Controls & Connectivity

em-LINK v3 software
Manual

TRIDONIC

Legal information

Copyright

Manufacturer

Tridonic GmbH & Co KG
Färbergasse 15
6851 Dornbirn AUSTRIA

Tel. +43 5572 395-0
Fax +43 5572 20176
www.tridonic.com

Document number

em-LINK v3
1.0 | 07.2022 | en

Table of contents

TRIDONIC

1 How to use these instructions

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

- Signs and icons in these instructions

- Further information

- Target audience of these instructions

- Software version

Signs and icons in these instructions

The following signs and icons are used in these instructions:

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

Table 1: Signs and icons in these instructions

TRIDONIC

1 How to use these instructions

Further information

More information on your emergency lighting system's setup and function can be found in the **sceneCOM self-contained emergency luminaires** manual.

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

Target audience of these instructions

These instructions are intended for electricians without any special product training who would like to use the *em-LINK v3* software to connect and monitor multiple *sceneCOM* controllers.

Software version

These instructions are based on software version *em-LINK v3 3.0.0*.

2 em-LINK v3 software

The *em-LINK v3* software can be used to establish a connection with up to 200 control devices. The *EMLinkService* must be started on the main computer and must be running at all times.

> ⚠ **WARNING**
> - The *em-LINK v3* software will not work if the *EMLinkService* is not started!
>
> - If the *EMLinkService* is stopped on the main computer, no connection can be established with the *em-LINK v3* web interface. The automatic test book export also stops working.
>
> - Do not shut down the main computer.

For more information see Section

Once the software has been started on the main computer, the *em-LINK v3* software can be accessed via the web interface from any computer in the network to get an overview of all connected control devices.

> ℹ **Note**
> If you start the software without a licence, the software functions are still available but you can only connect to one control device. You must purchase a licence to connect multiple control devices.

TRIDONIC

2 em-LINK v3 software

Main computer with
software **em-LINK v3**

Web application
sceneCOM

**sceneCOM
controller** (N°1)

**sceneCOM
controller** (N°2)

**sceneCOM
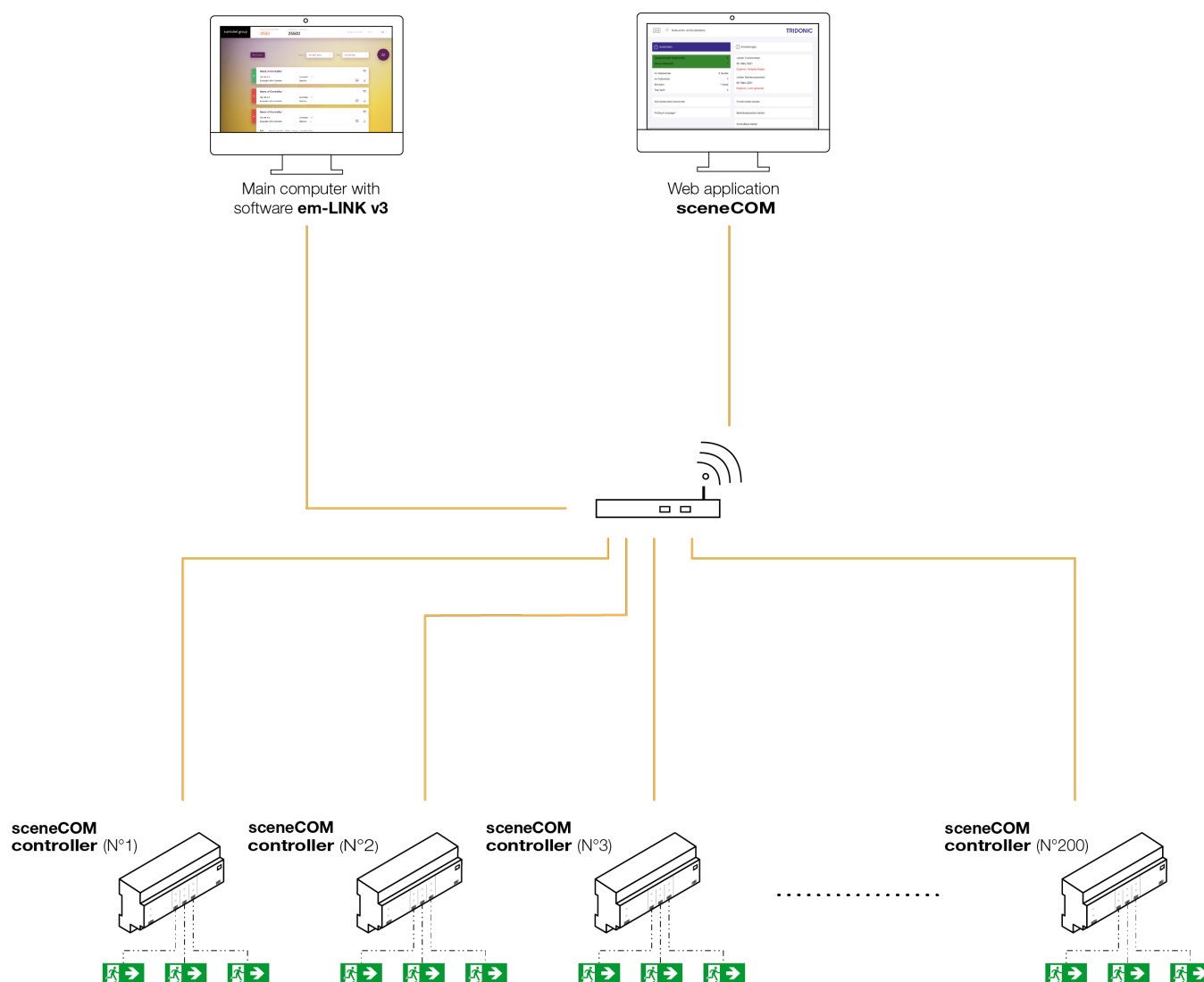controller** (N°3)

**sceneCOM
controller** (N°200)

Figure 1: Topology

Emergency lighting system

The emergency lighting system is designed for controlling and monitoring self-contained emergency luminaires.

The *sceneCOM* web application allows you to use just one *sceneCOM* controller to automate up to 192 self-contained emergency luminaires. It is therefore suitable for small buildings or individual floors, as shown in the figure on the left.

Figure 2: Application example

> **Note**
>
> More information on the web application can be found in the **sceneCOM self-contained emergency luminaires** manual.

2 em-LINK v3 software

Basic functions of the em-LINK v3 software

- Establishing a connection to max. 200 control devices manually or automatically

- Monitoring the connection status of individual control devices

- Accessing the web application for individual control devices

- Monitoring the function of the self-contained emergency luminaires

- Downloading the test books and faults for individual control devices manually or automatically

TRIDONIC

3 Interface description

Navigation principles

Different buttons are available in the *em-LINK v3* software for commissioning, configuration and maintenance.

Button	Meaning
	Expand – Collapse The arrow signifies that further information can be displayed (e. g. error messages). • When the right arrow is clicked, the information is expanded and the arrow points down. • When the arrow pointing down is clicked, the information is collapsed and the arrow points to the right.
	Error status: Permissible limit has not been exceeded The permissible limit of error messages has not been exceeded.
	Error status: Permissible limit has been exceeded The permissible limit of error messages has been exceeded.
	Connection status: No connection to the control device The grey bar signifies that no connection to the control device can currently be established. A check is performed at regular intervals to ascertain whether a connection can be established.

Table 2: Navigation principles

TRIDONIC

4 Requirements

Before starting the commissioning and configuration process for your *em-LINK v3* software, ensure that the following requirements have been met on the main computer:

— Operating system: *Linux (Debian-based) or Microsoft Windows*

— The *Java Runtime Environment* (*JRE*) or *Java Development Kit* (*JDK*) *11* software is installed.

— The *JAVA HOME* and *PATH* environment variables are present on computer and set to the *JDK 11* folder.

— Disk space required: at least 200 MB

— Port *9000* (*TCP*) is not in use and is not locked.

— Port *9000* (*TCP*) is accessible for *em-LINK v3* web users.

— Port *443* (*TCP*) and port *8883* (*TCP*) are accessible to the main computer.

— Optional: *mDNS* (port *5353* (*UDP*)) for finding control devices in the same network.

Before starting the *em-LINK v3* software web application, ensure that the following requirements have been met:

— Web browser: *Microsoft Edge*, *Google Chrome*, *macOS Safari*, *Mozilla Firefox*

Before establishing the connection to the control devices, ensure that the following requirements have been met:

— One configured *REST API & MQTT* API consumer on a control device.

— Version 3.0 or higher has been installed on all control devices.

Optimal viewport width

The optimal viewport width is 1,440 px, 1,280 px or 1,024 px.

> **i**
> **Note**
> - The *em-LINK v3* software uses the Apple *Bonjour* service to find the devices via *mDNS*.
> - The *em-LINK v3* software accesses the control device via the *REST API & MQTT* interface.
> - If you already have a higher version of Java installed, you must uninstall this version and install Java 11 on your main computer instead.
> - It is a good idea to connect the control devices in a separate *LAN* (e.g. *VLAN*).

5 Licensing

A license is required in order to use all of the functions of the *em-LINK v3* software. For licensing proceed as follows:

1. Open the menu.

2. Select **Licensing**.
   ➲ The **Licensing** view is displayed.

3. Enter the license key. The license key can be obtained from your local sales partner.

4. Tap the **Save** button.
   ➲ The license is applied.
   ➲ The full functionality of the *em-LINK v3* software is now available.

6 Commissioning

This section describes how to commission the *em-LINK v3* software.

The following steps are required:

- Step 1: Install the *em-LINK v3* software.
  For more information see Section <u>Installing the em-LINK v3 software</u> 12

- Step 2: Open the *em-LINK v3* web interface.
  For more information see Section <u>Starting the em-LINK v3 web interface</u> 13

- Step 3: Establish a connection to a maximum of 200 *sceneCOM* controllers manually or automatically.
  For more information see Section <u>Establishing a connection to control devices</u> 14

- Step 4: Define the exports (manual or automatic).
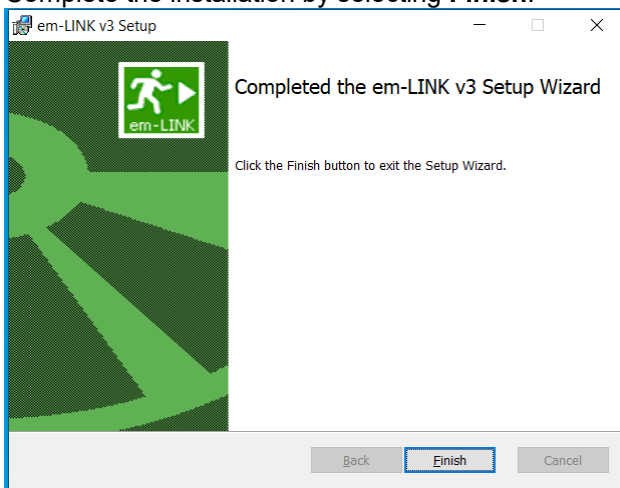 For more information see Section <u>Defining exports</u> 18

6 Commissioning

6.1 Installing the em-LINK v3 software

1. Run the installation file *em-LINK v3.msi* on the main computer.
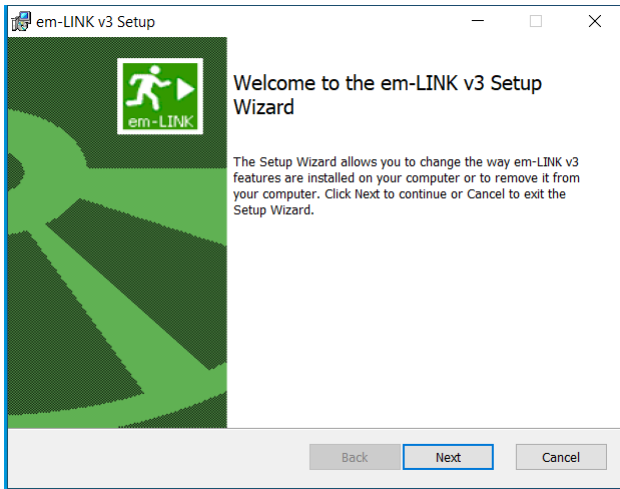
2. Complete the installation by selecting **Finish**.

↪ *em-LINK v3* has been installed.

3. Start *em-LINK v3* from the start menu.
↪ The *EMLinkService* starts.

> ⚠ **WARNING**
> - The *em-LINK v3* software will not work if the *EMLinkService* is not started!
> - If the *EMLinkService* is stopped on the main computer, no connection can be established with the *em-LINK v3* web interface. The automatic test book export also stops working.
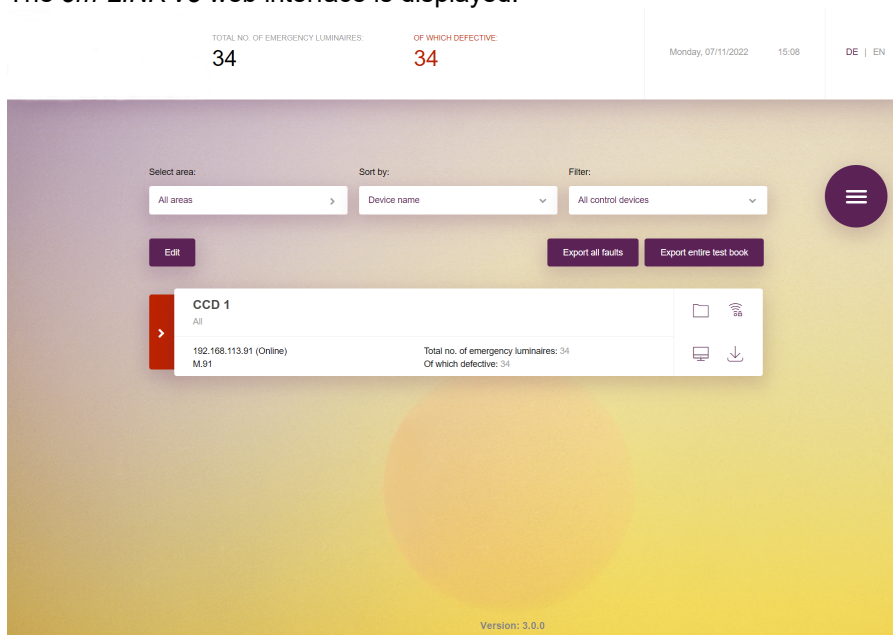> - Do not shut down the main computer.

4. Write down the IP address of the main computer.

TRIDONIC

6 Commissioning

6.2 Starting the em-LINK v3 web interface

Starting em-LINK v3 on the main computer

1. Start the *EMLinkService* for *em-LINK v3*.

2. Open a web browser.

3. In the address line, enter the IP address *localhost:9000*.
   ⮎ The *em-LINK v3* web interface is displayed.

> **ℹ Note**
>
> The web interface starts in English the first time a connection is established. You can change the language in which the web interface is displayed using the button at the top right corner of the start page.

Starting em-LINK v3 on another computer

Requirements:

— The *EMLinkService* for *em-LINK v3* is running on the main computer.

— The main computer and the other computer are located in the same network.

— The IP address or name of the main computer is known.

1. Open a web browser.

2. In the address line, enter the IP address of the main computer which has the *em-LINK v3* running on it, along with *:9000* at the end, and navigate to this address (e.g. enter "[IP address]*:9000*").

– or –

2. In the address line, enter the name of the main computer which has the *em-LINK v3* running on it, along with *:9000* at the end, and navigate to this address.
   ⮎ The *em-LINK v3* web interface is displayed.

TRIDONIC

6 Commissioning

6.3 Establishing a connection to control devices

There are two ways to establish a connection to the *sceneCOM* controllers:

- Manually

- Automatically

Entering a connection to a control device manually

Requirement:

— The control devices have been commissioned.

---

i | **Note**
More information on the *sceneCOM* software can be found in the **sceneCOM self-contained emergency luminaires** manual.

---

1. Open the menu.

2. Select **Connect manually**.
   ↩ The **Connect to control device manually** view is displayed.

✕

Connect to control device manually

IP address *:	
API consumer:	
API token:	

(!) Help   Add

---

6 Commissioning

3. Enter the **IP address** for the control device.

> **i**
>
> **Note**
> - If only the IP address is entered, the control device appears in the list but has no access to data.
>
> - You can access the web interface via the ⊡ icon and can create and manage the API consumer and API tokens for the control device via the *REST API & MQTT app*.
>
> - A control device can only be added once.
>
> - Assign a unique consumer name (e.g. CCD1) if you create a new consumer.

4. Enter the consumer name.

5. Enter the generated **API token**.

> **i**
>
> **Note**
> Copy the token generated in the *REST API & MQTT app*.

6. Tap **Add**.
   - ➪ The *sceneCOM* control device controller is added.
   - ➪ As soon as the connection has been manually established, the device name, IP address and device designation, if any, are displayed.
     The total number of emergency luminaires and the number of these which are faulty are also displayed.

> **CCD 1**
> All
>
> 192.168.113.91 (Online)   Total no. of emergency luminaires: 34
> M.91   Of which defective: 34

Automatically adding control devices

Requirement:

—*sceneCOM* controller has been commissioned.

1. Open the menu.

2. Select **Automatic search**.
   - ➪ The *em-LINK v3* software automatically searches the network for control devices.

> **i**
>
> **Note**
> - If you select **Automatic search**, *mDNS* detection is triggered.
>
> - All control devices are displayed as offline (in grey).

TRIDONIC

6 Commissioning

⮌ Control devices found are displayed with four possible statuses on the *em-LINK v3* web interface.

📶 Connection status: control device is offline; no connection to control device

📶 Connection status: connection to the control device has been established

📶 Connection status: control device is online, but the credentials are invalid or missing

📶 Connection status: attempting to connect to the control device

> **i**
>
> **Note**
>
> - There is no connection to the control device until the login data is saved.
>
> - Note that the API consumer and API token must be entered manually for each control device. The total number of emergency luminaires and the number of faulty emergency luminaires are only displayed in the web view once the login data for the control device has been saved.

3. Tap the icon indicating the connection status for the control device.

⮌ The **Connect to control device manually** view is displayed.

4. Enter the consumer name.

5. Enter the generated **API token**.

6. Tap **Save**.

⮌ As soon as the connection has been established, the device name, IP address and device designation, if any, are displayed.
The total number of emergency luminaires and the number of these which are faulty are also displayed.

TRIDONIC

6 Commissioning

6.4 Configuring the building structure

The following section contains an overview of the options for monitoring and configuring self-contained emergency luminaires in a hierarchy layout. You can define the specific structure in which the view is laid out yourself.

Creating and editing the building structure

1. Open the menu.

2. Select **Edit building structure**.
   ⮒ The **Edit building structure** view is displayed.

3. Tap the icon to add a new area.
   ⮒ The new area is displayed one level below.

4. Tap the icon to change the name of the area.

5. Tap the icon to delete the area.

6. The drag and drop function can be used to move the individual areas and assign them to new levels in the building structure.

TRIDONIC

6 Commissioning

6.5 Defining exports

The faults and test book can be exported as a PDF or XML file. You can also select whether the faults and test book are exported automatically or manually.

> **i** **Note**
> When generating test books with over 100 pages, creating the export as a PDF is not recommended because this may cause problems. For test books with a high number of pages an XML export should always be selected.

Defining the test book export

1. Open the menu.

2. Select **Define exports**.
   ➲ The **Define exports** view is displayed.

3. Select the type of export (automatic or manual).

4. Define the options for the automatic test book export (**file type**, **language**, **interval**, **time**, **path** and **recipient**).

   – *or* –

4. Define the options for the manual test book export (**file type**, **language** and **path**).

> **i** **Note**
> • The path indicates the desired save location for the exports on the main computer.
> • For the recipient, enter the email address to which the exported files are to be sent.

5. Tap **Save**.
   ➲ If "Automatic test book export" has been enabled, the test book export settings are saved. The test books are saved on the main computer or sent by email according to the settings. A separate file is created for each control device. Existing files are not overwritten.

TRIDONIC

6 Commissioning

⮱ If "Manual test book export" is selected, the test books will immediately be saved on the main computer or sent by email according to the settings. A separate file is created for each control device. Existing files are not overwritten.

> **i** **Note**
>
> - The ⤓ button on the *em-LINK v3* web interface can be used to manually export the test books for each control device at any time.
>
> - The "Export entire test book" button on the *em-LINK v3* web interface can be used to manually export the test books for displayed control devices.
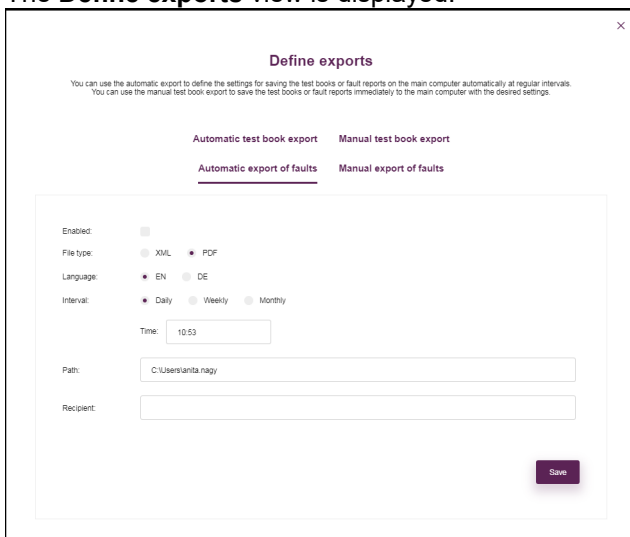
Exporting faults

1. Open the menu.

2. Select **Define exports**.
   ⮱ The **Define exports** view is displayed.

3. Select the type of export (automatic or manual).

4. Define the options for the automatic export of faults (**file type**, **language**, **interval**, **time**, **path** and **recipient**)

– *or* –

4. Define the options for the manual export of faults (**file type**, **language** and **path**).

> **i** **Note**
>
> - The path indicates the desired save location for the exports on the main computer.
>
> - For the recipient, enter the email address to which the exported files are to be sent.

5. Tap **Save**.
   ⮱ If **Automatic export of faults** has been enabled, the export settings are saved. The faults are saved on the main computer or sent by email according to the settings. A separate file is created for each control device. Existing files are not overwritten.

TRIDONIC

6 Commissioning

⮥ If **Manual export of faults** is selected, the faults will immediately be saved on the main computer or sent by email according to the settings. A separate file is created for each control device. Existing files are not overwritten.

> **i**
>
> **Note**
>
> - The ⤓ button on the *em-LINK v3* web interface can be used to manually export the faults for each control device at any time.
>
> - The **Export all faults** button on the *em-LINK v3* web interface can be used to manually export the faults for all displayed control devices.

6.6 Configuring SMTP

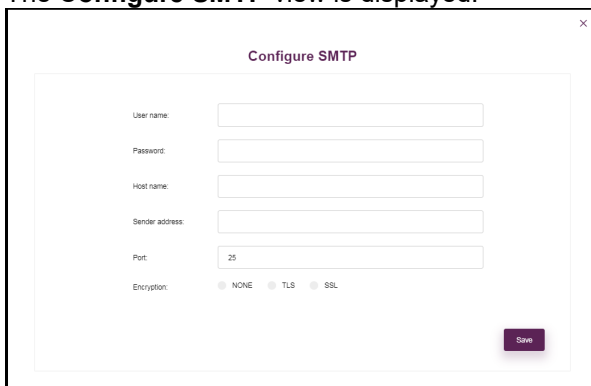Configure the SMTP server to send exports of test books and faults by email.

1. Open the menu.

2. Select **Configure SMTP**.
   ⮥ The **Configure SMTP** view is displayed.


```
                                              ×
                    Configure SMTP

      User name:      [                    ]

      Password:       [                    ]

      Host name:      [                    ]

      Sender address: [                    ]

      Port:           [ 25                 ]

      Encryption:      ○ NONE  ○ TLS  ○ SSL

                                      [ Save ]
```

3. Enter the user name.

4. Enter the password.

5. Enter the host name.

6. Enter the sender address.

7. Enter the port. Port 25 is entered here by default.

8. Select the method of encryption.

9. Tap **Save**.
   ⮥ The settings are saved.

TRIDONIC

7 Monitoring

This section describes how to monitor individual control devices using the *em-LINK v3* software.

This includes:

- Monitoring the connection status of individual control devices

- Accessing the web application for individual control devices

- Monitoring the function of the self-contained emergency luminaires

- Exporting test books for the individual control devices manually or automatically

7.1 Overview of monitoring functions

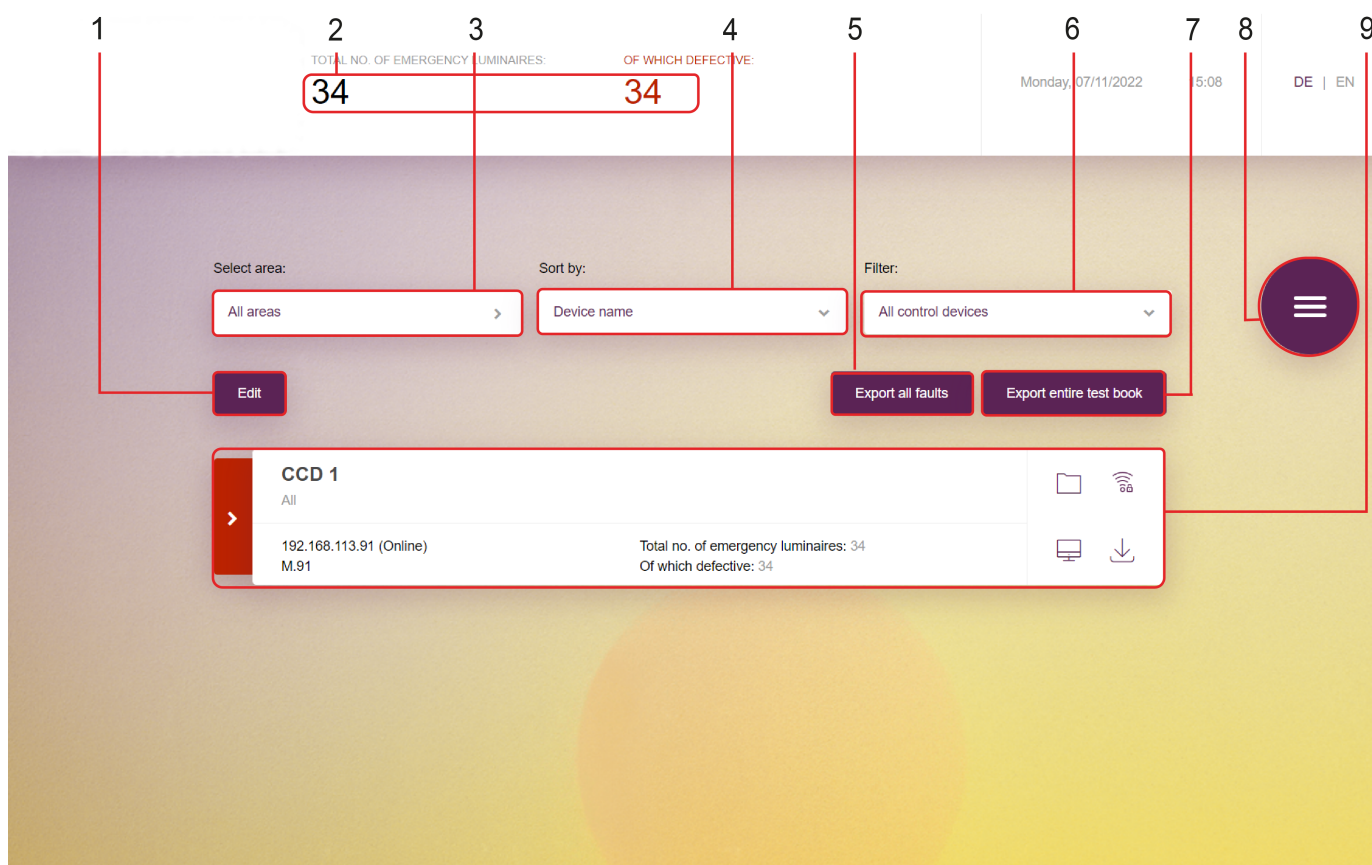The following contains an overview of the monitoring functions:

Figure 3: Monitoring the function of the self-contained emergency luminaires

	Function	Brief description
(1)	Edit connection	The **Edit** button can be used to select individual control devices or all of them. The connection to the control devices can then be terminated.
	Terminate connection	When the connection is terminated via the *em-LINK v3* web interface, the test book for the control device is not deleted on the control device itself. The test book also continues to be available via the control device web application.

TRIDONIC

7 Monitoring

|	Function	Brief description
(2)	Status of all connected self-contained emergency luminaires	This shows you the status of the self-contained emergency luminaires installed in the system at a glance: • **Total no. of emergency luminaires**: number of self-contained emergency luminaires addressed in the system. • **Of which defective**: number of self-contained emergency luminaires with a fault.
(3)	Filter by area	Use this button to select the area containing the control devices you want to be displayed on the web interface.
(4)	Sort	Sorting improves how the status of the control devices and of the connected self-contained emergency luminaires is displayed and makes it easier find the desired information. You can sort the control devices by device name (from A to Z), by the total number of emergency luminaires or by the number of faulty emergency luminaires.
(5)	Export faults	Use this button to export all faults for the control devices displayed on the web interface. The export is carried out based on the settings defined for manual exports of faults. **i** **Note** For more information see Section Defining exports 18
(6)	More filter options	It may be beneficial to display only the control devices that meet a certain criterion, e.g. all control devices with luminaire faults. The project window provides an additional filter function for this purpose. The following filters can be selected: • **All control devices**: all control devices are displayed. • **Defect. emergency luminaires**: only control devices to which faulty emergency luminaires are connected are displayed. • **Over limit for critical fault**: only control devices for which the limit has been exceeded are displayed. **i** **Note** In the *sceneCOM* web application, you can set the number of luminaire faults required to trigger a critical fault message. Luminaire faults are lamp failures, double addressing errors or ballast failures, for example. Set the limit to 1 if you wish to view every instance of these faults as critical faults. Increase the limit if a higher number of luminaire faults is desired before a critical fault is displayed. The default limit is 1.
(7)	Export the test book	Use this button to export a collective test book for all control devices displayed on the web interface. The export is carried out based on the settings defined for manual test book exports. **i** **Note** For more information see Section Defining exports 18

7 Monitoring

	Function	Brief description
(8)	Open the menu	You can access a selection of further functions via the menu: • Connecting to a control device manually • Editing the building structure • Automatic search • Defining exports • Configuring SMTP • Opening the manual • Adding a licence
(9)	Monitor the function of the self-contained emergency luminaires	The type of fault and path of the luminaire are displayed for each faulty emergency luminaire. Faults are displayed no more than 15 min. after they have occurred. **Note** For more information see Section Faults 26

Table 3: Monitoring the function of the self-contained emergency luminaires

7 Monitoring

7.2 Monitoring the functionality of self-contained emergency luminaires

The following provides detailed information about monitoring the function of the self-contained emergency luminaires:
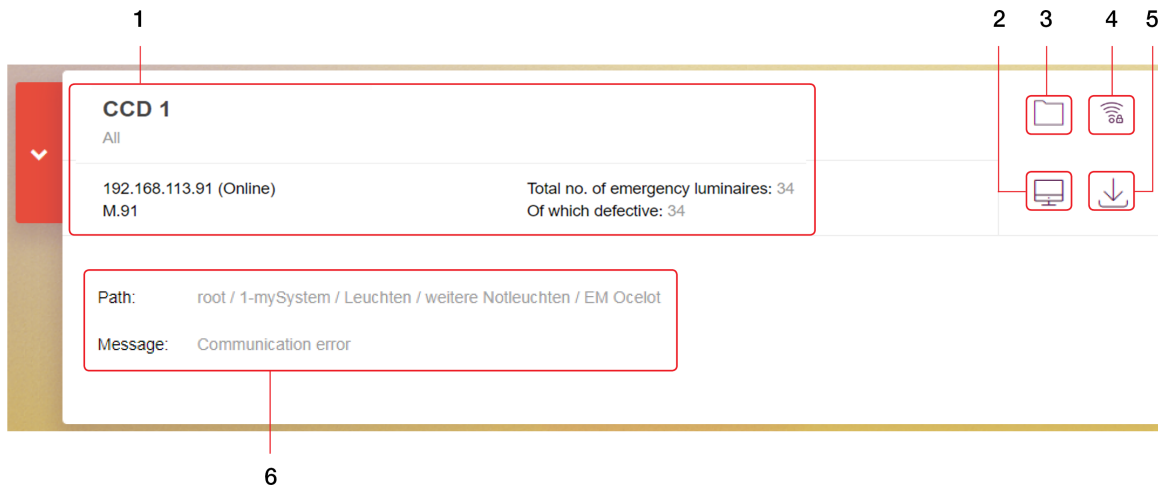

Figure 4: Details about monitoring the function of the self-contained emergency luminaires

	Function	Brief description
(1)	Device information	This is where you find the device name, an overview of the structure, the IP address and the device designation, if any, of the control device.
	Number of emergency luminaires and number of luminaire faults	This shows you the status of the self-contained emergency luminaires: • **Total no. of emergency luminaires**: number of self-contained emergency luminaires addressed in the system. • **Of which defective**: number of self-contained emergency luminaires with a fault.
(2)	Open the control device web application	Use this button to open the web application for the corresponding control device.
(3)	Assign control device	Use this button to assign the control device directly to an area in the building.
(4)	Check connection status	The icon indicates the connection status for the control device: Connection status: connection to the control device is not possible; the control device is offline Connection status: attempting to connect to the control device Connection status: connection to the control device has been established Connection status: control device is online, but the credentials are invalid or missing

7 Monitoring

	Function	Brief description
(5)	Export test book manually	The results of function, duration and inspection tests are documented in the test book. Test book entries are organised in chronological order (most recent test result at the top). This button can be used to manually export the test book for a control device to the local computer. The test book is exported as a PDF file in the language set on the *em-LINK v3* web interface. Exports always include all test results. **i** **Note** A test book export can be defined for all control devices. For more information see Section Defining exports ⌐18¬
(6)	Monitoring the function of the self-contained emergency luminaires	The type of fault and path of the luminaire are displayed for each faulty emergency luminaire. Faults are displayed no more than 15 min. after they have occurred. **i** **Note** For more information see Section Faults ⌐26¬

Table 4: Details about monitoring the function of the self-contained emergency luminaires

7 Monitoring

7.3 Faults

The following section provides an overview of the individual faults that can occur with the self-contained emergency luminaires. You can also get information on what the cause of the error message could be and how the problem can be corrected.

Self-contained emergency luminaire

Message	Possible cause	Solution
General error	A general error has occurred with an emergency luminaire.	▷ Contact your sales partner.
Battery fault	A fault has occurred with the battery.	▷ Replace the battery.
Duration test due.	The service interval has been exceeded.	1. Carry out maintenance. 2. Perform a duration test.
Communication error	A luminaire was connected, for example, first to one DALI control line and then to another. As a result a communication error has occurred.	▷ Delete the luminaire from the system image and readdress it.
Short circuit on DALI line	DALI control line has a short circuit.	▷ Check the affected line and eliminate the short circuit.
Charging fault	A fault has occurred when the battery was charging.	▷ Check the battery wiring. *– or –* ▷ Replace the battery. *– or –* ▷ Replace the control gear.
Lamp or control gear failure	The lamp is not correctly connected.	▷ Check the lamp wiring.
	Lamp or LED module is faulty.	▷ Replace the faulty lamp or LED module.
	Control gear is faulty.	▷ Replace the faulty control gear.
Break on DALI line	DALI control line has a break.	▷ Check the affected line and eliminate the break.

Table 5: Possible faults for a self-contained emergency luminaire

---

i   **Note**

A report on the faults can be exported automatically or manually.
For more information see Section <u>Defining exports</u> 18

8 Maintenance

This section explains how to maintain the *em-LINK v3* software.

8.1 Software update

You can update the *em-LINK v3* software. The software configuration will be retained. Existing test book exports will not be deleted.

> **i** **Note**
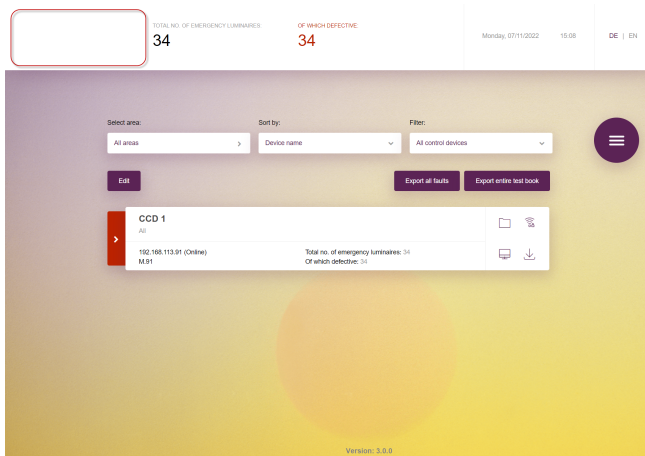> The most up-to-date software version is available from your sales partner.

Updating the em-LINK v3 software

▷ Run the new installation file *em-LINK v3.msi*.
  ➲ The *em-LINK v3* software is updated.

8.2 Logo

You can set the logo yourself, so that it appears in the top left corner of the web interface.

Defining and replacing the logo

Requirement:

— The logo is available as a PNG file.

> **i** **Note**
> - File name: *logo.png*
> - Dimensions: 500 × 250 pixels

1. Open the following folder on the main computer: **C:\Program Files (x86)\em-LINK\conf**

2. Copy file *logo.png* to the following folder: **C:\Program Files (x86)\em-LINK\conf**

3. Reload the web interface.
  ➲ The new logo is displayed in the top left corner of the *em-LINK v3* web interface.

TRIDONIC

9 Appendix

This section contains the following information:

-

9.1 Icons

This section contains an overview of all icons shown in the *em-LINK v3* software.

Icon	Description
🗁	Select an area
🖥	Open the web application
↓	Export test book manually
📶	Connection status: control device is offline; no connection to control device
☀	Connection status: connecting to the control device now
📶	Connection status: attempting to connect to the control device
📶	Connection status: connection to the control device has been established
📶	Connection status: control device is online, but the credentials are invalid or missing
≡	You can access a selection of further functions via the menu: • Connecting to a control device manually • Editing the building structure • Automatic search • Defining exports • Configuring SMTP • Opening the manual • Activating a licence

Table 6: Icons in the *em-LINK v3* software

This section contains an overview of all menu icons.

Icon	Description
+	Connect to a control device manually
🗁	Edit the building structure
🔍	Automatic search
↓	Define exports
✉	Configure SMTP
📄	Open the manual

9 Appendix

Icon	Description
	Activate a licence

Table 7: Menu icons in the *em-LINK v3* software