.
5. Wait for the test to end. The length of the test depends on the luminaire version (1 hour, 3 hours, ...).

Note: All three colour status LEDs on the luminaires flash to indicate that a test is underway (green+yellow+red).
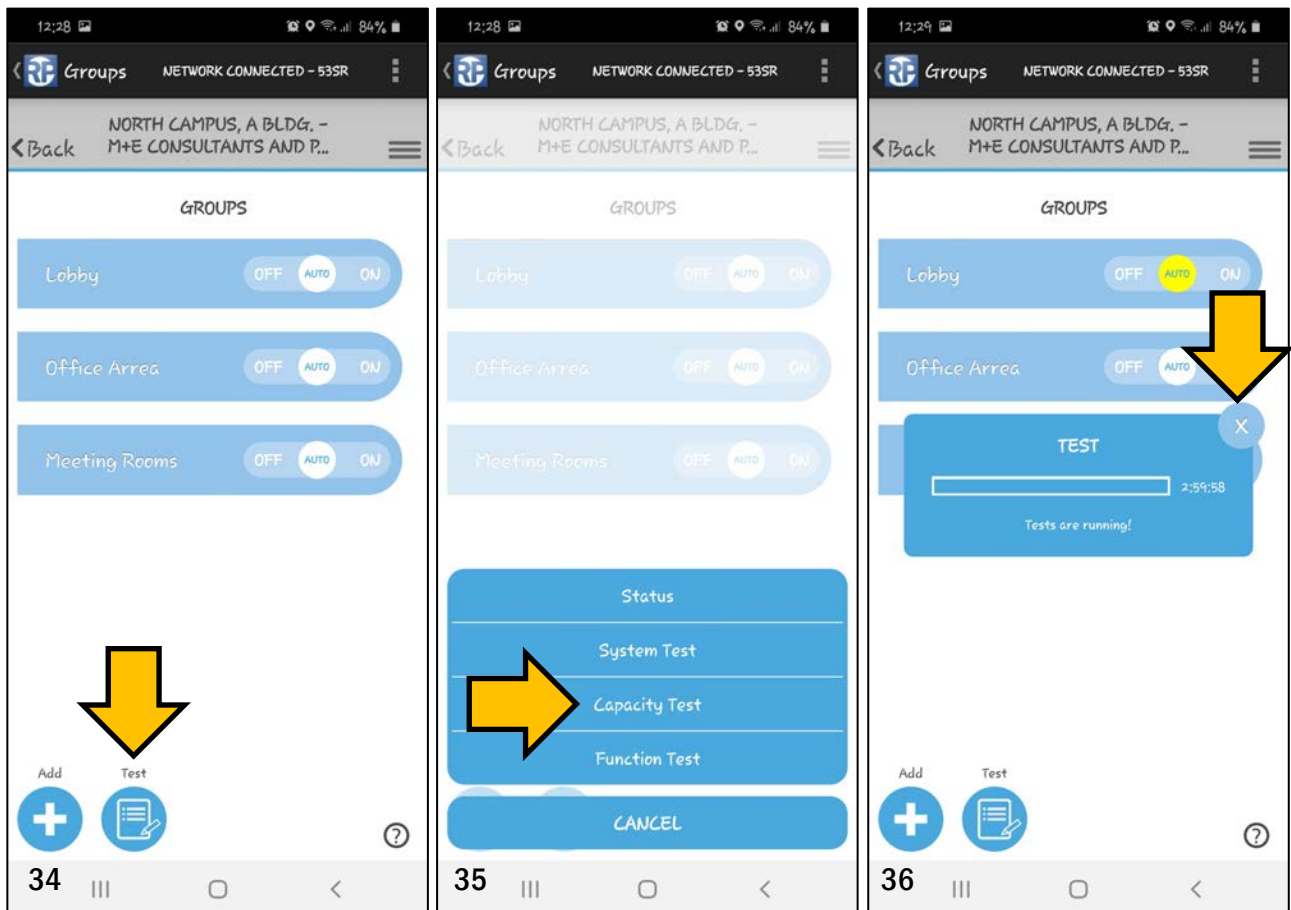
5.1.17   Viewing test results

Once the test has ended, the app first shows the luminaires where errors have occurred. Groups containing the luminaires with errors are also marked:

- Groups containing faulty luminaires have a red bar along their left-hand edge (Figure 37).
- Faulty luminaires are also marked with a red bar in the group view (Figure 38).

To view the complete test report, again tap on "Test" in the bottom left in the list showing all groups (where you triggered the test).

This time select "Status" in the Test menu (Figure 39). The app now downloads details of the completed tests from the luminaires (Figure 40) and then displays a status overview (Figure 41).

Note: It may take some time for the details to be downloaded (Figure 40). The Bluetooth networking technology in particular may cause delays and individual communication breakdowns, which are subsequently indicated as error messages. This is quite normal and does not immediately indicate an error in the luminaires; an error message to this effect is only temporary. If necessary, use the blue "Cancel" button and/or try again.

Tap on "Go to errors overview" (Figure 41) to navigate to a complete list of all active messages (error overview, Figure 42).

Note: Most of the error messages displayed are self-explanatory. However, you will find a complete overview of all messages along with explanations in Section 7.2 on page 47 onwards.

Note: The error overview serves to provide information about the current status. We are working on an export function.
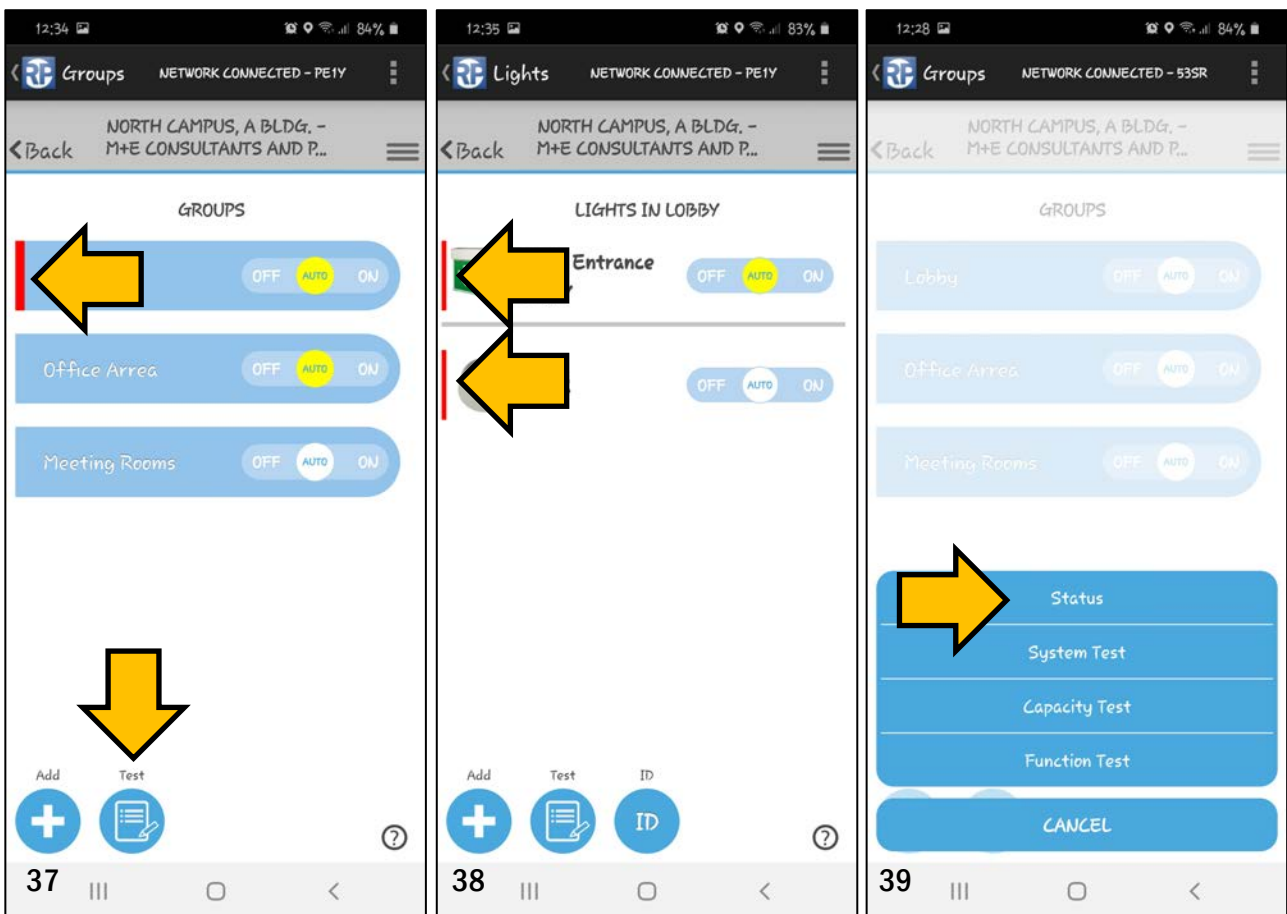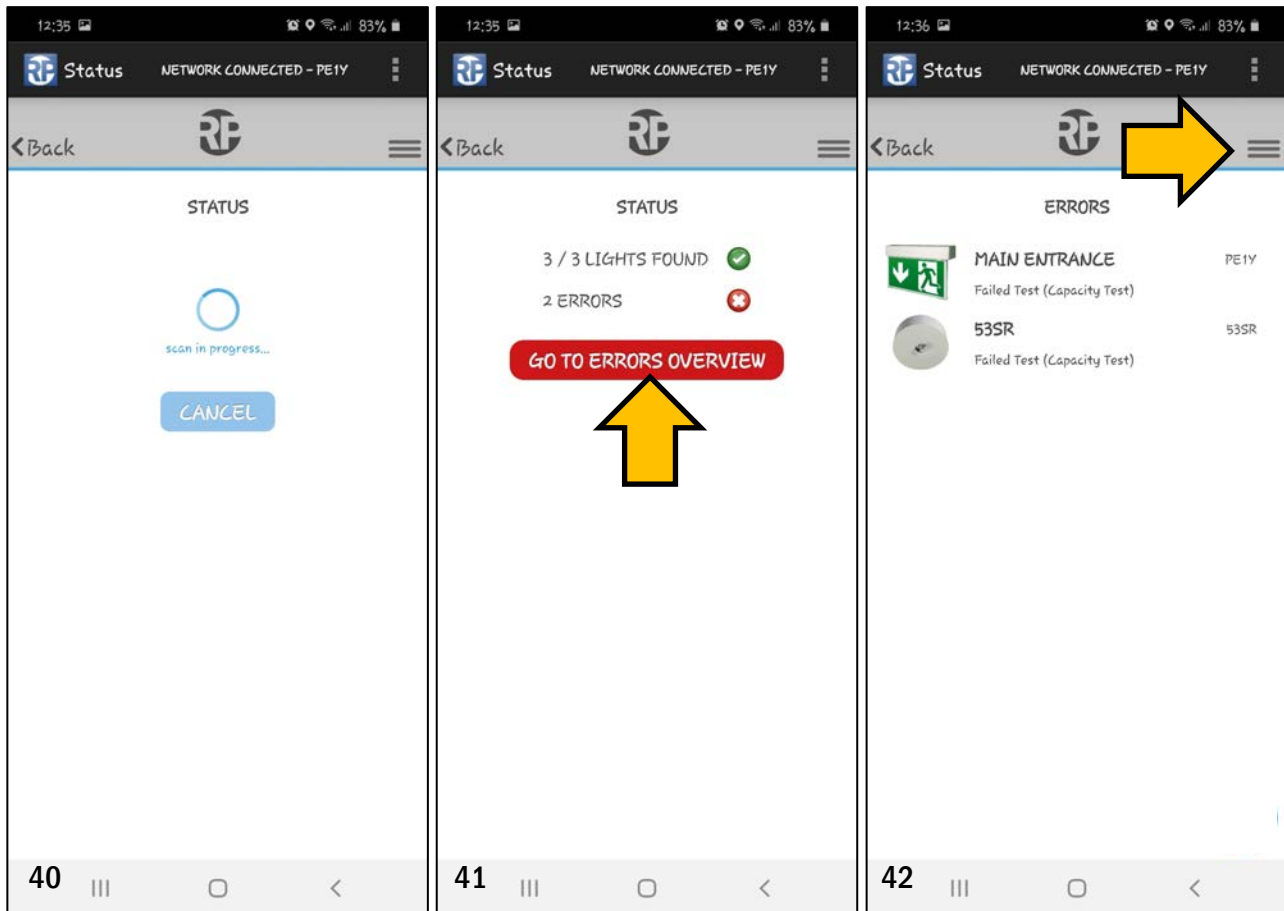
5.1.18   Creating and archiving a test log

To create the official test log for your Wireless Basic® installation, tap on the "Hamburger" menu button in the top right (Figure 42, top right) and thereby open the main menu (Figure 43). Tap on "Logbook".

In the "Logbook" view, you can choose the project for which the test log is to be created. You can also create a test log for just one single group or even one single luminaire. To do this, use the spin controllers (Figure 44) to select the desired project and, if necessary, select one group or one luminaire to narrow it down further. Tap on "Generate" in the bottom right. The app now downloads the local test protocols from all luminaires and creates the test log internally (Figure 45). If necessary, the process can be cancelled by tapping on the "x" in the top right of the progress bar.

Once the process is complete, a message to this effect appears (Figure 46). End the process by tapping on "OK".

Tap on "Show" in the bottom left (Figure 46). An initial view of the test log is now displayed (Figure 47). Here you have the option of adding a note by tapping on "Manual entry" in the bottom left (details in Section 6.11).

To view and archive the complete, official test log, tap on "Export" in the bottom right (Figure 47). The test log is now generated as a PDF and, depending on the operating mode, is saved in two different ways:

- If you are logged in in "Offline mode", the PDF is saved on your end device (location: internal memory, folder "\RPBluetoothControl\Export"). For this to happen, you have to allow the app to access media and files (Figure 48).
- If you are logged in in online mode and using your LIGHTLINX® login, the test log is automatically saved to the LIGHTLINX® cloud, where it is archived.

Important: If you are working in "Offline mode", you are responsible for the safe storage and archiving of the test log file. So save it in another location too.

Wireless Basic®

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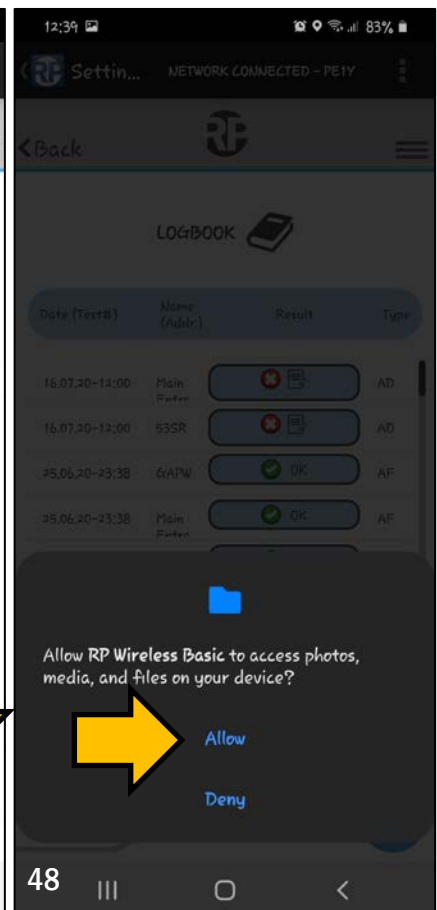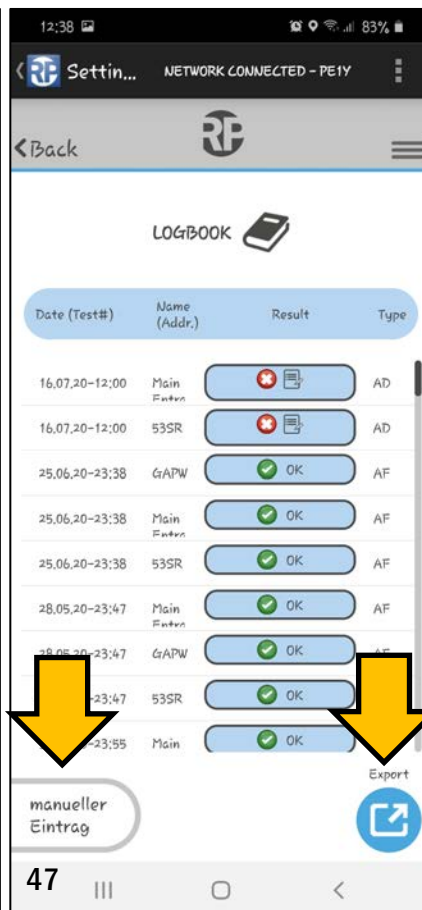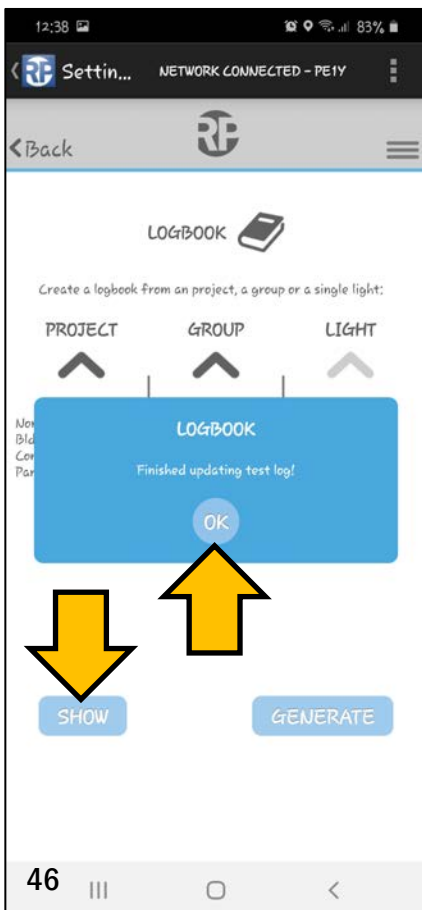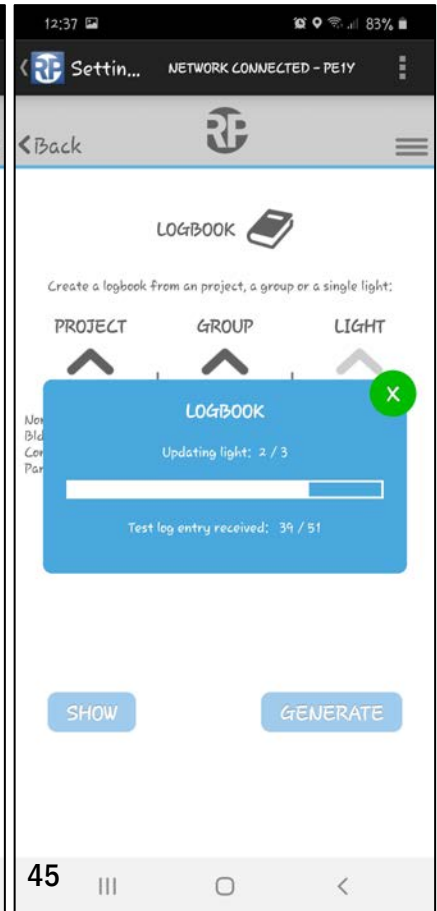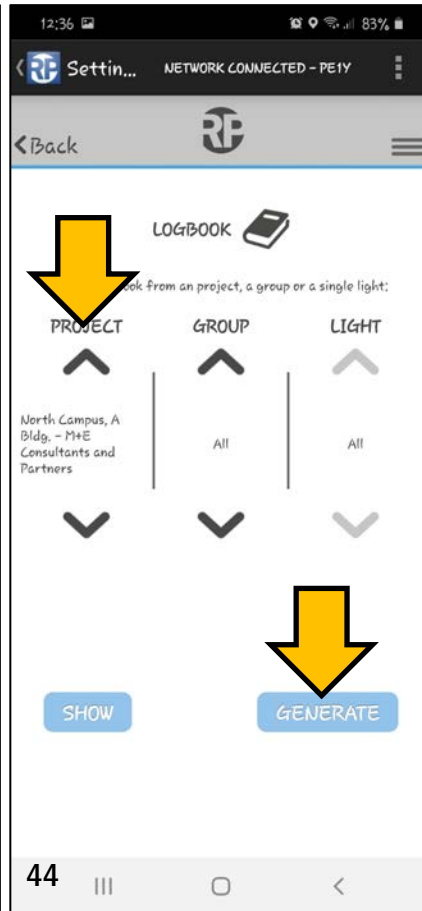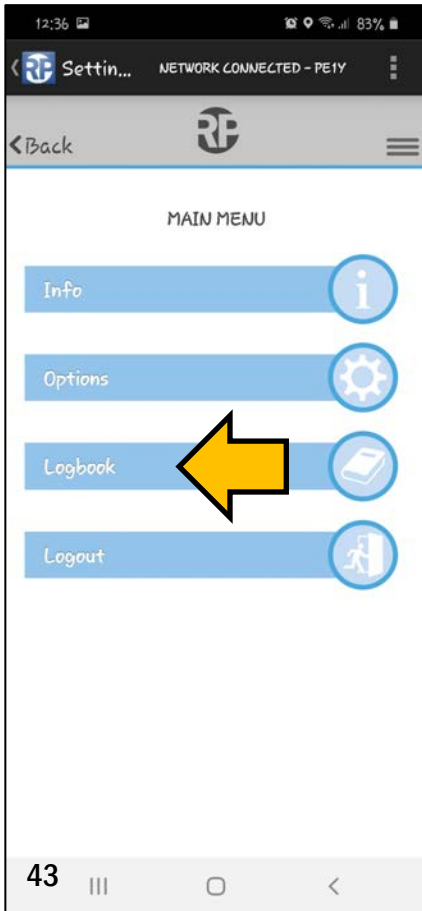
The test log contains the project's master data, an overview of the luminaire status and a complete list of the capacity tests and function tests run (Figures 49 & 50).

WirelessBasic – Logbook

Master Data

Project name	M+E Consultants and Partners
Building name	North Campus, A Bldg.
Address	Mayn Street 101 0**** Gretitdunn

Luminaires in project

Article Nr.	Type	Address	Group	Operation mode	Nominal autonomy time
KMU013WB	Main Entrance	PE1Y	Lobby	DS	3h
ILDF023WB	53SR	53SR	Lobby	BS	3h
KMU013WB	GrAPW	GrAPW	Office Arrea	DS	3h

Duration test

Date/Time	Name (Addr.)	Result	Error
16.07.2020 / 12:00	Main Entrance (PE1Y)	Test failed	
16.07.2020 / 12:00	53SR	Test failed	
20.04.2020 / 12:44	53SR	Test failed	Battery Failure Battery charging failure
20.04.2020 / 12:38	GrAPW	Test passed	---
20.04.2020 / 12:38	Main Entrance (PE1Y)	Test passed	---
16.04.2020 / 21:26	Main Entrance (PE1Y)	Test passed	---
16.04.2020 / 21:26	53SR	Test failed	Battery Failure Battery charging failure
16.04.2020 / 21:26	GrAPW	Test passed	---

Function test

Date/Time	Name (Addr.)	Result	Error
25.06.2020 / 23:38	GrAPW	Test passed	---
25.06.2020 / 23:38	Main Entrance (PE1Y)	Test passed	---
25.06.2020 / 23:38	53SR	Test passed	---
28.05.2020 / 23:47	Main Entrance (PE1Y)	Test passed	---
28.05.2020 / 23:47	GrAPW	Test passed	---
28.05.2020 / 23:47	53SR	Test passed	---
30.04.2020 / 23:55	Main Entrance (PE1Y)	Test passed	---
30.04.2020 / 23:55	GrAPW	Test passed	---
30.04.2020 / 23:55	53SR	Test passed	---
27.04.2020 / 11:45	Main Entrance (PE1Y)	Test passed	---
27.04.2020 / 11:45	GrAPW	Test passed	---
27.04.2020 / 11:45	53SR	Test passed	---
24.04.2020 / 22:15	Main Entrance (PE1Y)	Test passed	---
24.04.2020 / 22:15	53SR	Test passed	---
24.04.2020 / 22:15	GrAPW	Test passed	---
19.04.2020 / 16:33	GrAPW	Test passed	---
19.04.2020 / 16:33	Main Entrance (PE1Y)	Test passed	---
19.04.2020 / 16:33	53SR	Test passed	---
19.04.2020 / 16:30	GrAPW	Test passed	---
19.04.2020 / 16:30	Main Entrance (PE1Y)	Test passed	---
19.04.2020 / 16:30	53SR	Test passed	---
19.04.2020 / 09:43	53SR	Test passed	---
19.04.2020 / 09:43	GrAPW	Test passed	---
19.04.2020 / 09:43	Main Entrance (PE1Y)	Test passed	---

Once all luminaires have been tested and the test log has been archived,

installation and commissioning are complete!

5.1.19	Commissioning complete – what comes next?

Once you have completed the commissioning process with your own end device and/or with your own LIGHTLINX® login, you are in possession of the data belonging to the project. This forms part of the installation and may have to be handed over to the operator or your client so that they or a third party can manage and maintain the installation from now on.

- If you are working on an "Offline project", you will have to provide the operator or client with the project data. The app has an export function for this purpose (see Section 6.9). When handing over, you will usually also have to remove the project data from your end device. For details of how to delete projects from the app, see Section 6.4.

   Important: Always export the project and save the file in a safe place so that it can be restored on a new device if required should a device or data be lost.

- If you are working on an "Online project", you will have to hand over the project in LIGHTLINX® to the operator or client. You will find brief instructions of the typical steps you have to take to do this in Sections 5.3, 5.4 and 5.5. Detailed information about how to operate LIGHTLINX® can be found here in the Help menu.

- If the central display of the system status at a permanently manned location is prescribed by legal regulations at the system's location or is required by the operator, set up a terminal device remaining at the system's location as the control centre. The steps for this can be found in the following section.

5.1.20	Setup a device in central mode

To set up the central mode for a selected project, tap the "Central configuration" button in the main menu of the project concerned:

In the following configuration window (Fig. 51 and 52), define the settings for the central mode. If the end device is to automatically switch to the central mode after starting the Wireless Basic App, activate the selection "Activate central mode".

In the project field, select the project for which the central mode is to be activated. The "Play warn sounds" switch determines whether a signal is emitted on the end device in the event of a fault message.

Use the "Light status detection" selection field to define the interval at which the terminal device queries the status of the luminaires assigned to the project. You can choose between 1, 2, 3 or 10 minutes. Depending on the selection, it can take up to 30 minutes until a fault of a luminaire is detected and displayed.

In the next three lines of the configuration dialogue, you can set which functions you want to allow in central mode. It is possible to activate emergency light blocking for luminaires, to start a function test and to start a duration test. All three options can be selected individually and can optionally be protected against unauthorised access by a password.

The "Start central mode" button activates the central mode after complete setup.
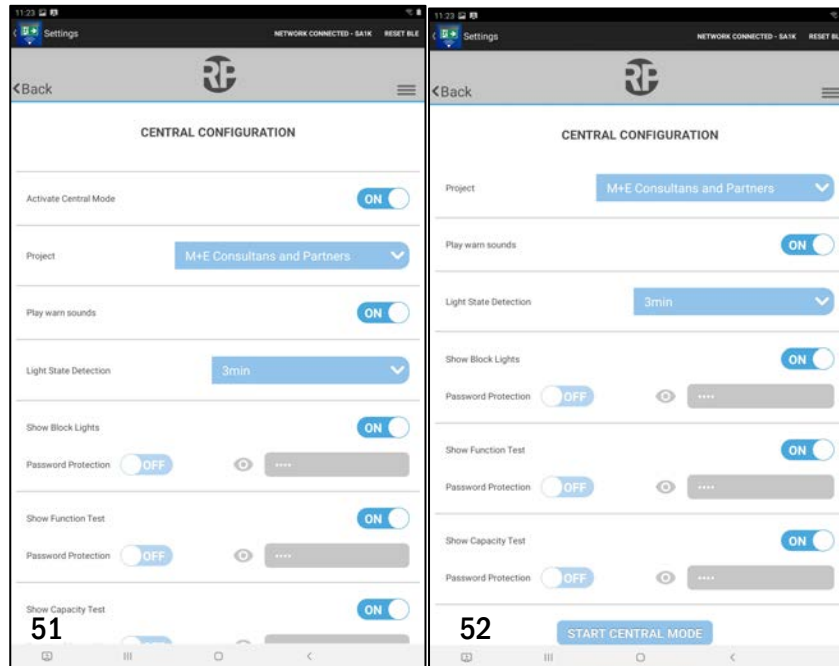
Central mode configuration dialog

Note: For display functions and operation of the app in central mode, see section 5.14.

5.2   Maintenance

General maintenance process:

1. Perform the usual maintenance for single-battery luminaires at the specified intervals. Refer to the general standards and legislation applicable to this.
2. Also take this opportunity to run function and capacity tests if required. **When running a capacity test, first make sure that the battery hasn't been discharged within the last 24 hours.** If you have not configured the capacity test to run automatically, at least one capacity test will have to be run during maintenance. Section 5.1.16 contains a detailed description of how to run a capacity test. Further information about both types of test can be found in Section 6.11.

   Note: A capacity test can only be run when the battery is fully charged, i.e. the last time it was discharged because the power supply failed or due to another test should be at least 24h prior to this test. If this condition is not met, the capacity test may be aborted and error displayed even though the battery is still fine and has full capacity.

3. Produce an up-to-date test log following the steps described in Section 5.1.18.
4. Archive the test log and/or export it to the cloud. This process is also described in Section 5.1.18.

5.3   Sharing projects (share)

If other people are also to have the opportunity to work on your project, i.e. to use the Wireless Basic® app on their own end device to access these luminaires, to program them or to run tests etc., they must receive a **sharing** for this project. **Sharing** allows third parties to access the project without becoming the owner (admin) of the project. Vice versa, the owner of a project can withdraw sharings for a project and reallocate them to other people. This concept permits parallel or alternating work to be undertaken on an installation or allows the operator to clear a project for a maintenance service provider. In this process, the party issuing sharing can pass on all or just some of his or her user rights.

Notes:

- The **sharing** concept outlined above applies to online projects, in other words, when using the cloud function (online mode). LIGHTLINX® provides convenient functions to allow you to create, manage and withdraw sharings for one or more projects with great ease. Sharing can also be granted to several people at the same time. Details about this can be found in the documentation for LIGHTLINX®, which is available in the LIGHTLINX® Help menu.
- For "Offline projects" without a cloud function, there is no automatic sharing mechanism. Sharing can however be granted for such projects by exporting the project data to your end device and allowing another person to import it onto their device. There is no scope for restricting user rights when using this method.

5.4   Handing over projects (handover)

If responsibility for your project is to be fully handed over to another person, such that even you the original processor/installer no longer has access to it, then all access rights must also be handed over to this other person. **Handing over** in this way makes the recipient the new owner (admin) of the project. This basically includes all user rights you have granted.

Notes:

- The type of **handover** described above applies to online projects and is a convenient process when using the cloud function in LIGHTLINX®.
- For "Offline projects" without cloud functionality, there is no such automatic handover mechanism. Again, one has to export/import the data. Ensure that the data is reliably deleted from the original device.

5.5   Using sharing and handover

Sharing and handover make a number of important processes possible. Here are a few examples.

Commissioning and handover

1. The installer puts the system into operation.
2. He or she hands the project over to the operator (**handover:** operator becomes project admin, installer no longer has access).
3. The operator appoints a service provider (**sharing with full rights** to the service provider).
4. The service provider can configure, add to the project, etc. (but he or she is not project admin).
5. The operator appoints a caretaker (**sharing with restricted rights**).
6. The caretaker has read-only rights and can call the service provider if necessary

Commissioning by several people

1. Installer 1 takes partial system into operation and issues installer 2 with **sharing with full rights**
2. Installer 2 completes commissioning the next day

Central project management in one service team

1. A new project is taken into operation.
2. The installer's team/service manager gains access to the project from the installers in the form of a **handover**, or once the project has been **handed over** to the operator, the operator grants the team/service manager a **sharing** to allow him or her to act as the service provider.
3. The team/service manager grants the service technician(s) working for him or her the required **sharing**.

A service employee leaves the company

1. The service employee **hands over** all projects to the team/service manager or
2. the team/service manager withdraws the service employee's access rights by **revoking** his or her **sharing**
3. All **sharings** granted by the employee leaving the company also **cease to apply** in both cases.

The operator changes the service provider

1. The operator withdraws the previous service provider's access by **revoking sharings** issued to him or her. Internal **sharings** issued by the service provider to his or her service staff also **cease to apply**.
2. The operator issues a new **sharing** to the new service provider.

A property is sold and there is a new operator

1. The operator **hands over** the existing projects to the new operator. All **sharings** granted to previous service providers **cease to apply**.
2. New service agreements are taken out.
3. **New sharings** are issued for the service providers.

5.6   Restoring data should a device be lost or become defective

You only need to take a couple of steps to restore the data for a Wireless Basic® project:

- **For online projects**: Get a new end device. Install the Wireless Basic® app. Log in with your LIGHTLINX® access details. The app automatically downloads the data for all your projects. That's it, job done.
  Tip: If you have lost your end device and are having to assume that it is being used by unauthorised persons, change your password as quickly as possible. To do this, click on "Forgot your password?" on the log-in page at www.lightlinx.com.
- **For offline projects**: If you exported the project data after commissioning, load the data file onto your new device and import it into the Wireless Basic® app. That's it, job done.

6 Wireless Basic® app: compendium of functions

6.1 The Wireless Basic® app and this section at a glance

Logout

Login

5.2 Start/login page
Select operating mode
(Online/Offline)
Online login with
LIGHTLINX® credentials

5.4 Project list
Create and delete
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5.9 Main menu
Version information
Terms of use
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Options
Generation of test log
Logout

5.10 Options
Language
GPS location access
Automatic network connection
Project import/export

5.14 Central mode
System status

5.5 Project settings
Name
Location
Test intervals
Floor plans (**5.13**)

"Hamburger" button
on all pages:
direct access
to main menu

5.12 Test log
Create+display
for entire project,
individual group or
individual luminaire

5.3 Help pages
available on
virtually every page
by clicking on (?)

5.6 Group list
Create+delete groups
Switch luminaires in groups
Test all luminaires (**5.11**)

5.7 Group view
Add, move, remove,
switch luminaires,
test group (**5.11**)

5.8 Luminaire configuration
DS/BS operation mode
dimming, identify,
test individual luminaires (**5.11**)

6.2   Start/login page

This is the first page which is displayed after you launch the Wireless Basic® app. You can choose between:

- **Login**: Select this button to log in with your LIGHTLINX® user data. You then enter online mode. Projects created in this operating mode are automatically synchronised with the cloud database by the app and can be shared with other users or handed over to them (sharing/handover) by LIGHTLINX®. The export/import function for project data is not available for such projects.

  Note: If you want to work in this mode, but do not yet have any LIGHTLINX® access details, the app will help you create them. Details about this can be found in Section 5.1.4.

- **Offline mode:** Select this button to enter offline mode. Projects created in this mode are and remain independent of the cloud, but the data does have to be manually managed in a consistent manner (backup, test log archiving, care taken when passing on).

6.3   Help pages

You will see a small question mark in a circle on virtually every page of the app: ⓘ Tap on this symbol to see information about functions and operation related to the current page. Tap on any point on the Help page to go back to the normal view.

6.4   Project list

This page shows an overview of all projects which are saved in the app.

- In **offline mode,** this means all projects that you yourself have created or imported
- In **online mode,** this means all projects that you yourself have either created or to which you have been granted access by LIGHTLINX®.

Projects, which are located in your wireless range and which are wirelessly "available", are identified by a blue bar along their left-hand edge.

Functions on this page:

- **Filter projects**: By tapping on the "Filter" icon, you can narrow down the list of projects to meet certain criteria (show all projects, only show those available). As an option, you can also narrow down the display to show projects in your geographical location. This is especially useful when working on a large number of projects in online mode.
- **Add project**: Tap on the "+" icon in the bottom left to create a new project. Details about this process can be found in Section 5.1.7.
- **Edit project settings**: Tap on the small symbol of three dots in a circle ⓘ to open the project settings. Sections 5.1.7, 5.1.8 and 6.5 contain more details.
- **Edit groups and luminaires**: Tap on the project name to go to the group list.
- **Delete project**: Tap on the round right-hand end of the bar and drag this to the left. Then tap on the red waste paper bin symbol. To prevent projects from being deleted by mistake, you have to confirm that you really want to do this.
- **Logout**: Tap on "Back" in the top left to go to the login screen. A confirmation prompt prevents you from logging out by mistake.

Tip: The logout function can also be accessed directly from all pages via the main menu (see Section 6.9).

6.5   Project settings

This page allows you to edit project information and settings which apply to all luminaires in the project. In detail, these are:

- Master data: Name of the project and building, postal address (for more details, refer to Section 5.1.7),
- An image or logo, that identifies the building or project, for example (see below)
- GPS coordinates of building (for more details, refer to Section 5.1.7),
- Test intervals for automatic function and capacity tests (see Section 5.1.8),
- Floor plans of building and luminaire positions (see below)

Functions on this page:

- **Save**: You have to accept all the input that you enter in free-text fields etc. by tapping on "Save" in the bottom right. If you exit this page using "Back" or by calling up the menu, any changes made will be lost.
- **Enter location automatically**: Tap on "Location" in the bottom left to allow the app to enter the GPS coordinates for your current location in the corresponding fields. If available, the app uses the Internet to also determine the postal address of the location and enters this too.
- **Edit master data and coordinates:** All entries are free-text fields, the content of which can be edited directly using the on-screen keyboard.
- **Set symbol (image or logo)**: On the right below the project name, tap on the grey circle (or the symbol shown in its place). The app allows a photo to be taken or an image file to be selected. This action may require you to agree to the app accessing files and/or the camera.
- **Set test intervals**: see Section 5.1.8.
- **Add and edit building floor plans**: The app can save one or more building floor plans (images) and display the luminaires and their statuses on these. See Section 6.13.

6.6   Group list

This view shows the available groups in which the luminaires are/are to be arranged in the current project. A project always contains one or more groups; sub-groups (groups in groups) are not possible. Groups which contain one or more luminaires with an error message are identified by a red bar along their left-hand edge:
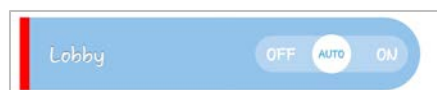

Functions on this page:

- **Add group:** Tap on "+" at the bottom. A new group bar appears and the on-screen keyboard is displayed. Enter a name for the group and then tap on the green "OK" on the right (see Section 5.1.10).
- **Rename group**: Press and hold your finger on the group name for a moment until the bar switches to input mode and the on-screen keyboard becomes visible.
- **Open group view/view luminaires**: Tap briefly on the group name to go to the group view with luminaires. More on this in the following Section 6.7.
- **Delete group**: Swipe the group name to the left so that the red waste paper bin symbol can be seen at the right-hand end of the bar. Tap on the waste paper bin symbol.

    Note: You can only delete a group if it is empty, i.e. doesn't contain any luminaires. So you first have to disassociate all luminaires in the group or move them to another group.

- **Switch all luminaires in the group**: You can use the "OFF-AUTO-ON" slider to either switch off ("OFF" position) or switch on ("ON" position) all luminaires in the group at the same time. You can also switch them all to the individually configured operating mode (DS/BS) ("AUTO" position).
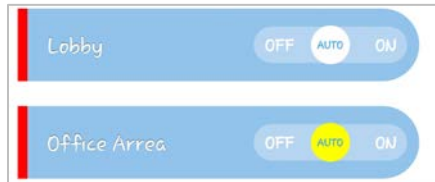
Note: The circle on the slider turns yellow when all luminaires in the group are switched on.

- **Trigger test/status query for all groups**: Tap on "Test" at the bottom to run a test for all luminaires in all groups at the same time or to run a status query for all these luminaires. Details in Section 6.11.
- **View building plans and edit luminaire positions**: Tap on "Project plan" at the bottom to go to the project plans view. More on this in Section 6.13.

6.7   Group view

The group view shows all luminaires belonging to a group. Any luminaires with an active error message are shown with a red bar along the left-hand edge:


Functions on this page:

- **Add luminaires**: Tap on the "+" icon in the bottom left to add (associate) new luminaires. This takes you to a separate view where luminaire detection and association are carried out. Details on this in Section 5.1.11.
- **Open a luminaire configuration**: Tap briefly on the name of a luminaire to switch to its configuration page (see section below).
- **Switch luminaires individually:** You can use the "OFF-AUTO-ON" slider to either switch off ("OFF" position) or switch on ("ON" position) each individual luminaire. You can also switch them to their set operating mode (DS/BS) ("AUTO" position). The circle on the slider turns white when the luminaire's illuminant is inactive and yellow when it is active.

- **Identify /get luminaires to flash**: Tap on "ID" in the bottom left to get a luminaire to flash for a few seconds.
- **Move luminaires into other groups**: Press and hold your finger on the group name for a moment until the display switches over and a blue rail appears at the top. You can now mark one or more luminaires by ticking on the left or tap on "Select all" at the top. In the top right in the blue bar, select the group to which you want to move the selected luminaires and then tap on "Move" in the bottom right. The luminaires are now in the new group and cannot therefore be seen anymore in the view for the current group.
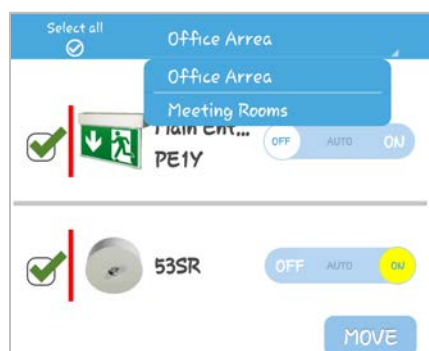
- **Delete/disassociate luminaires**: Swipe the name of a luminaire to the left so that the red waste paper bin symbol can be seen at the right-hand end of the bar. Tap on this symbol. The luminaire is disassociated and is no longer in the project.
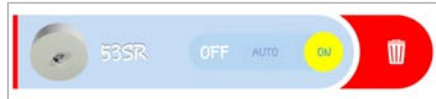
If the luminaire cannot be accessed during the disassociation process, a disassociation error is displayed. In this case, cancel the disassociation process and check the accessibility of the luminaire. Or delete the luminaire anyway if it is no longer in your inventory (e.g. in the case of a defective luminaire or a luminaire requiring maintenance).
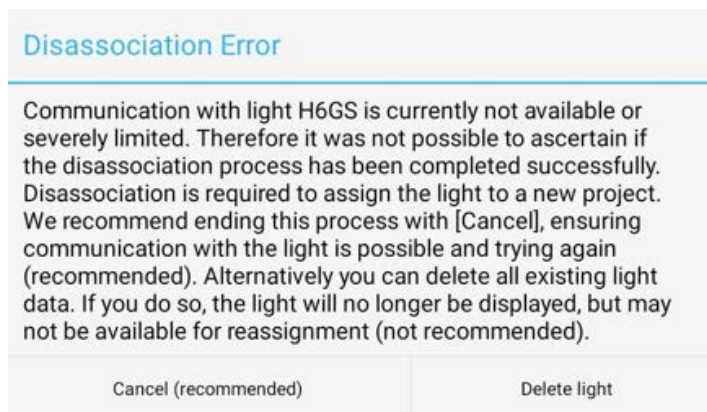
Note: Only a correctly deassociated luminaire is then recognisable as a free device again and allows it to be integrated into a project again. If the luminaire data are deleted from the app by tapping on [Delete luminaire data] when the above message appears without the luminaire in question having been properly deassociated, the app loses access to this luminaire while the luminaire itself remains in the associated state and does not allow recognition as a free device. Finding and associating the luminaire is then neither possible from the terminal used for deassociation nor from any other terminal. If this is the case, the manufacturer can reset the luminaire at the factory.

- **Test/status query for all luminaires in this group**: Tap on "Test" at the bottom to run a test for all luminaires in the current group at the same time or to run a status query for all these luminaires. Details on this in Section 6.11.

6.8   Luminaire configuration

This page is used to view detailed information about an individual luminaire and to set the individual luminaire configuration. This includes the operating mode (maintained mode (DS) and non-maintained mode (BS)), optional dimming and naming (also optional).

Functions on this page:

- **Save settings**: If you have changed settings, tap on "OK" in the bottom left to leave the page.
- **Determine operating mode**: Move the "Luminaire configuration" slider to the "DS" position for maintained mode or "BS" for non-maintained mode. The new setting is saved and takes effect immediately.
- **Set dimming**: Place a tick in the "Dimming" line and use the slider to the right of this to set the dimming. The new setting is saved and takes effect immediately.
- **Switch luminaire**: You can use the "OFF-AUTO-ON" slider to either switch off ("OFF" position) or switch on ("ON" position) the luminaire. You can also switch the luminaire to its set operating mode (DS/BS) ("AUTO" position). The circle on the slider turns white when the luminaire's illuminant is inactive and yellow when it is active.

- **Name luminaires:** Tap on the luminaire name with the blue background in the top left to change the name (the luminaire address is set as its name by default). This name is displayed straight away along with the device address.

  Note: The name for a luminaire must not be empty. If you want to delete the name of the luminaire later on, enter the luminaire address (four characters). If you are in any doubt, you will find this on the same page, in the table, in the "Address" line.

- **Test/status query for this one luminaire:** Tap on "Test" at the bottom to run a test or status query for the luminaire open at that time. Details on this in Section 6.11.
- **Identify luminaire:** Tap on "ID" in the bottom to get the luminaire to flash for a few seconds.
- **Update:** Tap on "Update" to update what is shown in this page.

6.9   Main menu

The main menu can be accessed from any view by tapping the hamburger symbol ☰ in the top right. It contains the following four functions:

1. **Info:** On a separate page, it displays the version and manufacturer information for Wireless Basic®. You can use separate buttons to call up the texts of the conditions of use and data protection declaration in order to refer to them. With the data protection declaration, you have the option of changing the decision you made when logging in for the first time (agreement/rejection) as to whether your data may be used for marketing purposes or not.
2. **Options:** Opens a separate page containing basic settings and functions. For details, see Section 6.10.
3. **Test log:** Opens a view from which you can create, update and view test logs. More on this in Section 6.12.
4. **Logout:** Allows you to quickly return to the start/login page.

6.10   Options

The following are available here:

- **Language:** Select the language in which the app is to be displayed. **Default: English.**
- **Automatic network connection:** Specifies whether the app is to automatically look for Bluetooth networks and make contact with luminaires. **Default: On.**
- **Search for GPS location:** Specifies whether the "Location" function in the project settings is to be able to access your device's GPS sensor or not. **Default: On.**
- **Data export:** See Sub-section **Fehler! Verweisquelle konnte nicht gefunden werden.**.

6.10.1   Exporting and importing projects

The functions for exporting and importing project data are only available in offline mode and can be found in the main menu under "Options" (see previous section).

- **Export:** This function exports one or of all projects into a file on your end device. When you select this function, you can select the desired project and confirm with OK. The data is exported into one file in a specified directory (path: internal memory, folder "\RPBluetoothControl\Export").

- **Import**: In the same way, when importing you can import one project from an available file or all the projects it contains. (We are still working on this function.)

Note: Examples of how to use these functions can be found in Sections 5.3, 5.4, 5.5. Take care and act responsibly with the export files. If producing a backup of your project, store it somewhere safe.

6.11 Running tests and querying status

You can use the "Test" icon at the bottom edge of the display to start a test or status query in the group list, in the group view and in the luminaire configuration. Depending on which of the three views you are using, the number of luminaires affected will differ:

- In the group list, all luminaires in all groups are tested/queried (see Section 6.6)
- In the group view (luminaire list), all luminaires of the current group are tested/queried (see Section 6.7)
- In the luminaire configuration, only the current luminaire is tested/queried (see Section 6.8)

In all cases, the test menu is displayed before the test is run.

Here you can choose between the following functions (from bottom to top):

- **Cancel**: Closes the menu without running a test.
- **Function Test**: Runs a function test on the luminaires in question (see above). The procedure is the same as for the capacity test described below; details on this can be found in Section 5.1.16.
- **Capacity Test**: Runs a capacity test on the luminaires in question (see above). Details on the process can be found in Section 5.1.16.
- **System Test**: Runs a function test, which ALWAYS covers ALL luminaires in the project. You can exclude individual luminaires from the test. Details on this can be found in the following Sub-section 6.11.1.
- **Status**: Queries the current status of the luminaire in question and displays a summary. Details on how to proceed to view the status and test results are described in Section 5.1.17.

6.11.1 System test

The system test is a function test, which is run for all luminaires present in the project regardless of the view you are in when you run the test. The system test is particularly transparent as you can follow it "live" on your end device and see when individual luminaires start, undergo and complete the test.

Once you have selected the "System test" in the test menu (see above), you enter the System test view (Figure 51). All luminaires are listed under "ToDo". You can exclude individual luminaires from the test by ticking "Ignore".

Then tap on "Start" in the bottom right. The test is started for all luminaires in turn. While a progress bar runs in the foreground (which you can close if you like by tapping on "OK" without this impacting on the test), in the background you can see how the luminaires pass through the "Test running" and "Test complete" sections (Figure 52).

At the end, all luminaires will be under the "Test complete" header (Figure 52). Close the view by tapping on "Finish". You can then view the test results as described in Section 5.1.17.
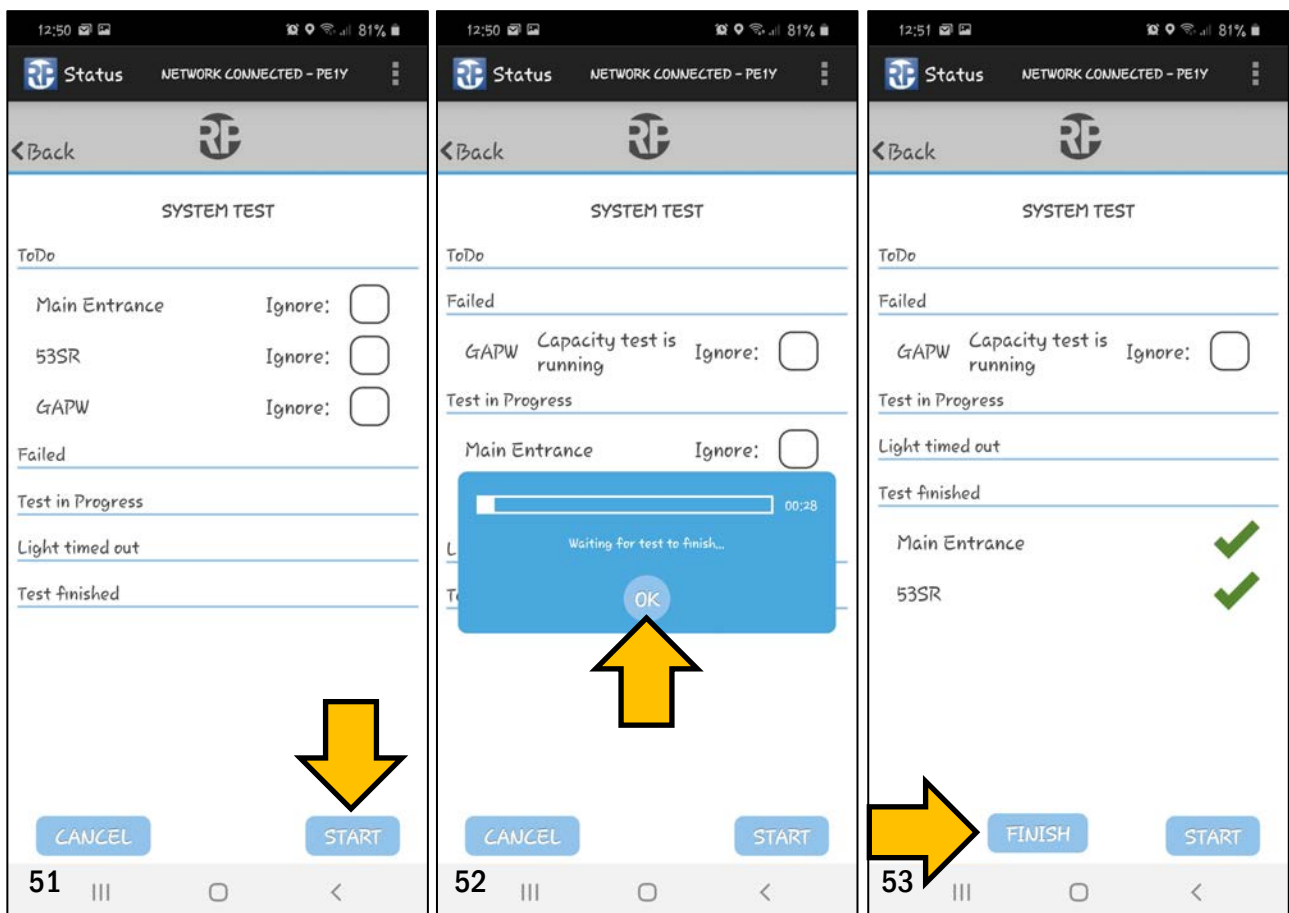
6.12   Test log

You can produce and update test logs for an entire project, one individual group in the project or individual luminaires. This process is described in detail in Section 5.1.18.

6.12.1   Manual entries

You can make a manual entry in a log book to document observations or other things. Manual entries can be assigned to groups and luminaires.

Open the main menu and select "Logbook". Select "Show" in the test log view and the view shown in Figure 54 will appear. You will find the "Manual entry" button in the bottom left. Tap on it.

You will now be able to see the input screen for a manual entry (Figure 55). Use the spin controls in the upper section to select the group and/or luminaire to which the new entry is to relate.

Enter a short title and description in the two input fields as required. If you want to, you can tap on "(+) Add photo" in the bottom left to attach an image file or take a photo right there and then.

Then tap on "Save" in the bottom right. The new entry is stored to the logbook where it is displayed (Figure 56).
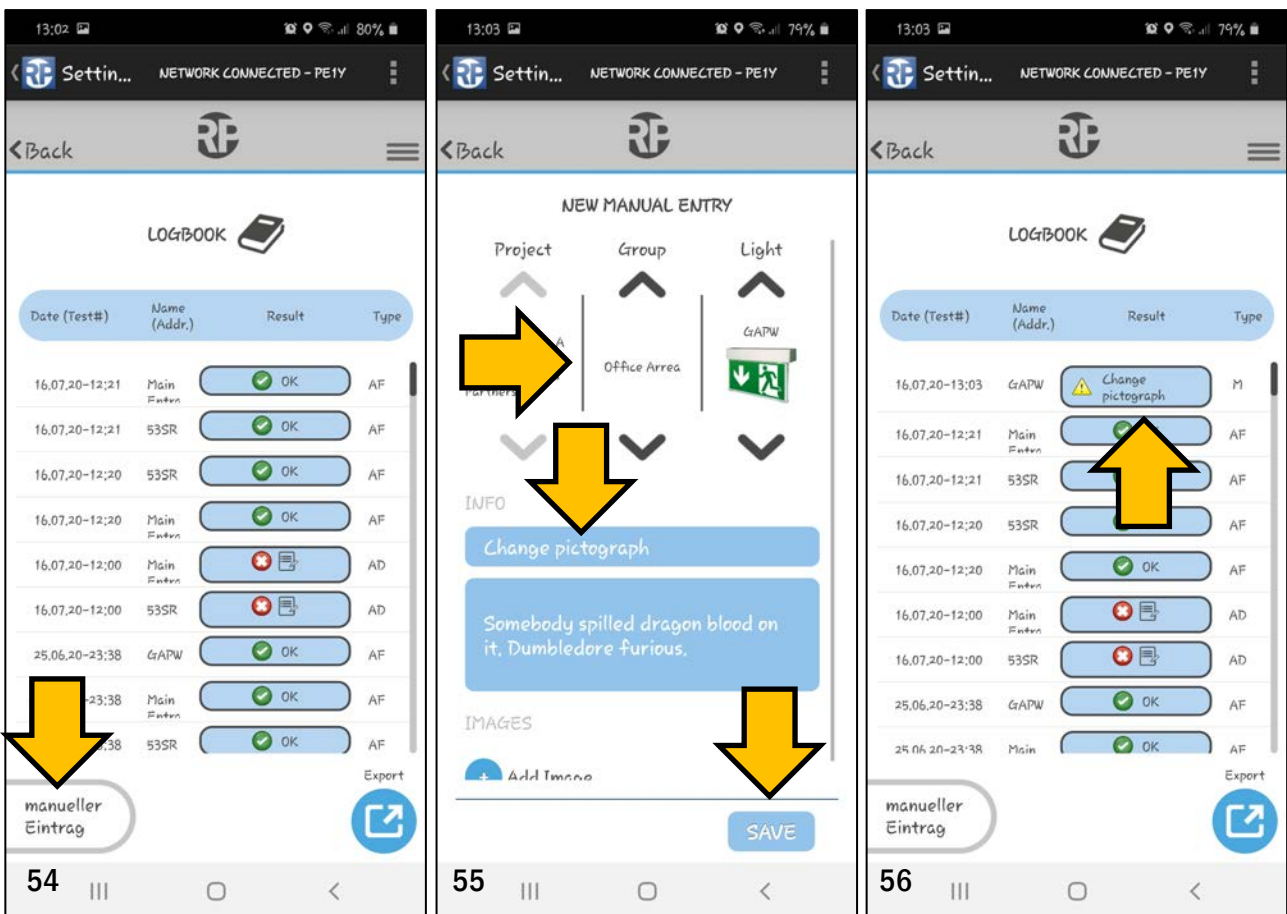
6.12.2   Delete local logbook

For performance reasons, logbook entries are not synchronised between the luminaire and the app. Instead, only previously unrecorded entries are added to the local logbook. Entries that have been recorded so far remain.

You can delete the locally saved test book entries in the logbook view. To do this, tap on "Delete local data" in the bottom right-hand corner of the view.
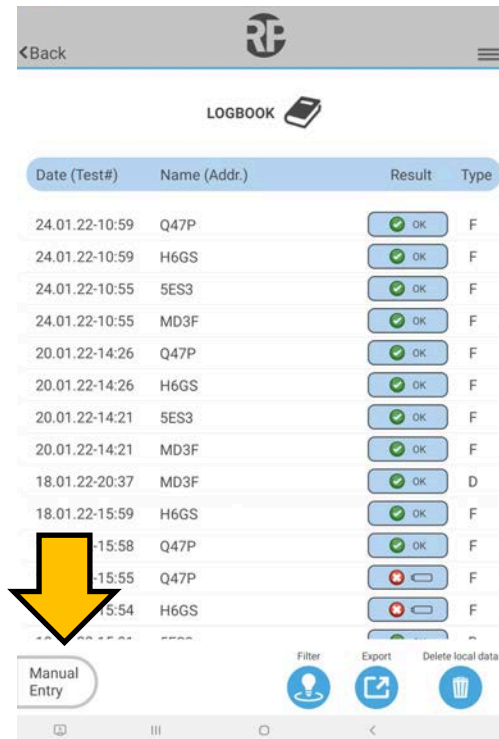
Deleting the local logbook is useful, for example, if the logbook of a luminaire has been deleted by a service / repair procedure.

6.13   Building plans

The Wireless Basic® app allows you to save building plans for a project. The individual luminaires can be arranged in these plans, i.e. shown in their correct positions. This function is particularly useful when trying to find a faulty luminaire should errors occur.

6.13.1   Adding, naming and deleting building plans

Open the project settings (see Section 6.5). Scroll down so that the "(+)" button with the wording "**Add new floor plan**" becomes visible (Figure 57). Tap on it. You can select an existing image file or take a photo, which is then transferred. The new floor plan is then displayed directly in the project settings (detail, Figure 58). In the same way, you can add several floor plans to the project.

You can individually **name** each floor plan (Figure 58, requirement: "Plan #0", "Plan #1", etc.). By tapping on the minus sign to the right of the name, you can **delete** a building plan from the project.

Then **save** the settings by tapping on "Save" in the bottom right.

6.13.2   Viewing building plan

As soon as a building plan is saved in the project, another "Project plan" button is available in the group list (Figure 59). Tap on "Plan" to view the building plans available and to arrange luminaires in them if necessary.

6.13.3   Arranging luminaires in building plans

Once you have tapped on "Plan" in the group list (Figure 59), you will see the first of the saved building plans (Figure 60). Tap the arrow-tip in the bottom right to see the plan selection and luminaires (Figure 61). There are two drop-down lists from which you can select the building plan and luminaire group to be displayed; the luminaires are displayed above this.

Tip: To find one particular luminaire, type a device address or luminaire name (or part of it) into the "Search" field. The luminaires displayed will be reduced to all applicable ones right away.

Arrange luminaires: Use your finger to pick up and drag the individual luminaires to their position in the plan (Figure 61, black arrow). For more accurate positioning, you can first use both fingers to zoom into the plan.

Remove luminaires from the plan: Use your finger to pick up and drag the luminaire you want to remove back to the display area (Figure 61, red arrow).

Note: Each luminaire can only be arranged in one single plan and only once.

6.13.4   Calling up building plan view after test or status query

After a test or status query, you can navigate straight to the building plan view by tapping the "Show on map" button which is displayed under the summary (Figure 62).

Note: Luminaires with an error are shown with a red outline.

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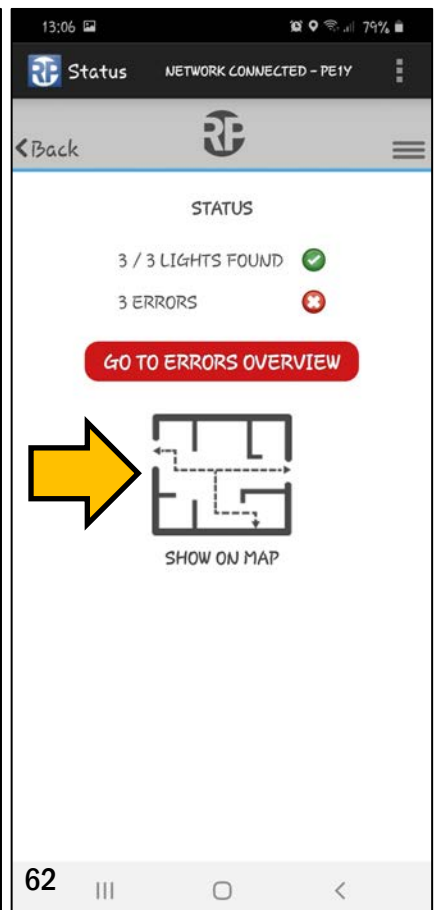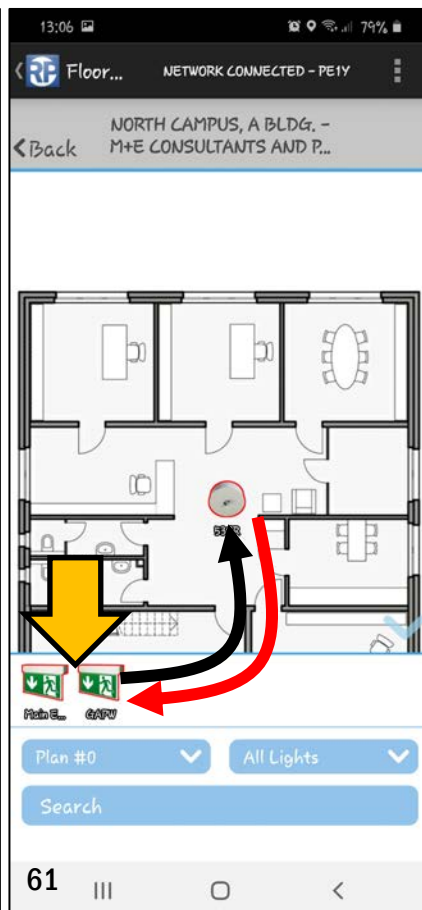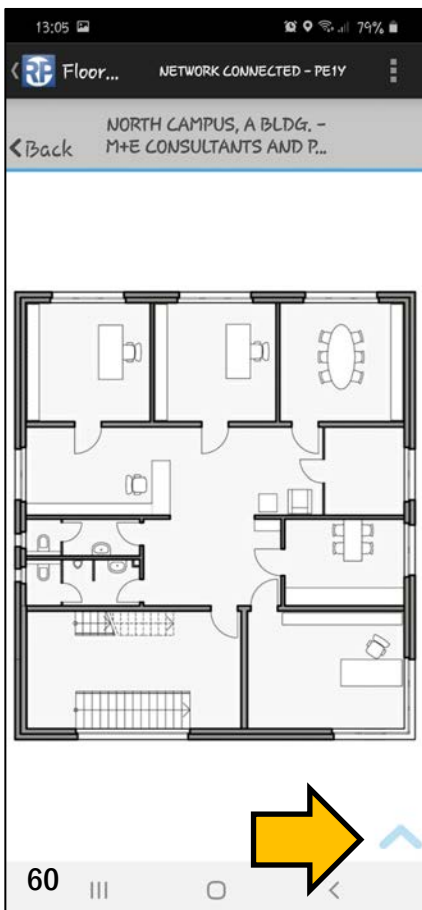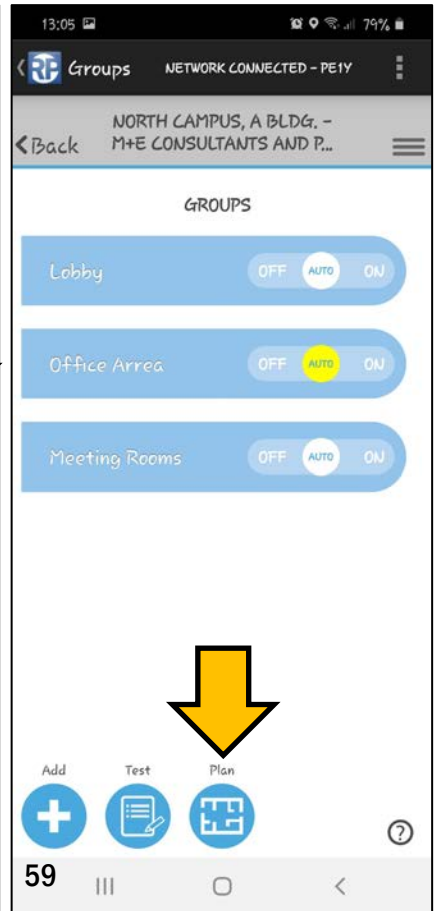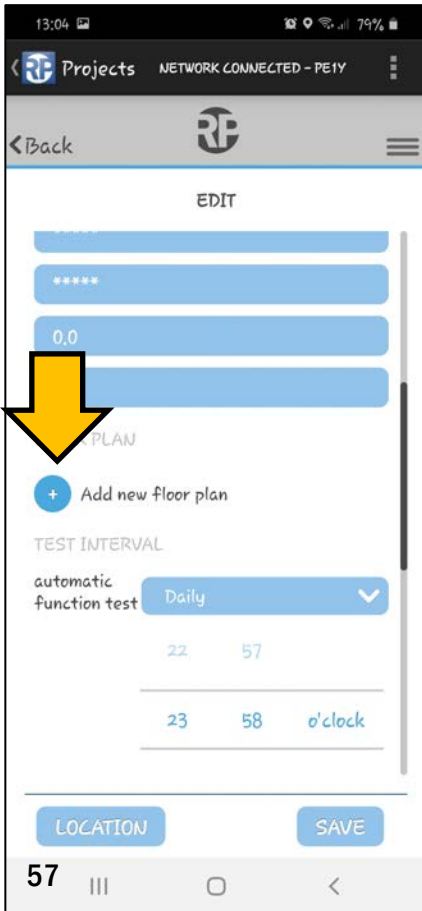
6.14   Central mode

6.14.1   What is Central mode?

Central mode ensures compliance with the requirements of national standards for a display of the system status at a permanently manned, central location.

In Germany, among others: DIN VDE V 0108-100-1:2018-12.

5.4.2 The status of the power source for safety purposes (operational, fault, power source for safety purposes* in operation) shall be monitored and displayed at a central, suitable location during the operationally required time. This requirement also applies to single-battery luminaires.

*Power source for safety purposes = rechargeable battery

In Austria: OVE E 8101:2019,

560.5.001.AT The system status (system ready for operation, supply from the power source for safety purposes, fault) of the safety power supply system shall be indicated by signalling devices at a central location that is constantly monitored during the time required for operation. This does not apply to self-contained systems for up to 20 safety luminaires.

Note: The central mode is used to display the system status according to DIN VDE V 0108-100-1:2018-12
and OVE E 8101:2019, it does not communicate with the cloud! This is planned for an upcoming version.

Note: The central mode is intended for terminal devices which, in the sense of the above standards, are intended to remain on site and a permanent display of the system status.

Note: The terminal device in central mode must be permanently supplied with power (charging cable, power supply unit), otherwise battery mode is displayed.

Note: The terminal device in central mode must remain permanently on site and should ideally
be permanently mounted, i.e. theft-proof.

6.14.2	Setup Central mode

Setting up the Central mode is described in Section 4.1.20

6.14.3	Central mode: Displays and functions

A terminal device operating in central mode displays an overview of the status of the luminaires assigned to the project (Fig. 52). The following conditions must be fulfilled for the status "Operational":

- All luminaires of the network are supplied with mains voltage, are working fault-free and are accessible by radio
- The end device is connected to a charging cable and supplied with mains voltage.

If the end device or at least one luminaire of the network is not supplied with mains voltage, the status changes to "Battery Mode".

As soon as a luminaire reports an error during the status query (battery error or light source error), the status "Error" is displayed. If the acoustic fault message was activated in the configuration dialogue for the central mode, a signal tone also sounds. This can be switched off by tapping the loudspeaker symbol.
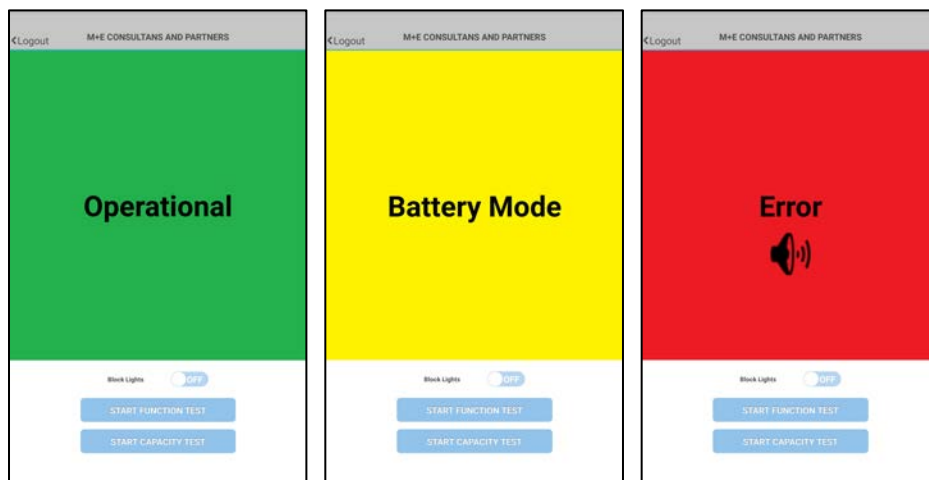
When setting up the central mode, you can determine whether function and capacity tests are permitted in this operating mode (see section 4.1.20). If permitted, the test can be triggered via the respective button. The results are automatically written to the official log and can be retrieved as described in section 4.1.18. If an error occurs during the test, the status display of the central mode changes accordingly.

Note: During an ongoing capacity test, the status screen remains at "Operational" until the results of the test are available. An ongoing capacity test is indicated on the luminaires by all three LED flashing.

If emergency light blocking was permitted in the configuration of the central mode, you can activate it via the "Block lights" slider. Blocked emergency luminaires are not activated if the mains voltage fails.

The central mode can be terminated at any time via the "Logout" button.

6.14.4   Quit Central mode

Central mode can be exited at any time by tapping the "Logout" button. After exiting the central mode, the Wireless Basic App is back in the login screen (see section 4.1.3). If the function "Automatic central mode" was selected when setting up the central mode, the app switches back to central mode approx. 1 minute after exiting.

6.14.5   For a better explanation - how the monitoring function works

A device working in central mode regularly queries the status of all luminaires of the selected project. The polling interval is adjustable and can be 1, 2, 3 or 10 minutes.

The green area with the note "Operational" is shown on the display of the end device working in central mode if all luminaires of the selected project are supplied with mains voltage, are addressable via radio in the network and are working properly. Furthermore, the end device itself must also be supplied with mains voltage to reach this state.

The yellow area with the note "Battery Mode" is shown on the display of the terminal device working in central mode if communication with at least one luminaire of the selected project was not possible for more than 30 min. or the terminal device itself is not supplied with mains voltage.

The red area with the message "Error" is shown on the display of the terminal device working in central mode if at least one luminaire of the selected project has reported an explicit fault or communication with at least one luminaire of this project was not possible for a period longer than the autonomy time set. With the status "Error", an acoustic signal also sounds (if activated in the settings), which can be muted by tapping on the displayed loudspeaker symbol.

7   Appendix

7.1   Frequently asked questions (FAQ)

Q: How can I tell that a luminaire is in wireless mode and transmitting? **A: Wireless luminaires are always in mains operation and wirelessly active during tests** and not in emergency mode. If a luminaire cannot be accessed wirelessly when in mains operation, i.e. even if you are standing right next to it with your end device, there is probably a connection problem or the wireless module is malfunctioning.
Q: Do I need a separate mobile or tablet for each project? **A: No.** The end device is basically a tool that you use for commissioning to get the luminaires up and running and that you then take away again. You can use one and the same device to support any number of installations regardless of whether you are using the cloud function for them or not.
Q: I'm working with the cloud. Do I have to create a new LIGHTLINX® login for every project? **A: No.** You only need one login. This then belongs to you, like a toolbox or piece of identification. You can use this one login to start up any number of projects and manage them in the app and in the LIGHTLINX® cloud. LIGHTLINX® gives you the option of individually handing over projects to other people or sharing projects with them. You then determine the projects people see and those they don't. So you can do all this with just one login.
Q: Why do I need a release code? **A: You only use the release code once when you first log into LIGHTLINX®.** LIGHTLINX® uses the code to check whether you as a user actually have anything to do with Wireless Basic® luminaires. This measure is intended to prevent the LIGHTLINX® platform from being misused.
Q: Can I turn an offline project into an online one? **A: Yes.** But it's not an automatic process. You will need to create a new online project, disassociate all luminaires in the offline project and add them to the new online project. In other words, you'll need to create the project from scratch.
Q: Can I turn an online project into an offline one? **A: Yes.** But it's not an automatic process. You will need to create a new offline project, disassociate all luminaires in the online project and add them to the new offline project. In other words, you'll need to create the project from scratch.

7.2   Error messages

Message	Cause	Tips for rectifying errors
Communication error	The luminaire could not be accessed for a period. This is a known Bluetooth phenomenon.	Re-run the test or status query.
Battery error (cap. test)	A battery error occurred during a capacity test (battery not sufficiently charged or defective).	Was the battery charged 24h before the test? Replace battery if necessary.
Battery error (function test)	A battery error occurred during a function test (battery not sufficiently charged or defective).	Was the battery charged 24h before the test? Replace battery if necessary.
Illuminant error (cap. test)	During a capacity test, the illuminant was found to be malfunctioning/to have failed.	Illuminant connected properly? Replace if necessary.
Illuminant error (function test)	During a function test, the illuminant was found to be malfunctioning/to have failed.	Illuminant connected properly? Replace if necessary.
Test failed	An active test was interrupted by emergency mode.	Repeat test.

Test log error	Data in the luminaire is potentially incorrect.	-
Test time error	The internal clock in the luminaire has lost the time, the system time is being used in the app.	-
Battery charge error	The battery is not connected.	Check connection.
Test start error	The test could not be started	Was the battery charged 24h before the test? Wait 24h, try again.

7.3   Entry types in the test log

In the right column in the test log view (see Figure 47, Section 5.1.18), the following abbreviations are used:

Abbreviation	Explanation
F	Function test
D	Capacity tests/capacity test
M	Manual entry
A	Automatically generated entry

In a future version, the abbreviations will provide more detailed information:

| Abbreviation	Explanation
AF	Automatic function test
AD	Automatic capacity tests/capacity test
MF	Manual function test
MD	Manual capacity tests/capacity test
M	Manual entry

7.4   Troubleshooting

7.4.1   Network not connected

Problem: "Network not connected" is displayed in the title bar

Cause: The connection to the Bluetooth network may be lost even when the "Automatic network connection" option is enabled. Such drops in the connection may occur with Bluetooth BLE.

Solution: To restore the connection to the luminaire network, tap on the vertical line of three dots in the top right ⋮ and select "Connect" in the menu that appears. The app then restores the network connection.
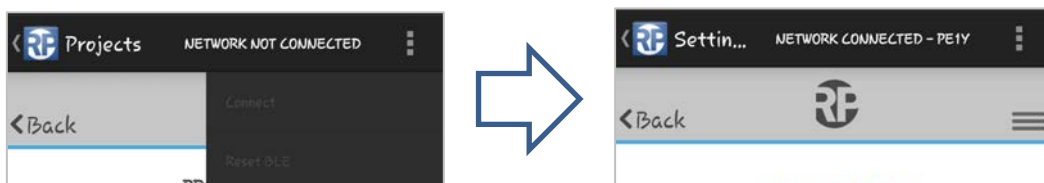
Tip: Select connection. If "Network connected" is displayed in the title bar, next to this you will see the device address of the luminaire with which the app is in direct wireless communication (in the example above, this is the PE1Y luminaire). All other luminaires in the BLE network are addressed indirectly by this luminaire. If you tap on the wording "Network connected", you will see a list of the other luminaires within wireless range. Tap on the name of a luminaire to cancel the existing connection and instead use this luminaire as a means of accessing the luminaire network.
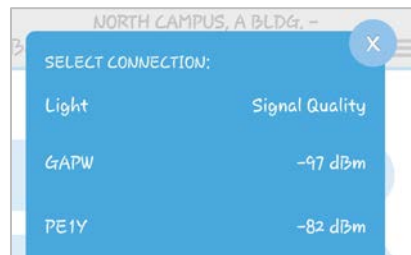
7.4.2 Network fragmentation

Problem: There is a network connection but not all luminaires are being found.

Cause: In addition to a luminaire defect (see following section), it is possible that your end device may be connected to a luminaire but that the luminaires which are missing (from the standpoint of this luminaire) are not within wireless range.

Solution: Check whether the missing luminaire(s) is/are transmitting (see next Section). If they are, the luminaires are not producing ONE cohesive network. Instead, because of the large distances between them, they are forming two or more separate networks. You can check this by moving close to the individual missing luminaires and establishing a network connection with them (see "Select connection" tip in the previous section).

If you are working with several separate networks, you have two options:

- **Manage all luminaires in one project.** To do this, take your end device to the location from which you are receiving each sub-network in turn, and run the commissioning process from each location. Ignore any "Communication error" messages which will probably be issued. Manual testing and status query must then also be run in these "stages".
- **Manage luminaires in separate projects like a network.** To do this, create a separate project for each sub-network and run the commissioning process separately for each project.

7.4.3 Individual luminaires cannot be found in the app

Problem: An individual luminaire is not being displayed in the app and cannot therefore be added/controlled/tested/queried.

Cause: There are several possible causes.

1. The luminaire is not transmitting because it is in emergency mode. This is the case when the green LED is dark (power supply failed).
2. The luminaire is not transmitting because the wireless module is not inserted correctly.
3. The luminaire is not transmitting because the wireless module or another part of the electronics is defective.
4. The luminaire has already been associated and is already incorporated into this or another project.
5. The luminaire is transmitting but is too far away.
6. The luminaire is transmitting but there are other luminaires between it and the location of your end device. Communication via these other luminaires is possible, not necessarily in transmit mode, so the network is interrupted.
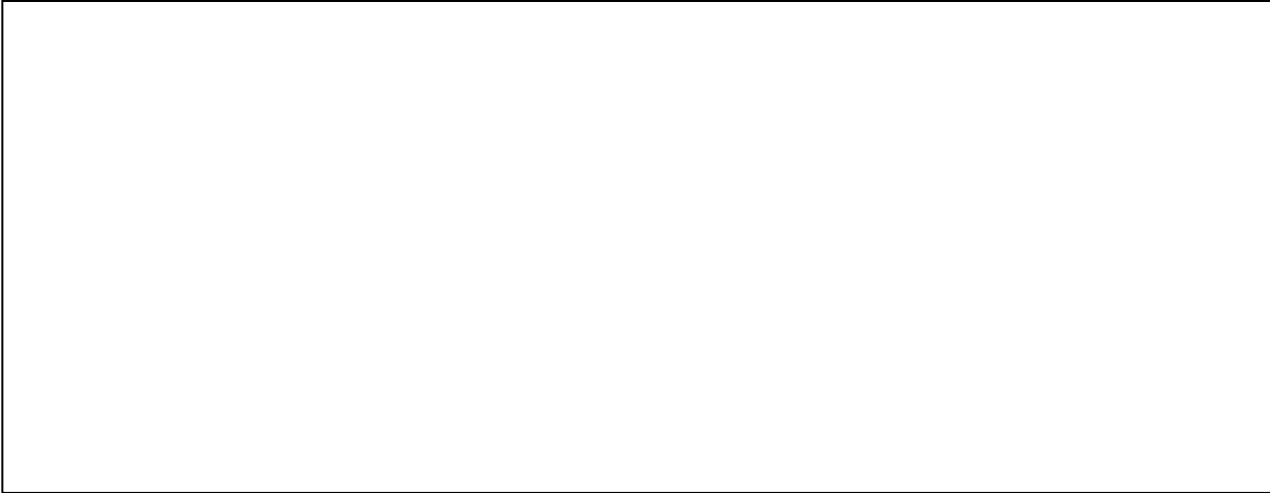7. There may be other causes.

Solution:

1. Check whether the luminaire is transmitting: Check on the luminaire whether it is in emergency mode (cause 1. above). Use the end device to look specifically for the luminaire, and establish the network connection. The luminaire should now be visible when adding luminaires. If it isn't, tap on "Network connected" and check whether the luminaire is showing in the list of alternative connections (wait for list to be produced). Connect directly with the luminaire and try again.
2. If the luminaire is not transmitting, check causes 2. and 3.
3. If the luminaire is not transmitting, check cause 4. The luminaire is probably already associated if it is not being found when adding but is being displayed in the list of luminaires when selecting the connection.
4. Check causes 5. and 6. Cause 5. relates to permanent network fragmentation (see previous section); in case 6., the network fragmentation is temporary and the luminaire should be available again once the other luminaires have been tested.

8   Revision history

Wireless Basic® User Manual		
Date	Software version/Revision	Comments/Important changes compared to the previous version
20.04.2020	WB app Android V.100e	First edition
21.07.2021	WB app Android V.100o	Added Central mode, released in Google Play store
07.09.2021	WB-App Android V.100x	Chapter screen sizes and test log, Spell Check
27.01.2022	WB-App Android V.1.03c	New chapters for release notes and deleting local logbook, addition for deassociating luminaires
11.10.2022	WB-App V.1.0.3k	App released in Apple App store

9 Contact information