WAGO Lighting Management V1.0.1.3

2018

Imprint

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Information about This Documentation

Copyright

Number Notation

Number System	Example	Comment
Decimal	100	Normal notation
Hexadecimal	0x64	C notation
Binary	'100' '0110.0100'	In quotation marks, nibble separated by a period

Font Conventions

Font Type	Explanation
`monospaced`	Names of paths and files are displayed in a font type with uniform character width. Example: `notepad.exe`
Menu	Menu options are displayed in bold, e.g.: **Save**
>	A “greater than” symbol between two names denotes the selection of a menu option. Example: **File > New**
Input	Designation of input or optional fields are displayed in bold. Example: **Value**
“Value”	Input or selection values are displayed in quotation marks. Example: Enter the value “4 mA” under **Start of measurement range**.
[Button]	Buttons are displayed in bold in square brackets. Example: **[OK]**
[Keys]	Key labels on the keyboard are displayed in bold and enclosed in square brackets. Example: **[F5]**

Symbols

DANGER	**Warning against personal injury!** Indicates a high-risk, imminently hazardous situation which, if not avoided, can result in death or serious injury.
DANGER	**Do not work on components while energized!** Indicates a high-risk, imminently hazardous situation which, if not avoided, can result in death or serious injury.
WARNING	**Warning against personal injury!** Indicates a high-risk, imminently hazardous situation which, if not avoided, can result in death or serious injury.
CAUTION	**Warning against personal injury!** Indicates a low-risk, potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
NOTICE	**Warning: Damage to property!** Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.
ESD (Electrostatic Discharge)	**Warning: Damage to property caused by electrostatic discharge (ESD)!** Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.
Note	**Important note!** Indicates a potential malfunction which will not result in damage to property, however, if not avoided.
Information	**Additional Information!** Refers to additional information which is not an integral part of this documentation (e.g., the Internet).

Legal Principles

Subject to Change

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Personnel Qualification

The use of the product described in this document is exclusively geared to specialists having qualifications in PLC programming, electrical specialists or persons instructed by electrical specialists who are also familiar with the appropriate current standards.
Moreover, the persons cited here must also be familiar with all of the products cited in this document, along with the operating instructions. They must also be capable of correctly predicting any hazards which may not arise until the products are combined.
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This documentation describes the use of various hardware and software components in specific example applications. The components may represent products or parts of products from different manufacturers. The respective operating instructions from the manufacturers apply exclusively with regard to intended and safe use of the products. The manufacturers of the respective products are solely responsible for the contents of these instructions.
The sample applications described in this documentation represent concepts, that is, technically feasible applications. Whether these concepts can actually be implemented depends on various guidelines. For example, different versions of the hardware or software components can require different handling than that described here. Therefore, the descriptions contained in this documentation do not form the basis for assertion of a certain product characteristic.
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Contents

1. Function Description

The aim of WAGO Lighting Management is to provide an intelligent lighting control system, which ensures the correct light is available in the right amount at the right time by using daylight sensors, presence sensors and thoughtfully programmed lighting scenarios. In times of increased energy prices, modern lighting technology can help save electricity quickly and effectively to cut costs. Potential savings can be optimized with state-of-the-art lighting management that is backed by a trusted control system which specializes in efficiency. WAGO Lighting Management also offers a wide range of benefits under other aspects, such as convenience and flexibility: An intelligent and sophisticated system offers users, for example a high degree of visual comfort at the work place and a visual ambience that positively effects motivation and performance.

Application examples for lighting management:

- Chemicals industry
- Printing industry
- Electrical engineering
- Aerospace industry
- Power plants
- Plastics processing
- Warehouses
- Food processing
- Logistics
- Mechanical engineering
- Metal processing
- Paper manufacturing
- Heavy industry
- Churches
- Movie theaters
- Subway stations
- Schools
- etc.

2. Scope of Functions

Scope of hardware

Max. quantity	Item No.	Description
1	750-8202/000-012	WAGO 8202 PFC 200 FG 2 2ETH RS
10	753-647	DALI Multi-Master module
64	75x-4xx	Digital inputs
32	75x-5xx	Digital outputs
1	750-640	RTC module
1	750-652	RS-232 / RS-485 interface
1	750-495/xxx-xxx	3-phase power measurement module

Note

Prerequisites
The 750-8202/000-012 (WAGO 8202 PFC 200 FG 2 2ETH RS) application controller is absolutely required for proper use of WAGO Lighting Management.

Software scope

Max. quantity	Description
16	DALI Multi-sensors per DALI Multi-Master module
16	DALI key couplers per DALI Multi-Master module
64	DALI ECG per DALI Multi-Master module (Attention: short addresses can not be switched when there are 64 ECGs)
64	EnOcean rockers (2-channel)
64	Digital inputs
64	MODBUS buttons
16	Clients for communication to other WAGO Lighting Management controllers for transfer of input signals
19	Server instances for communication to other WAGO Lighting Management controllers for provision of input signals.
19	Server instances for communication to other WAGO Lighting Management controllers for provision of output signals (function, external dimming value for virtual room)
20	Timer programs
32	Digital outputs

2.1. Supported hardware

Control system

Description	Item No.	Comment
WAGO 8202 PFC 200 FG 2 2ETH RS	750-8202/000-012	WAGO Lighting Management only functions with this control system.

Digital inputs

Voltage	Channels					Description	Item No.
	2 DI	4 DI	8 DI	16 DI	8 DIO		
5 VDC		x				0.2 ms, high-side switching	750-414
5/12 VDC			x			(5...14 VDC) 0.2 ms, high-side switching	753-434
24 VDC	x					3.0 ms, high-side switching	750-400
		x				3.0 ms, high-side switching	750-402
		x				3.0 ms, high-side switching, 2-wire connector	750-432
		x				3.0 ms, high-side switching, 3-wire connector	750-1420
			x			3.0 ms, high-side switching	750-430
			x			3.0 ms, high-side switching, 2-wire connector	750-1415
				x		3.0 ms, high-side switching, ribbon cable	750-1400
				x		3.0 ms, high-side switching	750-1405
					x	3.0 ms, 0.5 A, high-side switching, ribbon cable	750-1502
					x	3.0 ms, 0.5 A, high-side switching	750-1506
	x					0.2 ms, high-side switching	750-401
		x				0.2 ms, high-side switching	750-403
		x				0.2 ms, high-side switching	750-433
		x				0.2 ms, high-side switching, 3-wire connector	750-1421
			x			0.2 ms, high-side switching	750-431
			x			0.2 ms, high-side switching, 2-wire connector	750-1416
				x		0.2 ms, high-side switching	750-1406
		x				3.0 ms, low-side switching	750-408
		x				3.0 ms, low-side switching, 3-wire connector	750-1422
			x			3.0 ms, low-side switching	750-436
			x			3.0 ms, low-side switching, 2-wire connector	750-1417
				x		3.0 ms, low-side switching, ribbon cable	750-1402
				x		3.0 ms, low-side switching	750-1407
		x				0.2 ms, low-side switching	750-409
		x				0.2 ms, low-side switching, 3-wire connector	750-1423
			x			0.2 ms, low-side switching	750-437
			x			0.2 ms, low-side switching, 2-wire connector	750-1418
24 VAC/VDC		x				20 ms, high-side switching, 2-wire connector	750-415

		x				50 ms, high-side switching, power jumper contacts	750-423
42 VAC/VDC		x				20 ms, high-side switching	750-428
48 VDC	x					3.0 ms, high-side switching	750-412
60 VDC	x					3.0 ms, high-side switching	753-429
110 VDC	x					3.0 ms, configurable, high-side switching	750-427
220 VDC	x					3.0 ms, high-side switching	750-407
120 VAC	x					10 ms, high-side switching	750-406
120/230VAC		x				(120 to 230 VAC) 10 ms, high-side switching	753-440
230 VAC	x					10 ms, high-side switching	750-405

Digital outputs

Voltage	Channels					Description	Item No.
	2 DO	4 DO	8 DO	8 DIO	16 DO		
5 VDC		x				20 mA, high-side switching	750-519
5/12 VDC			x			(5…14 VDC) 1 A, high-side switching	750-534
24 VDC	x					0.5 A, high-side switching	750-501
	x					0.5 A, high-side switching, interference-free	750-501/000-800
	x					2.0 A, high-side switching	750-502
	x					2.0 A, high-side switching, interference-free	750-502/000-800
		x				0.5 A, high-side switching	750-504
		x				0.5 A, high-side switching, interference-free	750-504/000-800
		x				0.5 A, high-side switching, 2-wire connector	750-531
		x				0.5 A, high-side switching, 2-wire connector, interference-free	750-531/000-800
		x				0.5 A, low-side switching	750-516
			x			0.5 A, high-side switching	750-530
			x			0.5 A, low-side switching	750-536
			x			0.5 A, high-side switching, 2-wire connector	750-1515
			x			0.5 A, low-side switching, 2-wire connector	750-1516
				x		3.0 ms, 0.5 A, high-side switching, ribbon cable	750-1502
				x		3.0 ms, 0.5 A, high-side switching	750-1506
					x	0.5 A, high-side switching, ribbon cable	750-1500
					x	0.5 A, high-side switching	750-1504
					x	0.5 A, low-side switching, ribbon cable	750-1501
					x	0.5 A, low-side switching	750-1505
120/230VAC			x			(120...230 VAC) 0.25 A, high-side switching	753-540
230V AC/DC		x				0.3 A, solid state	750-509
230 VAC	x					0.5 A, solid state	750-522
Relays	x					125 VAC, 0.5 A, isolated outputs, 2 make contacts	750-514
	x					250 VAC, 1A, isolated outputs, 2 changeover contacts	750-517
	x					250 VAC, 2.0 A, 2 make contacts	750-512
	x					250 VAC, 2.0 A, isolated outputs, 2 make contacts	750-513
	x					250 VAC, 2.0 A, isolated outputs, 2 make contacts, without power jumper contacts	750-513/000-001
	x					250 VAC, 2.0 A, isolated outputs, 4 make contacts	750-515

Information

753 Series

Many modules are also available in the pluggable 753 Series.

Specialty modules

Description	Item No.	Comment
RS-232/RS-485 serial interface	750-652	Serial interface module for connecting the EnOcean wireless receivers STC65-RS485-EVC.
3-phase power measurement module (690 V / 1 A)	750-495	The 3-phase power measurement module is used for measuring the electrical data in a three-phase supply network. The current in the N conductor can also be measured. The current is measured through current transformers.
3-phase power measurement module (690 V / 5 A)	750-495/000-001	The 3-phase power measurement module is used for measuring the electrical data in a three-phase supply network. The current in the N conductor can also be measured. The current is measured through current transformers.
3-phase power measurement module (690 V / RC)	750-495/000-002	The 3-phase power measurement module is used for measuring the electrical data in a three-phase supply network. The current in the N conductor can also be measured. The current is measured through Rogowski coils.
RTC module	750-640	The RTC module provides WAGO Lighting Management with the correct time. A GPS/DCF receiver must be connected for the RTC module to operate properly.
DALI Multi-Master module	753-647	The DALI Multi-Master module complies with DALI standard IEC 62386. Two options are available to supply the DALI Multi-Master module: 1. DALI Multi-Master DC/DC converter (753-620) for supplying one single module A 2nd 787-1007 power supply is required for supplying more than one module

Current Transformers

Rated current:			Description	Item No.
primary	1 A	5 A		
500 A			Rogowski coil RT-500, conductor length 1.5 m	855-9100/500-000
500 A			Rogowski coil RT-500, conductor length 3 m	855-9300/500-000
2000 A			Rogowski coil RT-2000, conductor length 1.5 m	855-9100/2000-000
2000 A			Rogowski coil RT-2000, conductor length 3 m	855-9300/2000-000
50 A	x		Plug-in current transformer with CAGE CLAMP®; 26 mm round conductor	855-301/050-103
50 A		x		855-305/050-103
60 A	x			855-301/060-101
60 A		x		855-305/060-101
75 A	x			855-301/075-201
75 A		x		855-305/075-201
100 A	x			855-301/100-201
100 A		x		855-305/100-201
150 A	x			855-301/150-501
150 A		x		855-305/150-501
200 A	x			855-301/200-501
200 A		x		855-305/200-501
250 A	x			855-301/250-501
250 A		x		855-305/250-501
300 A		x		855-305/300-1001
400 A	x			855-301/400-1001
400 A		x		855-305/400-1001
600 A	x			855-301/600-1001
600 A		x		855-305/600-1001
250 A		x	Plug-in current transformer with CAGE CLAMP®; 32 mm round conductor	855-405/250-501
400 A	x			855-401/400-501
400 A		x		855-405/400-501
600 A	x			855-401/600-501
750 A		x		855-405/750-501
400 A		x	Plug-in current transformer with CAGE CLAMP®; 44 mm round conductor	855-505/400-1001
600 A		x		855-505/600-1001
800 A		x		855-505/800-1001
1000 A	x			855-501/1000-1001
1000 A		x		855-505/1000-1001
1500 A	x			855-601/1500-501
1500 A		x		855-605/1500-501

2000 A	x		Plug-in current transformer with CAGE CLAMP®; 55 mm round conductor	855-801/2000-1001
2000 A		x		855-805/2000-1001
2500 A	x		Plug-in current transformer with CAGE CLAMP®; 70 mm round conductor	855-1001/2500-1001
2500 A		x		855-1005/2500-1001
60 A	x		Split-core current transformer, diameter for signal lines 18 mm	855-3001/060-003
100 A	x			855-3001/100-003
200 A	x			855-3001/200-001
250 A	x			855-3001/250-001
100 A	x			855-4001/100-001
150 A	x			855-4001/150-001
150 A		x		855-4005/150-101
200 A	x			855-4001/200-001
200 A	x		Split-core current transformer, diameter for signal lines 28 mm	855-4101/200-001
250 A	x			855-4101/250-001
250 A		x		855-4105/250-101
400 A	x			855-4101/400-001
400 A		x		855-4105/400-101
250 A	x		Split-core current transformer, diameter for signal lines 42 mm	855-5001/250-001
400 A	x			855-5001/400-000
400 A		x		855-5005/400-001
600 A	x			855-5001/600-000
600 A		x		855-5005/600-000
1000 A	x			855-5001/1000-000
1000 A		x		855-5005/1000-000
1000 A	x		Split-core current transformer, diameter for signal lines 2 x 42 mm	855-5101/1000-000
1000 A		x		855-5105/1000-000

Information

Pre-assembled compact terminal blocks

Two different versions of pre-assembled compact terminal blocks are available for easy connection and short-circuiting of the current transformers.
Item Number 2007-8874 for current and voltage
Item Number 2007-8877 for current

Accessories

Description	Item No.	Comment
Switched-mode power supply for the DALI Multi-Master module (753-647)	787-1007	230 VAC / 18 VDC power supply; the power supply provides 1.1 A and can supply power to several 753-647 DALI Multi-Master modules. Typically, up to five DALI Multi-Master modules are powered by one power supply.
DALI Multi-Master DC/ DC converter	753-620	24 VDC / 18 VDC converter for power supply to a DALI Multi-Master module
DALI Multi-Sensor Kit	2851-8201	Set, incl. DALI sensor coupler, MULTI-3-CI sensor, ECO-CI kit
DALI sensor coupler	2851-8202	Sensor coupler for connecting MULTI-3-CI sensors to DALI
DALI HIGHBAY adapter + HIGH BAY	2852-7207, 2852-7201	DALI Multi-sensor for high installation heights (motion sensor) - 3 to 10 m: detection of walking motion by persons - 3 to 13 m: detection of travel motion (e.g., lift trucks)
DALI HIGHBAY adapter + VISION	2852-7207, 2852-7202	DALI Multi-Sensor for large areas, open offices, hallways or warehouses (motion sensor)
DALI LS/PD LI	2852-7203	DALI Multi-Sensor with presence (motion) detection area via integrated shutter, adjustable to between 40 to 90°, detection area 6m², maximum installation height 5m
DALI sensor coupler E	2852-7204	Sensor coupler for connecting conventional sensors to DALI (potential-free contact for presence detectors, 0...10V for light intensity sensor)
DALI sensor coupler HF LS LI + radar sensor HF LS LI	2852-7205, 2852-7206	DALI Multi-Sensor with presence detection via active radar sensor element. Mounting height 2...13 m
DALI XC	2852-7301	Key coupler for connecting 4 conventional keys to DALI
GPS-DCF converter UTC+-	2852-7901	Converter for time synchronization of the RTC module. The converter transforms the GPS time into a DCF signal. The RTC module is synchronized with the DCF signal.
STC65-RS-485 EVC	2852-7101	EnOcean wireless transceiver for receiving the EnOcean signal and transferring to the I/O nodes.
SRE repeater ext. ant.	2852-7102	EnOcean repeater for extending the range of EnOcean telegrams.
2-chanel EnOcean light switch	789-940/001-000	EnOcean wireless switch with rocker
2-chanel EnOcean light switch	789-940/003-000	EnOcean wireless switch with two rockers
SD card	758-879/000-001	SD memory card, 2 GB
WAGO communication cable	750-923	The USB communication cable is used to connect the engineering software with WAGO Lighting Management.

2.2. Supported browsers

The following browsers have been successfully tested with WAGO Lighting Management:

- Google Chrome Version 56.0
- Mozilla Firefox Version 51.0
- Microsoft Edge Version 38

Note

Web Visualization

Only one browser (client) at a time can access WAGO Lighting Management web visualization.

Example: Simultaneous display in a desktop browser and a display device is not possible.

Note

Other browsers

Although other browsers may also be used, we cannot rule out that the system may experience limited functions with these other browsers.

Note

Use of devices from the *e!DISPLAY* portfolio

One of the desktop browsers described above and a display device with the necessary resolution and screen size is required to properly use all of the Lighting Management functions. Devices from the ***e!DISPLAY*** portfolio are therefore unfortunately NOT supported.

3. Installation

Check the firmware installed on the application controller before installing the software.

Note

Check the firmware

WAGO Lighting Management V1.0.0.x requires firmware version 02.06.20(09). Indication of the firmware version is described in the Section Installation > Install software. Please contact Technical Support if a different firmware version is installed. **Do not begin installing WAGO Lighting Management until the proper firmware has been installed!**

Technical Support

Phone: +49 (0) 571 8 87 - 5 55

Fax: +49 (0) 571 8 87 - 85 55

E-mail support@wago.com

Note

Important note!

For trouble-free operation, the steps must be performed completely and in the right order!

3.1. Download the software

After registering at www.wago.com/applicationcontroller you will receive an e-mail with the download link to the WAGO Lighting Management installation files.
The files for WAGO Lighting Management required for installation are downloaded as a ZIP archive. The files contained in the archive are to be unzipped to a folder specially created on the local hard disk of the computer.

After extracting the files, the folder created contains the following files:

File Name	Category	Description
`sd_card_install.zip`	Software	Complete WAGO Lighting Management with firmware and online documentation
`firmware_backup_codesys.tgz`	Software	WAGO Lighting Management
`firmware_backup_settings`	Settings	Application controller settings
`online_help_de.ipk`	Documentation	Online documentation in the national language (de = German).
`online_help_en.ipk`	Documentation	Online documentation in the national language (en = English).

These files must be selected later.

3.2. Setting IP Addresses

For a PC and the application controller to communicate with each other via ETHERNET, the IP addresses must be adapted to each other.

Figure: Connect PC and Application Controller via ETHERNET Network

If there is a DHCP server that is configured accordingly, the IP addresses are automatically assigned, eliminating the need to manually configure the IP addresses. Otherwise, the IP addresses of the PC and application controller must be selected as described in the following sections such that both devices are in the same subnet.

Example:
If the IP address of the PC is `192.168.1.2` (see also Setting the IP Address of the PC), then the application controller must be in the same subnet so that it can be accessed from the PC. For example, the first three digits of a subnet mask of `255.255.255.0` used by the PC must match those of the application controller. This results in a possible address range for the application controller of `192.168.1.3` to `192.168.1.254`.

3.2.1. Setting the IP Address of the PC

The following help only applies to specific Microsoft operating systems. If you are running a different operating system, please refer to the corresponding user manual.

1. Perform the following steps:
   - In Windows 10, enter **View network connections** in the search box and then select **View network connections** at the top of the list.
   - In Windows 7 or Windows 8.1, press the **Start** button, enter **View network connections** and select **View network connections** in the list.
2. Right-click the connection to be changed and select **Properties**. If prompted, enter the administrator password or click to confirm.
3. Select the **Network** tab. Under **This connection uses the following items**, select **Internet Protocol Version 4 (TCP/IPv4)** and then click **Properties**.
4. To specify the IPv4 IP address, select **Use the following IP address** and then enter the required IP address settings in **IP address**, **Subnet mask** and **Default Gateway**.

Note

Important note!
Administrative privileges are required to change the IP address of the PC.

3.2.2. Setting the IP Address of the Application Controller

To goal is to allow the PC to communication with the application controller via an ETHERNET network. Both devices must be in the same subnet. Before a corresponding static IP address can be assigned to the application controller via the integrated Web-Based Management (WBM), it must first be accessible. Where necessary, a temporary IP address can be assigned – after correctly Setting the IP Address of the PC – to access it. Assigning a temporary IP address and/or static IP address to the application controller are explained below.

3.2.2.1. Setting an IP Address (temporary)

If no (known and/or accessible) IP address is set for the application controller, this procedure temporarily sets the IP address for the X1 interface of the application controller to the fixed address “192.168.1.17”. When the switch is enabled, the fixed address is also used for interface X2.
To make this setting, set the mode selector switch to STOP and press and hold the Reset button (RST) for longer than eight seconds. When the “SYS” LED begins flashing in orange, the setting has been made.
To cancel this setting, perform a software reset or switch off the controller and then switch it back on.

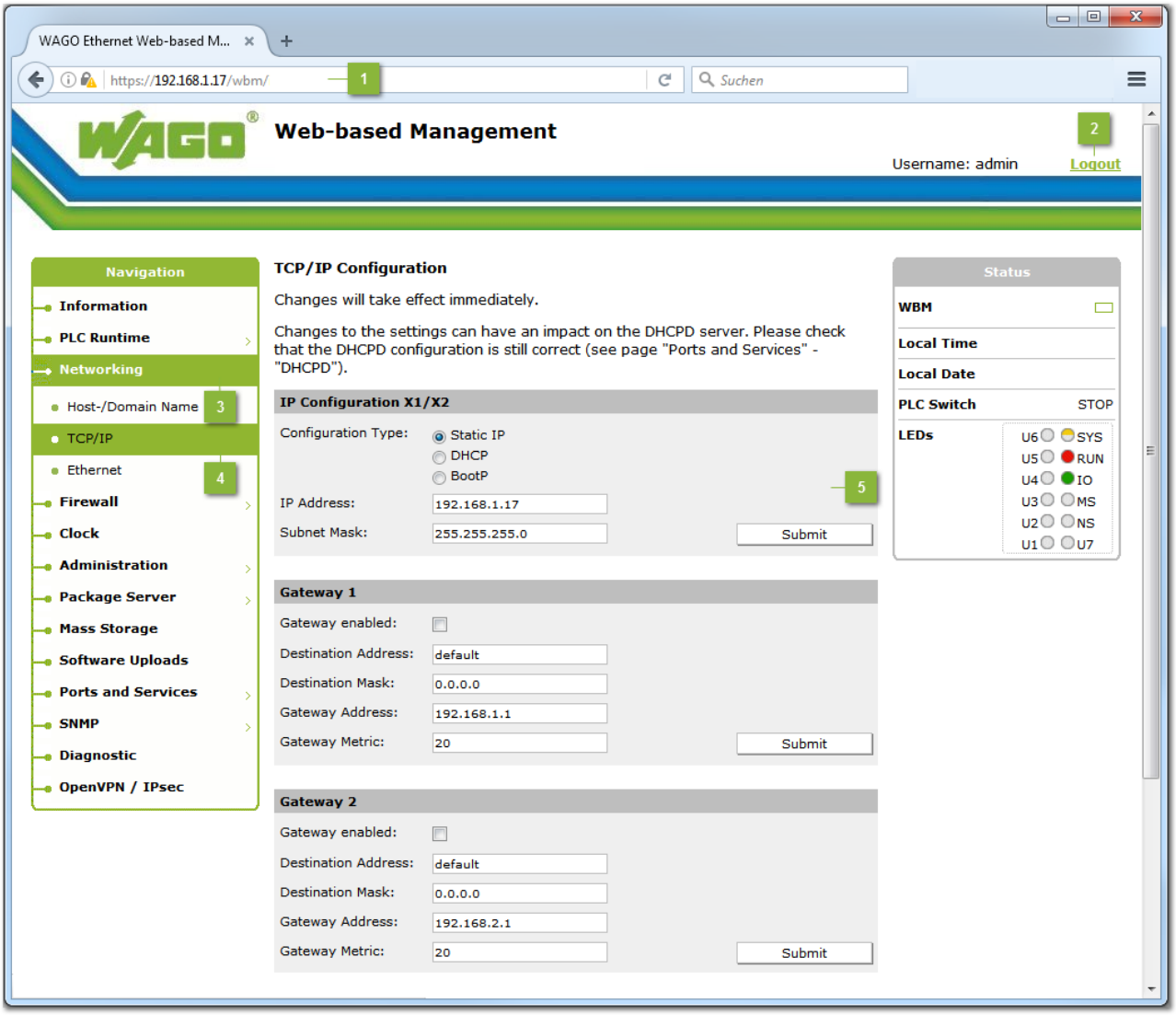
Information

Advanced setting options for the application controller IP address

To ensure that your PC can communicate with the controller via the ETHERNET network, both devices must be located in the same subnet (see also Setting the IP Address of the PC). To permanently adapt the application controller IP address to an existing system structure, follow the instructions given under Setting the IP address (static).
Detailed descriptions and alternative ways of setting a static IP address are given in the User's Manual for the application controller 750-8202/000-012; the manual is available on our website at http://www.wago.com.

3.2.2.2. Setting the IP address (static)

Call up the application controller Web-Based Management (WBM) to assign a static IP address. You can set a static IP address for the application controller using the menu item **Networking** contained in the WBM.



The following steps are required for this:

1 Call-up address for WBM

Call up Web-Based Management (WBM) by entering the following URL in your browser: “**https://<Controller-IP>/wbm**” (here: **https://192.168.1.17/wbm**).

A security message is first displayed. You must agree to bypass the security message to open WBM.

2 Login/Logout

The log-in dialog window is opened when you click on the **Login** link.

User (User name)	Rights	Default password
admin	All (Administrator)	wago
user	Supported to a limited extent:	user
guest	display only	

Log in as the user "**admin**" and confirm this by clicking **[Submit].** When log-in is successful "**Username: admin**" is displayed in the header and the link changes from **Login** to **Logout**. If you have not yet changed the password, the following message will appear: "Security message: please change your password!".

Note

Change passwords
The default passwords are documented in these instructions and thus do not offer adequate protection. Change the passwords to meet your particular needs! If you do not change these passwords, a warning will appear each time you call up a website after logging in.

3 Networking

After successfully logging in, select the **Networking** item in the navigation bar.

4 TCP/IP

Then select **TCP/IP** in the submenu.

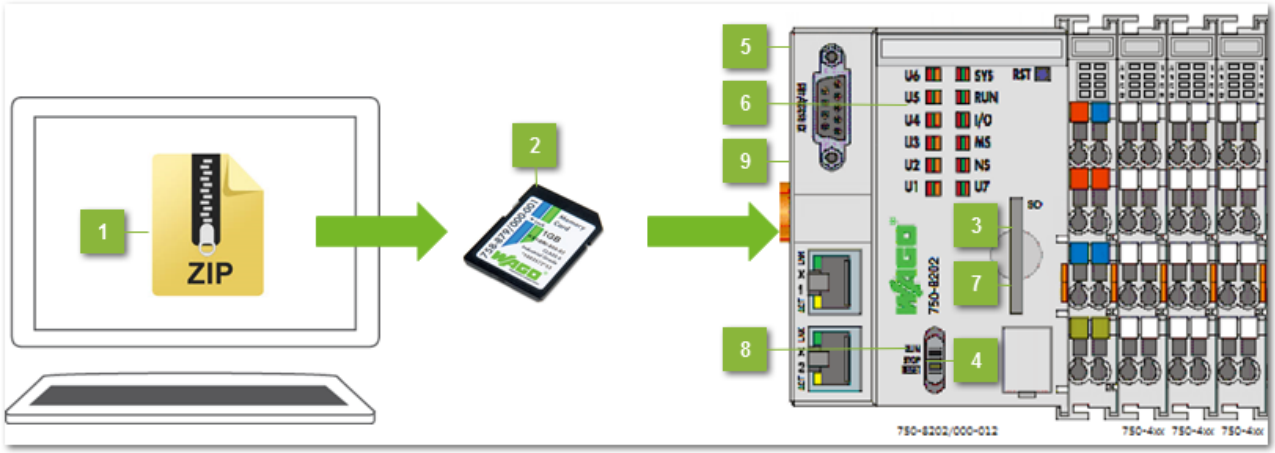
5 TCP/IP settings

1. Under **Configuration Type** select the item **Static IP**.
2. Under **IP address** set the required IP address.
3. Under **Subnet Mask** set the required subnet mask.
4. Click the **[Submit]** button to apply the changes.

3.3. Software Installation via SD Card (Recommended)

Software installation via SD card can be used for both an initial installation and an update.

Before the software is installed, the system checks whether WAGO lighting management is already installed, and if so, the existing settings are copied to the SD card.
After the installation, the saved settings are automated copied from the SD card back to the device.



1 Select zip file

Unzip the zip file downloaded from the WAGO homepage and select the `sd_card_install.zip` file.

2 Unzip ZIP file on SD card

Unzip the zip file `sd_card_install.zip` in the main directory of the WAGO SD card (758-879/000-001).

3 Insert SD card

Insert the SD card into the memory card slot of the PFC.

4 Stop software

Set the operating mode switch to the “STOP” position.

5 Reboot PFC

Reboot the PFC by briefly disconnecting the power supply to the device.

6 Software installation

After the reboot, the LED display indicates the progress of the installation.
Once all the LEDs light up green, the installation is complete.

7 Remove SD card

Remove the SD card from the memory card slot.

8 Start software

Set the operating mode switch to the “RUN” position.

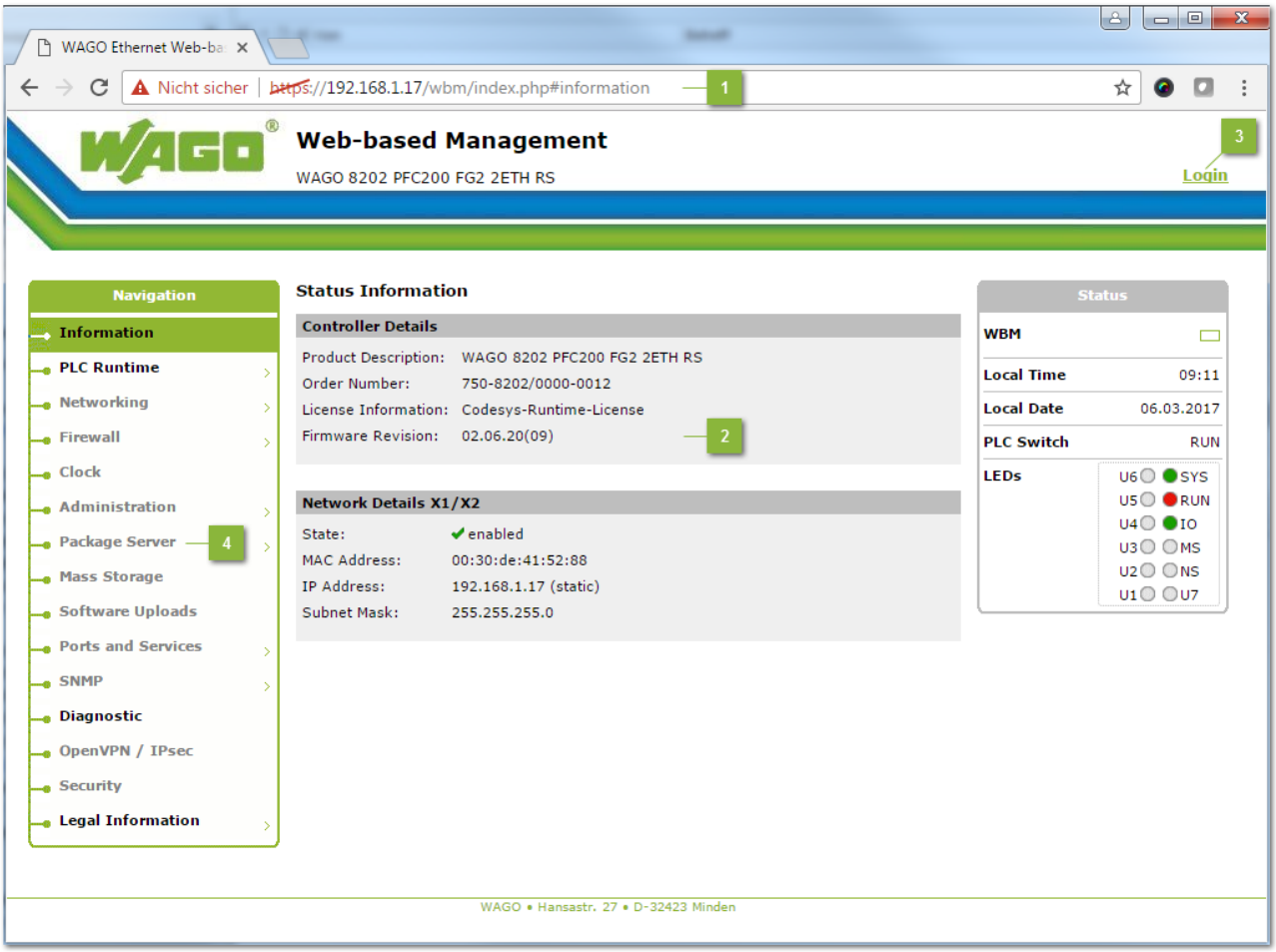
9 Reboot PFC

Reboot the PFC. The software is installed on the device after the reboot.

Note

Important note!
If the installation routine detects that changes to the device parameters are necessary, another reboot is performed after the PFC starts up.

3.4. Software Installation via network (Alternative)



1 Call-up address for WBM

Call up Web-Based Management (WBM) by entering the following URL in your browser: "**https://<Controller-IP>/wbm**" (here: **https://192.168.1.17/wbm**).

A security message is first displayed. You must agree to bypass the security message to open WBM.

2 Check the firmware

Note

Important note!

Before you begin installing WAGO Lighting Management V1.0.0.x, check to ensure that firmware version 02.06.20(09) is installed. Contact support@wago.com if a different firmware version is installed. **Do not begin installing WAGO Lighting Management until the proper firmware has been installed!**

3 Login

The log-in dialog window is opened when you click on the **Login** link.

User (User name)	Rights	Default password
admin	All (Administrator)	wago
user	Supported to a limited extent:	user
guest	display only	

Log in as the user "**admin**" and confirm this by clicking [**Submit**]. When log-in is successful **Username: admin** is displayed in the header and the link changes from **Login** to **Logout**. If you have not yet changed the password, the following message will appear: "Security message: please change your password!".

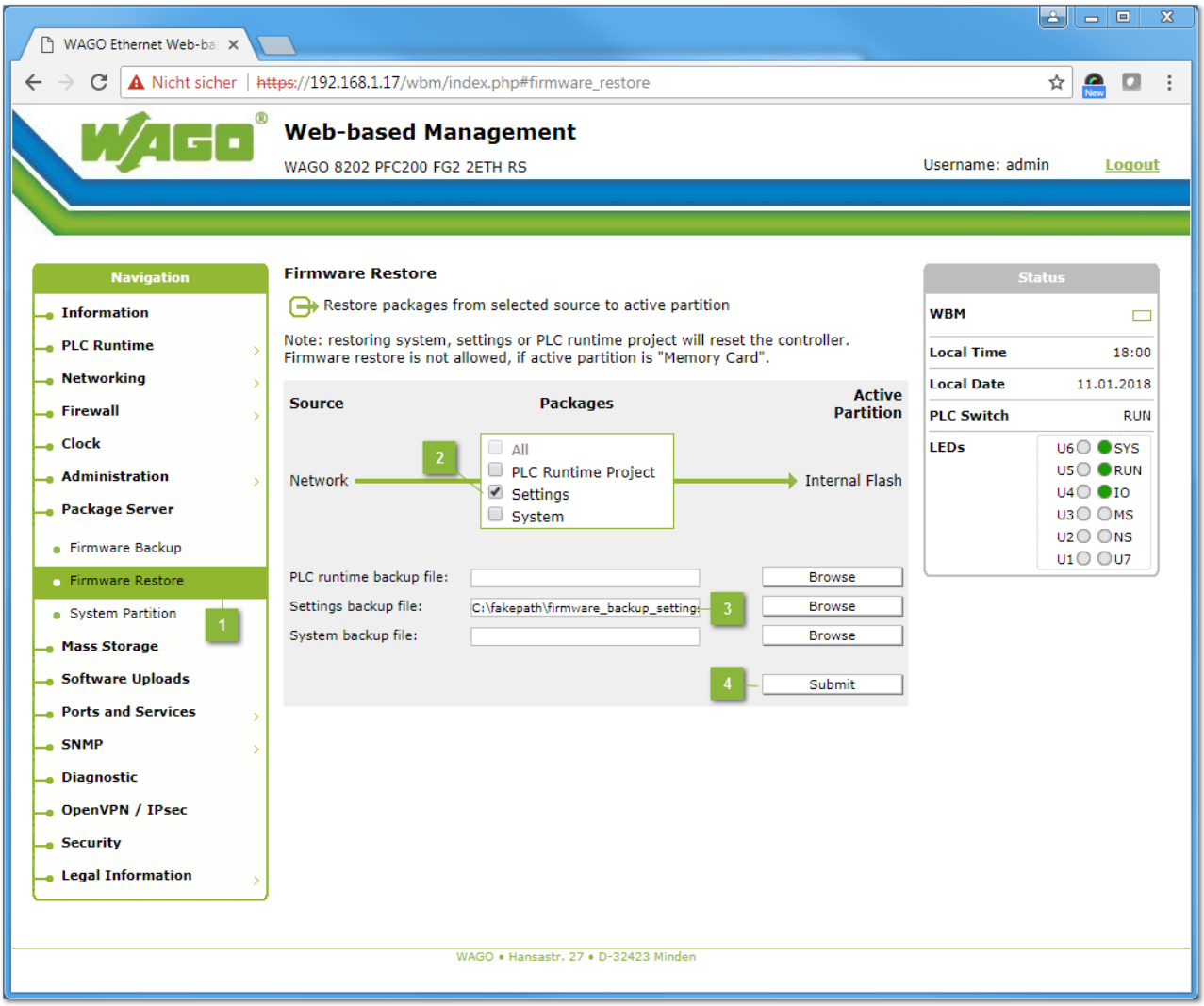
Note

Change passwords
The default passwords are documented in these instructions and thus do not offer adequate protection. Change the passwords to meet your particular needs! If you do not change these passwords, a warning will appear each time you call up a website after logging in.

4 Package Server

After successfully logging in, select the **Package server** item in the navigation bar.

3.4.1. Install settings



1 Firmware Restore

In the submenu under **Package server** select **Firmware restore**.

2 Settings

The check-box for the package **Settings** must be marked to obtain the required settings for the application controller on initial installation.

3 Settings backup file

Click the button **[Browse]** to select the storage location for the unpacked file `firmware_backup_settings`.

4 Submit

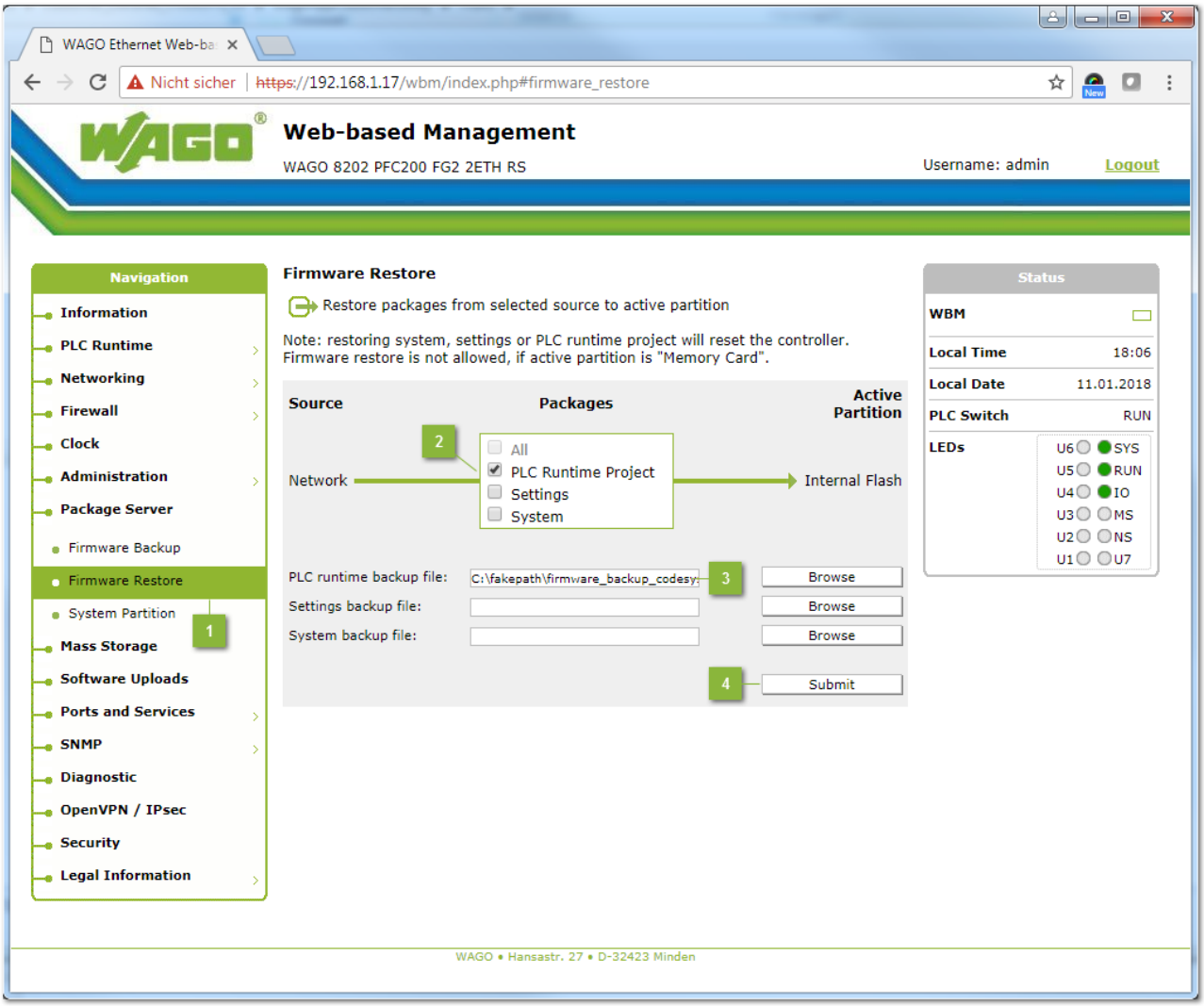
Clicking the button **[Submit]** then initiates installation of the required settings to the WAGO Lighting Management controller.

Note

Important note!
While the settings are being installed the running application is halted and the application controller restarted. A connection problem may be displayed in the browser while installation is in progress.

Installation is completed when the log-in dialog window is displayed again in Web-Based Management (WBM). The software can be installed after the settings have been installed.

3.4.2. Installing the software



1 Firmware Restore

In the submenu under **Package server** select **Firmware restore.**

2 PLC runtime project

The check-box for the **PLC runtime project** package must be marked to install the software.

3 PLC runtime backup file

Click the button **[Browse]** to select the storage location for the unpacked file `firmware_backup_codesys.tgz`.

4 Submit

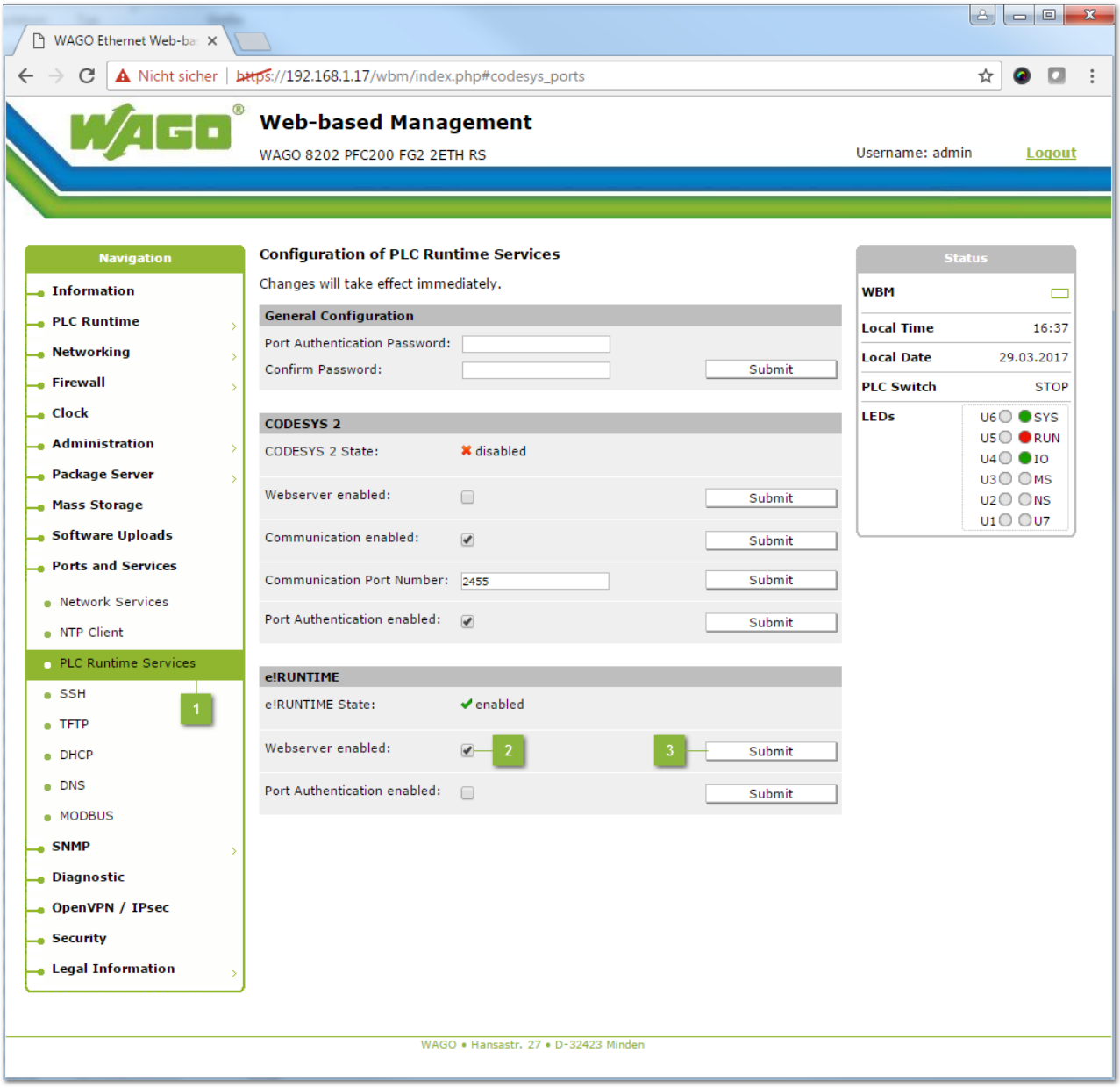
Start installation of the software by clicking on **[Submit]**.

Installation is completed when the dialog *"Restore firmware package(s)..."* disappears. The webserver can be activated after the software have been installed.

Note

Start the program.
The factory setting for the operating mode switch is “STOP”. Set the mode selector to “RUN” to start the WAGO Lighting Management system.

3.4.3. Enable the web server



1 PLC runtime services

In the submenu under **Ports and Services** select **PLC Runtime Services.**

2 Web server enabled

In the field **e!RUNTIME** the check-box for **Webserver enabled** must be marked to release the web server.

3 Submit

Clicking the button **[Submit]** enables the web server.

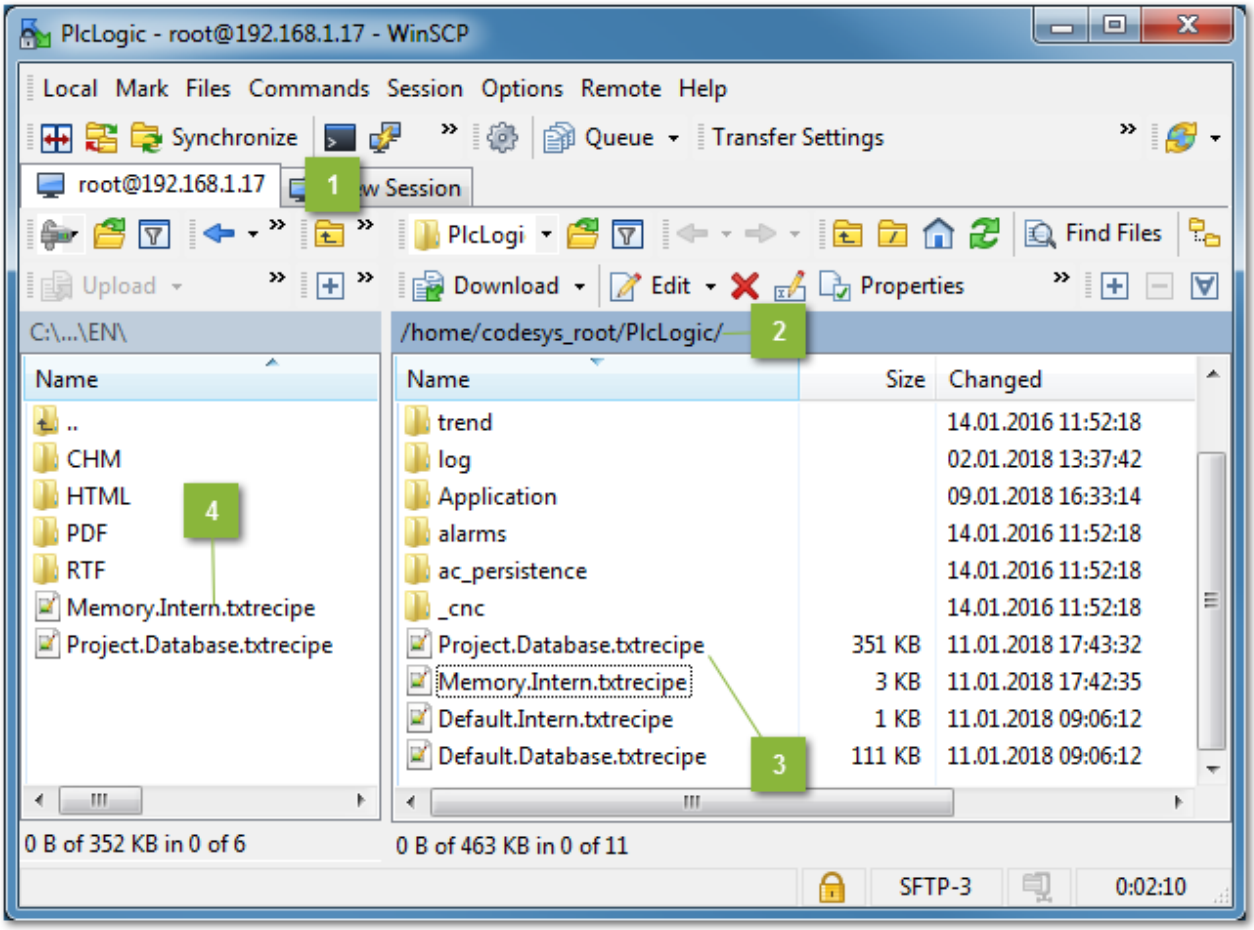
WAGO Lighting Management can now be called up in your browser using the following link: "**https://<Controller-IP>/webvisu/webvisu.htm**" (hier: https://192.168.1.17/webvisu/webvisu.htm).

3.4.4. Software update

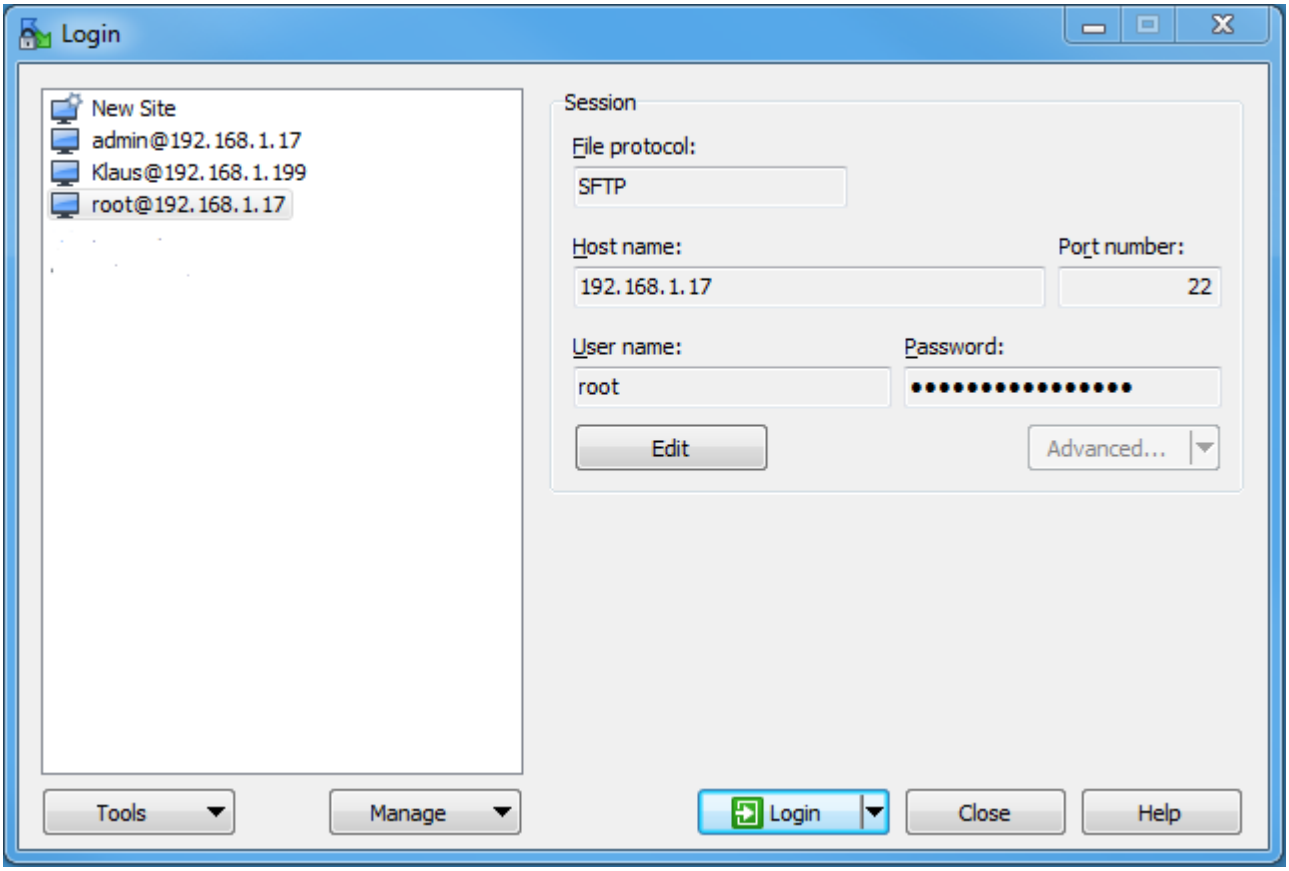
You should always back up your existing project settings before installing an update.

Note

Important note!
All existing settings are cleared when the update is installed.



1 Setting up a connection



Project files can be backed up to your computer using an FTP program (e.g., WinSCP). The SFTP protocol is enabled as the default setting for the application controller.

User	Rights	Home Directory	Default Password
admin	CODESYS user	/home/admin	wago
root	Super user	/root	wago
user	Normal user	/home/user	user

Configure an SFTP connection as **admin** in your FTP program.

Note

Change passwords
The default passwords are documented in these instructions and thus do not offer adequate protection. Change the passwords to meet your particular needs!

2 Directory

Using your FTP program select the directory `/home/codesys_root/PLCLogic`.

3 Project files

Save the project files `Memory.Intern.txtrecipe` and `Projekt.Database.txtrecipe` to your computer.

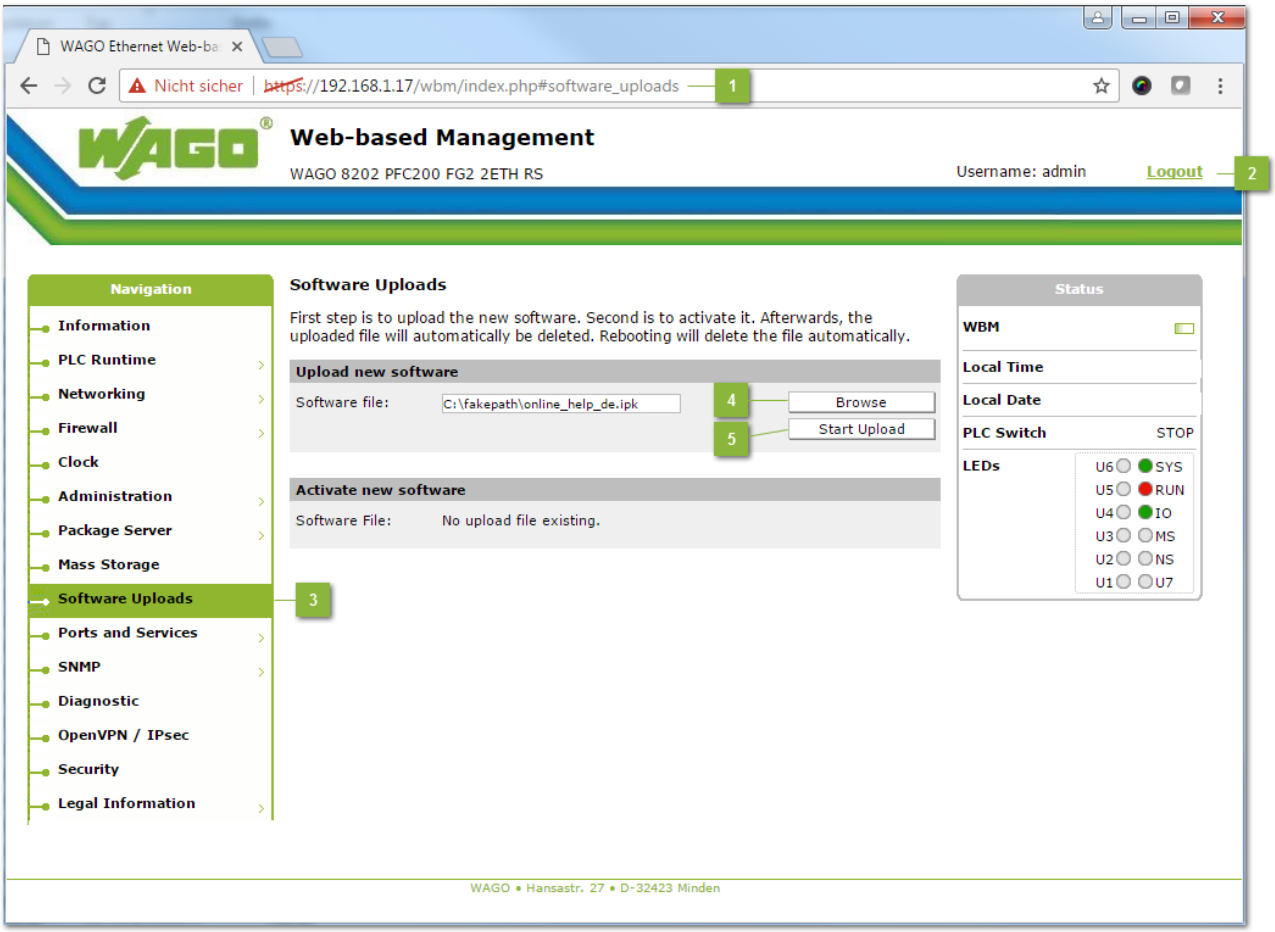
4 Restore project settings

You can start the software update after you have saved your project settings to your computer.

1. Follow the steps given in Section Installation > Install software > Installing the software.
2. After installation replace project files `Memory.Intern.txtrecipe` and `Projekt.Database.txtrecipe` from the application controller file system with the project files stored on your computer.
3. Load the current settings as described in Section Software > File > File management > Local.

3.4.5. Install online documentation

Call up the application controller Web-Based Management (WBM) to install the online documentation. The online documentation is installed via the function “Software uploads”.



1 Call-up address for WBM

Call up Web-Based Management (WBM) by entering the following URL in your browser: “**https://<Controller-IP>/wbm**” (here: https://192.168.1.17/wbm).

A security message is first displayed. You must agree to bypass the security message to open WBM.

2 Login/Logout

A description for Login is given in the Section Installation > Install software > Login.

3 Software Uploads

After successfully logging in, select the **Software uploads** item in the navigation bar.

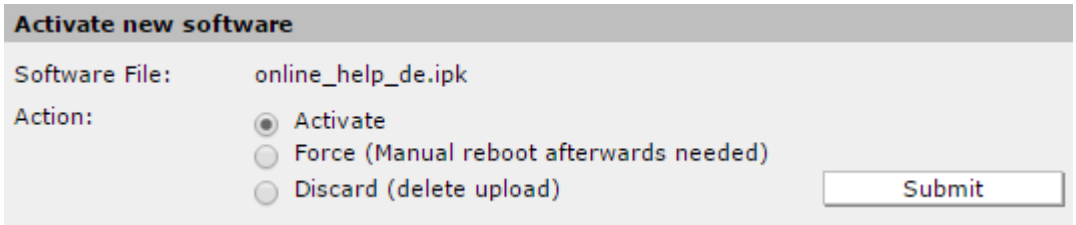
4 Software File

File download is described in the Section Installation > Download the software.

Click the button **[Browse]** to select the storage location for the unpacked file `OnlineDoku_LightManagement_en.ipk`.

5 Start Upload

1. Start installation of the online documentation by clicking on **[Start upload]**.
2. Uploading of the installation file then begins. This is signaled by the message *“Upload software...”* being displayed.
3. When this *“Upload software...”* message disappears, transfer of the software has been completed.
4. The installation file must be activated after it has been uploaded.

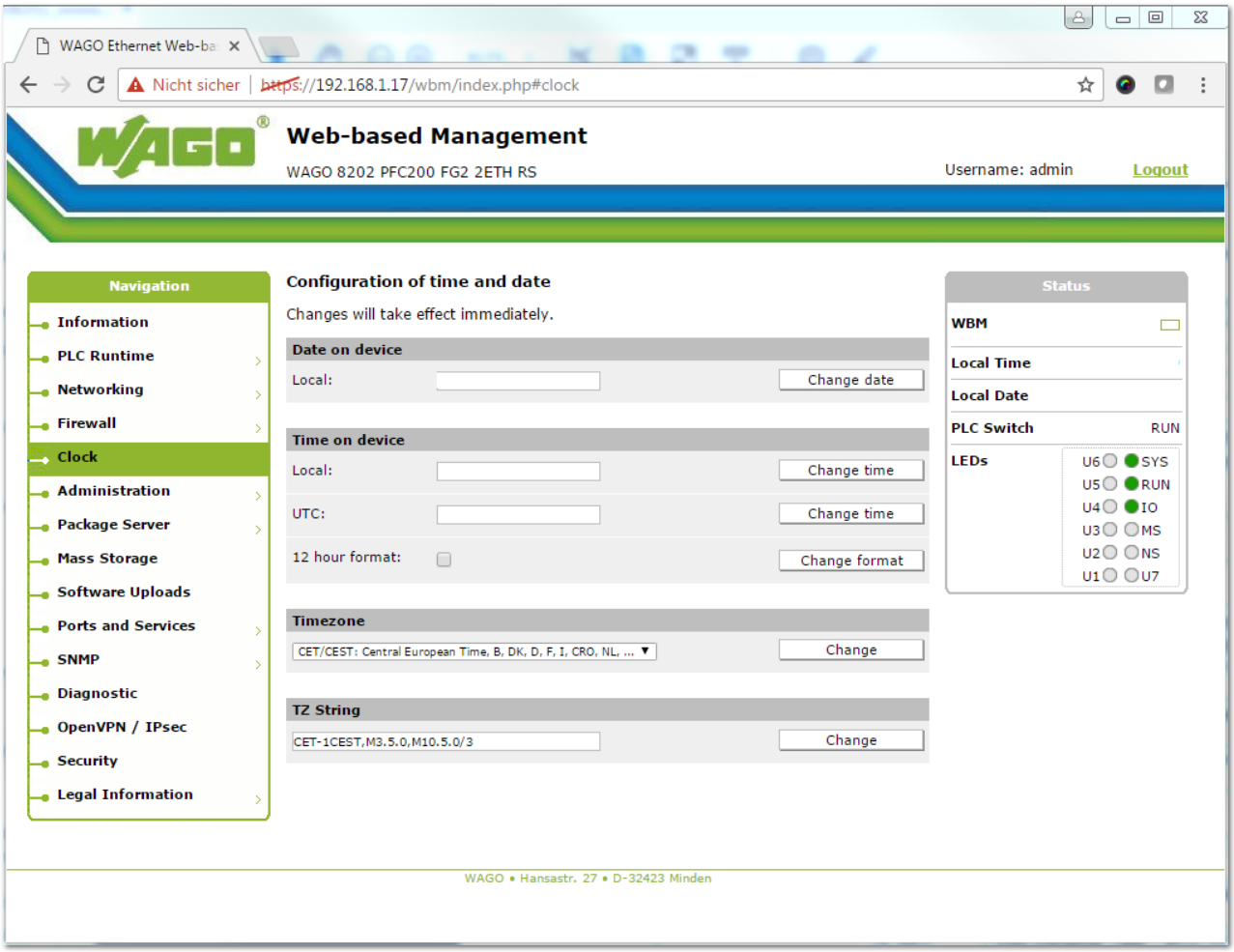


   Select **Activate** and activate the file by clicking the button **[Submit]**.
5. When this “Activating new software...” message disappears, activation of the software has been completed. The online documentation is successful installed.

Note

Timeout
If the PLC is not in "STOP", the message *"Error while activating new software."* can be displayed. In this case the activation of the software exceeds the time-limit, but is installed successfully.

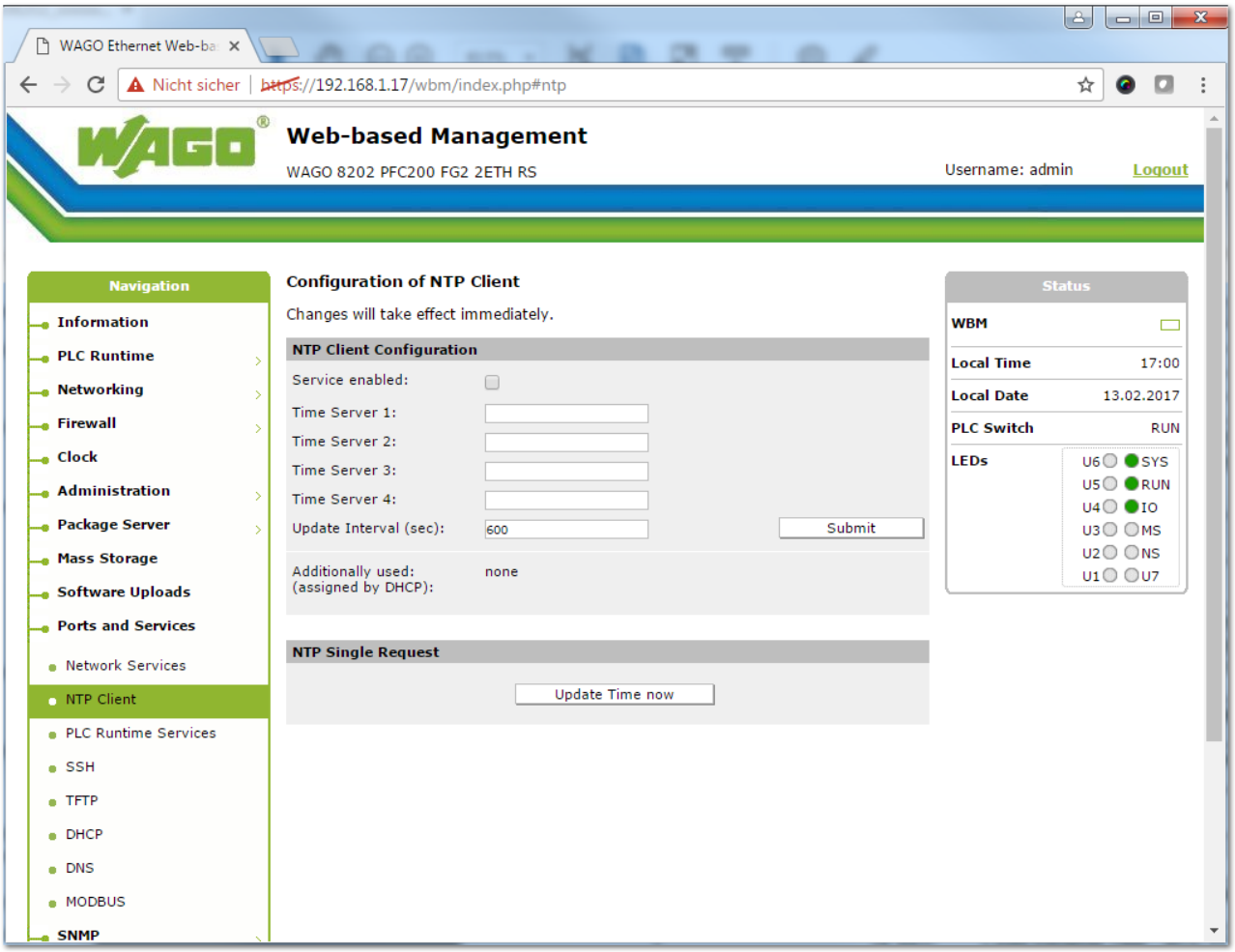
3.5. Setting the Date and Time



The date and time can be set in the Web-based management system of the application controller under the **Clock** tab in the navigation bar. These settings are described in detail in the application controller manual.
We recommend synchronizing the time at regular intervals, as the system clock tends to drift. WAGO Lighting Management offers two options for this:

1. Synchronization of the system clock via an NTP server
2. Synchronization of the system clock using the GPS signal

3.5.1. Synchronization via NTP Server



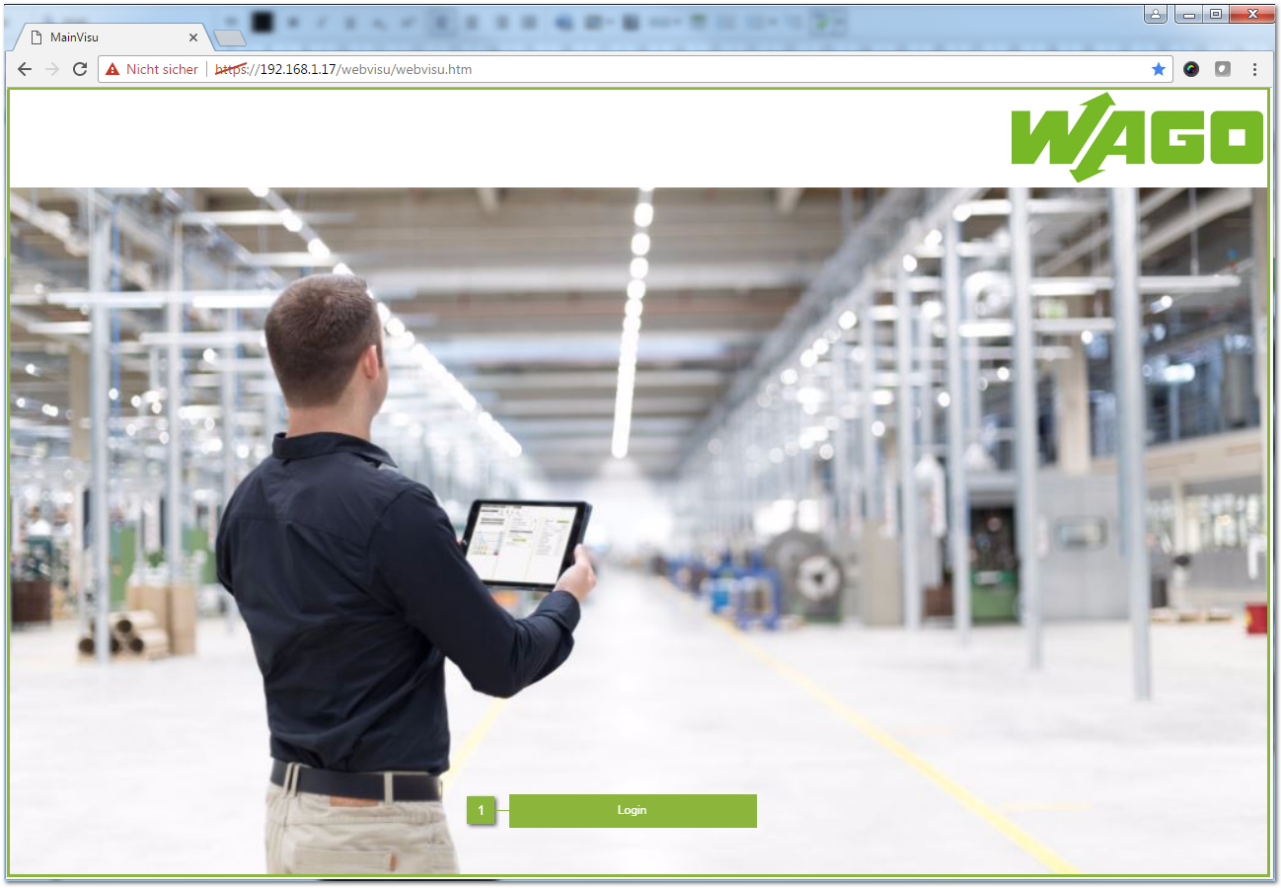
NTP clients can be set in the Web-based management system of the application controller under **Ports and Services > NTC Client** in the navigation bar.
These settings are described in detail in the application controller manual.

3.5.2. Synchronization via GPS

Synchronization of the time using GPS requires an RTC module (750-640) and a GPS/DCF converter. WAGO Lighting Management automatically detects whether an RTC module (750-640) is connected to the application controller. The WAGO Lighting Management control system is synchronized as long as the RTC module time is synchronized with the GPS/DCF converter time. A clock synchronization error is displayed in the alarm banner under Inputs > Timer program.
The wiring diagram is given in Appendix > Wiring diagram >GPS-DCF converter.

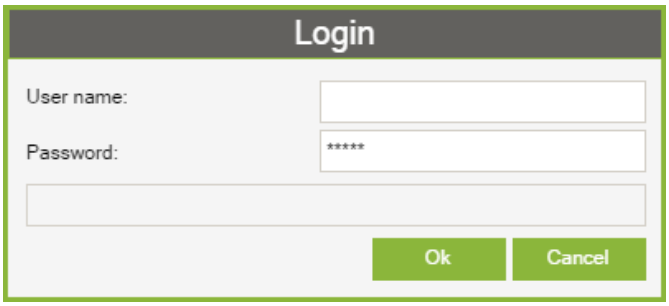
4. Software

WAGO Lighting Management can now be called up in your browser using the following link: "**https://<Controller-IP>/webvisu/webvisu.htm**" (Here: **https://192.168.1.17/webvisu/webvisu.htm**).



1 Login

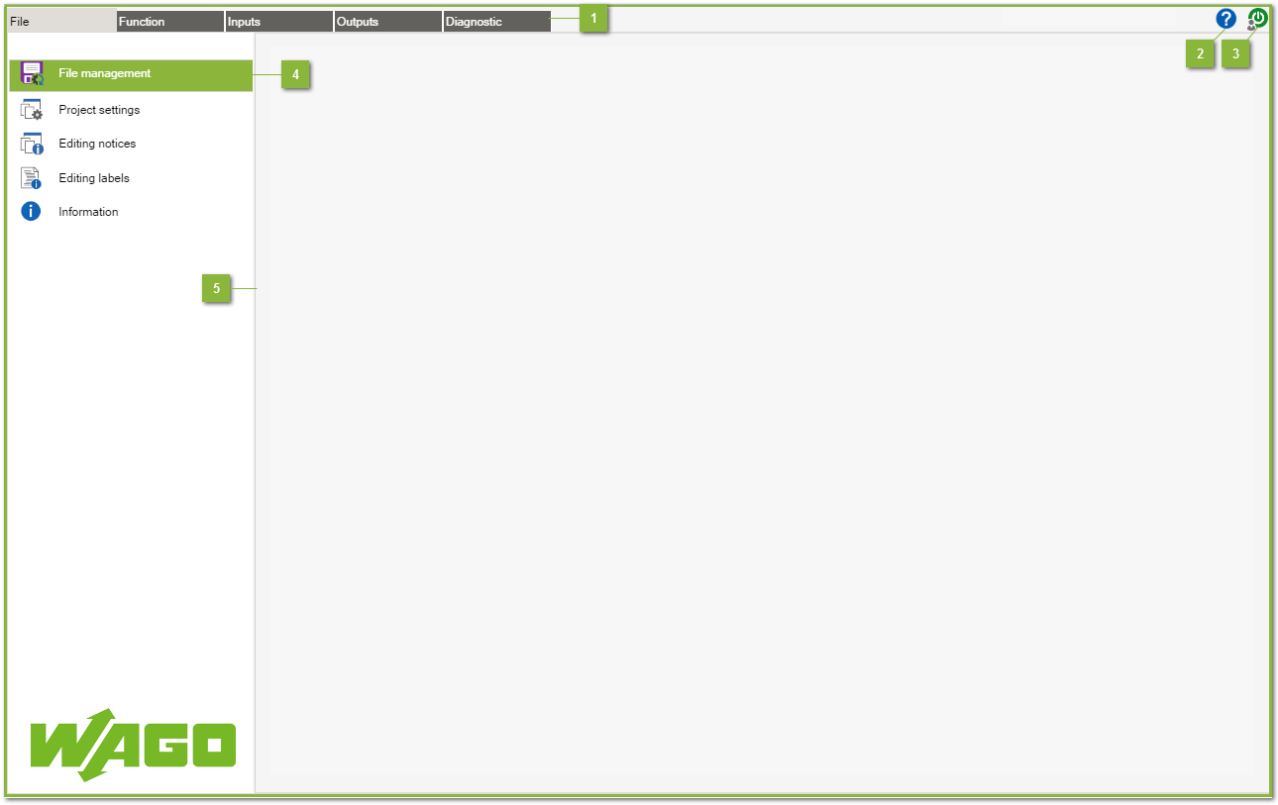
Click on **[Login]** to open the **Login** dialog window.



Log in with your user name and password. Click on **[Ok]** to open the **Function** main view. If your user name or password is not correct, this dialog window will remain open.

User Name	Rights	Default Password
admin	All (Administrator)	wago
user	restricted (Project settings and Delete blocked)	user
guest	display only	guest

4.1. File (Backstage)



1 Main Menu

The **File** (Backstage view) main view is shown on the left in the menu ribbon.
The Backstage view differs from the other main views in that the tabs are arranged on the left side.

2 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

3 Logout

Click the **[Logout]** button to sign out of the system.

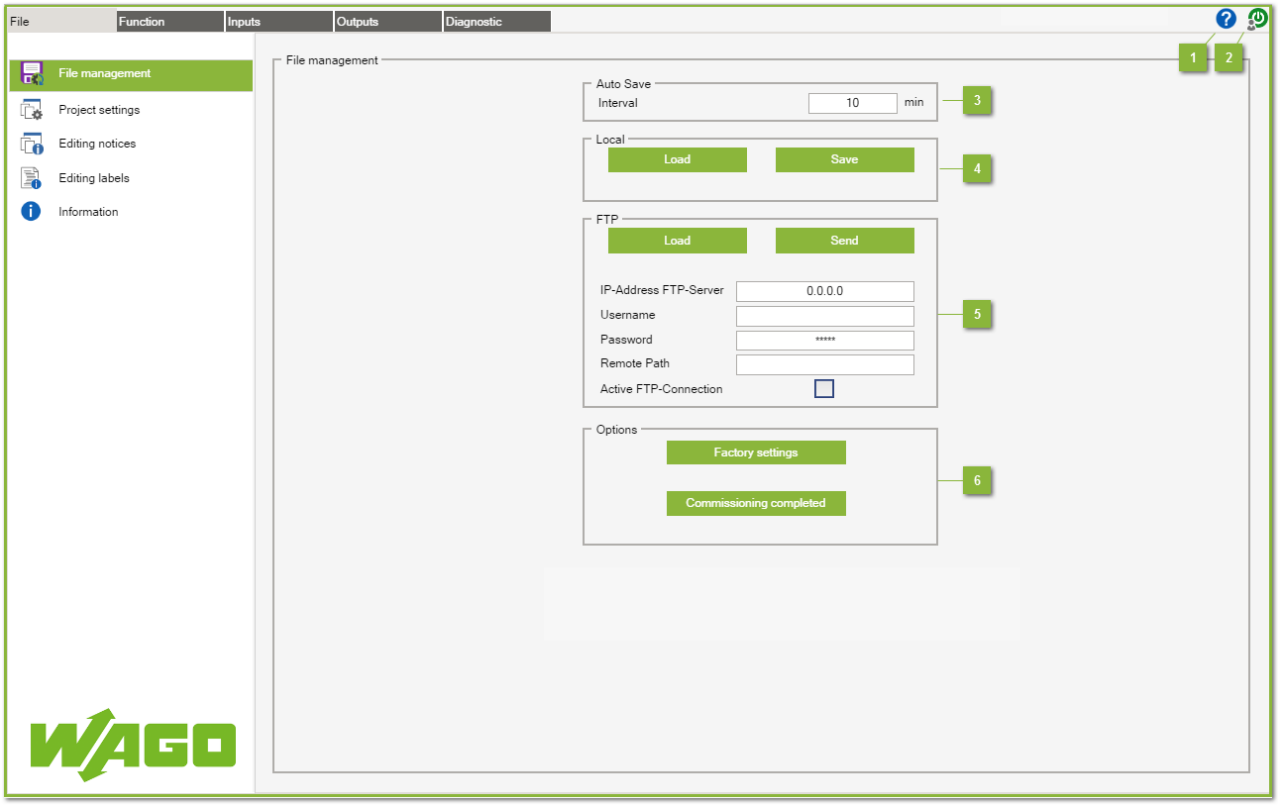
4 Tab

Switching between views (screens) is done by clicking on the corresponding tab.

5 Content

Displays the content of the selected tab.

4.1.1. File Management



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

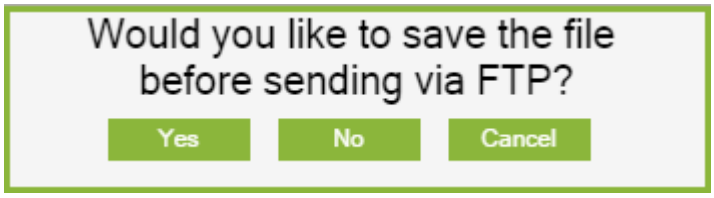
3 Auto Save

Designation	Description
Interval	Set the interval for automatic save; the current settings are saved at set intervals as long as a user is logged in to the system. The settings are saved a last time when the user logs out. **Information** **Deactivating this function** Setting an interval of zero deactivates the AutoSave function.

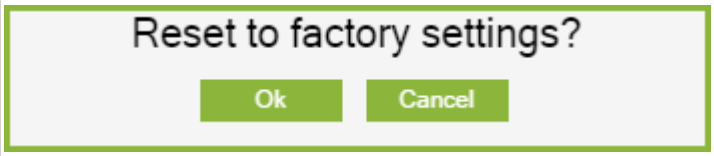
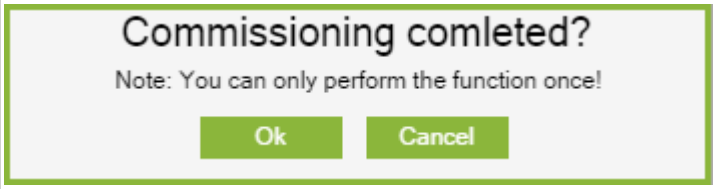
4 Local

Designation	Description
Load	Click on the **[Load]** button to load the project settings from the WAGO Lighting Management internal storage.
Save	Click on the **[Save]** button to save the project settings to the WAGO Lighting Management internal storage.

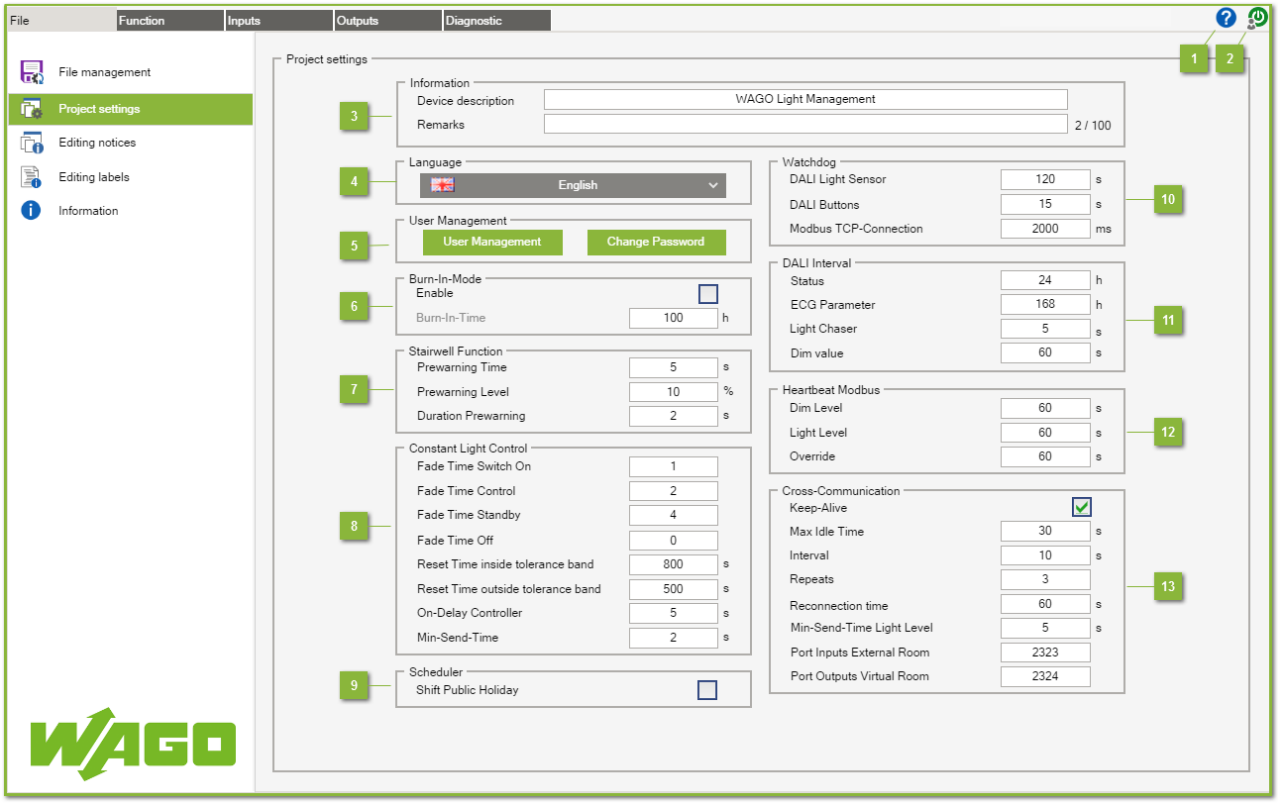
5 FTP

Designation	Description
Load	Click on the **[Load]** button here to load project settings from an FTP server.
Send	Click on [**Send**] to open the following dialog window:  Click the button • **[Yes]** to save the current project settings to the internal storage and then send the project settings via FTP. • **[No]** to send the project settings directly from the internal storage via FTP. • **[Cancel]** to cancel the process.
IP-Address FTP-Server	IP address of the FTP server; the IP address is entered in the format '0.0.0.0' .
Username	User name for logging in to the FTP server
Password	Password for logging in to the FTP server
Remote Path	Target directory on the FTP server; the path is created automatically on the FTP server when the project settings are sent. **Note** **Directory name** There may be no backslash (\) at the end of the directory name.
Active FTP-Connection	An active FTP connection is set up when the check-box is marked. If the check-box is not marked, a passive FTP connection is set up.

6 Options

Designation	Description
Factory setting	Click on [**Default**] to open the following dialog window:  Clicking on the • **[Ok]** button resets all of the settings stored in WAGO Lighting Management to the factory default values. • **[Cancel]** to cancel the process. **Note** **Not all settings are reset** This function only resets internal settings and NOT the settings for devices connected to the system.
Commissioning completed	Click on [**Commissioning completed**] to open the following dialog window:  Click the button • **[Ok]** to save the settings made on system acceptance <u>one time</u> to the internal memory of WAGO Lighting Management. • **[Cancel]** to cancel the process.

4.1.2. Project settings



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

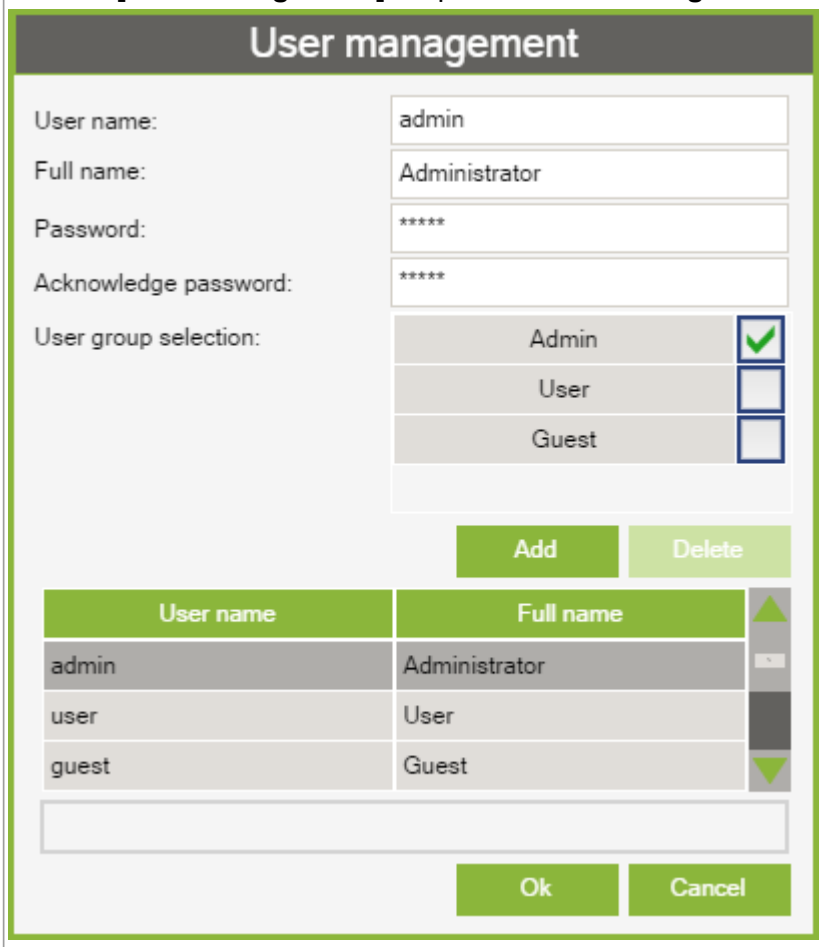
3 Information

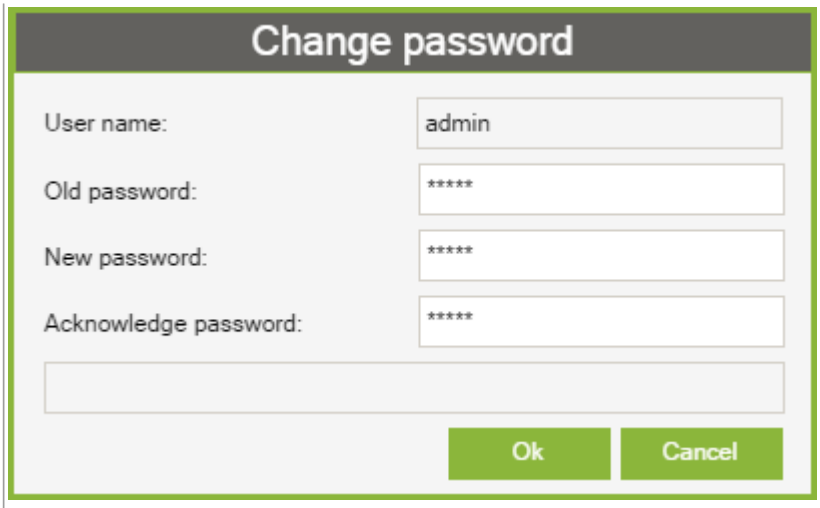
Designation	Description
Device description	80-character input field for the distribution list name
Remarks	100-character input field for notes

4 Language

Designation	Default	Description
Language	en	Language setting for the user interface

5 User Administration

Designation	Description
User Management	Click on **[User Management]** to open the **User management** dialog window.  A user is generated using a **user name**, **full name**, **user group selection** and a valid **password**. Security demands require that the password be confirmed. Click the button • **[Add]** to create a new user in the table. • **[Delete]** to remove the marked user from the table. • **[Ok]** to apply the settings in user management. • **[Cancel]** to cancel the process. **User group** / **Description** Admin: Admin can perform any settings User: The user is permitted to make all settings, but may not change project settings or remove devices. Nor may the user initiate re-addressing of the DALI devices. Guest: A guest may only view the pages.
Change password	Clicking on **[Change Password]** opens a dialog window in which the password can be changed.



You must enter the old and the new passwords in this window. Security demands require that the password be confirmed.
Click the button

- **[Ok]** to change the password and close the dialog window. If an error is made inputting the password, the dialog window will remain open with the corresponding error message.
- **[Cancel]** to cancel the process.

6 Burn-In-Mode

Designation	Default	Range	Description
Enable	Inactive		When this check-box is marked, the burn-in function ensures that fluorescent lamps whose operating time is less than the **Burn-In-Time** are not dimmed. **Note** **Response to localization** The light remains switched on when the burn-in function is active while locating of the DALI ECG is in progress. **Note** **Constant light control** As soon as the burn-in function is active for a light in a virtual room, the function **Switch-Off Delay at Min. Dim Level** is deactivated.
Burn-In-Time	100	> 1	Duration of burn-in function

7 Stairwell Function

Designation	Default	Range	Description
Prewarning Time	5	> 1	Time of switch-off pre-warning before switching off
Prewarning Level	10	0…100	Dimming value of the switch-off pre-warning [%]
Duration Prewarning	2	> 1	Duration of switch-off pre-warning [s]

8 Constant Light Control

Designation	Default	Range	Description
Fade Time Switch-On	1	0…15	Transition time, when the light is turned on
Fade Time Control	2	0…15	Transition time during regulating process
Fade Time Standby	4	0…15	Transition time, when the controller goes into stand-by mode
Fade Time Off	0	0…15	Transition time, when the light is switched off.
Reset Time inside tolerance band	800		Reset time for small reference/actual value deviation [s]
Reset Time outside tolerance band	500		Reset time for large reference/actual value deviation [s]
On-Delay Controller	5	> 5	Switch-on delay of the controller after the lighting has been switched on
Min-Send-Time	2	> 1	Minimum interval between two set values on the DALI bus

9 Scheduler

Designation	Default	Range	Description
Shift Public Holiday	Inactive		When this check-box is marked, any holidays which occur on a weekend are shifted to the following Monday.

10 Watchdog

Designation	Default	Range	Description
DALI Light Sensor	120	> 60	Connection monitoring for DALI Multi-Sensors; if no event is received from the DALI light sensor within a set time period, the sensor value is deleted from the calculation (e.g., calculation of mean value). This function is deactivated when the value is set to zero.
DALI Buttons	15		Monitoring time for extended pressing of a key; if a key should “stick”, the long key stroke is terminated when the set monitoring time expires. This function is deactivated when the value is set to zero.
Modbus TCP-Connection	2000	> 100	Connection monitoring for MODBUS TCP connections; if no new telegram is received within the set time period, the connection is discontinued.

11 DALI interval

Designation	Default	Range	Description
Status	24		Interval for automatic reading of DALI status values [h]; this function is deactivated when the value is set to zero.
ECG Parameter	168		Interval for cyclic writing of all ECG parameter [h]; this function is deactivated when the value is set to zero.
Light Chaser	5	> 1	Switch-on time of the lights with chaser [s]
Dim value	60		Interval for cyclic sending of current dimming values [s]; this function is deactivated when the value is set to zero.

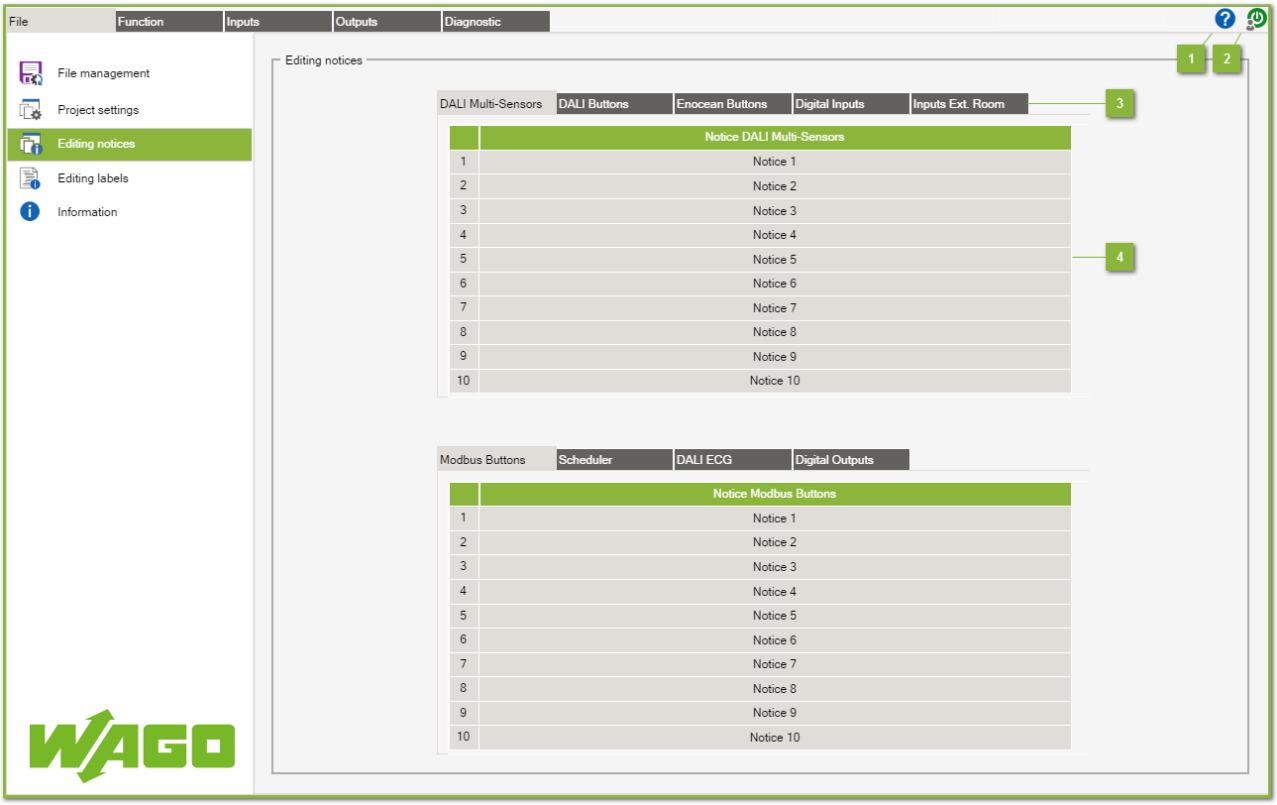
12 Heartbeat MODBUS

Designation	Default	Range	Description
Dim Level	60	> 1	Connection monitoring for the dimming value in a virtual room [s]; with the Slave function changeover is made to the fall-back option when no new MODBUS telegram is received within the set time period. In daylight regulation with extreme daylight values, the daylight value is set to 100% when no new MODBUS telegram is received within the set time period.
Light Level	60	> 1	Connection monitoring for the brightness value in the virtual room [s]. The last transmitted brightness value is deleted from the calculation (e.g., calculation of mean value) if no MODBUS telegram is received within the set time period.
Override	60	> 1	Connection monitoring for the timer program with an override function in the virtual room [s]. Overriding of the timer program is terminated if no MODBUS telegram is received within the set time period.

13 Cross-Communication

Designation	Default	Range	Description
Keep-Alive	Active		When this check-box is marked, the connection between WAGO Lighting Management controllers is monitored.
Max Idle time	30	> 1	Waiting period after sending a “standard” TCP telegram until a keep-alive telegram is transmitted [s]
Interval	10	> 1	Interval for transmitting of keep-alive telegrams, provided no “standard” TCP telegram is sent
Repeats	3		Number of keep-alive telegrams for which a reply is not received, until connection termination is detected
Reconnection time	60	> 1	Reconnection time after a connection termination has been detected [s]
Min. Send-Time Light Level	5	> 1	Minimum time interval between brightness values that is transmitted via cross communication
Port Inputs External Room	2323		ETHERNET port via which the current status of the inputs (e.g., buttons) is transmitted between WAGO Lighting Management controllers
Port Outputs External Room	2324		ETHERNET port via which the current status of the outputs (e.g., dimming value) is transmitted between WAGO Lighting Management controllers

4.1.3. Editing notices



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

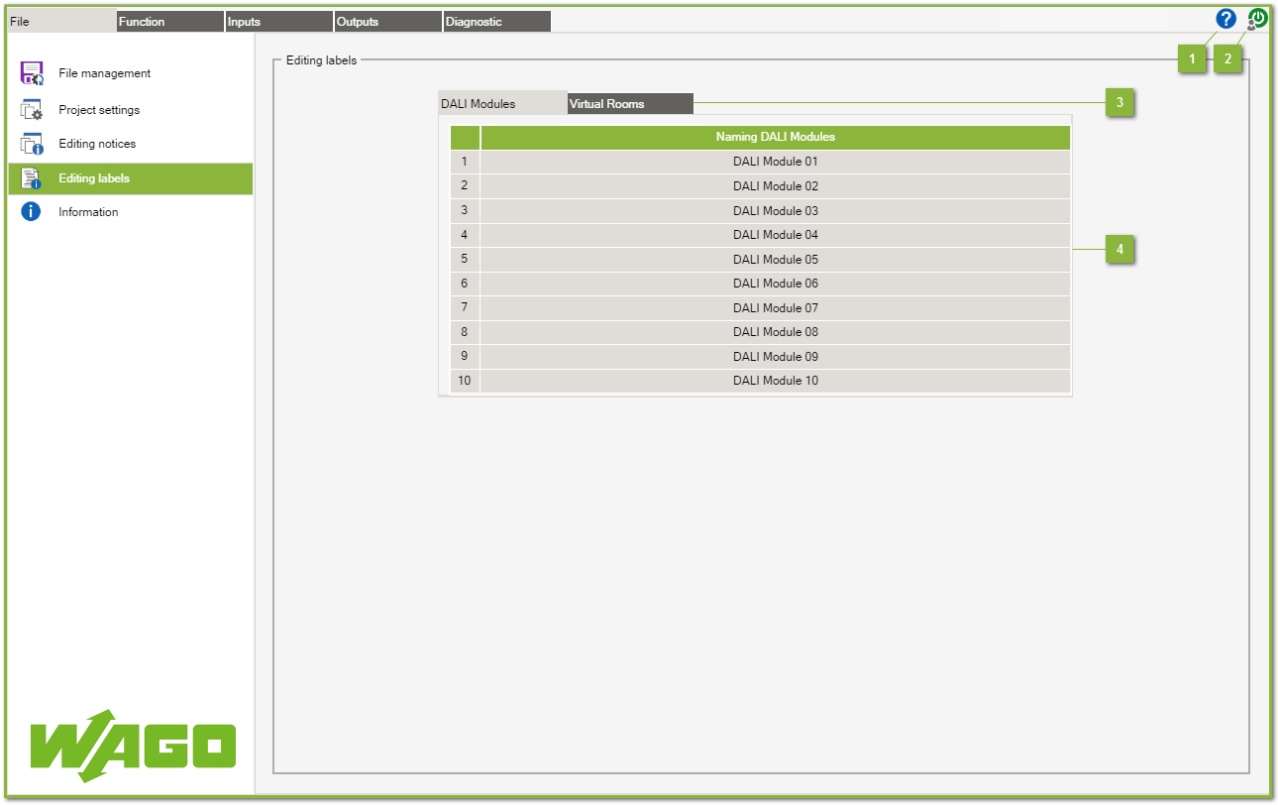
3 Select note

These tabs are used to switch between the note fields of the individual input/output interfaces. The tabs are divided into two sections on account of the number of different input/output interfaces.

4 Note field

Various notes can be saved for each input/output type. The maximum length of any note is 80 characters. Notes created here can be selected for the respective input/output devices.

4.1.4. Edit labels



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

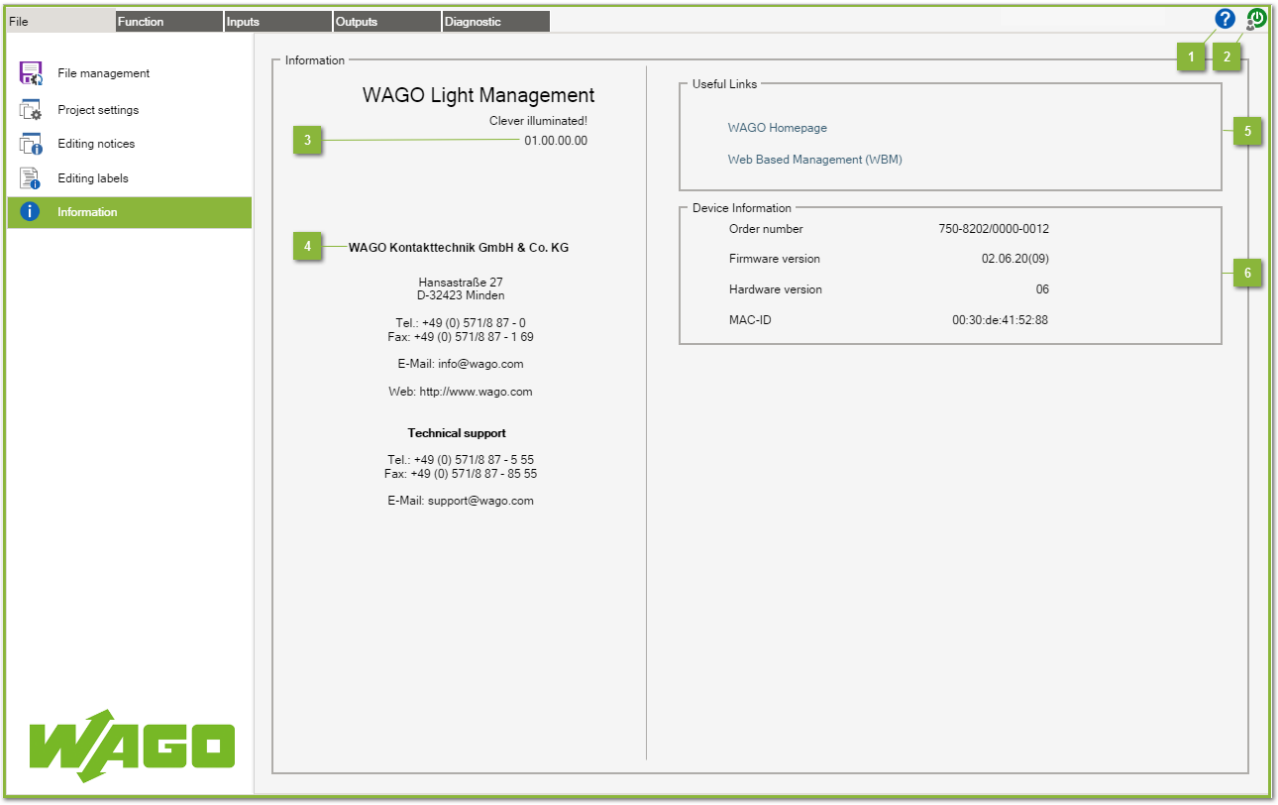
3 Select marking

You can use the tabs to switch between marking of the DALI modules and marking of the virtual rooms.

4 Marking field

The marking field for DALI modules is used to edit the DALI module marking. The texts that you set here will appear in the selection menu for the DALI modules. The marking field for virtual rooms is used to edit the marking for virtual rooms. The texts that you set here will appear in the selection menu for the virtual rooms. The maximum length of any marking is 30 characters.

4.1.5. Information



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Version

Software version of WAGO Lighting Management.

4 Contact information

Information on contacts at WAGO Kontakttechnik GmbH & Co. KG and Technical Support

5 Useful Links

Designation	Description
WAGO Homepage	Click on this link to open a new browser window containing the URL for the WAGO homepage.
Web Based Management (WBM)	Click on this link to open a browser window containing the URL for Web-Based Management of WAGO Lighting Management.

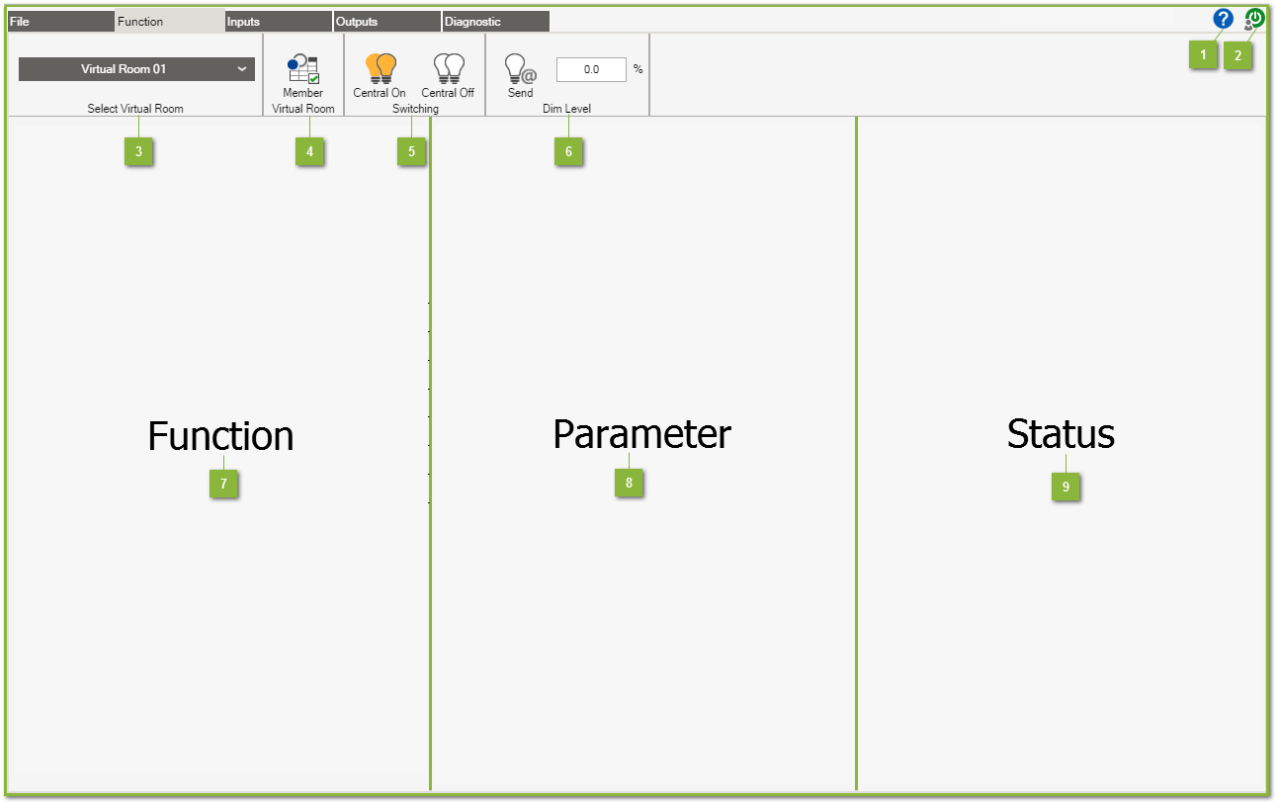
Note

Popup blocker
If the browser popup window is blocked, a new browser window will not be opened when you click on this link.

6 Device Information

Designation	Description
Order Number	Item Number for the WAGO controller
Firmware version	Firmware version of the WAGO controller
Hardware Version	Hardware version of the WAGO controller
MAC ID	MAC ID of the WAGO controller

4.2. Function



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select virtual room

Select the virtual room using the selection menu.

4 Virtual room member

Click on **[Member]** to open an dialog window with the subscribers of a virtual room. A distinction is made between inputs and outputs for virtual room subscribers. The Inputs view is described under Software > Function > Member virtual room - Inputs. The Outputs view is described under Software > Function > Member virtual room - Outputs.

5 Switching

Click on the button **[Central On]** to switch the lighting in the virtual room on (see function diagram). Click on **[Central Off]** to switch off the lighting in the virtual room (see function diagram).

6 Send dimming value

Clicking on the button **[Send]** transmits the set dimming level to the lighting in the virtual room.

Note

Important note!
Sending of the current dimming value is considered to be an event and can be directly overwritten by the selected function in the virtual room.

7 Function

The function of the virtual room can be selected in this area. The function diagram is adapted automatically in line with the selected function.
The following functions are available:

Basic functionality	Detail functionality
Switching	• Buttons On/Off • Latching relays • Stairwell Function • Switching on/off) • Automatic light • Advanced buttons On/Off • Advanced Stairwell Function
Dimming	• Dimming • Dimming with presence
Lighting control	• Constant light control • Daylight regulation with activation/deactivation • Daylight regulation with Stairwell Function • Daylight regulation with presence
Slave feature	• External virtual room (Slave) • External dimming value

8 Parameters

You can set the parameters for the virtual room in this area.

9 Status

The status of the virtual room is displayed in this area.

4.2.1. Member virtual room – Inputs

	Name	Address	DALI Module	Device	Button Type	Actual Value
1	Digital Input	3		DI	Key Switch	FALSE
2	Enocean Rocker	16#008B88D4			Button Up/Down	0
3		0	1	DALI	Button Up/Down	0
4	Modbus Button	32808			Button Up	0
5	DALI Multi-Sensor	0	1		Presence	FALSE
6	DALI Multi-Sensor	1	1			556
7	Cross communication	1				§/0/0/FALSE/564
8	Scheduler	1				FALSE

1 Inputs

This tab shows all of the inputs assigned to the virtual room.

2 Outputs

The description of the **Outputs** tab is given under Software > Function > Member virtual room - Outputs.

3 Name

Device name displayed.
The device name is defined in the **Inputs** main screen.

4 Adress

Address displayed; the address format may vary depending on the input type.

5 DALI modul

The corresponding module number is displayed for DALI devices.

6 Device

Device type for the respective input

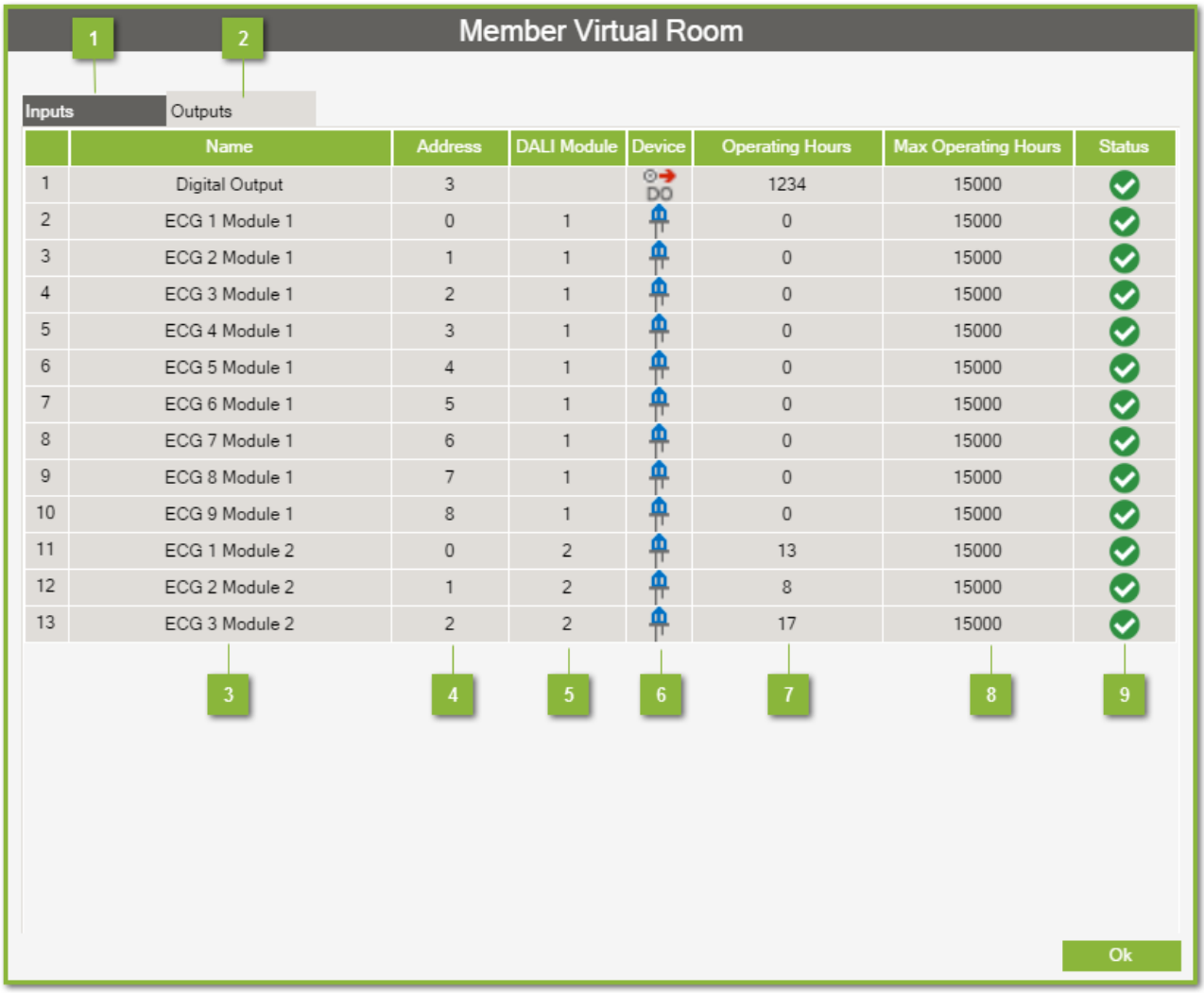
7 Button type

The corresponding button type is displayed here for button signals.

8 Actual value

Current actual value displayed (raw value)

4.2.2. Member virtual room – Outputs



	Name	Address	DALI Module	Device	Operating Hours	Max Operating Hours	Status
1	Digital Output	3		DO	1234	15000	✓
2	ECG 1 Module 1	0	1		0	15000	✓
3	ECG 2 Module 1	1	1		0	15000	✓
4	ECG 3 Module 1	2	1		0	15000	✓
5	ECG 4 Module 1	3	1		0	15000	✓
6	ECG 5 Module 1	4	1		0	15000	✓
7	ECG 6 Module 1	5	1		0	15000	✓
8	ECG 7 Module 1	6	1		0	15000	✓
9	ECG 8 Module 1	7	1		0	15000	✓
10	ECG 9 Module 1	8	1		0	15000	✓
11	ECG 1 Module 2	0	2		13	15000	✓
12	ECG 2 Module 2	1	2		8	15000	✓
13	ECG 3 Module 2	2	2		17	15000	✓

1 Inputs

The description of the **I**nputs tab is given under Software > Function > Member virtual room - Inputs.

2 Outputs

This tab shows all of the outputs assigned to the virtual room.

3 Name

Device name displayed; the device name is defined in the **Outputs** main screen.

4 Address

Display of data point addresses

5 DALI module

The corresponding module number is displayed for DALI devices.

6 Device

Device type of the respective output

7 Operating hours

Display of the current operating hours for the respective output

8 Max. operating hours

Display of the set, maximum operating hours

9 Status

Operating hours status.

Symbol	Description
	The maximum operating hours have not yet been reached.
	The maximum operating hours have been exceeded.

4.2.3. Override

There are 4 different priorities in WAGO Lighting Management. As soon as a higher priority becomes active, none of the lower priorities are then evaluated.

Priority	Function	Description
1	Key switch	The key switch has the highest priority and can be selected in the Button type dialog window under Inputs. A description of the button types is given in the Section Software > Inputs > Select button type. All other switching commands are blocked as long as the key switch is activated.
2	Override MODBUS (GLT)	A description of this interface is given in the Section Software > MODBUS interface > Write > External values for virtual room. MODBUS registers 32401 to 32460 are used for overriding the virtual room. The MODBUS master must write cyclically to the MODBUS register for connection monitoring. The connection monitoring time can be set under Software > File > Project settings > Heartbeat MODBUS.
3	Override local timer program	If the check-box **[Override]** is marked for the local timer program, the timer program has a priority of 3. All events are blocked as long as the timer program is active and the lighting is adjusted to the dimming value [%] set in the timer program. A description of the local timer program is given in the Section Software > Inputs > Timer program.
4 (none)	MODBUS (GLT) event	A description of this interface is given in the Section Software > MODBUS interface > Write > External values for virtual room. MODBUS registers 32301 to 32360 are used for controlling the virtual room as an event (without overriding). The dimming value from the event is passed on directly to the lighting in the virtual room. Events from other inputs continue to be executed.
4 (none)	Timer program event	If the check-box **[Override]** is not marked for the local timer program, the timer program does not have any priority. The dimming value is transmitted on directly to the lighting in the virtual room as soon as a timer switching condition has been fulfilled. Events from other inputs continue to be executed.
4 (none)	Buttons / Switches	None of the button types, except for the Key Switch, have any priority and control the virtual room. A description of the button types is given in the Section Software > Inputs > Select button type.

4.2.3.1. Example 1

Priority	Function	Status	Value	Activity
1	Key switch			
2	Override MODBUS (GLT)		80	
3	Override local timer program		70	
4 (none)	MODBUS (GLT) event			
4 (none)	Timer program event			
4 (none)	Buttons/Switches		100	

Actual status:
1. Key switch is not active.
2. The value 80% is transmitted to the address 32401 (virtual room 1) in cycles via MODBUS.
3. The local timer program is active and possesses a value of 70%.
4. A local key is being pressed at the moment.

Result:
In this case, the MODBUS interface has the highest priority, meaning that the lighting in virtual room 1 is overridden at 80%. The selected room function is blocked.

4.2.3.2. Example 2

Priority	Function	Status	Value	Activity
1	Key switch			
2	Override MODBUS (GLT)		80	
3	Override local timer program		70	
4 (none)	MODBUS (GLT) event			
4 (none)	Timer program event			
4 (none)	Buttons/Switches		100	

Actual status:
1. Key switch is not active.
2. No value is transmitted any longer to the address 32401 (virtual room 1) via MODBUS. The watchdog has triggered.
3. The local timer program is active and possesses a value of 70%.
4. A local key is being pressed at the moment.

Result:
In this case, the local timer program has the highest priority because the watchdog has triggered for the MODBUS connection, meaning that the lighting in virtual room 1 is overridden at 70%. The selected room function is blocked.

4.2.3.3. Example 3

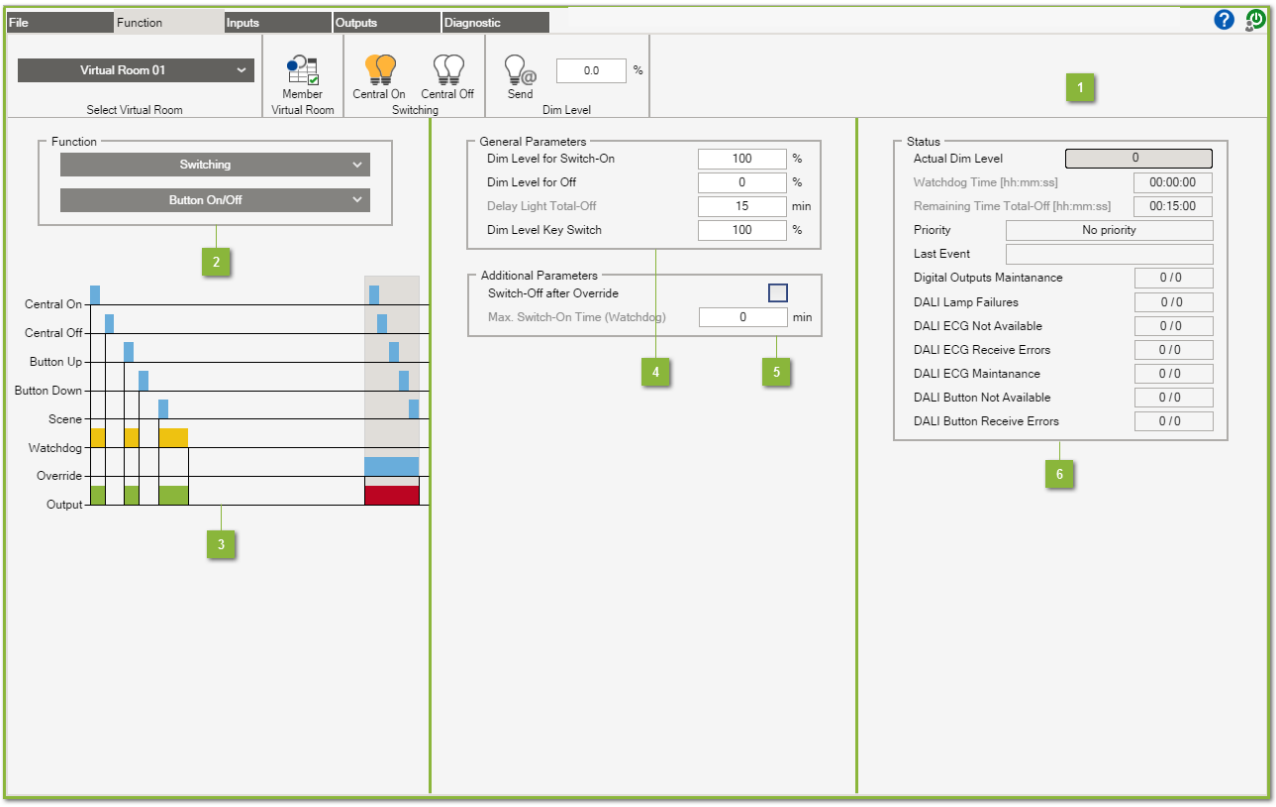
Priority	Function	Status	Value	Activity
1	Key switch			
2	Override MODBUS (GLT)			
3	Override local timer program			
4 (none)	MODBUS (GLT) event			
4 (none)	Timer program event			
4 (none)	Buttons/Switches		100	

Actual status:
1. No override function is active.
2. A local key is being pressed at the moment.

Result:
The selected room function will be executed.

4.2.4. Switching

4.2.4.1. Buttons On/Off



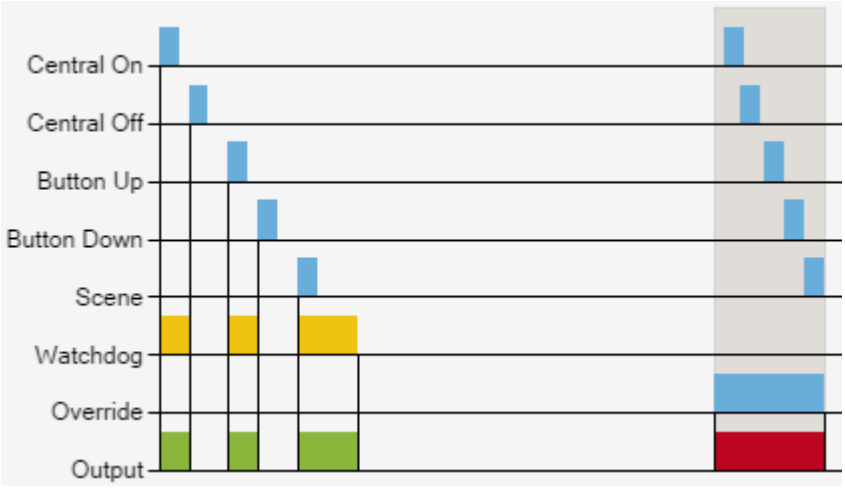
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Button On/Off** function switches on the lighting via the inputs **Central On** and **Button Up** and switches it off via the inputs **Central Off** and **Button Down**. The **Scene** input can be used to call up a scene stored in the DALI ECG.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Button Up	A positive edge switches the lighting in the virtual room on.
Button Down	A positive edge switches the lighting in the virtual room off.
Scene	A positive edge calls up the selected scene in the virtual room.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The function **Switch-Off after Override** is executed as soon as overriding is completed. Overriding is explained under Software > Function > Override**.**
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	0…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the time set for **Delay Light Total-Off** expires. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **key switch** is active [%]

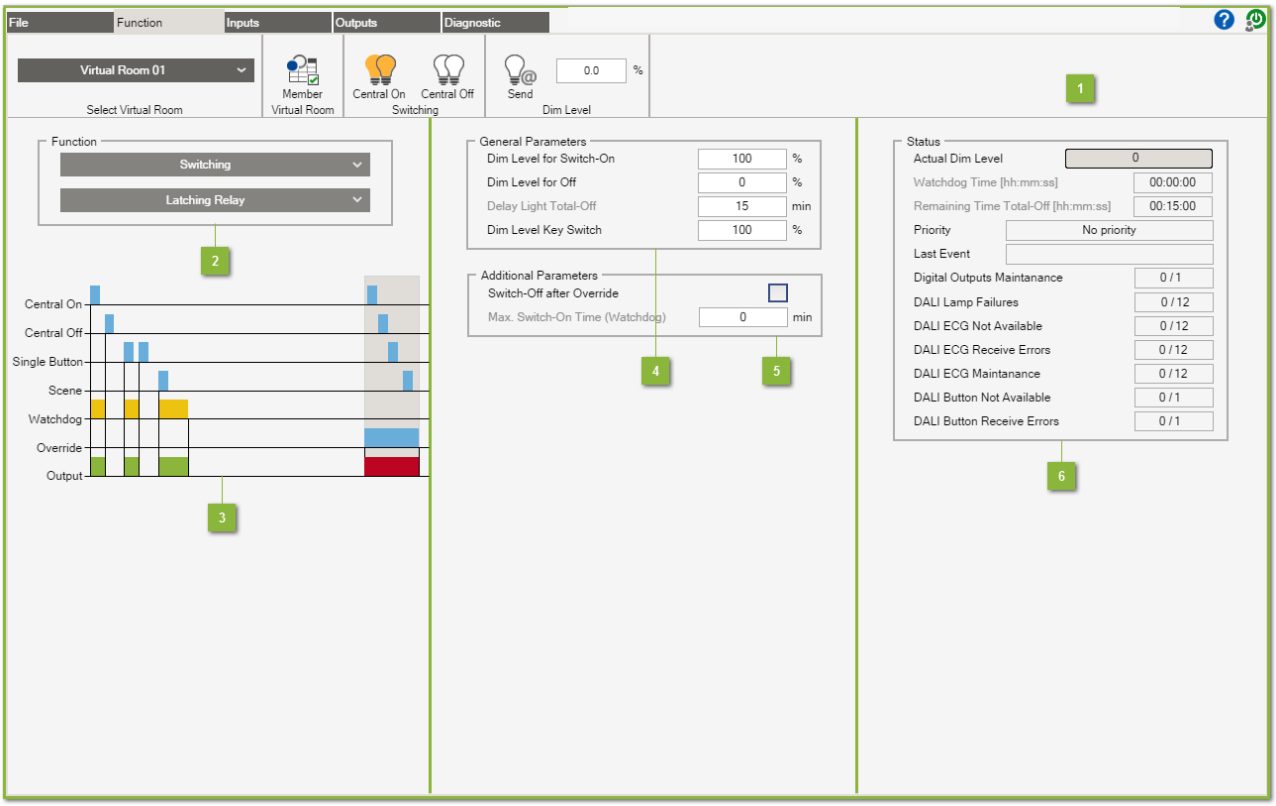
5 Additional parameters

Designation	Default	Range	Description
Switch-Off after Override	Inactive		When this check-box is marked, **Dim Level for Off** is transmitted when overriding is completed. If this check-box is not marked, **Dim Level for Switch-On** will be transmitted when overriding is completed.
Max. Switch-On Time (Watchdog)	0		Monitoring of the maximum switch-on time [min]; the lighting is switched off when this time expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use

6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%].
Watchdog Time	Indication of the remaining time for the property **Max. switch-on time** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Button Up)
Digital Outputs Maintenance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.4.2. Latching relay



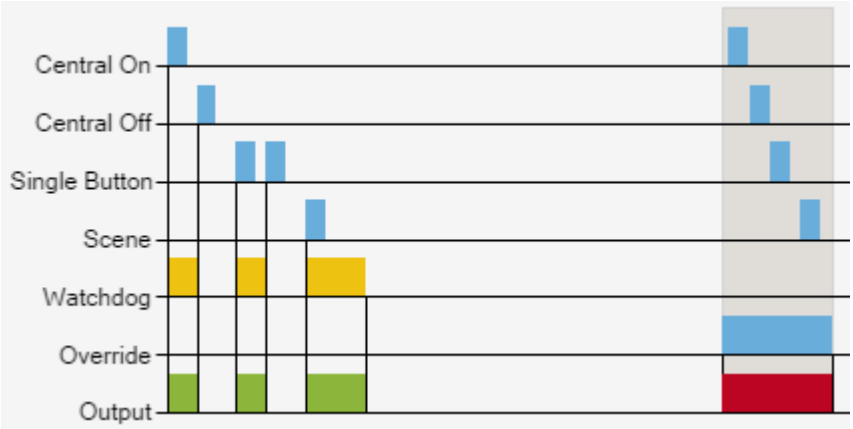
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The function **Latching Relay** switches the lighting via the **Single Button** input. The lighting is toggled each time the button is pressed (On > Off / Off > On). The input **Central On** switches the lighting on, and the input **Central Off** switches it off. The **Scene** input can be used to call up a scene stored in the DALI ECG

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Single Button	A positive edge switches the lighting status (On -> Off / Off -> On).
Scene	A positive edge calls up the selected scene in the virtual room.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The function **Switch-Off after Override** is executed as soon as overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	1…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use.
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **key switch** is on [%]

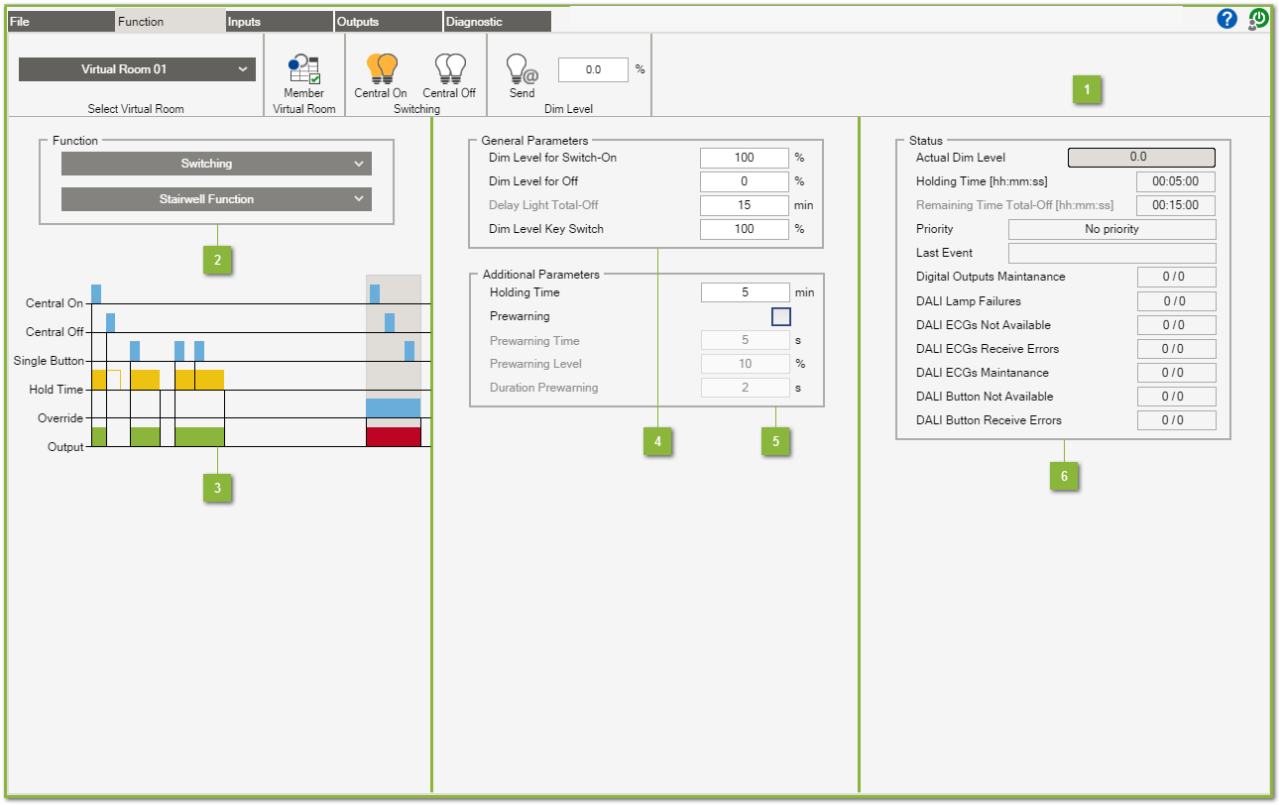
5 Additional parameters

Designation	Default	Range	Description
Switch-Off after Override	Inactive		When this check-box is marked, **Dim Level for Off** is transmitted when overriding is completed. If this check-box is not marked, **Dim level for Switch-On** will be transmitted when overriding is completed.
Max. Switch-On Time (Watchdog)	0		Monitoring of **Max. Switch-On Time** [min]. The lighting is switched off when the specified time period expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use

6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Watchdog Time	Indication of the remaining time for the property **Max Switch-On Time** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintenance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.4.3. Stairwell function



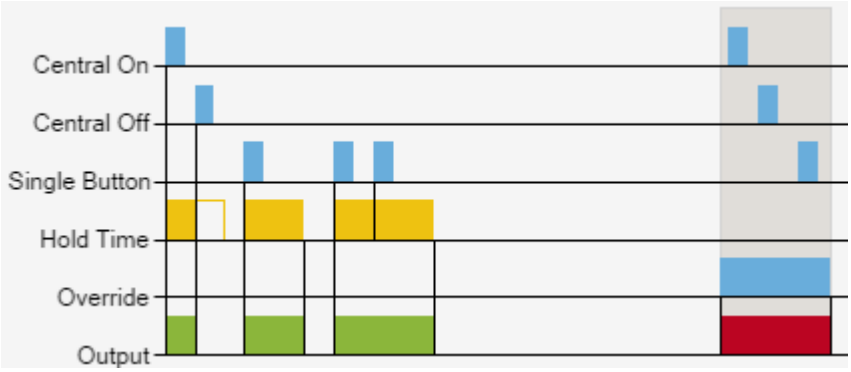
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Stairwell Function** switches the lighting on via the **Single Button** and **Central On** inputs. The lighting is switched off automatically when the set **Hold Time** period expires. The **Hold Time** is restarted each time a button is pressed. A pre-warning can also be triggered as an option prior to switching off of the lighting. The input **Central Off** enables the lighting to be switched off before the **Hold Time** expires.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on and starts the **Hold Time**.
Central Off	A positive edge switches the lighting in the virtual room off.
Single Button	A positive edge switches the lighting in the virtual room on and starts the **Hold Time**.
Hold Time	The lighting in the virtual room is switched off automatically when the set **Hold Time** expires.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Hold Time** is resumed when overriding is completed. Overriding is explained under Software > Function > Override**.**
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1...100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	1...100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0...100	Dimming value that is transmitted when the **key switch** is on [%]

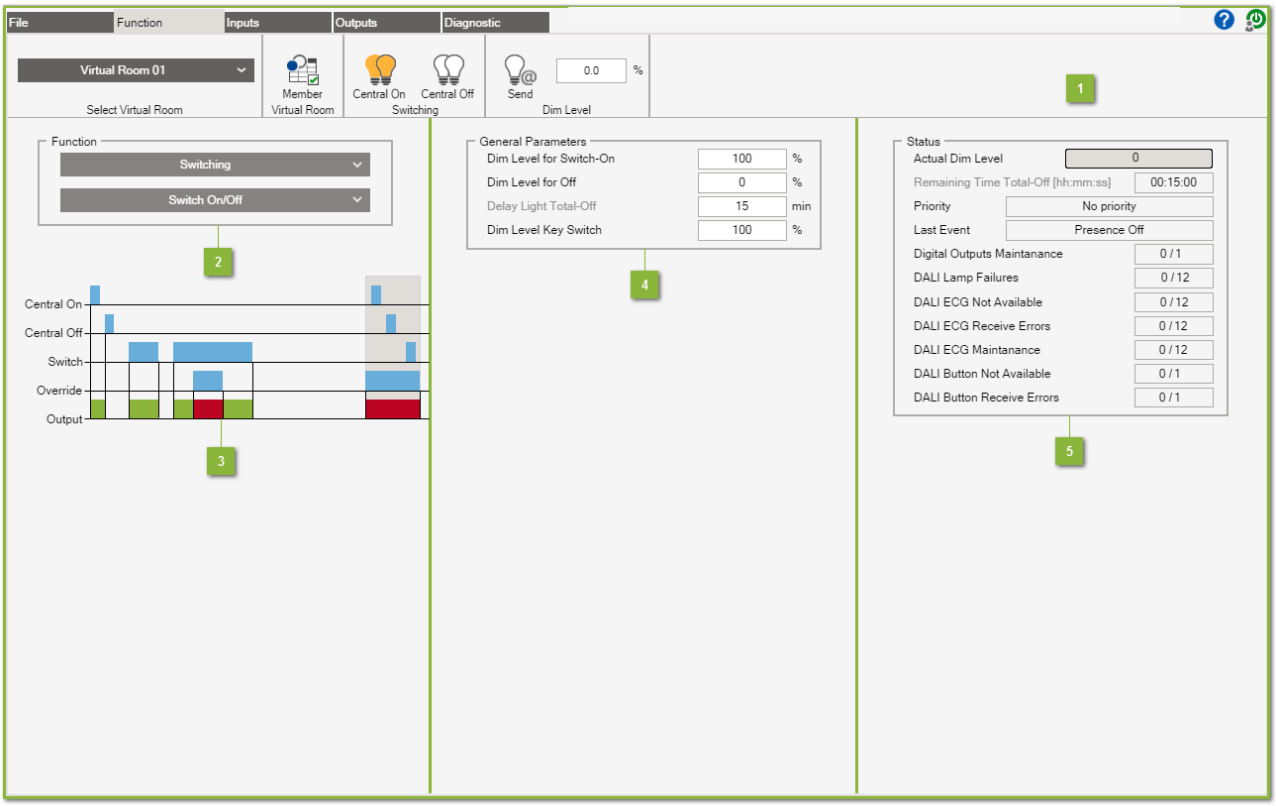
5 Additional parameters

Designation	Default	Range	Description
Holding time	5	> 0	Defines the entire duty cycle for the lighting [min]
Prewarning	Inactive		When this check-box is marked, the switch-off pre-warning is enabled
Prewarning Time	5		Time of pre-warning switch-off prior to switching off [s]; this value is for display only and is set under File > Project settings > Stairwell Function.
Prewarning Level	10		Dimming level for the switch-off pre-warning [%]; this value is for display only and is set under File > Project settings > Stairwell Function.
Duration Prewarning	2		Duration of switch-off pre-warning [s]; this value is for display only and is set under File > Project settings > Stairwell Function.

6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Holding time	Indication of the remaining **Holding time** [hh:mm:ss]
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of light errors in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.4.4. Switching On/Off



1 Menu ribbon

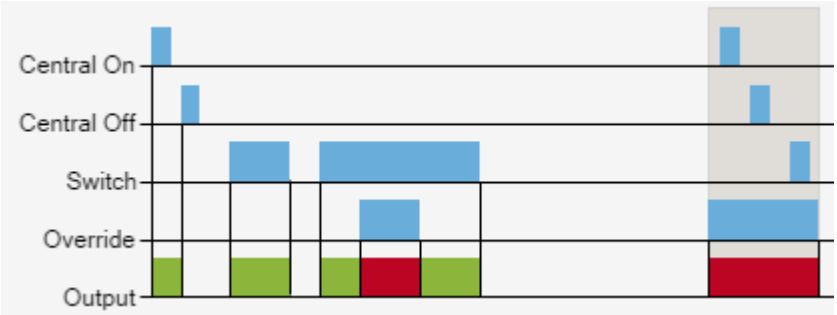
The documentation for the menu ribbon is given under Software > Function.

2 Function

The function **Switch On/Off** switches the lighting via the **Switch** input. A positive edge at the **Switch** input switches the lighting on, while a negative edge at this input switches it off. The inputs **Central On** and **Central Off** switch the lighting on/off independently of the status at the **Switch** input.

Application: Switching of outside lighting using a photo-electric lighting controller.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Switch	A positive edge switches the lighting in the virtual room on. A negative edge switches the lighting in the virtual room off.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Switch** input is resumed when overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

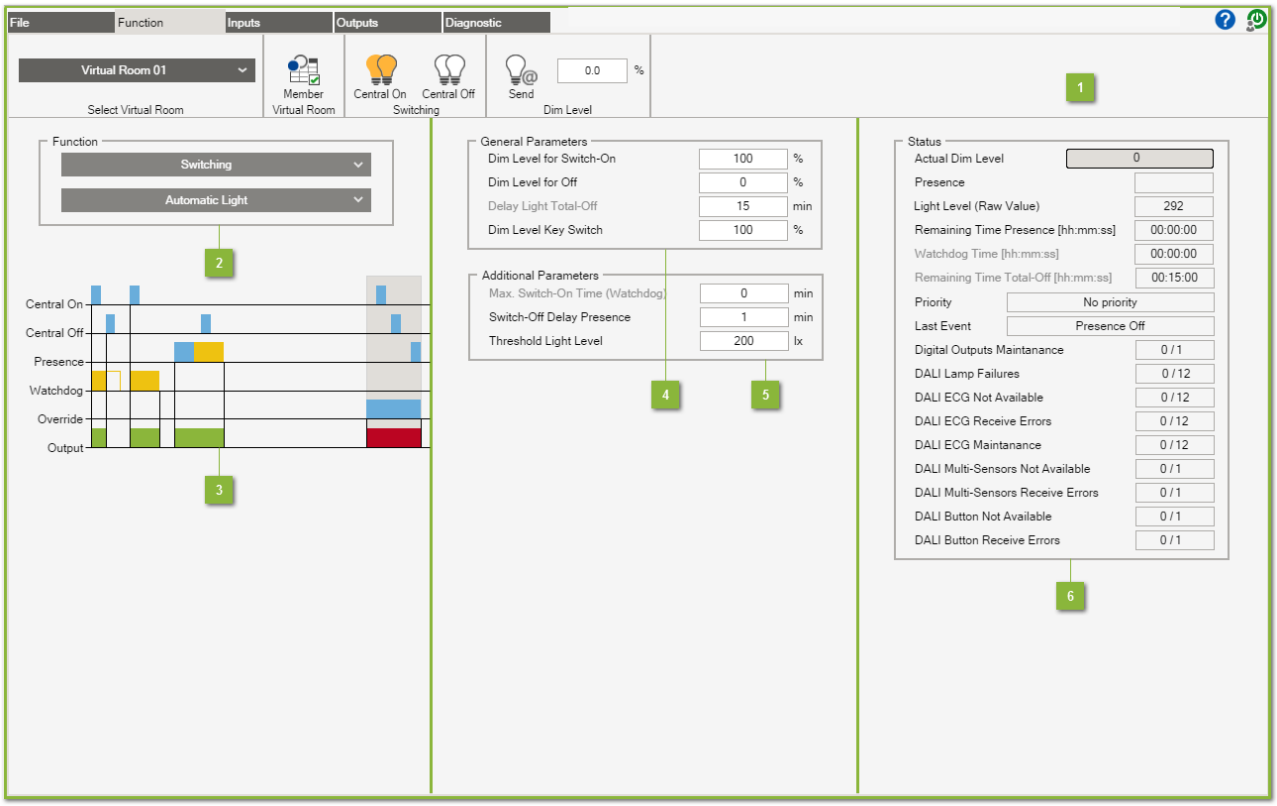
4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	0…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%].
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.4.5. Automatic light



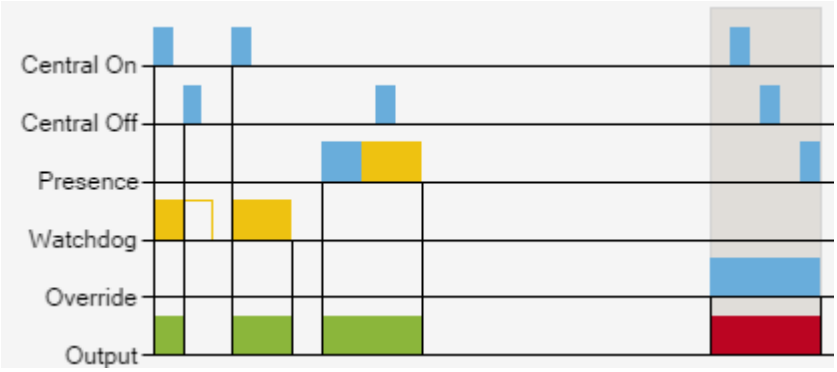
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Automatic Light** function switches the lighting via the **Presence** input. A positive edge at the **Presence** input switches on the lighting, while a negative edge at this inputs initiates the switch-off delay. The lighting is switched off when the switch-off delay time has expired. The input **Central On** switch the lighting on independently of the status at the **Presence** input. Only when the **Presence** input is inactive, The input **Central Off** switch the lighting off.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	Only when the **Presence** is inactive, a positive edge switches the lighting in the virtual room off.
Presence	A positive edge switches on the lighting, while a negative edge initiates the switch-off delay. The lighting in the virtual room is switched off when the switch-off delay time has expired.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Presence** input is resumed when overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	0…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Additional parameters

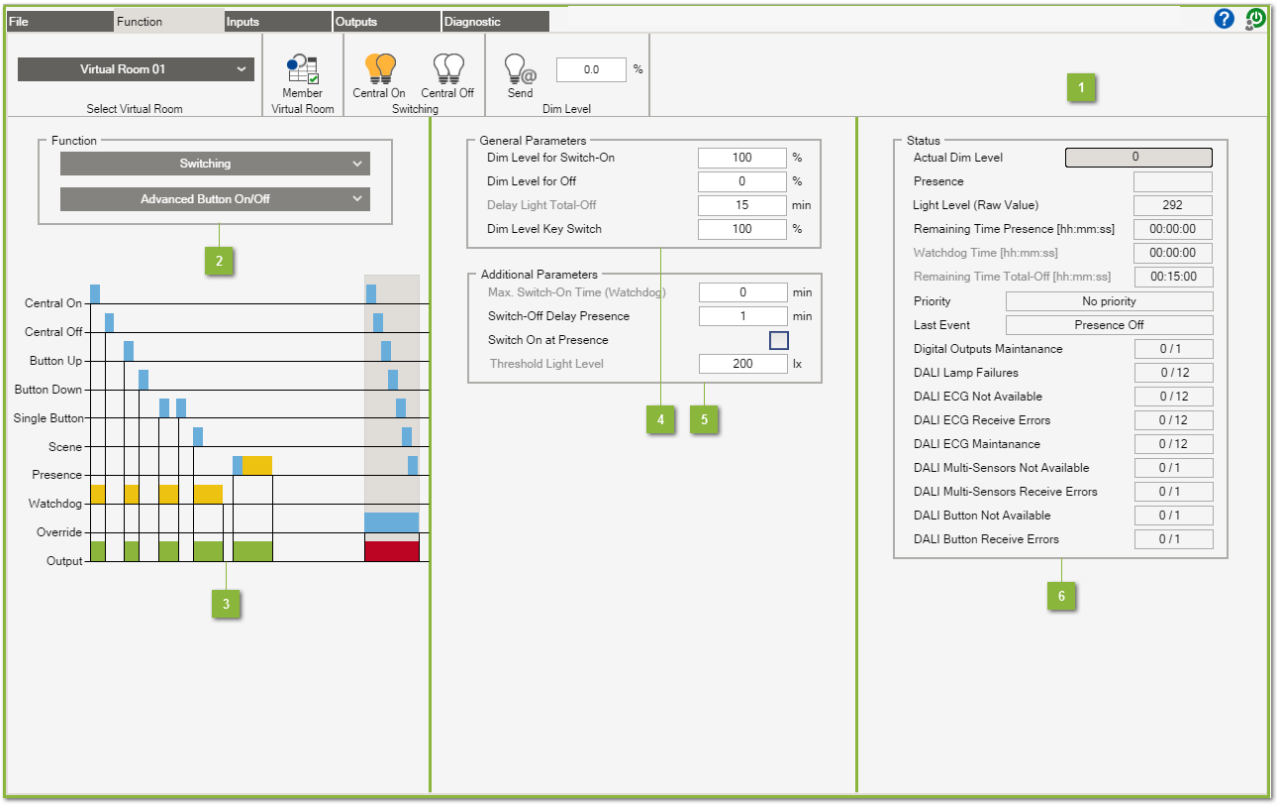
Designation	Default	Range	Description
Max. Switch-On Time (Watchdog)	0		Monitoring of maximum switch-on time [min]. The lighting is switched off when the specified time period expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use
Switch-Off Delay Presence	1	> 0	Extending of **Presence**; the switch-off delay begins when on a negative edge at the presence detector. The lighting is not switched off until the switch-off delay time has expired.
Threshold Light Level	200		The lighting will not be switched on with a positive edge at the **Presence** input when the **Light Level (raw value)** > **Threshold Light Level**.

6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Presence	Indication of **Presence**; the presence status is retained until the switch-off delay time has expired.
Light Level (Raw value)	Indication of the measured brightness level from the multi-sensor (raw value)
Remaining Time Presence	Indication of remaining Presence time [hh:mm:ss]
Watchdog Time	Indication of the remaining time for the property **Max. Switch-On Time** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.

DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.4.6. Advanced buttons On/Off



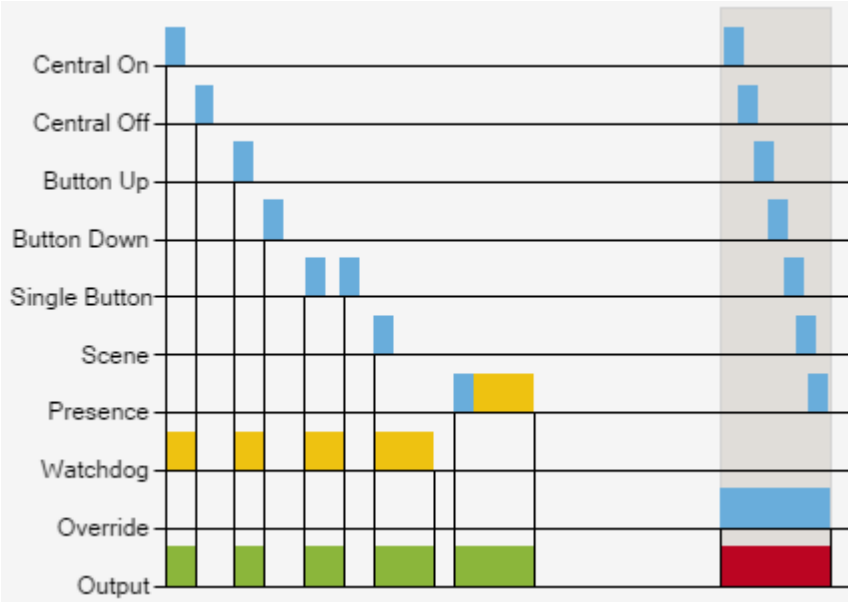
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The function **Advanced Button On/Off** switches on the lighting via the **Button Up** input and switches it off via the **Button Down** input. In contrast to the **Button On/Off** function, the lighting can also be switched using a **Single Button** here. The lighting is toggled each time the button is pressed (On > Off / Off > On). This function also offers the option of switching the lighting as a function of **Presence**. Higher-order switching of the lighting is possible via the inputs **Central On**, **Central Off and Scene**.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Button Up	A positive edge switches the lighting in the virtual room on.
Button Down	A positive edge switches the lighting in the virtual room off.
Single Button	A positive edge switches the lighting status (On -> Off / Off -> On).
Scene	A positive edge calls up the selected scene in the virtual room.
Presence	A positive edge switches on the lighting, while a negative edge initiates the switch-off delay. The lighting in the virtual room is switched off when the switch-off delay time has expired.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Presence** input is resumed when overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	0…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Additional parameters

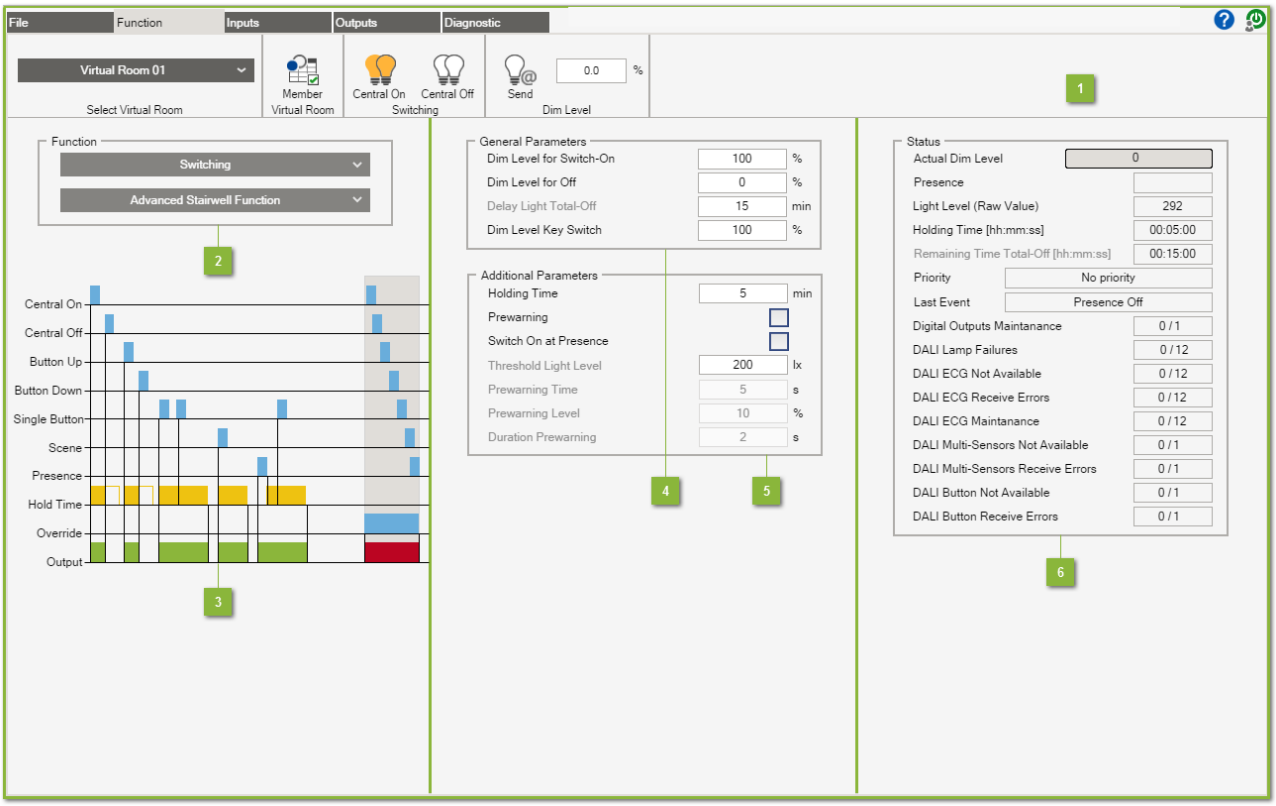
Designation	Default	Range	Description
Max. Switch-On Time (Watchdog)	0		Monitoring of the maximum switch-on time [min]; the lighting is switched off when this time expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use
Switch-Off Delay Presence	1		Extending of **Presence**; the switch-off delay begins when on a negative edge at the presence detector. The lighting is not switched off until the switch-off delay time has expired. The value “0” deactivates this property and grays out the marking text.
Switch On at Presence	Inactive		When this check-box is marked, a positive edge at the **Presence** input switches the lighting on. Prerequisite:**Light Level (raw value)** > **Threshold Light Level**
Threshold Light Level	200		The lighting will not be switched on with a positive edge at the **Presence** input when the **Light Level (raw value)** > **Threshold Light Level**. The marking text is grayed out when **Switch-on with Presence** is deactivated.

6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Presence	Indication of **Presence**; the presence status is retained until the switch-off delay time has expired.
Light Level (Raw value)	Indication of the measured brightness level from the multi-sensor (raw value)
Remaining Time Presence	Indication of remaining Presence time [hh:mm:ss]
Watchdog Time	Indication of the remaining time for the property **Max. Switch-On Time** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.

DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.4.7. Advanced stairwell function



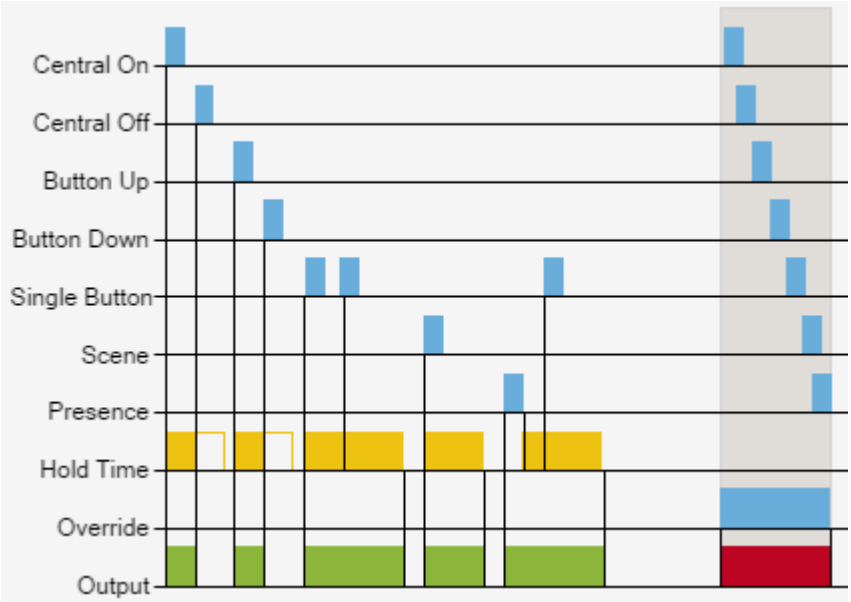
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Advanced Stairwell Function** switches the lighting on via the **Central On, Button Up** or **Single Button** inputs. The lighting is switched off automatically when the set **Hold Time** period expires. The **Hold Time** is restarted each time a button is pressed. A pre-warning can also be triggered as an option prior to switching off of the lighting. The **Central Off** and **Button Down** inputs enable the lighting to be switched before the **Hold Time** expires. The **Scene** input can be used to call up a scene stored in the DALI ECG. This function also offers the option of switching the lighting as a function of the **Presence** input. A negative edge at the **Presence** input initiates the **Hold Time**.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on and starts the **Hold Time**.
Central Off	A positive edge switches the lighting in the virtual room off.
Button Up	A positive edge switches the lighting in the virtual room on and starts the **Hold Time**.
Button Down	A positive edge switches the lighting in the virtual room off.
Single Button	A positive edge switches the lighting in the virtual room on and starts the **Hold Time**.
Scene	A positive edge calls up the selected scene in the virtual room and initiates the **Hold Time**.
Presence	A positive edge switches the lighting in the virtual room on. **Hold Time** is not started until a negative edge is present.
Hold Time	The lighting in the virtual room is switched off automatically when the set **Hold Time** expires.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Hold Time** is resumed when overriding is completed. Overriding is explained under Software > Function > Override**.**
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	0…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Additional parameters

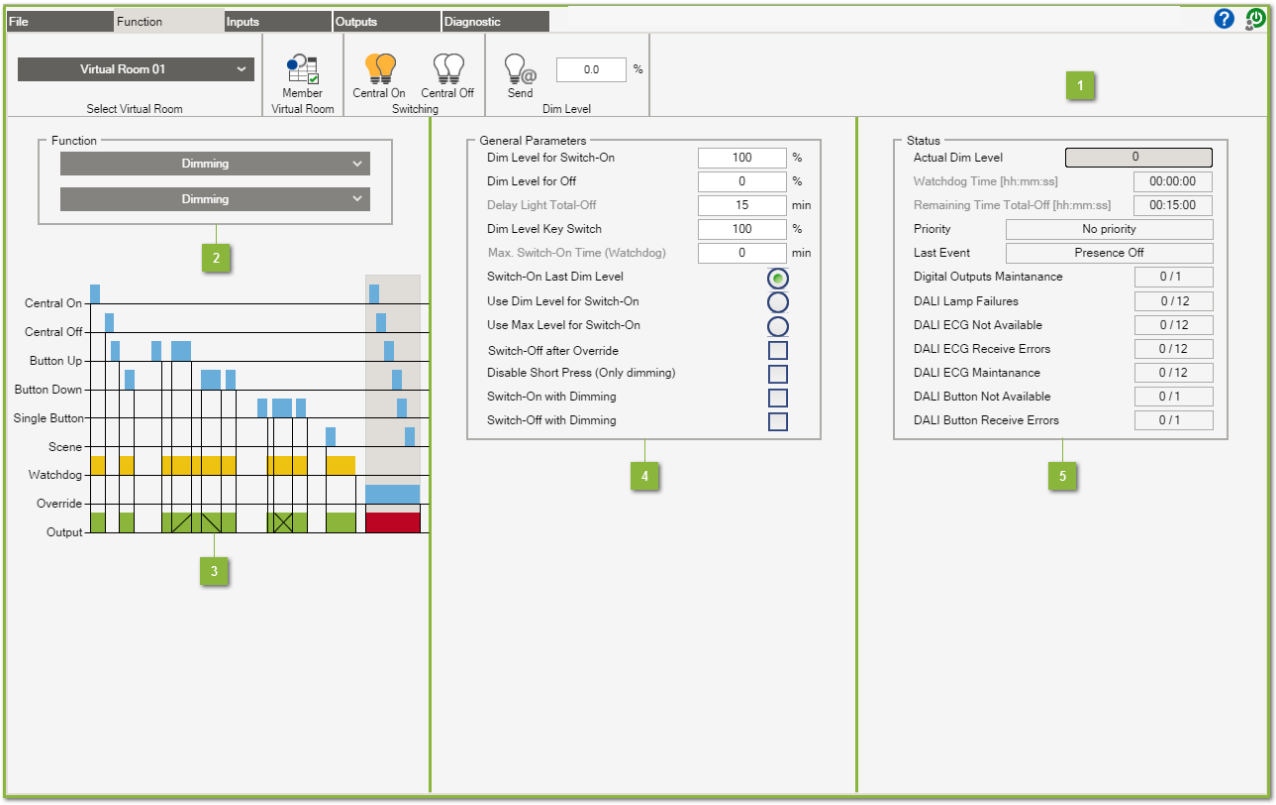
Designation	Default	Range	Description
Holding time	5	> 0	Defines the entire duty cycle for the lighting [min]
Prewarning	Inactive		When this check-box is marked, the switch-off pre-warning is enabled
Switch on with presence	Inactive		When this check-box is marked, a positive edge at the **Presence** input switches the lighting on. Prerequisite: **Light Level (raw value)** > **Threshold Light Level**
Brightness threshold	200		The lighting will not be switched on with a positive edge at the **Presence** input when the **Light Level (raw value)** > **Threshold Light Level**. The marking text is grayed out when **Switch-on with Presence** is deactivated.
Prewarning Time	5		Time of pre-warning switch-off prior to switching off [s]; this value is for display only and is set under File > Project settings > Stairwell Function.
Prewarning Level	10		Dimming level for the switch-off pre-warning [%]; this value is for display only and is set under File > Project settings > Stairwell Function.
Duration Prewarning	2		Duration of switch-off pre-warning [s]; this value is for display only and is set under File > Project settings > Stairwell Function.

6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Presence	Indication of **Presence**; the presence status is retained until the switch-off delay time has expired.
Light Level (Raw value)	Indication of the measured brightness level from the multi-sensor (raw value)
Holding time	Indication of the remaining **Holding Time** [hh:mm:ss]
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.5. Dimming

4.2.5.1. Dimming



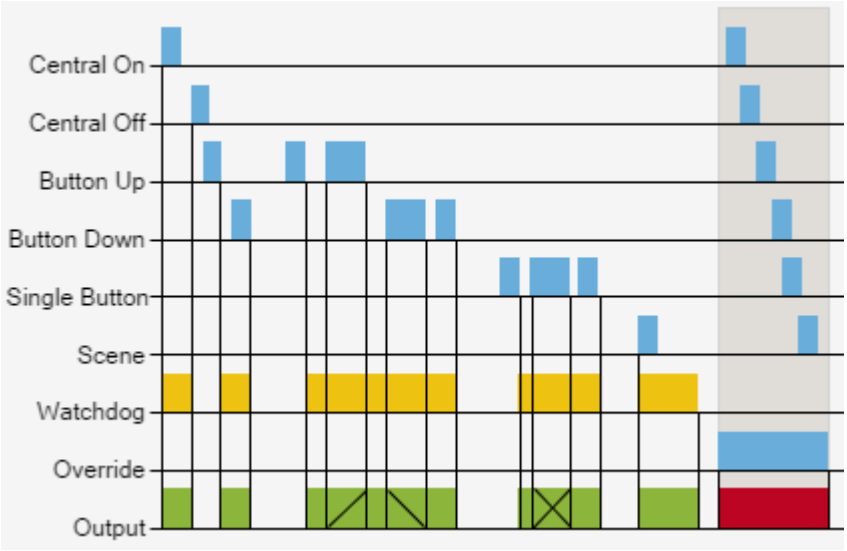
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Dim** function dims the lighting according to the specified setting via the **Button Up** and **Button Down** inputs. The lighting can also be dimmed via the **Single Button** input. The dimming “direction” is changed when the button is held in when using the **Single Button** input. The length of time that the button is depressed differentiates between switching and dimming of the lighting (switching < 500 ms / dimming > 500 ms). A positive edge at the **Central On** input switches the lighting on. The lighting is switched off by a positive edge at the **Central Off** input. The **Scene** input can be used to call up a scene stored in the DALI ECG.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Button Up	Briefly pressing the button (< 500 ms) switches the lighting in the virtual room on, while pressing (holding) the button longer (>= 500 ms) makes the lighting brighter in the virtual room.
Button Down	Briefly pressing the button (< 500 ms) switches the lighting in the virtual room off, while pressing (holding) the button longer (>= 500 ms) dims the lighting in the virtual room.
Single Button	Briefly pressing the button (< 500 ms) changes the status of the lighting in the virtual room (On -> Off / Off -> On). Pressing (Holding) the button longer (>= 500 ms) toggles the dimming direction and adjusts the lighting in the virtual room accordingly (brighter -> darker / darker -> brighter).
Scene	A positive edge calls up the selected scene in the virtual room.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The function **Switch-Off after Override** is executed as soon as overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

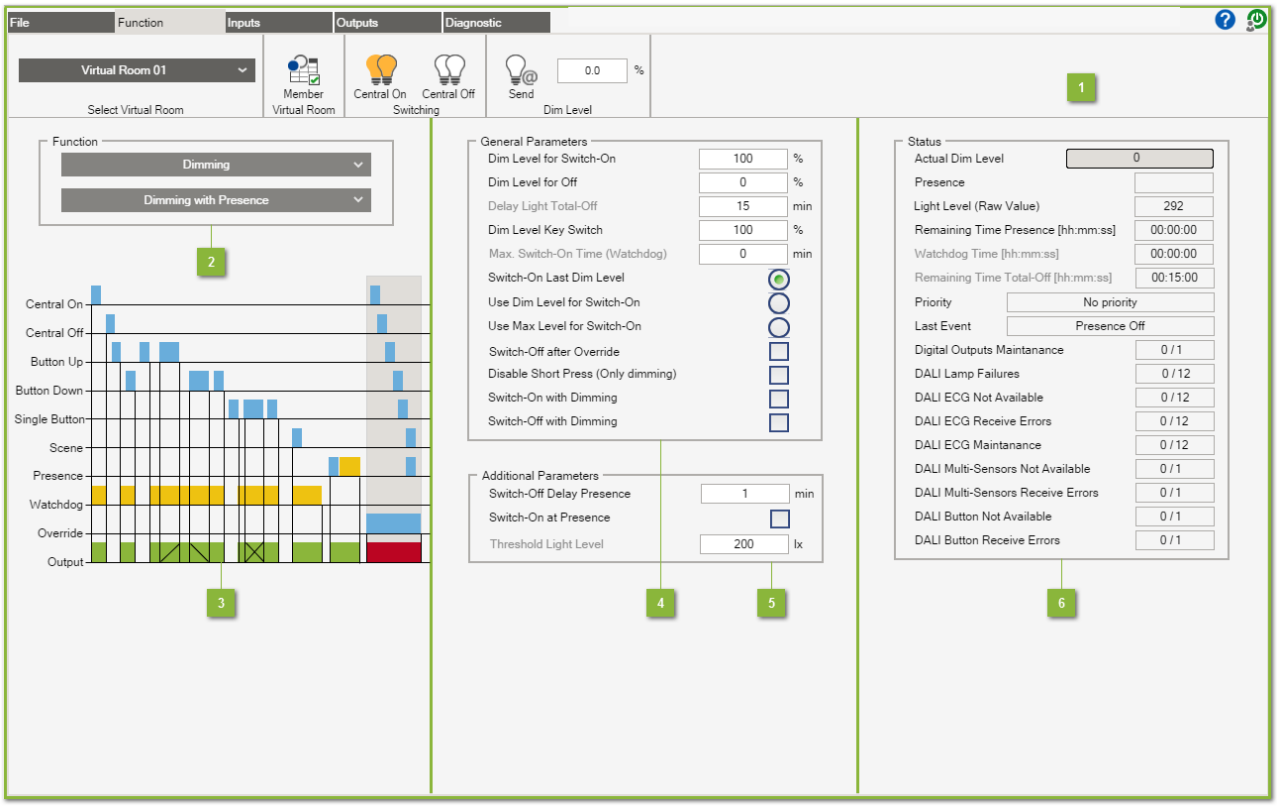
4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	0…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **Key Switch** is active [%]
Max. Switch-On Time (Watchdog)	0		Monitoring of the maximum switch-on time [min]; the lighting is switched off when this time expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use
Switch-On Last Dim Value	Active		Three options are available when switching on the lighting. Option 1 = Switch on with the last switch-on value
Uses Dim Level for Switch-On	Inactive		Three options are available when switching on the lighting. Option 2 = Switch on with **Dim Level for Switch-On**
Use Max Level for Switch-On	Inactive		Three options are available when switching on the lighting. Option 3 = Switch on with max. value
Switch-Off after Override	Inactive		When this check-box is marked, **Dim Level for Off** is transmitted when overriding is completed. If this check-box is not marked, **Dim Level for Switch-On** will be transmitted when overriding is completed.
Disable Short Press (only dimming)	Inactive		When this check-box is marked a brief stroke of the button will no longer be evaluated. The lighting can then only be dimmed via the **Button Up** and **Button Down** inputs. It cannot, however, be switched off/on.
Switch-On with Dimming	Inactive		When this check-box is marked, the lighting can be switched on by holding down the button (dimming) if the lighting was previously switched off.
Switch-Off with Dimming	Inactive		When this check-box is marked, the lighting can be switched off by holding down the button (dimming) when the minimum dimming value is reached.

5 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Max. switch-on time	Indication of the remaining time for the property **Max Switch-On Time** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Button Up)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.5.2. Dimming with presence



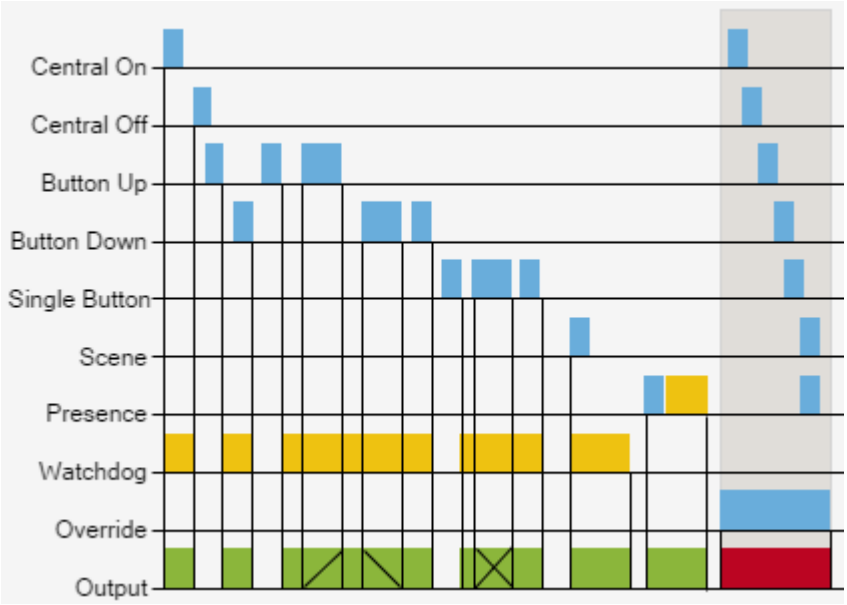
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Dim with Presence** function dims the lighting according to the specified setting via the **Button Up** and **Button Down** inputs. The lighting can also be dimmed via the **Single button** input. The dimming “direction” is changed when the button is held in when using the **Single Button** input. The length of time that the button is depressed differentiates between switching and dimming of the lighting (switching < 500 ms / dimming > 500 ms). A positive edge at the **Central On** input switches the lighting on. The lighting is switched off by a positive edge at the **Central Off** input. This function also offers the option of switching the lighting as a function of **Presence**. The **Scene** input can be used to call up a scene stored in the DALI ECG.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Button Up	Briefly pressing the button (< 500 ms) switches the lighting in the virtual room on, while pressing (holding) the button longer (>= 500 ms) makes the lighting brighter in the virtual room.
Button Down	Briefly pressing the button (< 500 ms) switches the lighting in the virtual room off, while pressing (holding) the button longer (>= 500 ms) dims the lighting in the virtual room.
Single Button	Briefly pressing the button (< 500 ms) changes the status of the lighting in the virtual room (On -> Off / Off -> On). Pressing (Holding) the button longer (>= 500 ms) toggles the dimming direction and adjusts the lighting in the virtual room accordingly (brighter -> darker / darker -> brighter).
Scene	A positive edge calls up the selected scene in the virtual room.
Presence	A positive edge switches on the lighting, while a negative edge initiates the switch-off delay. The lighting in the virtual room is switched off when the switch-off delay time has expired.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Presence** input is resumed when overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1…100	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Off	0	0…100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Dim Level Key Switch	100	0…100	Dimming value that is transmitted when the **Key Switch** is active [%]
Max. Switch-On Time (Watchdog)	0		Monitoring of maximum switch-on time [min]. The lighting is switched off when the specified time period expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use
Switch-On Last Dim Level	Active		Three options are available when switching on the lighting. Option 1 = Switch on with the last switch-on value
Use Dim Level for Switch-On	Inactive		Three options are available when switching on the lighting. Option 2 = Switch on with **Dim Level for Switch-On**
Use Max Level for Switch-On	Inactive		Three options are available when switching on the lighting. Option 3 = Switch on with max. value
Switch-Off after Override	Inactive		When this check-box is marked, **Dim Level for Off** is transmitted when overriding is completed. If this check-box is not marked, **Dim Level for Switch-On** will be transmitted when overriding is completed.
Disable Short Press (Only dimming)	Inactive		When this check-box is marked a brief stroke of the button will no longer be evaluated. The lighting can then only be dimmed via the **Button Up** and **Button Down** inputs. It cannot, however, be switched off/on.
Switch-On with Dimming	Inactive		When this check-box is marked, the lighting can be switched on by holding down the button (dimming) if the lighting was previously switched off.
Switch-Off with Dimming	Inactive		When this check-box is marked, the lighting can be switched off by holding down the button (dimming) when the minimum dimming value is reached.

5 Additional parameters

Designation	Default	Range	Description
Switch-Off Delay Presence	1		Extending of **Presence**; the switch-off delay begins when on a negative edge at the presence detector. The lighting is not switched off until the switch-off delay time has expired. The value “0” deactivates this property and grays out the marking text.
Switch-On at Presence	Inactive		When this check-box is marked, a positive edge at the **Presence** input switches the lighting on. Prerequisite: **Light Level (raw value)** > **Threshold Light Level**
Threshold Light Level	200		The lighting will not be switched on with a positive edge at the **Presence** input when the **Light Level (raw value)** > **Threshold Light Level**. The marking text is grayed out when **Switch-On at Presence** is deactivated.

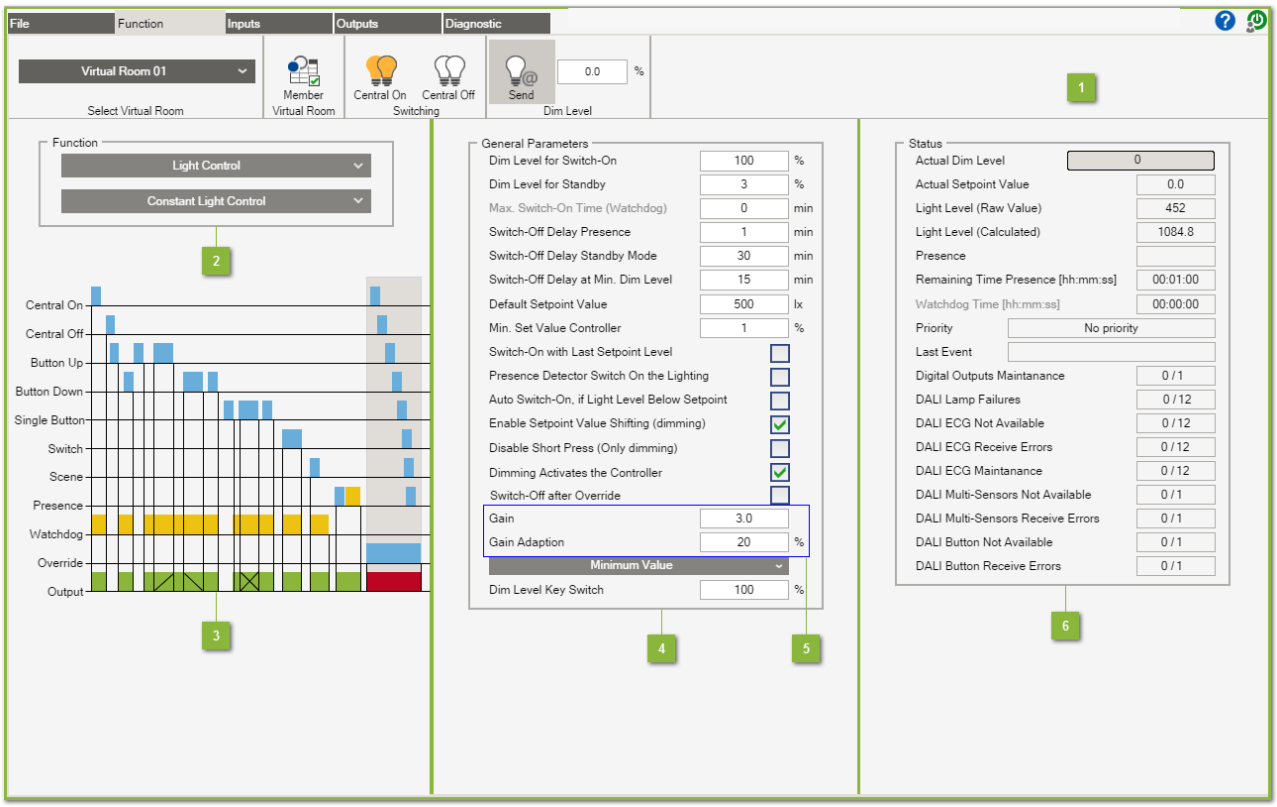
6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Presence	Indication of **Presence**; the presence status is retained until the switch-off delay time has expired.
Light Level (Raw value)	Indication of the measured brightness level from the multi-sensor (raw value)
Remaining Time Presence	Indication of remaining Presence time [hh:mm:ss]
Watchdog Time	Indication of the remaining time for the property Max. Switch-On Time [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.

DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.6. Lighting control

4.2.6.1. Constant Light Control



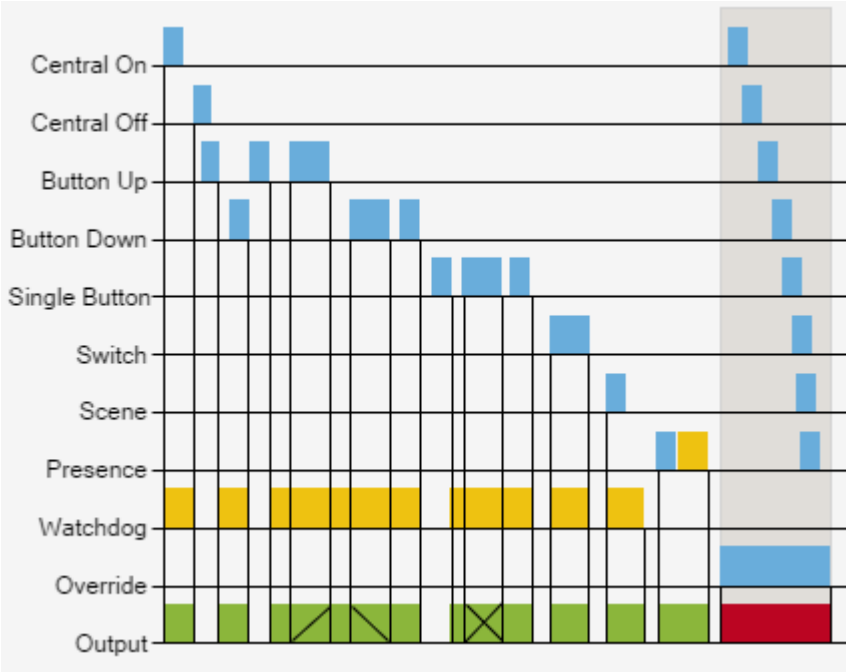
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Constant Light Control** function dims the lighting as a function of the brightness level that is registered. If setpoint adjustment is enabled, you can change the setpoint by holding down the button at the **Button Up**, **Button Down** and **Single Button** inputs. The length of time that the button is depressed differentiates between switching and dimming of the lighting (switching < 500 ms / dimming > 500 ms). A positive edge at the **Central On** or **Switch** inputs switches the lighting on. The lighting is switched off on a negative edge at the **Switch** input or on a positive edge at the **Central Off** input**,** when **Presence** is inactive**.** This function also offers the option of switching the lighting as a function of **Presence**. Lighting control is terminated on a negative edge at the **Presence** input and the lighting is adjusted to the **Dim Level for Standby**. The lighting is not switched off until the **Switch-Off Delay Standby Mode** has expired. The **Scene** input can be used to call up a scene stored in the DALI ECG and to deactivate lighting control.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on and initiates lighting control.
Central Off	Only when the **Presence** is inactive, a positive edge switches the lighting in the virtual room off.
Button Up	Brief pressing of the button (< 500 ms) switches the lighting in the virtual room on and initiates lighting control. Extended pressing of the button (>= 500 ms) brightens the lighting in the virtual room. After dimming, the current brightness level is saved as the new setpoint.
Button Down	Brief pressing of the button (< 500 ms) switches the lighting in the virtual room off. Extended pressing of the button (>= 500 ms) dims the lighting in the virtual room. After dimming, the current brightness level is saved as the new setpoint.
Single Button	Briefly pressing the button (< 500 ms) changes the status of the lighting in the virtual room (On -> Off / Off -> On). Pressing (Holding) the button longer (>= 500 ms) toggles the dimming direction and adjusts the lighting in the virtual room accordingly (brighter -> darker / darker -> brighter). After dimming, the current brightness level is saved as the new setpoint.
Switch	A positive edge switches the lighting in the virtual room on and initiates lighting control. A negative edge switches the lighting in the virtual room off.
Scene	A positive edge calls up the selected scene in the virtual room and terminates lighting control.
Presence	A positive edge switches the lighting on and initiates lighting control. A negative edge initiates the switch-off delay. The lighting in the virtual room is dimmed to the stand-by level when the switch-off delay time has expired.

Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The function **Switch-Off after Override** is executed as soon as overriding is completed. Overriding is explained under Software > Function > Override**.**
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level for Switch-On	100	1...00	Dimming level that is transmitted when the lighting is switched on [%]
Dim Level for Standby	3	0...100	Dimming level that is transmitted on the changeover to the Stand-by mode [%]; the value “0” deactivates this property and grays out the marking text.
Max. Switch-On Time (Watchdog)	0		Monitoring of the maximum switch-on time [min]; the lighting is switched off when this time expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use
Switch-Off Delay Presence	1		Extending of **Presence**; the switch-off delay begins when on a negative edge at the presence detector. The lighting is not switched off until the switch-off delay time has expired. The value “0” deactivates this property and grays out the marking text.
Switch-Off Delay Standby Mode	30		Switch-off delay for the lighting in standby mode [min]. The value “0” deactivates this property and grays out the marking text.
Switch-Off Delay at Min. Dim Level	15		Switch-off delay of the lighting when it has reached the minimum dimming level. The value “0” deactivates this property and grays out the marking text.
Default Setpoint Value	500	> 100	Setpoint when lighting is switched on, as long as the function **Switch-On with Last Setpoint Level** is deactivated [lx]
Min. Set Value Controller	1	1...100	Minimum set value for the internal controller [%].
Switch-On with Last Setpoint Level	Inactive		When this check-box is marked, the setpoint that was last set is used when the lighting is switched on.
Presence Detector Switch-On the Lighting	Inactive		When this check-box is marked, a positive edge at the **Presence** input switches the lighting on.
Auto Switch-On, if Light Level below Setpoint	Inactive		When this check-box is marked, a positive edge at the **Presence** input, or at the **Switch** input will switch on the lighting only when the **Light Level (calculated)** is at least 50 lx less than the **Actual Setpoint Value.**
Enable Setpoint Value Shifting (dimming)	Active		The setpoint can be changed by holding down the (dimming) button.

Disable Short Press (Only dimming)	Inactive		When this check-box is marked a brief stroke of the button will no longer be evaluated. The lighting can then only be dimmed via the **Button Up, Button Down** and **Single Button** inputs. It cannot, however, be switched off/on.
Dimming Activates the Controller	Active		When this check-box is marked, lighting control is enabled again after dimming and the lighting is adjusted to the new setpoint. If the check-box is not marked, lighting control remains inhibited after dimming.
Switch-Off after Override	Inactive		When this check-box is marked and no presence is detected, the lighting is switched off at the completion of overriding. When this check-box is not marked, or when presence is detected, the lighting control is activated at the completion of overriding.
Gain	3.0		Gain for **Light Level (Raw Value)**
Gain Adaption	20		Correction of gain as a function of the portion of daylight [%]
Minimum value			When several multi-sensors are assigned to a virtual room, you can use the selection menu to define whether the minimum value, mean value or maximum value is to be generated via the measured values.
Dim Level Key Switch	100		Dimming value that is transmitted when the **Key Switch** is active [%]

5 Calibrate the light intensity sensor

Calibration Requirements:

- The source of light to be measured must be switched on about 20 minutes before measuring, so that the lamps can operate at their full power.
- The specified light intensity level must be measured on the work surface. A luxmeter that can adapt well to the V(#) curve is required for this.
- The calibration cannot be performed until the room has been completely furnished since the measured values of the light sensor depend on the reflection properties of the room.
- *Starting value* ***Gain*** = 3
- Starting value ***Gain Adaption*** = 20

Two measurements are required for calibrating the light sensor. For both measurements, the luxmeter is placed on the work surface where the desired light intensity must be reached. The first measurement is performed in a darkened room using pure artificial light. The calibration value is determined as follows:

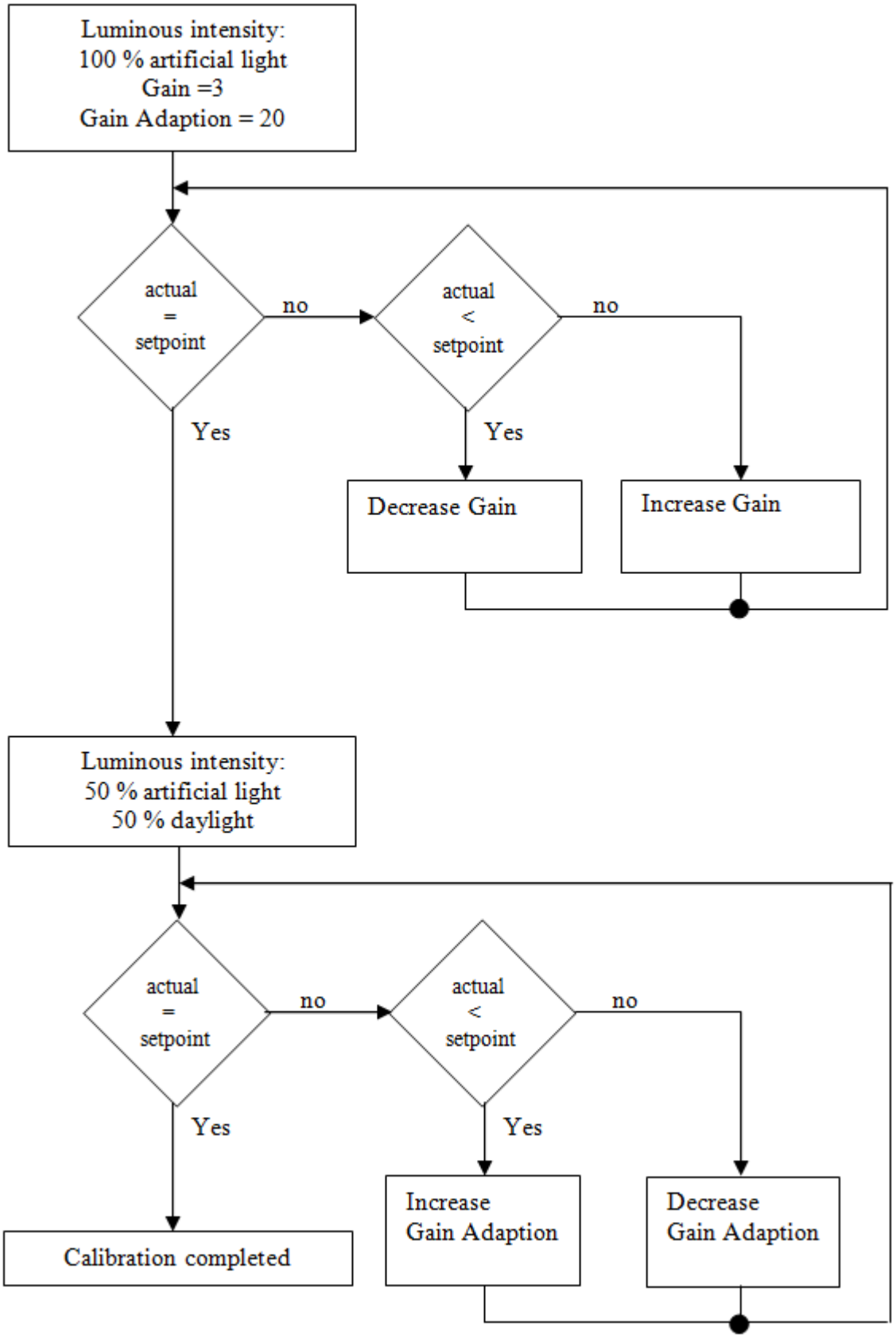
- If the light intensity in the workplace is higher than the light intensity setpoint, the calibration value must be increased until the desired light intensity is reached.
- If the light intensity in the workplace is lower than the light intensity setpoint, the calibration value must be decreased until the desired light intensity is reached.

For safety reasons, the light intensity measured by the luxmeter should be about 10 % higher than the desired light intensity setpoint. The second calibration measurement is required in order to determine the percentage adjustment of the calibration value. This measurement is performed in a semi-darkened room with residual artificial light. The second measurement is performed as follows:

- If the light intensity in the workplace is lower than the light intensity setpoint, the adjustment percentage must be increased until the desired light intensity is reached.
- If the light intensity in the workplace is higher than the desired light intensity, the adjustment percentage must be decreased until the desired light intensity is reached.

If the percentage adaptation of the calibration value is performed in a semi-darkened room, the lowest possible offset is achieved depending on the proportion of daylight or artificial light. The actual value of the light intensity can still be lower than the light intensity setpoint.

Process diagram

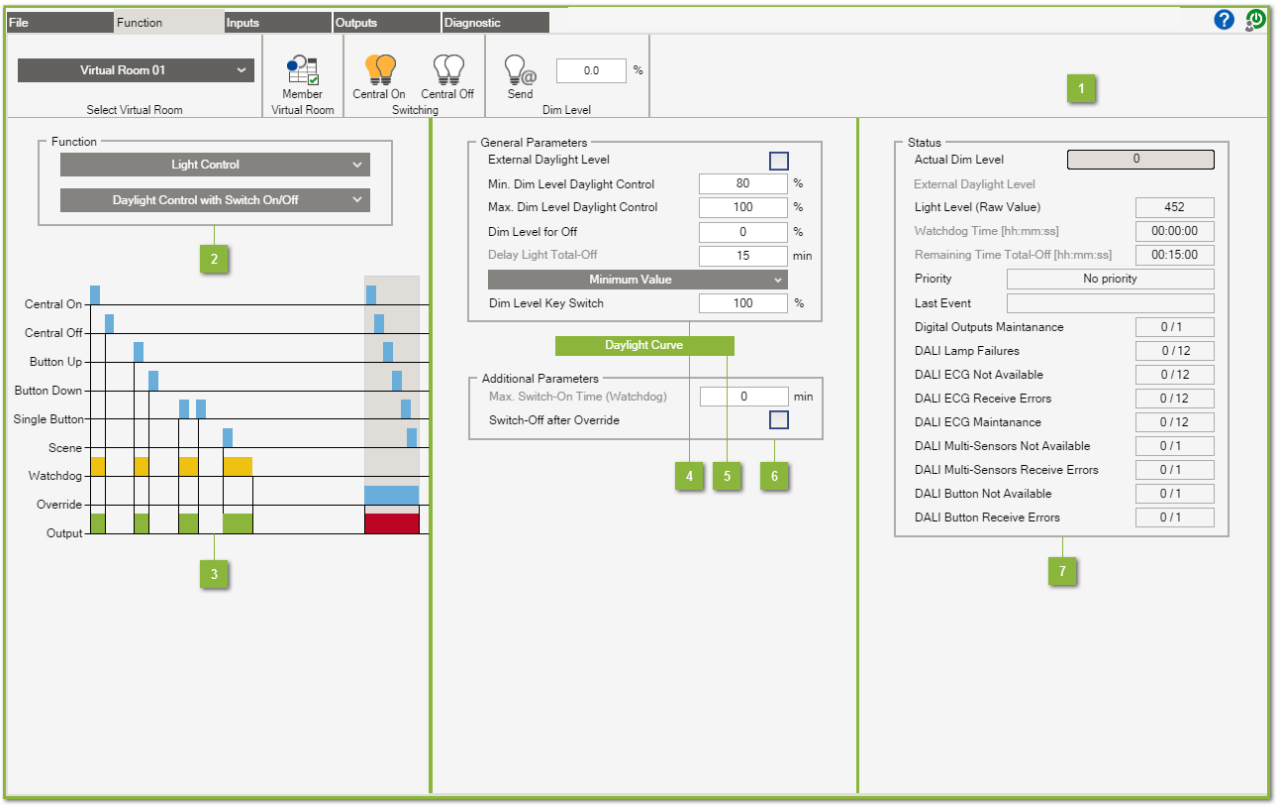


6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Actual Setpoint Value	Indication of current set value by the constant light controller
Light Level (Raw Value)	Indication of the measured brightness level from the multi-sensor (raw value)
Light Level (Calcluated)	Indication of the calculated brightness level as a function of **Gain** and **Gain Adaption**
Presence	Indication of **Presence**; the **Presence** status is retained until the switch-off delay time has expired.
Remaining Time Presence	Indication of the remaining time for Presence [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Watchdog Time	Indication of the remaining time for the property Max. Switch-On Time [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.

DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.6.2. Daylight control with Switch On/Off



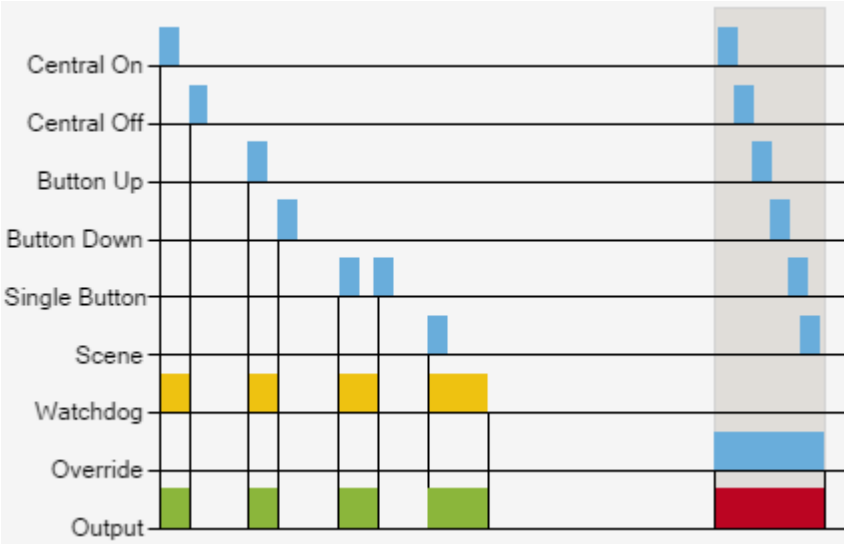
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The function **Daylight Control with Switch On/Off** switches on the lighting via the **Central On** and **Button Up** inputs and switches it off via **Central Off** and **Button Down**. The lighting can also be switched via the **Single Button** input. The lighting is toggled each time the button is pressed (On > Off / Off > On). If it has already been switched on, the lighting is then adjusted to the dimming level determined by the daylight regulation function. The **Scene** input can be used to call up a scene stored in the DALI ECG.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Button Up	A positive edge switches the lighting in the virtual room on.
Button Down	A positive edge switches the lighting in the virtual room off.
Single Button	A positive edge switches the lighting status (On -> Off / Off -> On).
Scene	A positive edge calls up the selected scene in the virtual room and deactivates daylight regulation.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The function **Switch-Off after Override** is executed as soon as overriding is completed. Overriding is explained under Software > Function > Override**.**
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
External Daylight Level	Inactive		When this check-box is marked, the daylight value from the MODBUS interface is applied. A description of this interface is given in the Section Software > MODBUS Interface > Write > External values for virtual room. If the check-box is not marked, the daylight value from the daylight curve is applied.
Min Dim Level Daylight Control	80	1...100	The daylight value is determined using a 10-point characteristic curve. The pivot points on the Y axis are calculated automatically as a function of the defined limits. The lower limit here is the **Min. Dim Level Daylight Control**. The marking text is grayed out and calculation deactivated when **External Daylight Level** is activated.
Max Dim Level Daylight Control	100	1...100	The daylight value is determined using a 10-point characteristic curve. The pivot points on the Y axis are calculated automatically as a function of the defined limits. The upper limit here is the **Max. Dim Level Daylight Control**. The marking text is grayed out and calculation deactivated when **External Daylight Level** is activated.
Dim Level for Off	0	0...100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Minimum value			When several multi-sensors are assigned to a virtual room, you can use the selection menu to define whether the minimum value, mean value or maximum value is to be generated via the measured values.
Dim Level Key Switch	100	0...100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Daylight curve

Click the **[Daylight curve]** button to call up the dialog window for configuring the daylight characteristic curve.
This dialog window is explained under Software > Function > Light control > Daylight curve.

6 Additional parameters

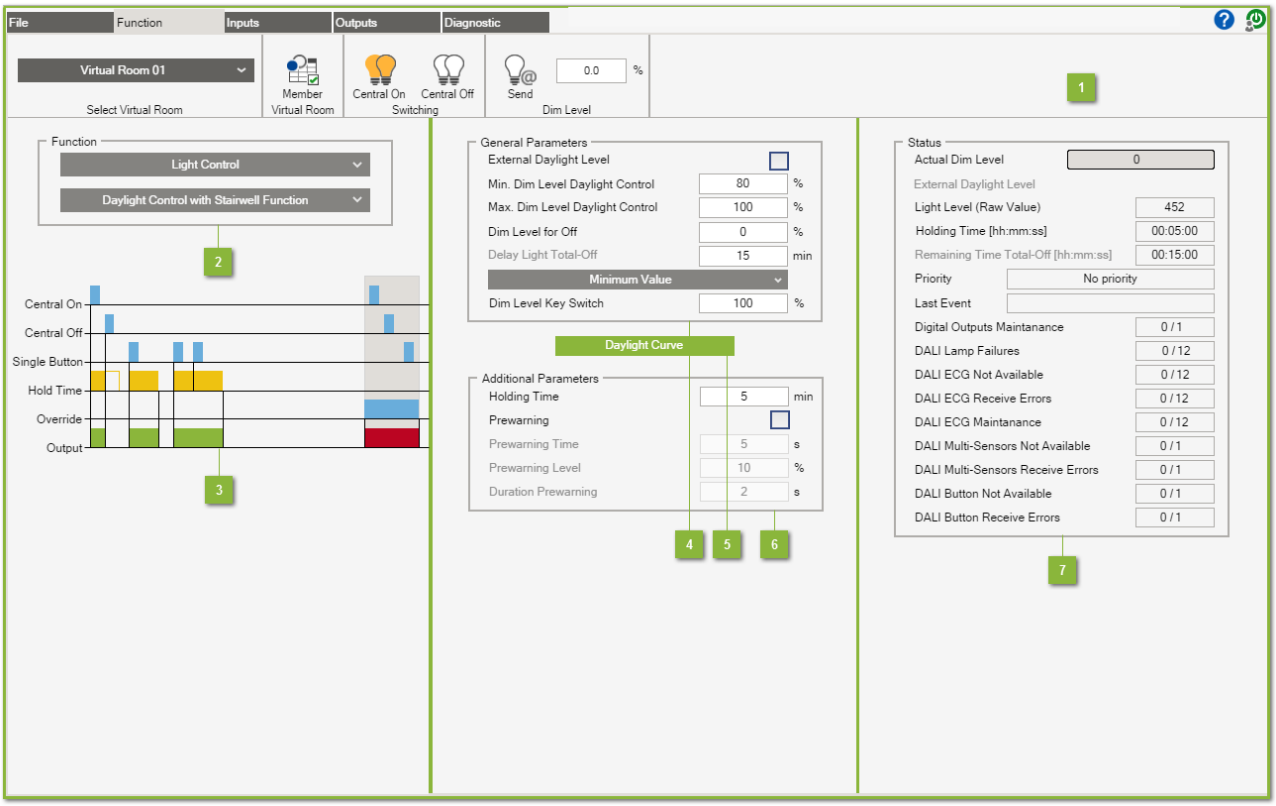
Designation	Default	Range	Description
Max. Switch-On Time (Watchdog)	0		Monitoring of the maximum switch-on time [min]; the lighting is switched off when this time expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use
Switch-Off after Override	Inactive		When this check-box is marked, **Dim Level for Off** is transmitted when overriding is completed. If this check-box is not marked, the daylight value will be transmitted when overriding is completed.

7 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
External Daylight Level	The connection status is displayed here when the function **External Daylight Level** is activated; the marking text is grayed out when this property is deactivated.
Light Level (Raw Value)	Indication of the measured brightness level from the multi-sensor (raw value)
Watchdog Time	Indication of the remaining time for the property **Max. Switch-On Time** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or

	maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.6.3. Daylight control with stairwell function



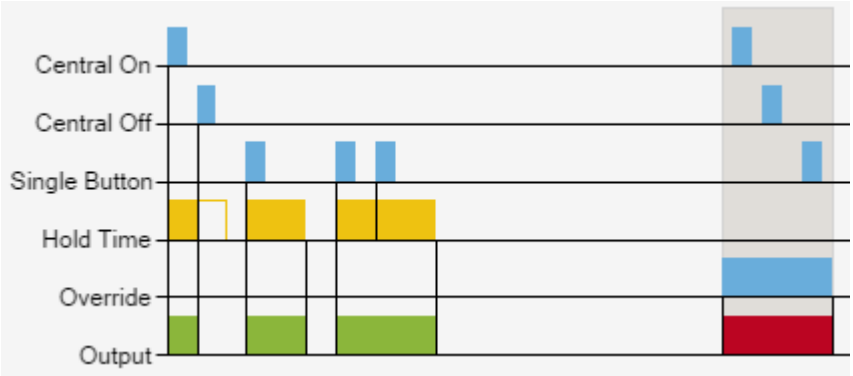
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The function **Daylight Control with Stairwell Function** switches the lighting on via the **Single Button** and **Central On** inputs. The lighting is switched off automatically when the set **Hold Time** period expires. The **Hold Time** is restarted each time a button is pressed. A pre-warning can also be triggered as an option prior to switching off of the lighting. The input **Central Off** enables the lighting to be switched off before the **Hold Time** expires. If it has already been switched on, the lighting is then adjusted to the dimming level determined by the daylight regulation function.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on and starts the **Hold Time**.
Central Off	A positive edge switches the lighting in the virtual room off.
Single Button	A positive edge switches the lighting in the virtual room on and starts the **Hold Time**.
Hold Time	The lighting in the virtual room is switched off automatically when the set **Hold Time** expires.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Hold Time** is resumed when overriding is completed. Overriding is explained under Software > Function > Override**.**
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
External daylight value	Inactive		When this check-box is marked, the daylight value from the MODBUS interface is applied. A description of this interface is given in the Section Software > MODBUS Interface > Write > External values for virtual room. If the check-box is not marked, the daylight value from the daylight curve is applied.
Min Dim Level Daylight Control	80	1...100	The daylight value is determined using a 10-point characteristic curve. The pivot points on the Y axis are calculated automatically as a function of the defined limits. The lower limit here is the **Min Dim Level Daylight Control**. The marking text is grayed out and calculation deactivated when **External Daylight Level** is activated.
Max Dim Level Daylight Control	100	1...100	The daylight value is determined using a 10-point characteristic curve. The pivot points on the Y axis are calculated automatically as a function of the defined limits. The upper limit here is the **Max Dim Level Daylight Control**. The marking text is grayed out and calculation deactivated when **External Daylight Level** is activated.
Dim Level for Off	0	0...100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the **Delay Light Total-Off** time has expired. Application: Areas subject to regular use.
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Minimum value			When several multi-sensors are assigned to a virtual room, you can use the selection menu to define whether the minimum value, mean value or maximum value is to be generated via the measured values.
Dim Level Key Switch	100	0...100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Daylight curve

Click the **[Daylight curve]** button to call up the dialog window for configuring the daylight characteristic curve.
This dialog window is explained under Software > Function > Light control > Daylight curve.

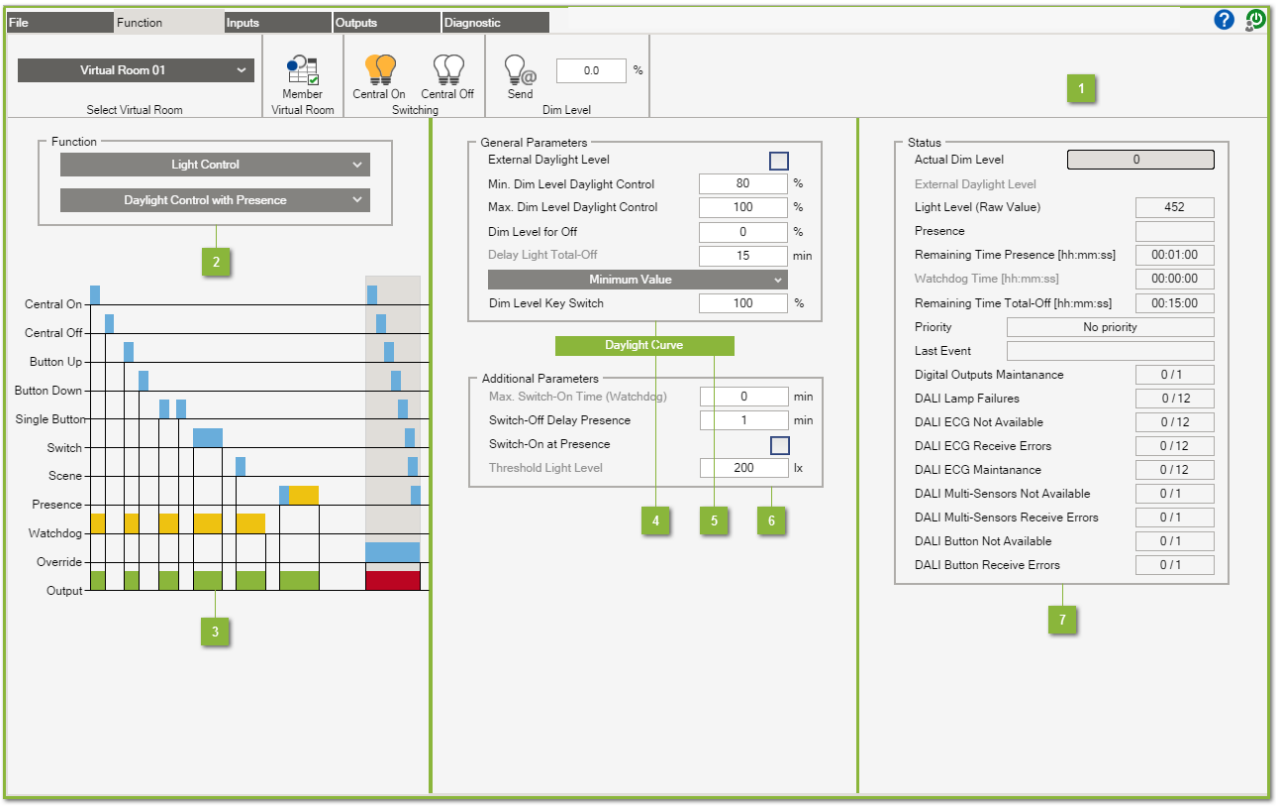
6 Additional parameters

Designation	Default	Range	Description
Holding time	5	> 0	Defines the entire duty cycle for the lighting [min]
Prewarning	Inactive		Enable for Switch-off pre-warning.
Prewarning Time	5		Time of pre-warning switch-off prior to switching off [s]; this value is for display only and is set under File > Project settings > Stairwell Function.
Prewarning Level	10		Dimming level for the switch-off pre-warning [%]; this value is for display only and is set under File > Project settings > Stairwell Function.
Duration Prewarning	2		Duration of switch-off pre-warning [s]; this value is for display only and is set under File > Project settings > Stairwell Function.

7 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
External Daylight Level	The connection status is displayed here when the function **External Daylight Level** is activated; the marking text is grayed out when this property is deactivated.
Light Level (Raw Value)	Indication of the measured brightness level from the multi-sensor (raw value)
Holding time	Indication of the remaining **Holding time** [hh:mm:ss]
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.6.4. Daylight control with Presence function



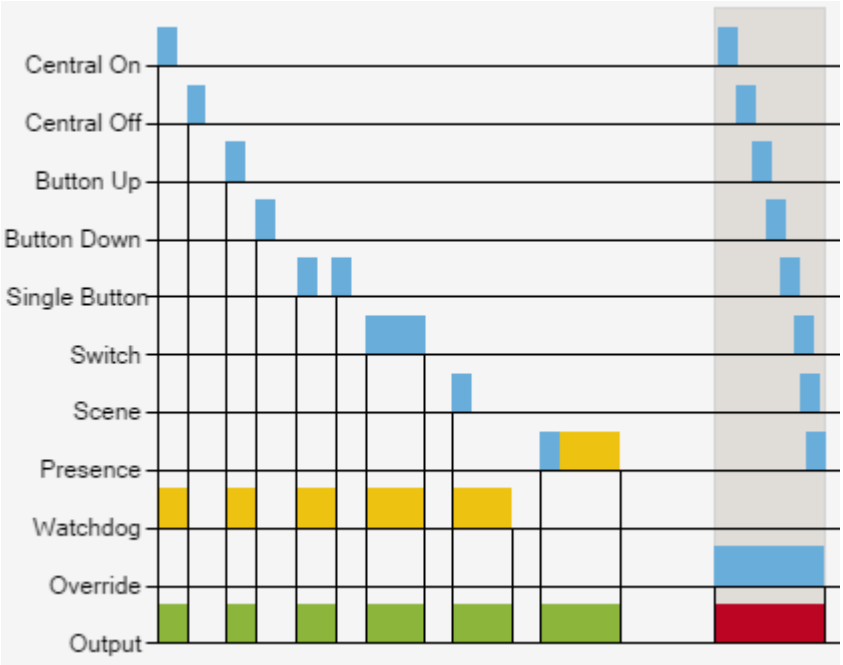
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The **Daylight Control with Presence** function switches on the lighting via the **Central On** and **Button Up** inputs and switches it off via **Central Off** and **Button Down**. The lighting can also be switched via the **Single Button** input. The lighting is toggled each time the button is pressed (On > Off / Off > On). As opposed to the **Daylight Control with Switch On/Off**, the **Switch** and **Presence** inputs are also supported here. A positive edge at the **Presence** or **Switch** input switches the lighting on. The lighting is switched off on a negative edge at the **Presence** or **Switch** input. If it has already been switched on, the lighting is then adjusted to the dimming level determined by the daylight regulation function. The **Scene** input can be used to call up a scene stored in the DALI ECG.

3 Function diagram



Designation	Description
Central On	A positive edge switches the lighting in the virtual room on.
Central Off	A positive edge switches the lighting in the virtual room off.
Button Up	A positive edge switches the lighting in the virtual room on.
Button Down	A positive edge switches the lighting in the virtual room off.
Single Button	A positive edge switches the lighting status (On -> Off / Off -> On).
Switch	A positive edge switches the lighting in the virtual room on. A negative edge switches the lighting in the virtual room off.
Scene	A positive edge calls up the selected scene in the virtual room and deactivates daylight regulation.
Presence	A positive edge switches on the lighting, while a negative edge initiates the switch-off delay. The lighting in the virtual room is switched off when the switch-off delay time has expired.
Watchdog	The lighting in the virtual room is switched off automatically when the set monitoring time expires.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **Presence** input is resumed when overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
External daylight value	Inactive		When this check-box is marked, the daylight value from the MODBUS interface is applied. A description of this interface is given in the Section Software > MODBUS Interface > Write > External values for virtual room. If the check-box is not marked, the daylight value from the daylight curve is applied.
Min Dim Level Daylight Control	80	1...100	The daylight value is determined using a 10-point characteristic curve. The pivot points on the Y axis are calculated automatically as a function of the defined limits. The lower limit here is the **Min Dim Level Daylight Control**. The marking text is grayed out and calculation deactivated when **External Daylight Level** is activated.
Max Dim Level Daylight Control	100	1...100	The daylight value is determined using a 10-point characteristic curve. The pivot points on the Y axis are calculated automatically as a function of the defined limits. The upper limit here is the **Max Dim Level Daylight Control**. The marking text is grayed out and calculation deactivated when **External Daylight Level** is activated.
Dim Level for Off	0	0...100	Dimming level that is transmitted when the lighting is switched off [%] **Note** **Delayed switch-off** A value “>0” does not switch off the lighting. In this case, the lighting is not switched off until the time set for **Delay Light Total-Off** expires. Application: Areas subject to regular use.
Delay Light Total-Off	15		If the **Dim Level for Off** is greater than zero, the lighting is not switched off until this time has expired [min]. The value “0” for **Dim Level for Off** deactivates the property and grays out the marking text.
Minimum value			When several multi-sensors are assigned to a virtual room, you can use the selection menu to define whether the minimum value, mean value or maximum value is to be generated via the measured values.
Dim Level Key Switch	100	0...100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Daylight curve

Click the **[Daylight curve]** button to call up the dialog window for configuring the daylight characteristic curve.
This dialog window is explained under Software > Function > Light control > Daylight curve.

6 Additional parameters

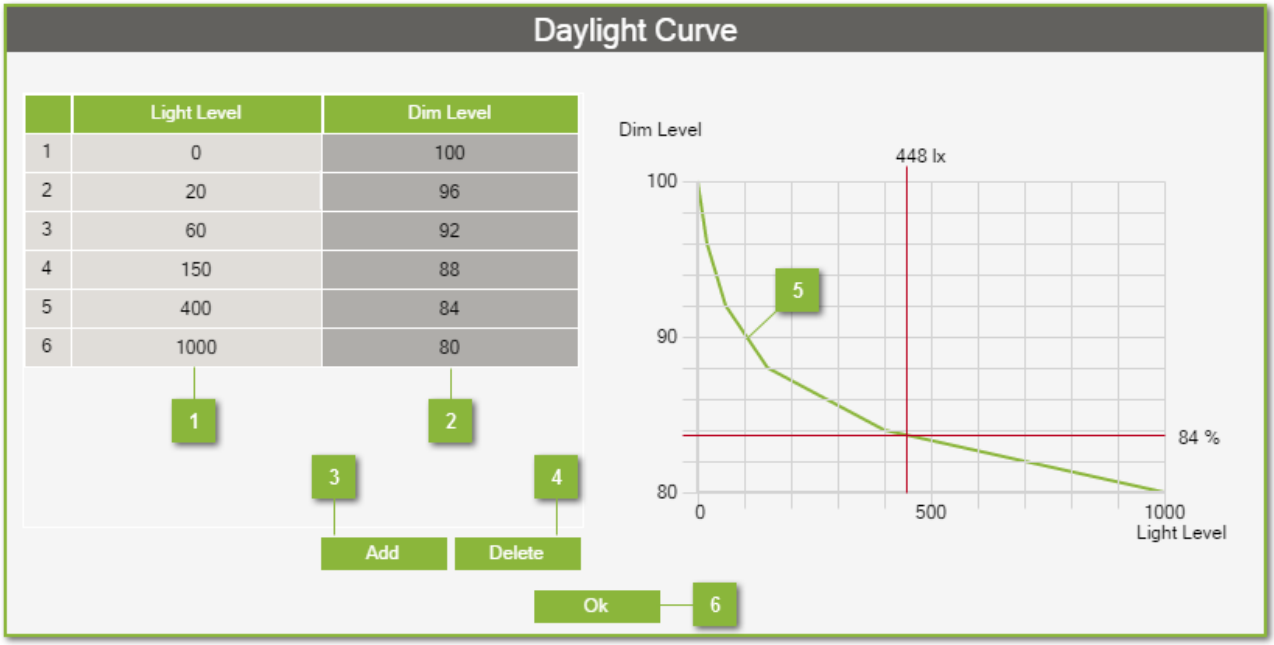
Designation	Default	Range	Description
Max. Switch-On Time (Watchdog)	0		Monitoring of maximum switch-on time [min]. The lighting is switched off when the specified time period expires. The value “0” deactivates this property and grays out the marking text. Application: Areas subject only to occasional use
Switch-Off Delay Presence	1		Extending of **Presence**; the switch-off delay begins when on a negative edge at the presence detector. The lighting is not switched off until the switch-off delay time has expired. The value “0” deactivates this property and grays out the marking text.
Switch-On at Presence	Inactive		When this check-box is marked, a positive edge at the **Presence** input switches the lighting on. Prerequisite: **Light Level (raw value)** > **Threshold Light Level**
Threshold Light Level	200		The lighting will not be switched on with a positive edge at the **Presence** input when the **Light Level (Raw Value)** > **Threshold Light Level**. The marking text is grayed out when **Switch-On at Presence** is deactivated.

7 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
External Daylight Level	The connection status is displayed here when the function **External Daylight Level** is activated; the marking text is grayed out when this property is deactivated.
Light Level (Raw value)	Indication of the measured brightness level from the multi-sensor (raw value)
Presence	Indication of **Presence**; the **Presence** status is retained until the switch-off delay time has expired.
Remaining Time Presence	Indication of remaining Presence time [hh:mm:ss]
Watchdog Time	Indication of the remaining time for the property **Max. Switch-On Time** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Remaining Time Total-Off	Indication of the remaining time for the property **Delay Light Total-Off** [hh:mm:ss]; the marking text is grayed out when this property is deactivated.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.

DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.6.5. Daylight curve



1 Light Level

The pivot points (Light Levels) for the 10-point characteristic curve are set in the column **Light Level**.

2 Dim Level

The pivot points on the Y axis (dimming value) are calculated automatically as a function of the defined limits. The lower limit here is the **Min Dim Level Daylight Control**, while the upper limit is the **Max Dim Level Daylight Control**.

3 Add

You can add a new pivot point to the daylight curve by clicking on the button **[Add]**. Up to 10 pivot points can be defined for each curve.

4 Delete

The last pivot point of the daylight curve is removed by clicking on **[Delete]**.

5 Graphical representation

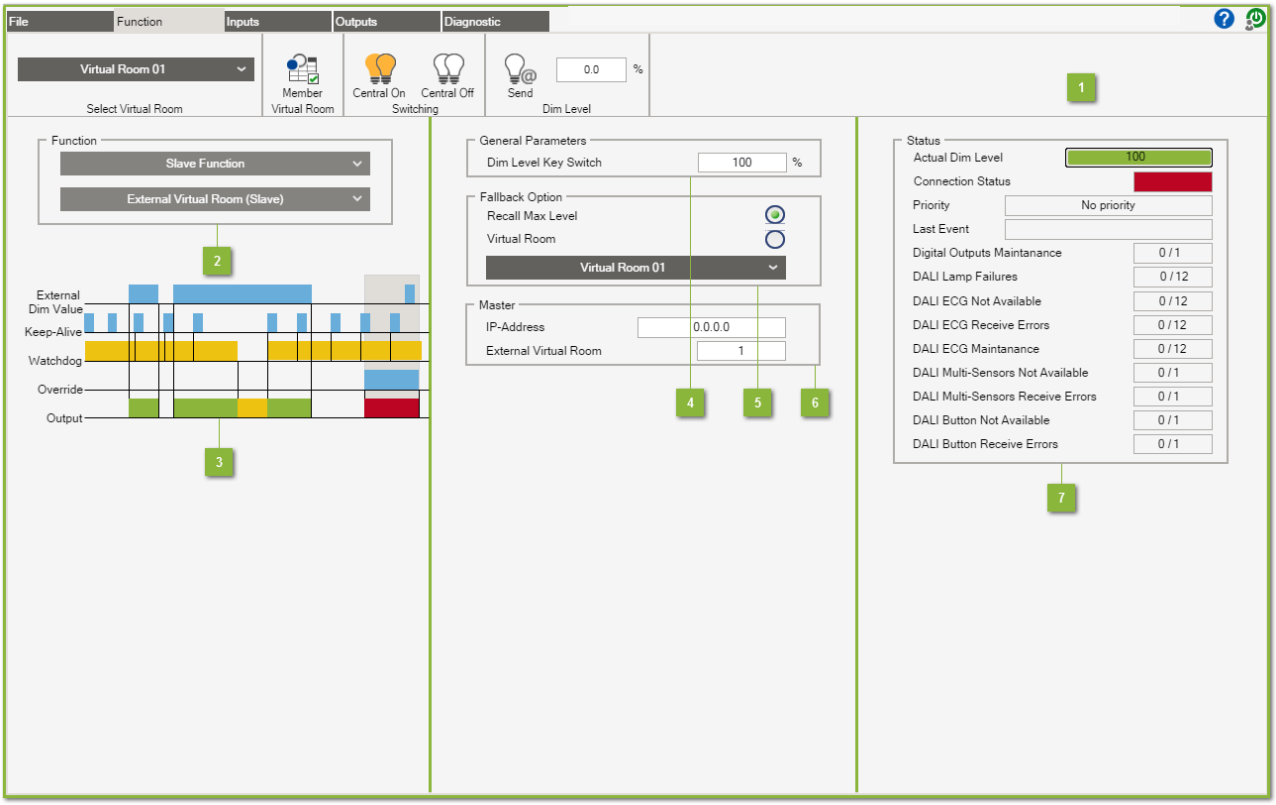
The green line indicates the characteristic curve that had been defined for daylight regulation. The red line shows the current operating point for daylight regulation.

6 OK

Click on **[Ok]** to close this window.

4.2.7. Slave feature

4.2.7.1. External virtual room (Slave)



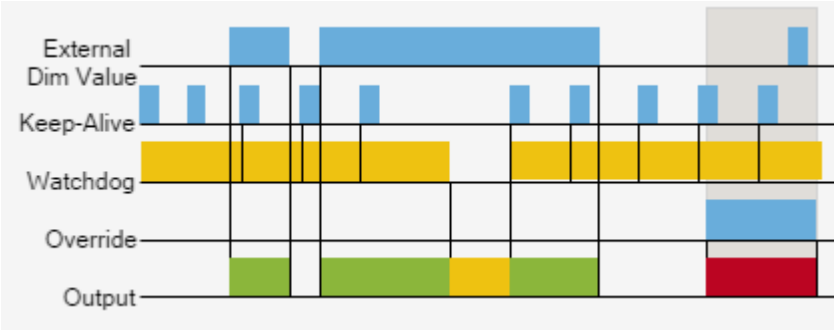
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

The function **External Virtual Room (Slave)** is used for cross-communication between two WAGO Lighting Management controllers. This virtual room always follows the condition of the lighting in the “leading” virtual room (Master). A **Fallback Option** can be defined when the connection to the virtual room is disrupted.

3 Function diagram



Designation	Description
External dimming value	Any change of the dimming level in the (Master) virtual room will be transferred directly to the lighting in the (Slave) virtual room.
Keep-alive	A “blank” telegram is transmitted for monitoring the connection if no new value is transmitted from the (Master) virtual room.
Watchdog	Connection monitoring; the lighting in the virtual room switches to the selected **Fallback Option** as soon as a loss of connection is determined.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **External dimming value** input is resumed when overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level Key Switch	100	0...100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Fallback Option

Two Fall-back options are available when a break in communication is determined: Lighting in the virtual room:
1. is adjusted to the maximum dimming value.
2. assumes the condition of a different virtual room on the same controller. You can set the (Master) virtual room using the selection menu.

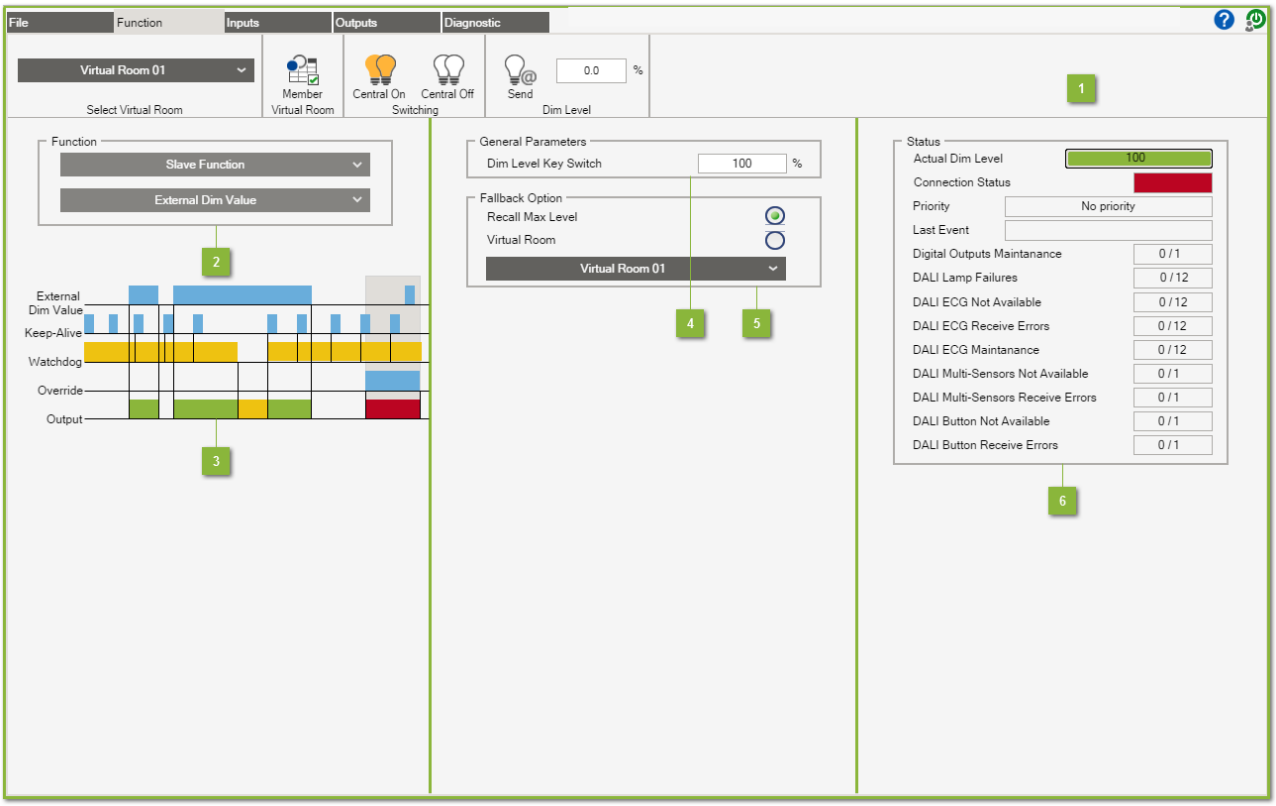
6 Master

Designation	Default	Range	Description
IP-Address	0.0.0.0		IP address of the WAGO Lighting Management controller containing the (Master) virtual room
External Virtual Room	1	1...60	Number of the (Master) virtual room

7 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Connection Status	Indicates the connection status with the (Master) virtual room; if there is a connection fault the virtual room switches to the fall-back option and the status is shown in red.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.2.7.2. External dim value



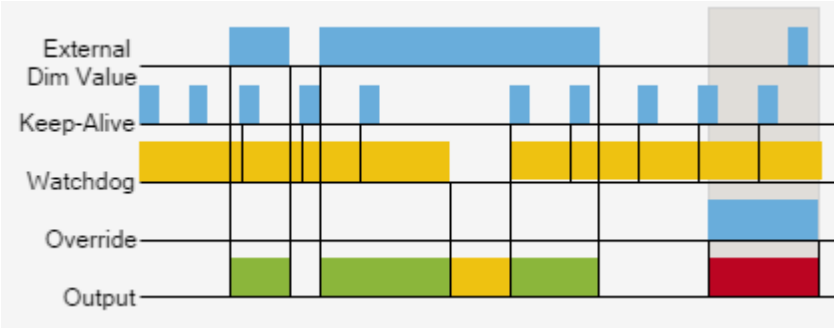
1 Menu ribbon

The documentation for the menu ribbon is given under Software > Function.

2 Function

With the **External Dim Value** function the dimming value received via the network is passed on directly to the lighting in the virtual room.
The description of the interface for the external dimming value is given in Section Software > MODBUS Interface > Write > External values for virtual room.

3 Function diagram



Designation	Description
External Dim Value	Any change in the external dimming value is transferred directly to the lighting in the virtual room.
Keep-Alive	The external dimming value must be transmitted in cycles to WAGO Lighting Management for monitoring the connection. You can set the maximum interval between two MODBUS telegrams under Software > File > Project settings > Heartbeat MODBUS.
Watchdog	Connection monitoring; the lighting in the virtual room switches to the selected **Fall-back option** as soon as a loss of connection is determined.
Override	Overriding of the virtual room deactivates the selected function. The condition defined by the **External Dim Value** input is resumed when overriding is completed. Overriding is explained under Software > Function > Override.
Output	Indicates in the diagram when the virtual room is activated.

4 General Parameters

Designation	Default	Range	Description
Dim Level Key Switch	100	0...100	Dimming value that is transmitted when the **Key Switch** is active [%]

5 Fallback option

The following two fall-back options are available when a break in communication is determined. Lighting in the virtual room:

1. is adjusted to the maximum dimming value.
2. assumes the condition of a different virtual room on the same controller. You can set the (Master) virtual room using the selection menu.

6 Status

Designation	Description
Actual Dim Level	Indication of the current dimming level in the virtual room [%]
Connection status	Indicates the connection status with the (Master) virtual room; if there is a connection fault the virtual room switches to the fall-back option and the status is shown in red.
Priority	Indication of current priority Priority 1: Key Switch Priority 2: MODBUS override (GLT) Priority 3: Timer override Priority 4: No priority
Last Event	Indication of last event (e.g., Digital Input 2 Single Button)
Digital Outputs Maintanance	The first digit indicates the number of digital outputs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of digital outputs assigned to the virtual room.
DALI Lamp Failures	The first digit indicates the number of lamp failures in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Not Available	The first digit indicates the number of DALI ECGs which cannot be contacted in the virtual room. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Receive Errors	The first digit indicates the number of DALI ECGs in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI ECG Maintenance	The first digit indicates the number of DALI ECGs in the virtual room which have exceeded their maximum operating hours. The second digit indicates the number of DALI ECGs assigned to the virtual room.
DALI Multi-Sensors Not Available	The first digit indicates the number of DALI Multi-sensors which cannot be contacted in the virtual room. The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Multi-Sensor Receive Errors	The first digit indicates the number of DALI Multi-sensors in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI Multi-sensors assigned to the virtual room.
DALI Button Not Available	The first digit indicates the number of DALI buttons that cannot be contacted in the virtual room. The second digit indicates the number of DALI buttons assigned to the virtual room.
DALI Button Receive Errors	The first digit indicates the number of DALI buttons in the virtual room for which a receive error has been detected (e.g., duplicate addresses or maximum line length exceeded). The second digit indicates the number of DALI buttons assigned to the virtual room.

4.3. Inputs

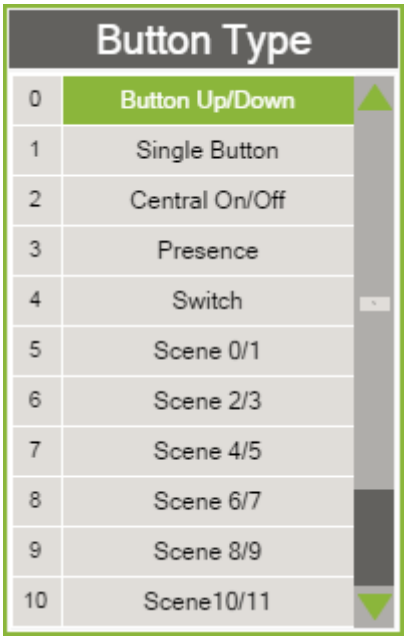
4.3.1. Select button type

In this dialog window you can assign a button type to the input. The selected button type is highlighted in green. Clicking on the desired button type then applies the setting and closes the dialog window.

The following types of buttons can be selected:

Button type	Function	Description
Button Up	Button	Switch-on/Brighter function
Button Down	Button	Switch-off/Dim
Single Button	Button	Switch-on/Switch-off and/or Dim/Brighter
Central On	Button	Central On function
Central Off	Button	Central Off function
Presence	Presence	Presence function
Switch	Switch	Switch function
Scene 0	Button	Call up DALI scene 0
Scene 1	Button	Call up DALI scene 1
Scene 2	Button	Call up DALI scene 2
Scene 3	Button	Call up DALI scene 3
Scene 4	Button	Call up DALI scene 4
Scene 5	Button	Call up DALI scene 5
Scene 6	Button	Call up DALI scene 6
Scene 7	Button	Call up DALI scene 7
Scene 8	Button	Call up DALI scene 8
Scene 9	Button	Call up DALI scene 9
Scene 10	Button	Call up DALI scene 10
Scene 11	Button	Call up DALI scene 11
Scene 12	Button	Call up DALI scene 12
Scene 13	Button	Call up DALI scene 13
Scene 14	Button	Call up DALI scene 14
Scene 15	Button	Call up DALI scene 15
Key Switch	Switch	The Key Switch has the highest priority and overrides the normal room function. When the Key Switch is active the lighting is adjusted to the **Dim Level Key Switch**. Overriding is explained in Section Software > Function > Override.

4.3.2. Select button type for button pair

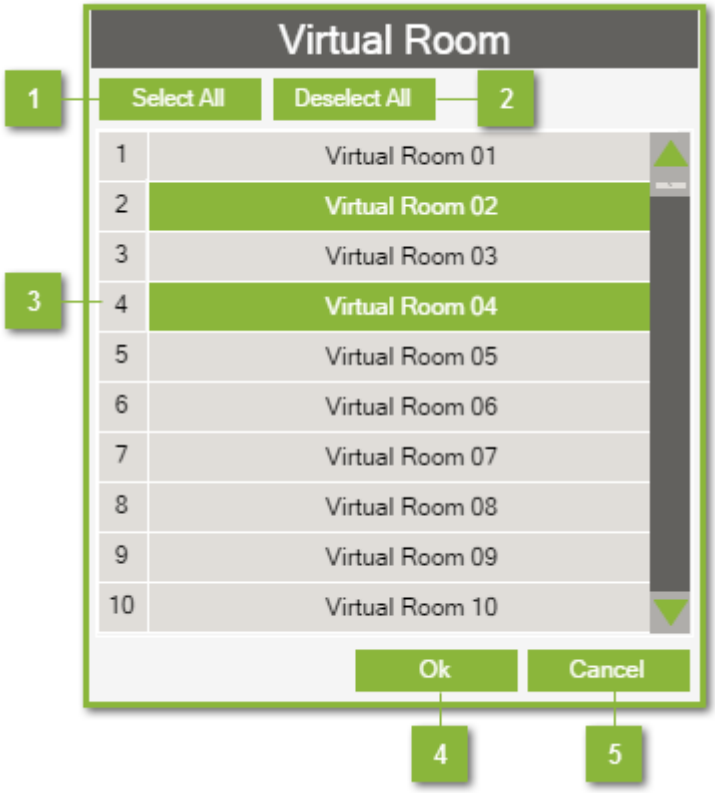


In this dialog window you can assign a button type to the input. The selected button type is highlighted in green. Clicking on the desired button type then applies the setting and closes the dialog window.

The following types of buttons can be selected:

Button type	Function	Description
Button Up/Down	Button	Input 1 has the function Switch-on/Brighter. Input 2 has the function Switch-off/Dim.
Single Button	Button	Input 1 and 2 together have the function Switch-on/Switch-off and/or Brighter/ Dim (OR logic).
Central On/Off	Button	Input 1 has the function Central On. Input 2 has the function Central Off.
Presence	Presence	Input 1 and 2 together have the function Presence (OR logic).
Switch	Switch	Input 1 and 2 together have the function Switch (OR logic).
Scene 0/1	Button	Input 1 calls up DALI scene 0. Input 2 calls up DALI scene 1.
Scene 2/3	Button	Input 1 calls up DALI scene 2. Input 2 calls up DALI scene 3.
Scene 4/5	Button	Input 1 calls up DALI scene 4. Input 2 calls up DALI scene 5.
Scene 6/7	Button	Input 1 calls up DALI scene 6. Input 2 calls up DALI scene 7.
Scene 8/9	Button	Input 1 calls up DALI scene 8. Input 2 calls up DALI scene 9.
Scene 10/11	Button	Input 1 calls up DALI scene 10. Input 2 calls up DALI scene 11.
Scene 12/13	Button	Input 1 calls up DALI scene 12. Input 2 calls up DALI scene 13.
Scene 14/15	Button	Input 1 calls up DALI scene 14. Input 2 calls up DALI scene 15.
Key Switch	Switch	Input 1 and 2 together have the function **Key Switch** (OR logic). The Key Switch has the highest priority and overrides the normal room function. When the Key Switch is active the lighting is adjusted to the **Dim Level Key Switch**. Overriding is explained in Section Software > Function > Override.

4.3.3. Select virtual room



In the **Virtual room** dialog window you can assign inputs to the virtual rooms. Multiple selections are possible.

1 Select all

[Select all] selects all of the virtual rooms.

2 Deselect all

[Deselct all] deselects all of the virtual rooms.

3 Allocation to virtual rooms

This table shows the designations of all 60 virtual rooms. Select the virtual room simply by clicking on the name (designation). Virtual rooms that have been selected are highlighted in green. In this figure, the input is assigned to virtual rooms 2 and 4.

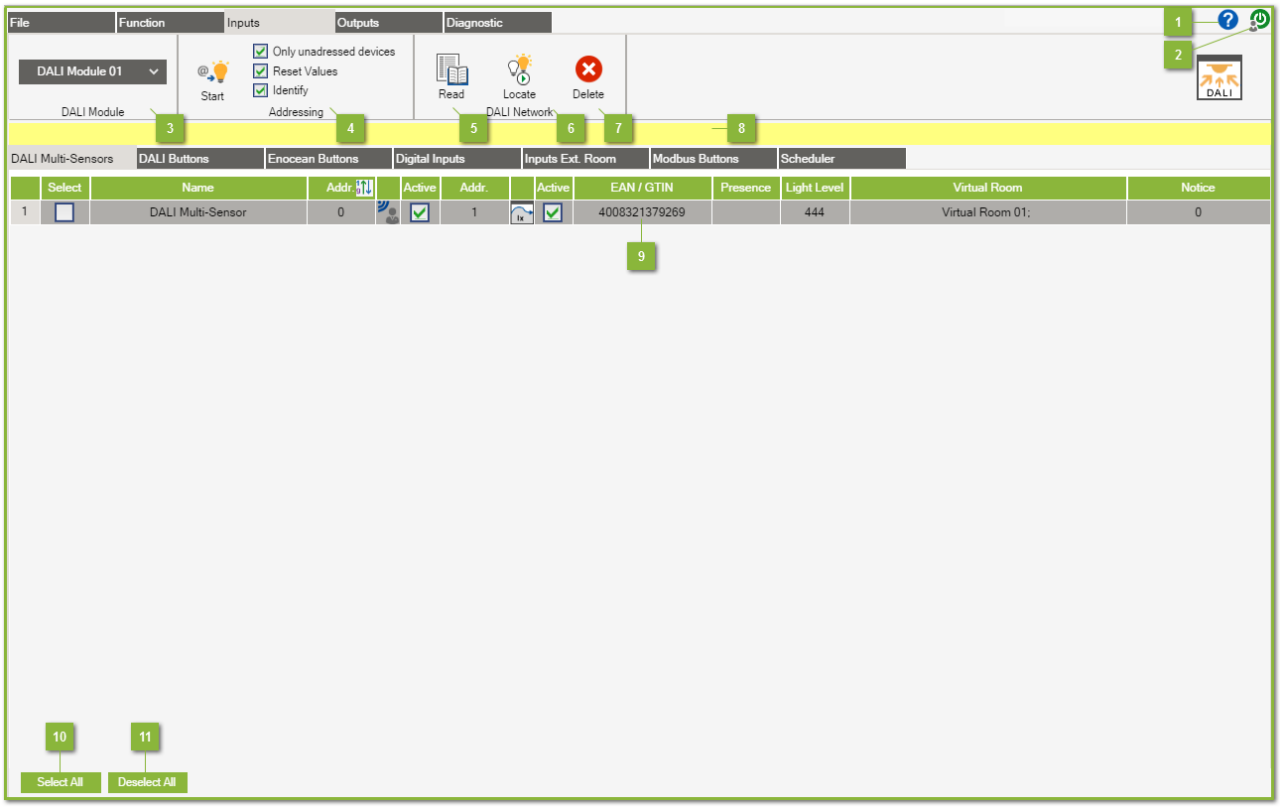
4 OK

[Ok] applies your selection of the virtual rooms and closes the dialog window.
Selection of the virtual rooms is applied to all selected inputs.

5 Cancel

[Cancel] closes the dialog window without saving (applying) any selections you have made.

4.3.4. DALI Multi-sensors



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select DALI module

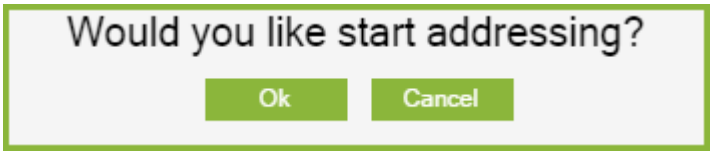
Use the selection menu to select the DALI module.

4 Addressing

The following options are available for addressing the DALI Multi-sensors:

Designation	Default	Description
Only unaddressed devices	Enabled	When this check-box is marked, only the DALI Multi-sensors that do not yet have an address are addressed. If this check-box is not marked, all DALI Multi-sensors will be re-addressed.
Reset values	Enabled	When this check-box is marked, all DALI Multi-sensors that have been assigned a new address through addressing are set to their reset (factory default) values.
Identify	Enabled	When this check-box is marked, the DALI Multi-sensor begins identifying itself (flashing LED) directly after its address has been assigned.

Clicking on the **[Start]** button opens the dialog window with the confirmation prompt.



The DALI Multi-sensors with the selected options are not assigned addresses until you click **[OK]**. The **[Stop]** button is displayed while the addresses are being assigned. Clicking on this **[Stop]** button halts address assigning before it is completed.

Note

Stop addressing!
Halting addressing before it is completed can result in some DALI Multi-sensors not having a valid address.

DALI Multi-sensors newly added to the table are marked by green address fields.

5 Read

Reading out of the DALI Multi-sensors is performed by clicking on the [**Read**] button. DALI Multi-sensors which are found are compared to existing DALI Multi-sensors and added, where required. DALI Multi-sensors newly added to the table are marked by green address fields.

6 Locate

You can start locating the DALI Multi-sensors by clicking on the button **[Locate]**. While locating is in progress, the button icon changes. The DALI Multi-sensor selected in the table begins identifying itself (flashing LED). As soon as a new DALI Multi-sensor is selected, identification of the previously selected one is terminated and the newly selected sensor begins identifying itself. Locating is ended when you click the **[Locate]** button again, or when you switch to a different tab.

7 Delete

When you click **[Delete]**, the addresses of the selected DALI Multi-sensor are deleted and the entry is removed from the table. This button is inhibited as soon as more than one DALI Multi-sensor is selected.

8 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

Severity	Message	Description
Warning	No response from DALI device	The address of the DALI Multi-sensor cannot be located.
Warning	Collision on the backward frame	Several DALI Multi-sensors have responded simultaneously.
Warning	Collision detected	Collision detected when sending
Information	DALI devices without addresses found on the bus	DALI Multi-sensors without an address are still connected to the DALI module.
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is connected with the DALI Configurator.
Error	DALI module firmware not supported by the software	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Warning	An EAN /GTIN value is invalid.	The EAN / GTIN value could not be read by all DALI Multi-sensors.
Warning	Table overflow (other entries are present.)	More entries are present than can currently be displayed in the table (e.g., maximum number of DALI Multi-sensors exceeded).
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

Information

Wiring diagram

The pin assignment for the DALI Multi-Master is given under Appendix > Wiring diagram > DALI Multi-Master.

9 Table

Designation	Description
Select	Selection of the DALI Multi-sensors which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one DALI Multi-sensor is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
Addr.	Address of presence detector/motion detector; changing this address will result in the address being switched both on the DALI bus and in the table. You can have the addresses sorted in ascending order in the table by clicking on the icon.
Device type	<table><tr><th>Symbol</th><th>Description</th></tr><tr><td></td><td>Motion detector/Presence detector</td></tr><tr><td></td><td>The address can no longer be located.</td></tr><tr><td></td><td>The response from the DALI Multi-sensor was not received properly. Possible causes for this are duplicate addresses or exceeding of the maximum line length.</td></tr></table>
Active	When this check-box is marked, the presence detector/motion detector transmits its presence (location) automatically to WAGO Lighting Management. This check-box can be left unmarked to inhibit the presence signal to reduce the traffic on the bus.
Addr.	Address of light intensity sensor; changing this address will result in the address being switched both on the DALI bus and in the table.
Device type	<table><tr><th>Symbol</th><th>Description</th></tr><tr><td></td><td>Light sensor</td></tr><tr><td></td><td>The address can no longer be located.</td></tr><tr><td></td><td>The response from the DALI Multi-sensors was not received properly. Possible causes for this are duplicate addresses or exceeding of the maximum line length.</td></tr></table>
Active	When this check-box is marked, the light intensity sensor transmits its light intensity level automatically to WAGO Lighting Management. This check-box can be left unmarked to inhibit the light intensity signal to reduce the traffic on the bus.
EAN/GTIN	Indication of the **Global Trade Item Number (GTIN)**; the GTIN is an internationally unique identification number used for product identification.
Presence	Indication of presence; the text **Presence** is displayed as soon as presence is detected.
Light Level	Indication of the current brightness (light intensity).

	Information **Locating Multi-sensors!** Besides the **[Locate]** function, the DALI Multi-sensors can also be detected through a change in light intensity. This can occur, for example, by darkening or direct light on the sensor.
Virtual Room	Allocation of the DALI Multi-sensors to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room. The maximum length for room selection is 30 characters. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

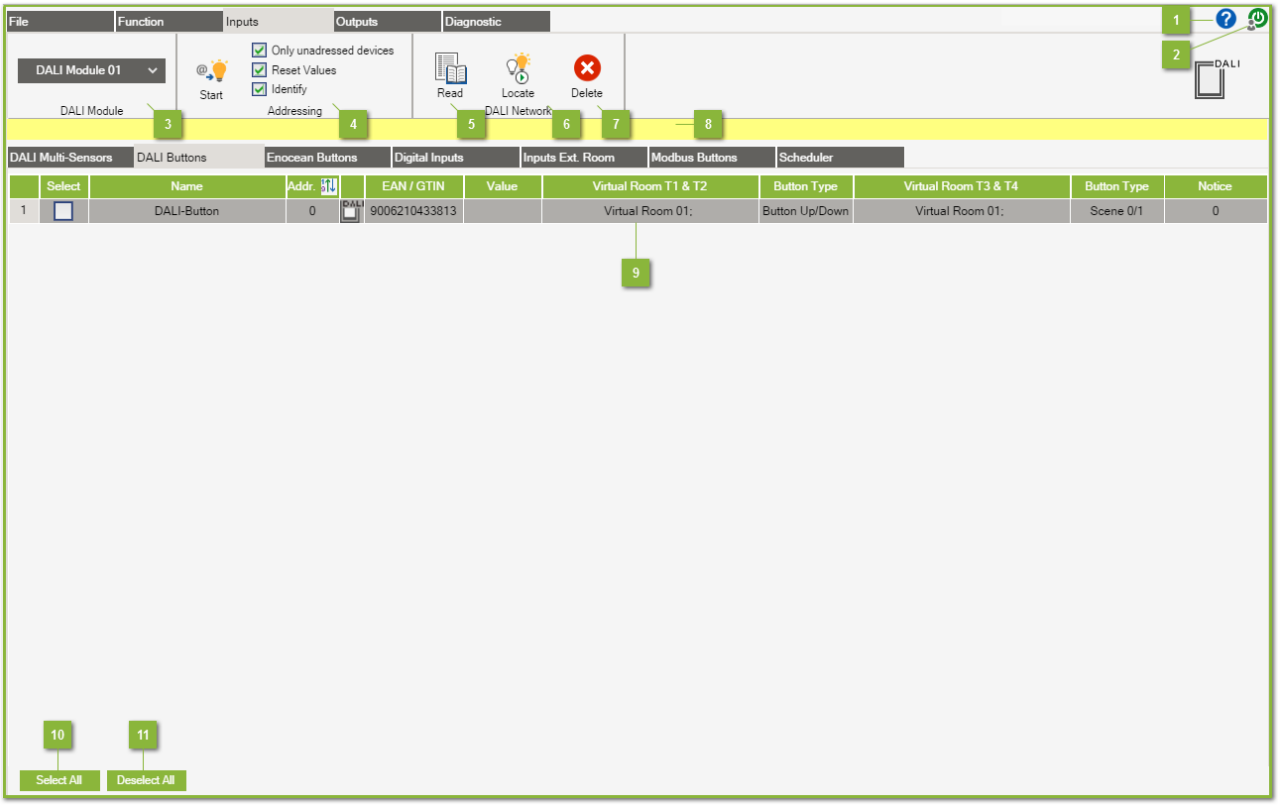
10 Select all

[Select all] selects all of the DALI Multi-sensors.

11 Deselect all

[Deselect all] deselects all of the DALI Multi-sensors.

4.3.5. DALI buttons



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select DALI module

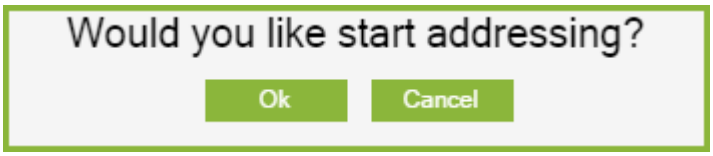
Use the selection menu to select the DALI module.

4 Addressing

The following options are available for addressing the DALI buttons:

Designation	Default	Description
Only unaddressed devices	Enabled	When this check-box is marked, only the DALI buttons that do not yet have an address are addressed. If this check-box is not marked, all DALI buttons will be re-addressed.
Reset values	Enabled	When this check-box is marked, all DALI buttons that have been assigned a new address through addressing are set to their reset (factory default) values.
Identify	Enabled	When this check-box is marked, the DALI buttons begin identifying themselves (acoustic signal) directly after their addresses have been assigned.

Clicking on the **[Start]** button opens the dialog window with the confirmation prompt.



The DALI buttons with the selected options are not assigned addresses until you click **[OK]**. The **[Stop]** button is displayed while the addresses are being assigned. Clicking on this **[Stop]** button halts address assigning before it is completed.

Note

Stop addressing!
Halting addressing before it is completed can result in some DALI buttons not having a valid address.

DALI buttons newly added to the table are marked by green address fields.

5 Read

Reading out of the DALI buttons is performed by clicking on the [**Read**] button. DALI buttons which are found are compared to existing DALI buttons and added, where required. DALI buttons newly added to the table are marked by a green address field.

6 Locate

You can start locating the DALI buttons by clicking on the button **[Locate]**. While locating is in progress, the button icon changes. The DALI button selected in the table begins identifying itself (acoustic signal). As soon as a new DALI button is selected, identification of the previously selected one is terminated and the newly selected button begins identifying itself. Locating is ended when you click the **[Locate]** button again, or when you switch to a different tab.

7 Delete

When you click **[Delete]**, the address of the selected DALI button is deleted and the entry is removed from the table. This button is inhibited as soon as more than one DALI button is selected.

8 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

Severity	Message	Description
Warning	No response from DALI device	The address of the DALI button cannot be located.
Warning	Collision on the backward frame	Several DALI buttons have responded simultaneously.
Warning	Collision detected.	Collision detected when sending.
Information	DALI devices without addresses found on the bus.	DALI buttons without an address are still connected to the DALI module.
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited.
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is connected with the DALI Configurator.
Error	DALI module firmware not supported by the software.	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Warning	An EAN /GTIN value is invalid.	The EAN / GTIN value could not be read by all DALI buttons.
Warning	Table overflow (other entries are present.)	More entries are present than can currently be displayed in the table. (e.g., maximum number of DALI buttons exceeded)
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

Information

Wiring diagram

The pin assignment for the DALI Multi-Master is given under Appendix > Wiring diagram > DALI Multi-Master.

9 Table

Designation	Description
Select	Selection of the DALI buttons which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one DALI button is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
Addr.	Address of DALI button; changing this address will result in the address being switched both on the DALI bus and in the table. You can have the addresses sorted in ascending order in the table by clicking on the icon.
Device type	<table><tr><th>Symbol</th><th>Description</th></tr><tr><td></td><td>DALI keys</td></tr><tr><td></td><td>The address can no longer be located.</td></tr><tr><td></td><td>The response from the DALI button was not received properly. Possible causes for this are duplicate addresses or exceeding of the maximum line length.</td></tr></table>
EAN/GTIN	Indication of the **Global Trade Item Number (GTIN)**; the GTIN is an internationally unique identification number used for product identification.
Value	Display of button signals in plain text (e.g., Button 1)
Virtual Room T1 & T2	Allocation of the DALI button inputs B1 & B2 to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room. The maximum length for room selection is 30 characters. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Button type	Selection of button type for the DALI button inputs B1 & B2. You can open this dialog window to select the button type simply by clicking in the column. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select button type for button pairs.
Virtual Room T3 & T4	Allocation of the DALI button inputs B3 & B4 to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room. The maximum length for room selection is 30 characters. If the room name has less

	than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Button Type	Selection of button type for the DALI button inputs B3 & B4. You can open this dialog window to select the button type simply by clicking in the column. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select button type for button pairs.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

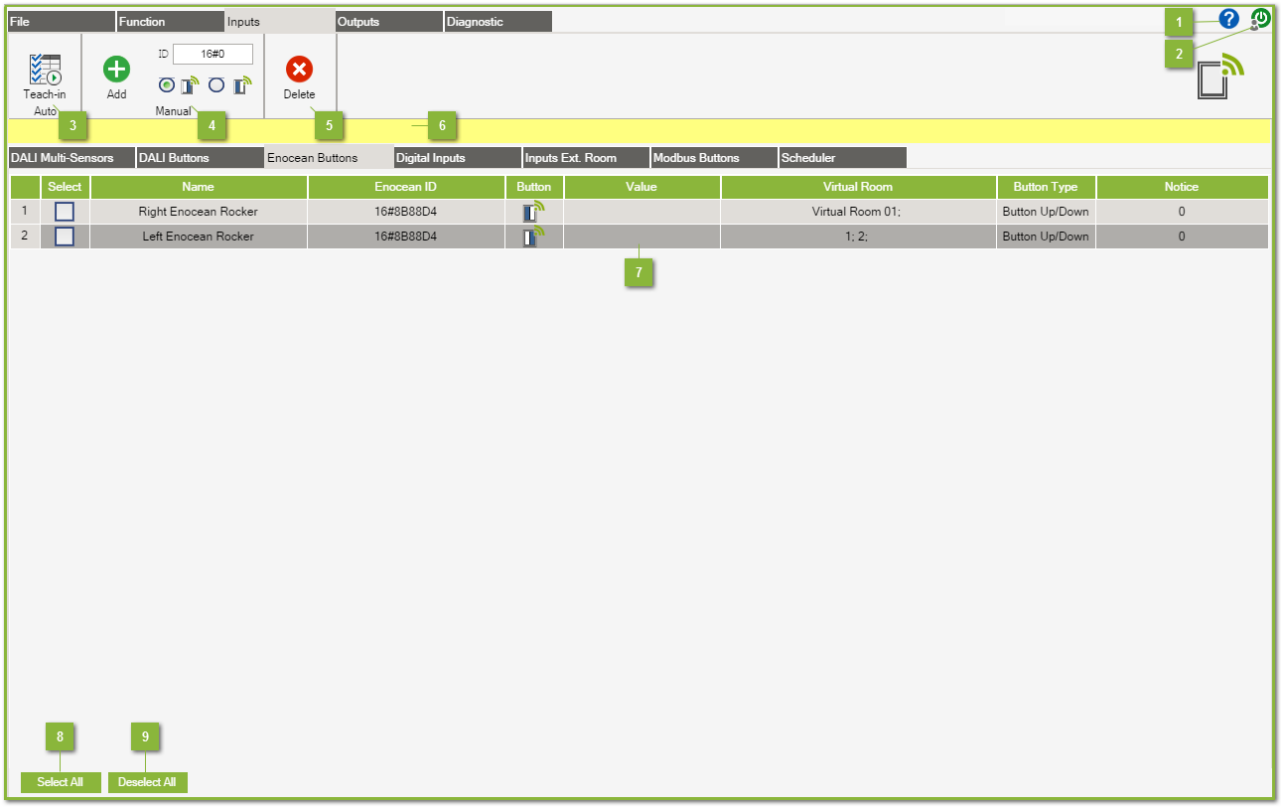
10 Select all

[Select all] selects all of the DALI buttons.

11 Deselect all

[Deselect all] deselects all of the DALI buttons.

4.3.6. EnOcean buttons



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Teaching

Click on the **[Teach-In]** button to start the function for “teaching” the EnOcean rocker buttons.

The Teaching function is active as long as the button symbol  is displayed. While the Teaching function is active, EnOcean function switches can be added to the table by double-clicking the rocker button. Teaching is ended when you click the **[Teach-In]** button again, or when you switch to a different tab.

4 Manual EnOcean ID

You can enter the EnOcean rocker buttons manually using the EnOcean ID and selecting the rocker tab (right/left). The EnOcean ID is a hexadecimal number. Clicking on **[Add]** inserts the manually set EnOcean rocker button into the table.

5 Delete

When you click **[Delete]**, the selected EnOcean rocker button is removed from the table. This button is inhibited as soon as more than one EnOcean rocker button is selected.

6 Alarm banner

The alarm banner is displayed as soon as an error is detected. The following alarms can be issued:

Severity	Message	Description
Error	Timeout	Timeout in communication with the EnOcean gateway
Error	CRC error	Checksum error
Error	No gateway located.	EnOcean gateway not located
Information	No vacant entries left.	Maximum number of EnOcean buttons has been reached.
Error	Serial interface (750-652) not available for the EnOcean gateway.	Serial interface (750-652) not recognized by WAGO Lighting Management.

Information

Wiring diagram

The pin assignment for the EnOcean gateways is given under Appendix > Wiring diagram > EnOcean gateway.

7 Table

Designation	Description
Select	Selection of the EnOcean rocker buttons which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one EnOcean rocker button is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
EnOcean ID	Indication of the EnOcean ID as hexadecimal number
Button	Left rocker tab Right rocker tab
Value	Display of button signals in plain text (e.g., rocker up)
Virtual Room	Allocation of the EnOcean rocker buttons to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room. The maximum length for room selection is 30 characters. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Button Type	Selection of the button type for EnOcean rocker buttons; you can open this dialog window to select the button type simply by clicking in the column. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select button type for button pairs.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

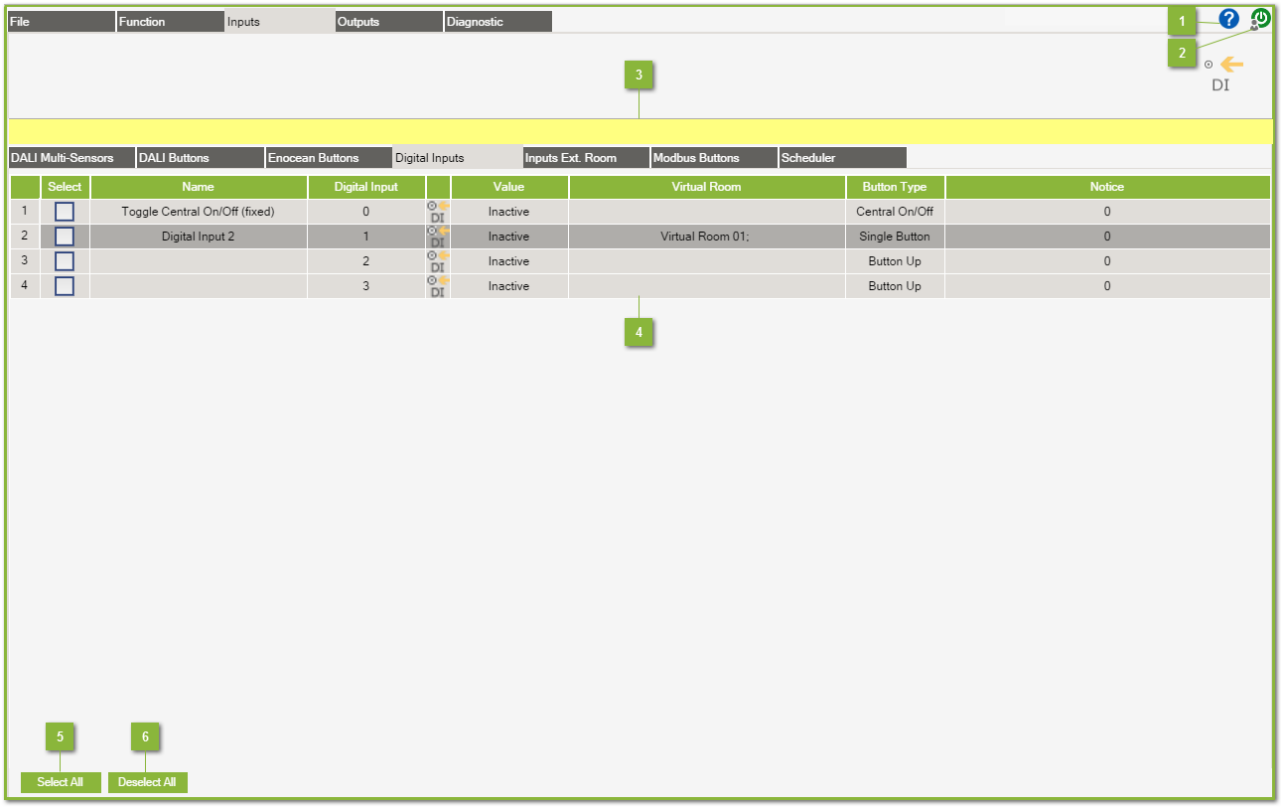
8 Select all

[Select all] selects all of the EnOcean rocker buttons.

9 Deselect all

[Deselct all] deselects all of the EnOcean rocker buttons.

4.3.7. Digital Inputs



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Alarm banner

The alarm banner is displayed as soon as an error is detected. The following alarms can be issued:

Severity	Message	Description
Warning	Maximum number of digital inputs exceeded.	More digital inputs are connected to WAGO Lighting Management than are supported by the software.

4 Table

Designation	Description
Select	Selection of the digital inputs which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one digital input is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
Digital Input	Number of the digital input (counting begins at zero). Connected digital inputs are detected automatically.
Value	Status indication of inputs in plain text (active/inactive).
Virtual Room	Allocation of the digital inputs to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room. The maximum length for room selection is 30 characters. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Button Type	Selection of the button type for digital inputs; you can open this dialog window to select the button type simply by clicking in the column. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select button type.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

Note

“Construction site” function!
The first digital input is defined as a latching relay and cannot be changed. During the construction period, lighting can be switched from a central location, for example by using a conventional switch. WAGO Lighting Management does not need to be commissioned for this function!

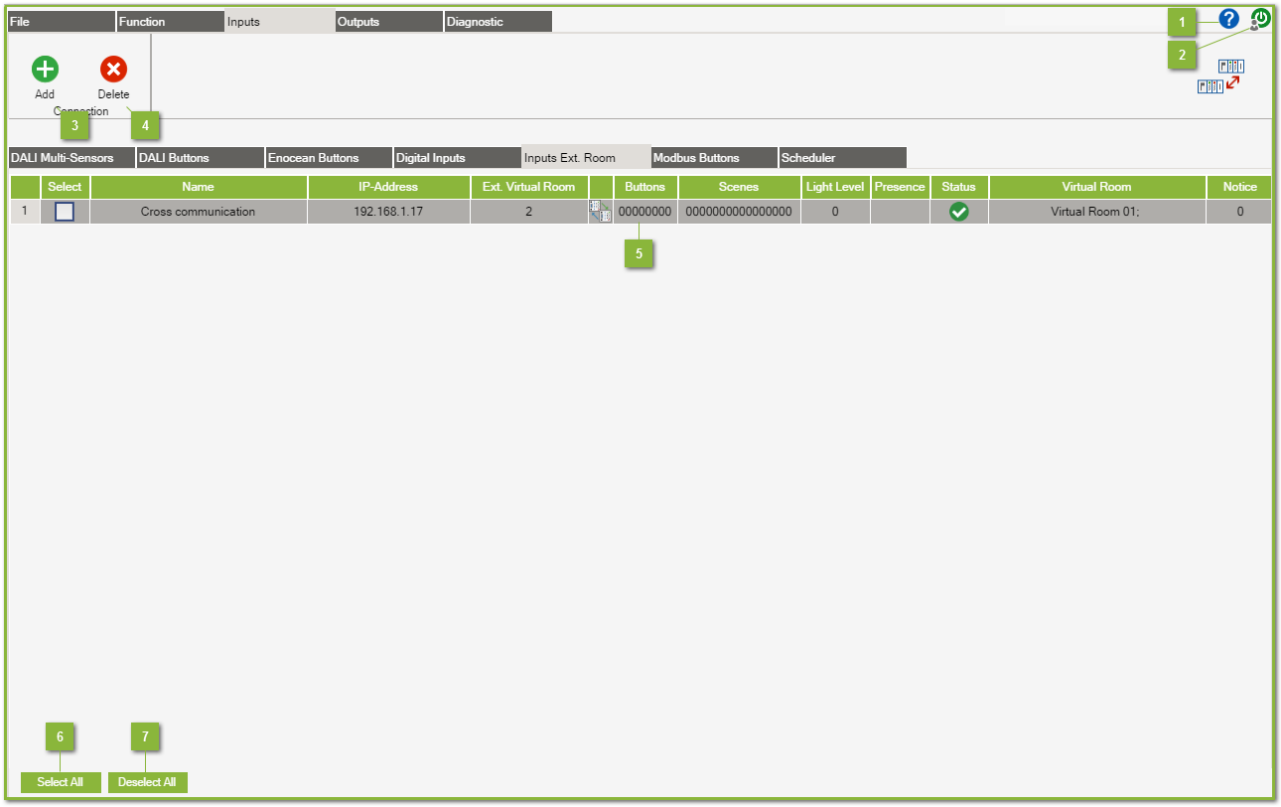
5 Select all

[Select all] selects all of the digital inputs.

6 Deselect all

[Deselect all] deselects all of the digital inputs.

4.3.8. Inputs Ext. Room



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Add

Clicking on **[Add]** inserts a new cross-communication channel to an external virtual room into the table.

4 Delete

When you click **[Delete]**, the selected cross-communication channel to an external virtual room is removed from the table. This button is inhibited as soon as more than one cross-communictaion channel to an external room is selected.

5 Table

Designation	Description
Select	Selection of cross-communication channels to an external virtual room which are to be commonly configured (multiple selection); columns/ functions which do not support multiple selections are inhibited as soon as more than one cross-communication channel is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
IP-Address	IP address of the WAGO Lighting management controller at which the input signals are to be registered
Ext. Virtual Room	Number of the virtual room on the WAGO Lighting Management controller at which the input signals are to be registered
Button	Status indication of button signals Bit 0 = Up button Bit 1 = Down button Bit 2 = Single Button Bit 3 = Switch Bit 4 = Key Switch Bit 5 = Central On Bit 6 = Central Off Bit 7 = Reserved
Scenes	Status indication of scene buttons Bit 0 = Scene 0 Bit 1 = Scene 1 ... Bit 15 = Scene 15
Light Level	Indication of current brightness
Presence	Indication of presence; the text Presence is displayed as soon as presence is detected.
Status	The symbol is displayed as soon as cross-communication to an external virtual room has been set up. This connection can be monitored using the Keep-alive function. The Keep-alive function is set under File > Project settings > Cross-communication.
Virtual Room	Allocation of the input signals from the external virtual room to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room The maximum length for room selection is 30 characters. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

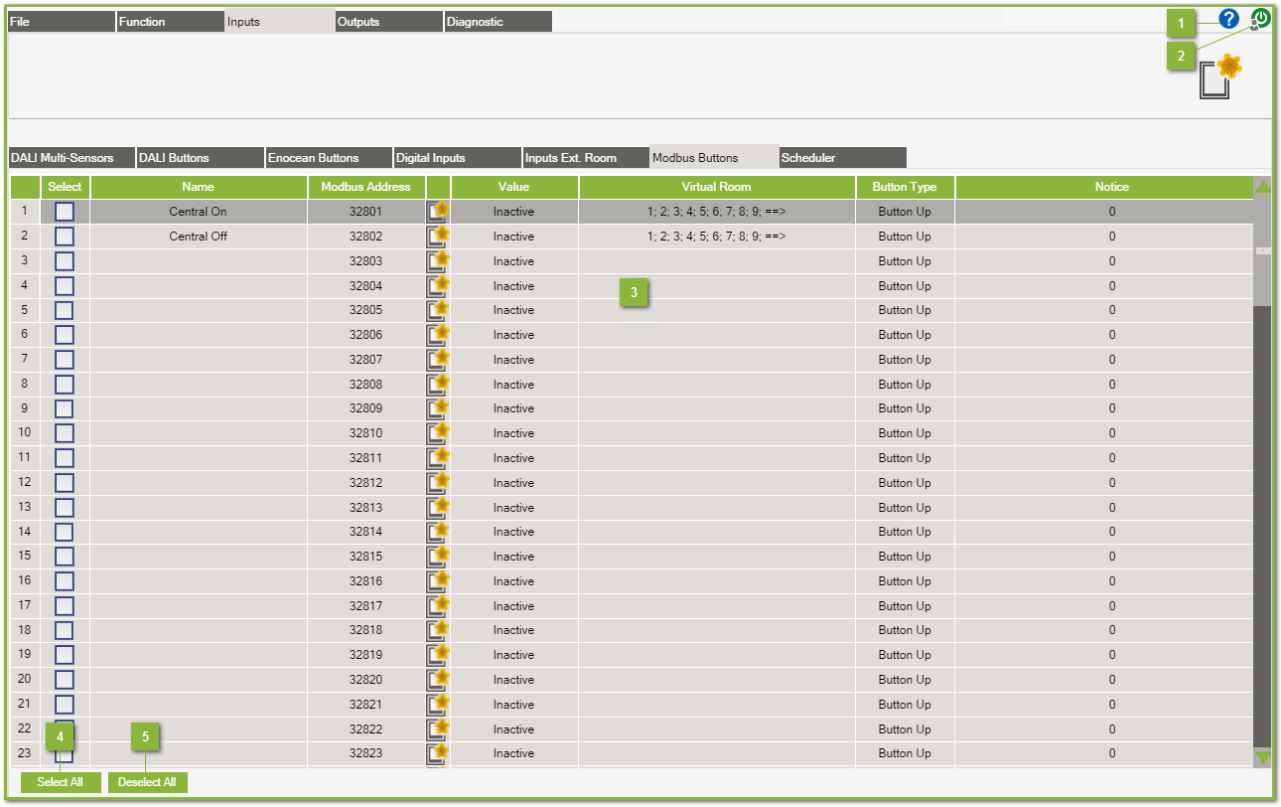
6 Select all

[Select all] selects all cross-communication channels to an external virtual room.

7 Deselect all

[Deselect all] deselects all cross-communication channels to an external virtual room.

4.3.9. MODBUS Buttons



	Select	Name	Modbus Address		Value	Virtual Room	Button Type	Notice
1		Central On	32801		Inactive	1; 2; 3; 4; 5; 6; 7; 8; 9; ==>	Button Up	0
2		Central Off	32802		Inactive	1; 2; 3; 4; 5; 6; 7; 8; 9; ==>	Button Up	0
3			32803		Inactive		Button Up	0
4			32804		Inactive		Button Up	0
5			32805		Inactive		Button Up	0
6			32806		Inactive		Button Up	0
7			32807		Inactive		Button Up	0
8			32808		Inactive		Button Up	0
9			32809		Inactive		Button Up	0
10			32810		Inactive		Button Up	0
11			32811		Inactive		Button Up	0
12			32812		Inactive		Button Up	0
13			32813		Inactive		Button Up	0
14			32814		Inactive		Button Up	0
15			32815		Inactive		Button Up	0
16			32816		Inactive		Button Up	0
17			32817		Inactive		Button Up	0
18			32818		Inactive		Button Up	0
19			32819		Inactive		Button Up	0
20			32820		Inactive		Button Up	0
21			32821		Inactive		Button Up	0
22			32822		Inactive		Button Up	0
23			32823		Inactive		Button Up	0

1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Table

Designation	Description
Select	Selection of the MODBUS buttons which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one MODBUS button is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
Modbus Address	Indication of the MODBUS address; this address applies to coils and to registers.
Value	Status indication of the MODBUS values in plain text (active/inactive); in communication with the register a value > 0 corresponds to the status Active.
Virtual Room	Allocation of the MODBUS buttons to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room. The maximum length for room selection is 30 characters. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Button Type	Selection of the button type for MODBUS buttons; you can open this dialog window to select the button type simply by clicking in the column. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select button type.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

Information

Supported protocols
WAGO Lighting Management supports MODBUS TCP, MODBUS UDP and MODBUS RTU. The following function codes are also supported: FC 1, FC 2, FC 3, FC 4, FC 5, FC 6, FC 15, FC 16, FC 22, FC 23 .

Note

Central On / Off
You can implement **Central Off** via MODBUS by selecting button type “Central Off” and assigning the corresponding MODBUS address to the virtual rooms. You can implement **Central On** via MODBUS by selecting button type “Central On” and assigning the corresponding MODBUS address to the virtual rooms.

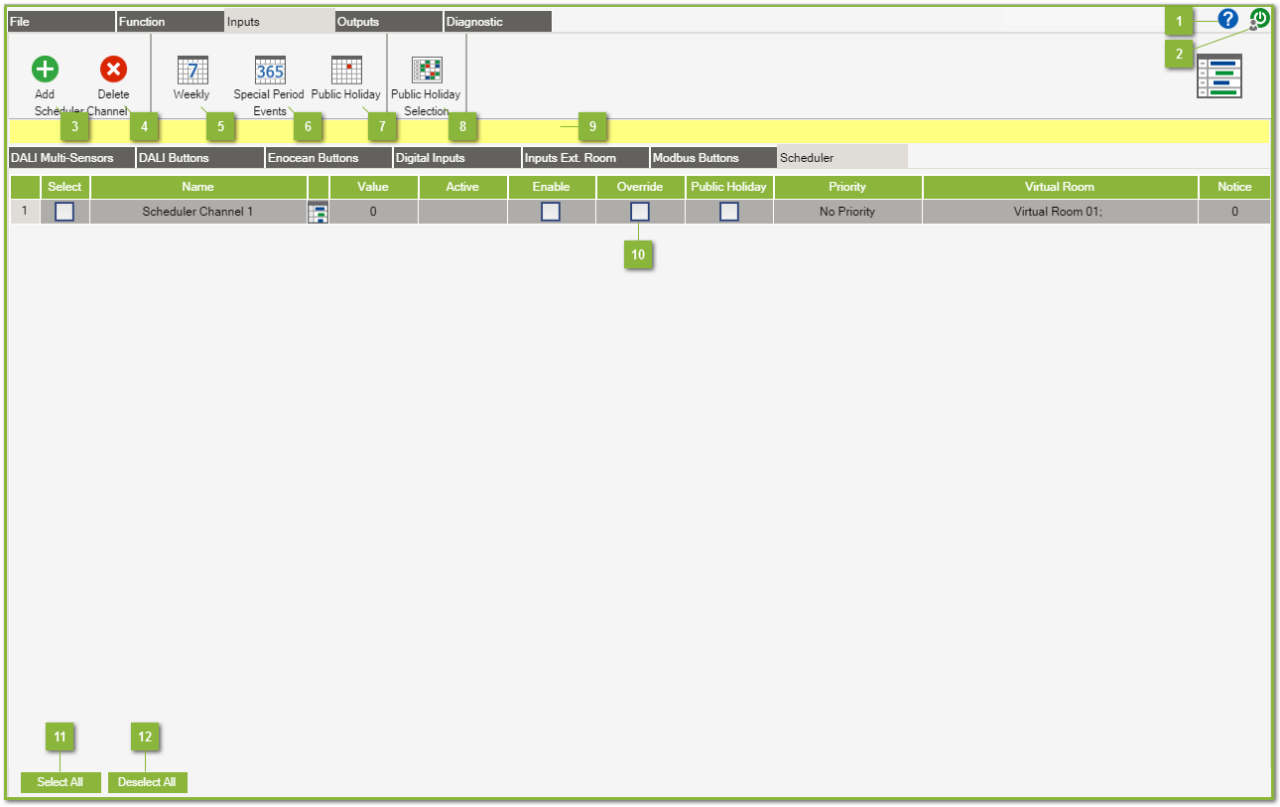
4 Select all

[Select all] selects all of the MODBUS buttons.

5 Deselect all

[Deselect all] deselects all of the MODBUS buttons.

4.3.10. Scheduler



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Add

Clicking on **[Add]** inserts a new timer program into the table.

4 Delete

When you click **[Delete]**, the selected timer program is removed from the table. This button is inhibited as soon as more than one timer program is selected.

5 Weekly

Click on the button **[Weekly]** to open a dialog window containing the weekly timer program. The times you set here will then be applied to the marked timer program. A description of this dialog window is given in the Section Software > Inputs > Scheduler > Weekly.

Note

Multiple selection
If more than one timer program is selected when the weekly timer program is opened, all of the settings will be copied to the selected timer programs when the dialog window is closed by clicking **[Ok]**.

6 Special period

Click on the **[Special period]** button to open a dialog window containing the special period timer program. The times you set here will then be applied to the marked timer program. A description of this dialog window is given in the Section Software > Inputs > Scheduler > Special period.

Note

Multiple selection
If more than one timer program is selected when the special period timer program is opened, all of the settings will be copied to the selected timer programs when the dialog window is closed by clicking **[Ok]**.

7 Holiday

Click on the **[Holiday]** button to open a dialog window containing the holiday timer program. The times you set here will then be applied to the marked timer program. A description of this dialog window is given in the Section Software > Inputs > Scheduler > Holiday.

Note

Multiple selection
If more than one timer program is selected when the holiday timer program is opened, all of the settings will be copied to the selected timer programs when the dialog window is closed by clicking **[Ok]**.

8 Select holiday

Click on the **[Holiday]** button to open a dialog window for selecting holidays and special days. A description of this dialog window is given in the Section Software > Inputs > Scheduler > Select holidays.

9 Alarm banner

The alarm banner is displayed as soon as an error is detected. The following alarms can be issued:

Severity	Message	Description
Warning	RTC module does not have a valid clock signal	An RTC module (750-640) is connected to WAGO Lighting Management and its time is not synchronized with the GPS signal.

Information

Wiring diagram

The pin assignment for the GPS/DCF converter is given under Appendix > Wiring diagram > GPS/DCF converter.

10 Table

Designation	Description
Select	Selection of the timer programs which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one timer program is selected.
Name	Name of the timer program; the maximum length for each name is 30 characters.
Value	Output value for the timer program (dimming level)
Active	The symbol is displayed as soon as a timer switching condition is fulfilled.
Enable	The timer switching conditions are only evaluated when the check-box is marked.
Override	When this check-box is marked, the active timer program will override the local control of the virtual room. Operation using local buttons (except for the Key Switch) is blocked in this case. A description of the overriding options is given in the Section Software > Function > Override. If this check-box is not marked, an event is transmitted when the timer program is activated, or when there is a change in a value. Local control of the virtual room continues to be possible.
Public Holiday	When this check-box is marked, the holiday timer program will be executed on the selected holidays.
Priority	Indication of the current priority for the timer program. Priority 1 = Holiday Priority 2 = Special period Priority 3 = Weekly
Virtual Room	Allocation of the timer programs to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the input to the virtual rooms is explained in the Section Software > Inputs > Select virtual room. The maximum length for room selection is 30 characters. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>). This column supports multiple selections.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

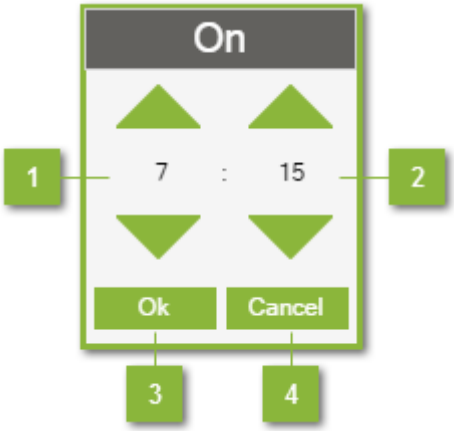
11 Select all

[Select all] selects all of the timer programs.

12 Deselect all

[Deselect all] deselects all of the timer programs.

4.3.10.1. Setting the time



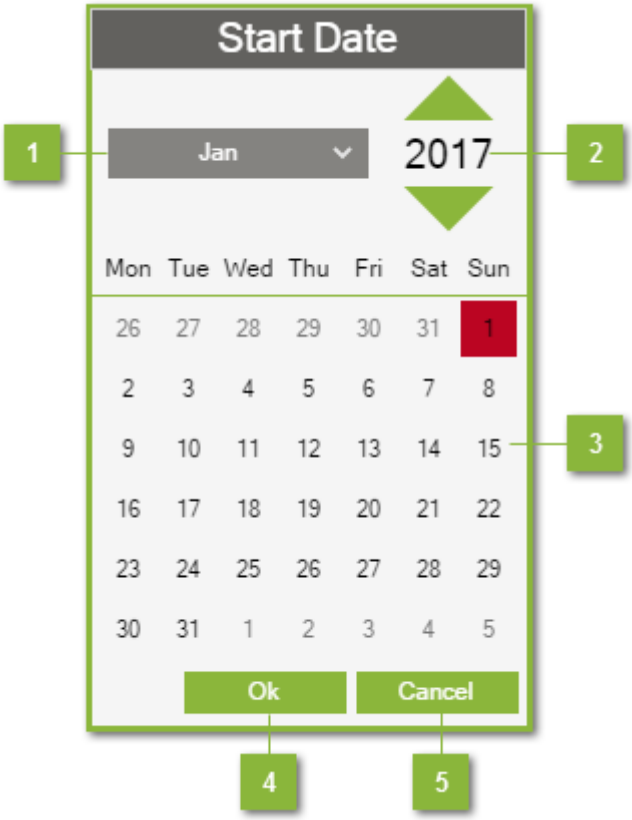
1 **Select hours**
You can enter the hour either by direct input of the number, or using the arrow keys.

2 **Select minutes**
You can enter the minute either by direct input of the number, or using the arrow keys.

3 **OK**
Click on **[Ok]** to close this window and apply the time.

4 **Cancel**
Click on **[Cancel]** to close this window ignore any changes made.

4.3.10.2. Set the date



1 Select month

Select the month using the selection menu.

2 Select year

You can enter the year either by direct input of the number, or using the arrow keys.

3 Select day

Enter the day by clicking on the corresponding number. The selected day is then highlighted in red.

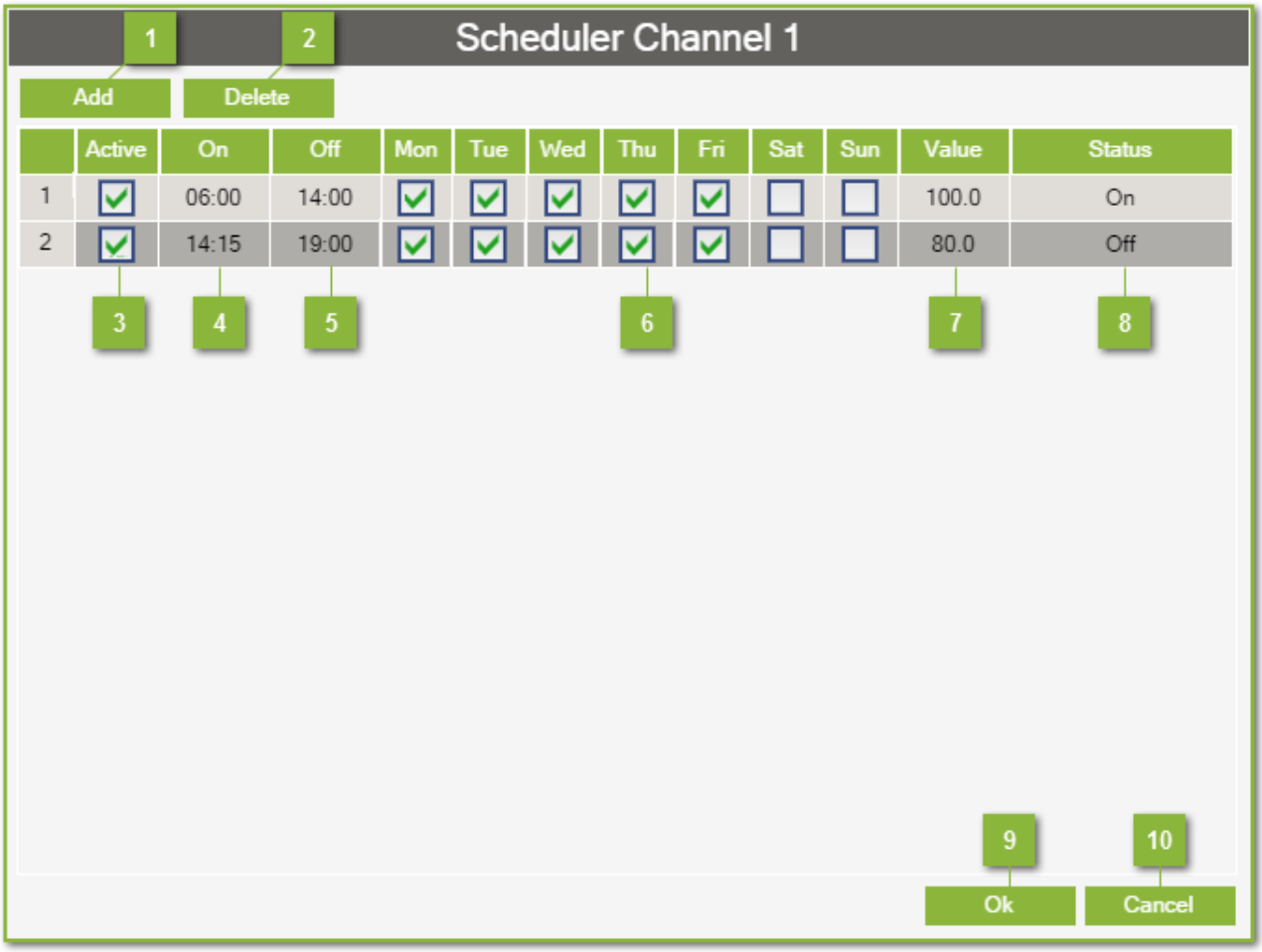
4 OK

Click on **[Ok]** to close this window and apply the date.

5 Cancel

Click on **[Cancel]** to close this window ignore any changes made.

4.3.10.3. Weekly



1 **Add**

Clicking on **[Add]** inserts a new weekly timer program into the table.

2 **Delete**

When you click **[Delete]**, the selected weekly timer program is removed from the table. This button is inhibited as soon as more than one weekly timer program is selected.

3 **Active**

The weekly timer program is not evaluated until this check-box is marked.

4 **On**

Switch-on time for the weekly timer program; data is input in a dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the time.

5 **Off**

Switch-off time for the weekly timer program; data is input in a dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the time.

6 **Day of week**

Selection of week days on which the weekly timer program is to be executed

7 Value

Dimming value (0 … 100 %) that is to be output when the timer switching conditions have been fulfilled; the value “1” can also be entered as a special function. In this case, the timer program acts on the **Switch** input signal.

8 Status

Status indication of the weekly timer program; this status indication is given regardless of whether the timer program has been enabled.
The following status indications can be given:

Status	Description
On	Timer switching condition fulfilled.
Off	Timer switching condition not fulfilled.
On overnight	The timer switching condition is fulfilled and continues into the next day.
Off overnight On	The timer switching condition will be fulfilled at a later time and will then continue into the next day.
Event inactive	Timer switching condition has not been fulfilled.
Whole day On	The timer switching condition is active for the entire day.
Week day inactive	The timer switching condition is inactive for the entire day, as the current day of the week has not been selected.
Override	The timer condition is overridden by a higher priority. Priority 1 = Holiday Priority 2 = Special period

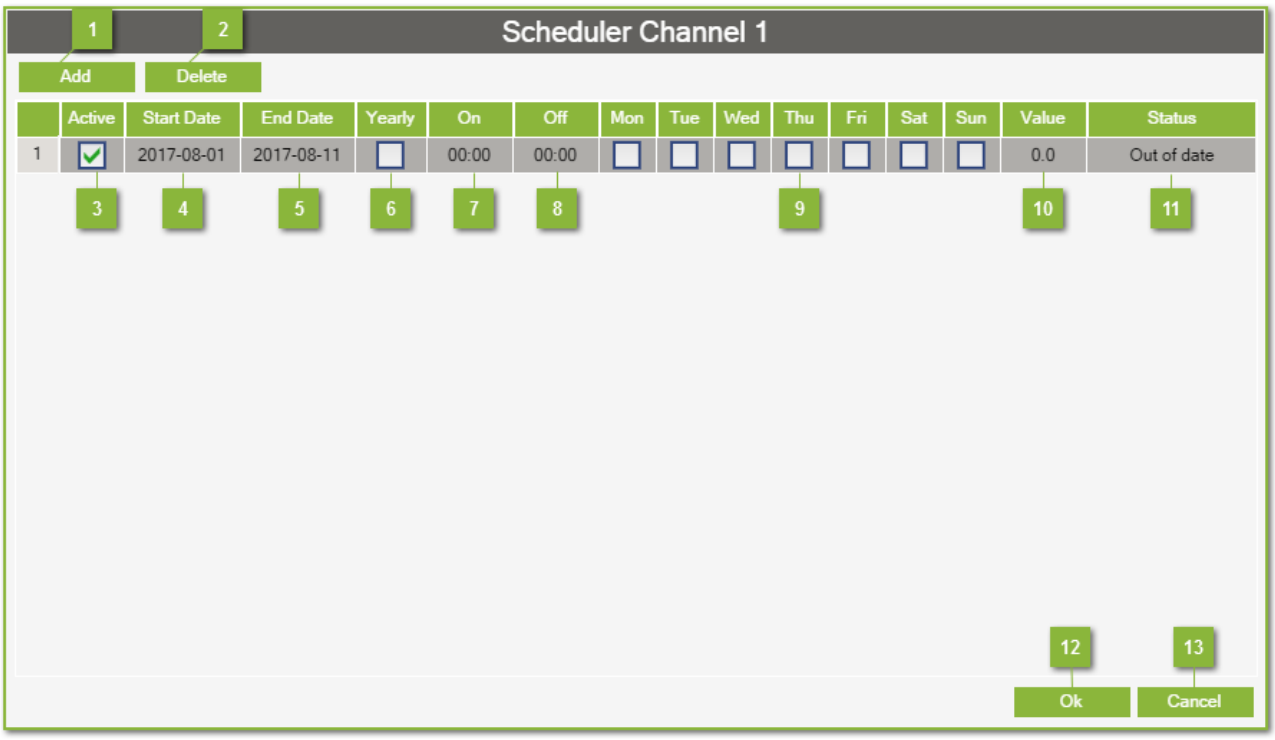
9 OK

Click on **[Ok]** to close this window and apply the weekly timer programs.

10 Cancel

Click on **[Cancel]** to close this window ignore any changes made.

4.3.10.4. Special period



1 Add

Clicking on **[Add]** inserts a new special period timer program into the table.

2 Delete

When you click **[Delete]**, the selected special period timer program is removed from the table. This button is inhibited as soon as more than one special period timer program is selected.

3 Active

The special period timer program is not evaluated until this check-box is marked.

4 Date

Starting date for the special period timer program; this date is entered in the dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the date. If the current date is situated between the starting date and the end date, the weekly timer program will be overridden.

5 End date

End date for the special period timer program; this date is entered in the dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the date. If the current date is situated between the starting date and the end date, the weekly timer program will be overridden.

6 Yearly

When the check-in box is marked, the special period timer program is repeated annually.

7 On

Switch-on time for the special period timer program; data is input in a dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the time.

8 Off

Switch-off time for the special period timer program; data is input in a dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the time.

9 Week days

Selection of week days on which the special period timer program is to be executed

10 Value

Dimming value (0 - 100 %) that is to be output when the timer switching condition has been fulfilled. The value “1” can also be entered as a special function. In this case, the timer program acts on the **Switch** input signal.

11 Status

Status indication of the special period timer program; this status indication is given regardless of whether the timer program has been enabled.
The following status indications can be given:

Status	Description
On	Timer switching condition fulfilled.
Off	Timer switching condition not fulfilled.
On overnight	The timer switching condition is fulfilled and continues into the next day.
Off overnight On	The timer switching condition will be fulfilled at a later time and will then continue into the next day.
Event inactive	Timer switching condition has not been fulfilled.
Whole day On	The timer switching condition is active for the entire day.
Week day inactive	The timer switching condition is inactive for the entire day, as the current day of the week has not been selected.
Override	The timer condition is overridden by the holiday timer program.
Outside date	The current date is not situated between the starting and end dates.

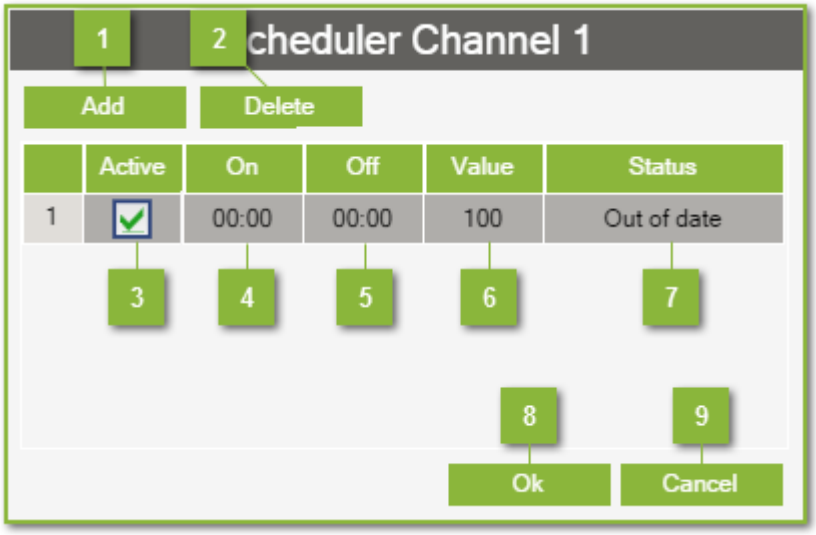
12 OK

Click on **[Ok]** to close this window and apply the special period timer programs.

13 Cancel

Click on **[Cancel]** to close this window ignore any changes made.

4.3.10.5. Holiday



1 **Add**

Clicking on **[Add]** inserts a new holiday timer program into the table.

2 **Delete**

When you click **[Delete]**, the selected holiday timer program is removed from the table. This button is inhibited as soon as more than one holiday timer program is selected.

3 **Active**

The holiday timer program is not evaluated until this check-box is marked.

4 **On**

Switch-on time for the holiday timer program; data is input in a dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the time.

5 **Off**

Switch-off time for the holiday timer program; data is input in a dialog window. A description of this dialog window is given in the Section Software > Inputs > Timer program > Set the time.

6 **Value**

Dimming value (0 - 100 %) that is to be output when the timer switching condition has been fulfilled. The value “1” can also be entered as a special function. In this case, the timer program acts on the **Switch** input signal.

7 Status

Status indication of the holiday timer program; this status indication is given regardless of whether the timer program has been enabled.
The following status indications can be given:

Status	Description
On	Timer switching condition fulfilled.
Off	Timer switching condition not fulfilled.
On overnight	The timer switching condition is fulfilled and continues into the next day.
Off overnight On	The timer switching condition will be fulfilled at a later time and will then continue into the next day.
Event inactive	Timer switching condition has not been fulfilled.
Whole day On	The timer switching condition is active for the entire day.
Outside date	The current date is not situated between the starting and end dates.

8 OK

Click on **[Ok]** to close this window and apply the holiday timer programs.

9 Cancel

Click on **[Cancel]** to close this window ignore any changes made.

4.3.10.6. Select holiday

In this dialog window you can select the holidays to be used in the holiday timer programs. You can also define up to twelve further special days.

Public Holiday	Select	Public Holiday	Select	Public Holiday	Select	Special Days	Select	Date
New Year	☑	Pentecost	☐	German Unification Day	☑	Company Party	☑	23.06.
Epiphany	☐	Whit Monday	☑	Trinity Sunday	☐		☐	01.01.
Shrove Monday	☐	Whit Tuesday	☐	Triodion	☐		☐	01.01.
Mardi Gras	☐	Corpus Christi	☑	Septuagesima	☐		☐	01.01.
Ash Wednesday	☐	Assumption of Mary	☐	Saturday of Soul	☐		☐	01.01.
Maundy Thursday	☐	Reformation Day	☐	Sexagesima	☐		☐	01.01.
Good Friday	☑	AllSaints Day	☑	Quinquagesima	☐		☐	01.01.
Holy Saturday	☐	Day of Repentance	☐	Triumph of Orthodoxy	☐		☐	01.01.
Easter	☐	Christmas Eve	☑	Mothering Sunday	☐		☐	01.01.
Easter Monday	☐	Christmas Day	☑	Passion Sunday	☐		☐	01.01.
Labour Day	☑	Boxing Day	☑	Lazarus Sunday	☐		☐	01.01.
Ascension Day	☑	New Year Eve	☑	Palm Sunday	☐		☐	0

1 Select holiday

Select holidays for the holiday timer programs; holidays are selected by marking the corresponding check-box(es).

2 Enter special days

Name of the special days; the maximum length for each name is 30 characters.

3 Select special day

Select the special days for the holiday timer programs; special days are selected by marking the corresponding check-box(es).

4 Date of special day

Date of the special days. These dates are entered in the dialog window; a description of this dialog window is given in the Section Software > Inputs > Timer program > Set the date.

Note

Year selection
The year selection is disregarded for special days.

5 OK

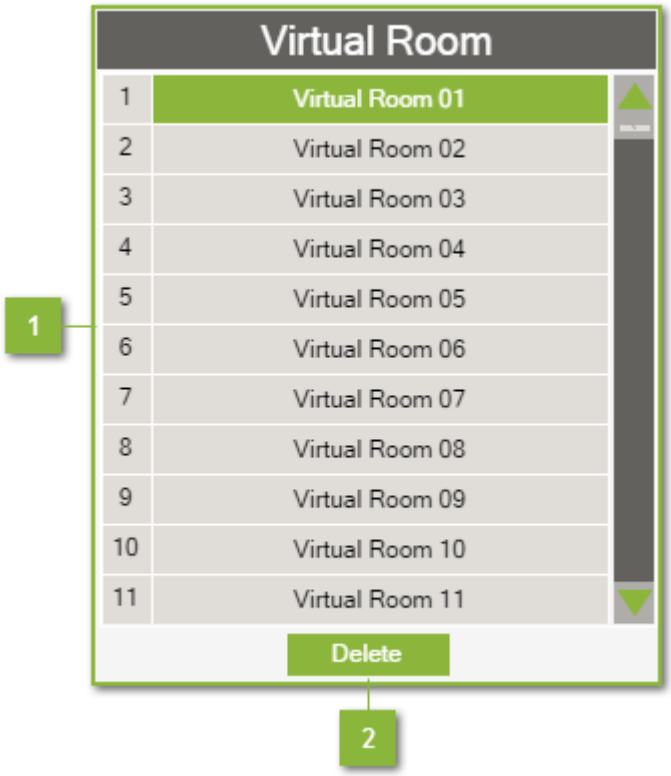
Click on **[Ok]** to close this window and apply the selected holidays and special days.

6 Cancel

Click on **[Cancel]** to close this window ignore any changes made.

4.4. Outputs

4.4.1. Select virtual room



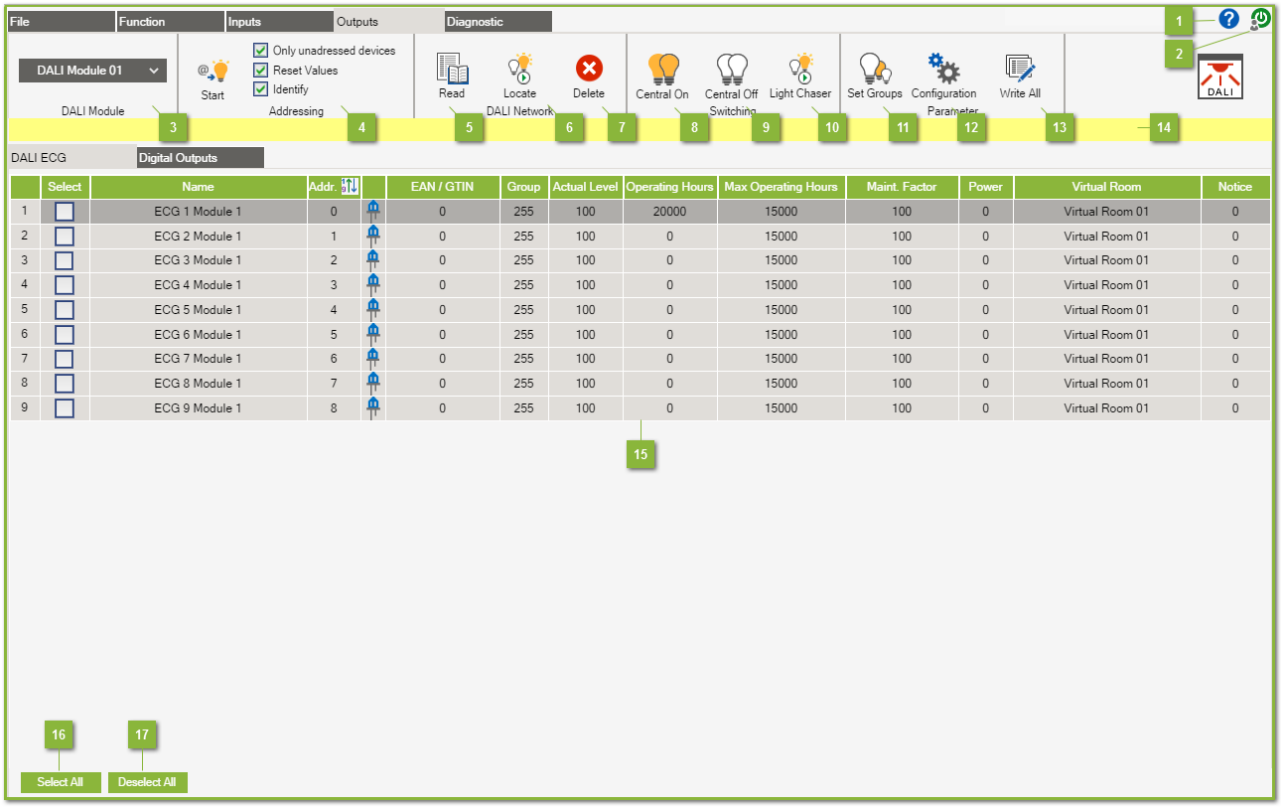
1 Select virtual room

This table shows the room designations of all 60 virtual rooms. The currently selected room is highlighted in green. Clicking in a line in the table selects that virtual room and closes the dialog window.

2 Delete

When you click **[Delete]**, the selected virtual room is canceled and the dialog window is closed.

4.4.2. DALI ECG



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select DALI module

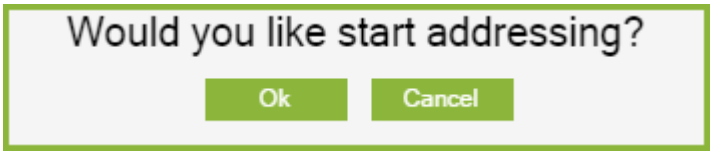
Use the selection menu to select the DALI module.

4 Addressing

The following options are available for addressing the DALI ECGs:

Designation	Default	Description
Only unaddressed devices	Enabled	When this check-box is marked, only the DALI ECGs that do not yet have an address are addressed. If this check-box is not marked, all DALI ECGs will be re-addressed.
Reset values	Enabled	When this check-box is marked, all DALI ECGs that have been assigned a new address through addressing are set to their reset (factory default) values.
Identify	Enabled	When this check-box is marked, the DALI lamp will begin flashing directly after its address has been assigned.

Clicking on the **[Start]** button opens the dialog window with the confirmation prompt.



The DALI ECGs with the selected options are not assigned addresses until you click **[OK]**. The **[Stop]** button is displayed while the addresses are being assigned. Clicking on this **[Stop]** button halts address assigning before it is completed.

Note

Stop addressing!
Halting addressing before it is completed can result in some DALI ECGs not having a valid address.

DALI ECGs newly added to the table are marked by green address fields.

5 Read

Reading out of the DALI ECGs is performed by clicking on the [**Read**] button. DALI ECGs which are found are compared to existing DALI ECGs and added, where required. DALI ECGs newly added to the table are marked by green address fields.

6 Locate

You can start locating the DALI ECGs by clicking on the button **[Locate]**. While locating is in progress, the button icon changes.
The DALI ECG selected in the table begins identifying itself (flashing). As soon as a new DALI ECG is selected, identification of the previously selected one is terminated and the newly selected ECG begins identifying itself. Locating is ended when you click the **[Locate]** button again, or when you switch to a different tab.

7 Delete

When you click **[Delete]**, the address of the selected DALI ECG is deleted and the entry is removed from the table. This button is inhibited as soon as more than one DALI ECG is selected.

8 Central On

The entire lighting on the DALI module is switched on when you click on the **[Central On]** button.

9 Central Off

The entire lighting on the DALI module is switched off by clicking on **[Central Off]**.

10 Light Chaser

You can start the chaser by clicking the button **[Light Chaser]**. While the chaser is activated, the button icon changes. The chaser is used to check the located lights and functions in the following manner:
The chaser switches on the light given in the first line of the table. When the time set under File > Project settings > DALI interval then expires, the light is switched off and the light given in the next line of the table is switched on. This function is then continued for each line in the table. When the function has tested the last line in the table it starts over from the first line in the table. The chaser is ended when you click the **[Light Chaser]** button again, or when you switch to a different tab.

11 Form groups

When you click the **[Set Groups]** button, DALI groups will be assigned automatically. DALI groups are formed as a function of the selection of the virtual rooms. The following warning is displayed as soon as the allocation of the virtual rooms changes:

The view cannot be changed by WAGO Lighting Management as long as this warning is being displayed. The warning message can be canceled either by clicking the **[Set Groups]** button again, or by acknowledging the message.

Note

Acknowledge
Invalid allocation of the lights to the virtual rooms may occur if the allocation for the virtual rooms has been changed and the warning message is acknowledged.

12 Configuration

Click on the **[Configuration]** button to open a dialog window for configuring the DALI ECG. A description of this dialog window is given in the Section Software > Outputs > DALI ECG > Configuration DALI ECG. The current configuration will be applied to the marked DALI ECG.

Note

Configuration
The configuration is taken from the WAGO Lighting Management database and not read out from the DALI ECG.

Note

Multiple selection
If more than one DALI ECG is selected when the configuration is opened, all of the settings will be copied to the selected DALI ECGs when the dialog window is closed by clicking **[Ok]**.

13 Write all

Clicking on the button **[Write All]** will write all the parameters from the WAGO Lighting Management database to the DALI ECG of the selected DALI module.

14 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

Severity	Message	Description
Warning	No response from DALI device	The address of the DALI ECG cannot be located.
Warning	Collision on the backward frame	Several DALI ECGs have responded simultaneously.
Warning	Collision detected.	Collision detected when sending.
Information	DALI devices without addresses found on the bus.	DALI ECGs without an address are still connected to the DALI module.
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited.
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is currently connected with the DALI Configurator.
Error	No group is available	The maximum number of groups (16) was exceeded. (More than 16 different virtual rooms have been defined on the DALI module)
Error	DALI module firmware not supported by the software	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Warning	An EAN /GTIN value is invalid.	The EAN / GTIN value could not be read by all DALI ECGs.
Warning	Table overflow (other entries are present.)	More entries are present than can currently be displayed in the table. (e.g., maximum number of DALI ECGs exceeded)
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

15 Table

Designation	Description
Select	Selection of the DALI ECGs which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one DALI ECG is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
Addr.	Address of DALI ECG; changing this address will result in the address being switched both on the DALI bus and in the table. You can have the addresses sorted in ascending order in the table by clicking on the icon.
Device type	<table><tr><th>Symbol</th><th>Description</th></tr><tr><td></td><td>Standard ECG</td></tr><tr><td></td><td>Separate emergency lighting</td></tr><tr><td></td><td>Discharge lamp</td></tr><tr><td></td><td>Low voltage halogen lamp</td></tr><tr><td></td><td>Filament lamp</td></tr><tr><td></td><td>Converting the digital signal into a 1 - 10 VDC voltage</td></tr><tr><td></td><td>LED lamp</td></tr><tr><td></td><td>Switching function</td></tr><tr><td></td><td>Color control device</td></tr><tr><td></td><td>Several device types are supported, or unknown device type.</td></tr><tr><td></td><td>The address can no longer be located.</td></tr><tr><td></td><td>The response from the DALI ECG was not received properly. Possible causes for this are duplicate addresses or exceeding of the maximum line length.</td></tr></table>
EAN/GTIN	Indication of the Global Trade Item Number (GTIN); the GTIN is an internationally unique identification number used for product identification.
Group	Indication of the current grouping; if the DALI ECG is not assigned to any group, 254 is displayed. The number 255 is displayed when all DALI

	ECGs on the DALI module are assigned to a virtual room. If this is the case, the lights will be broadcast-controlled.
Actual Level	Indication of the current dimming level
Operating Hours	Indication of current operating hours
Max. Operating Hours	Indication of the maximum operating hours; information on the configuration of the maximum operating hours is given in the Section Software > Outputs > DALI ECG > Configuration DALI ECG.
Maint. Factor	Indication of the current maintenance factor; information on the configuration of the maintenance factor is given in the Section Software > Outputs > DALI ECG > Configuration DALI ECG.
Power	Indication of connected load; information on the configuration of the connected load is given in the Section Software > Outputs > DALI ECG > Configuration DALI ECG.
Virtual Room	Allocation of the DALI ECGs to virtual rooms You can open this dialog window to select the virtual rooms simply by clicking in the column. The dialog window for allocating the output to the virtual rooms is explained in the Section Software > Outputs > Select virtual room. This column supports multiple selections.
Notice	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

16 Select all

[Select all] selects all of the DALI ECGs.

17 Deselect all

[Deselect all] deselects all of the DALI ECGs.

4.4.2.1. DALI ECG configuration

1 2 **Configuration**

Write	Parameter	Value	Unit
☐	Power On Level	100	%
☐	System Failure Level	100	%
☐	Min. Level *	1	%
☐	Max. Level **	100	%
☐	Fade Rate	7	
☐	Fade Time ***	0	
☐	Scene 0	101	%
☐	Scene 1	101	%
☐	Scene 2	101	%
☐	Scene 3	101	%
☐	Scene 4	101	%
☐	Scene 5	101	%
☐	Scene 6	101	%
☐	Scene 7	101	%
☐	Scene 8	101	%
☐	Scene 9	101	%
☐	Scene 10	101	%
☐	Scene 11	101	%
☐	Scene 12	101	%
☐	Scene 13	101	%
☐	Scene 14	101	%
☐	Scene 15	101	%
☐	Operating Hours	20000	h
☐	Max. Operating Hours	15000	h
☐	Maintanance Factor	100	%
☐	Power Consumption	0	W

3 Ok 4 Cancel

* Burn-In Mode overrides the Min. Level
** Maintanace Factor overrides the Max. Level
*** Constant Light Control overrides the Fade Time

The configuration is taken from the WAGO Lighting Management database and not read out from the DALI ECG.

Note

Write parameters periodically

Parameters should be written at set cycles to the DALI ECGs to ensure that the contents of the database concur with the configuration of the DALI ECGs. You can set this update interval under File > Project settings > DALI interval.

Note

Multiple selection

If more than one DALI ECG is selected when the configuration is opened, all of the settings will be copied to the selected DALI ECGs when the dialog window is closed by clicking **[Ok]**.

1 Write

Only those parameters whose check-boxes are marked will be applied to the database, or in the DALI ECG when you click **[Ok]**. This check-box is marked automatically when the parameter (value) is changed.

2 Configuration parameters:

Designation	Default	Range	Description
Power On Level	100	0…101	Dimming value at power restoration (Power-on level)
System Failure Level	100	0…101	Dimming value on a bus error (System Failure Level)
Min. Level	1	1…100	Minimum dimming level for normal operation; the burn-in function overrides the minimum dimming level with 100 % so that the lighting cannot be dimmed while the burn-in function is in progress.
Max. Level	100	1…100	Maximum dimming level for normal operation; maintenance factor compensation overrides the maximum dimming level as a function of the operating hours.
Fade Rate	7	1…15	The fade rate specifies the number of stages that the lighting will be dimmed per second [stages/s]. (0…100 % corresponds to 0…254 stages) 1 = 357.796 2 = 253 3 = 178.898 4 = 126.5 5 = 89.449 6 = 63.25 7 = 44.725 8 = 31.625 9 = 22.362 10 = 15.813 11 = 11.181 12 = 7.906 13 = 5.591 14 = 3.953 15 = 2.795
Fade time	0	0…15	The Fade time indicates the time period in which the transmitted dimming level is to be reached [s] 0 = <0.707 1 = 0.707 2 = 1 3 = 1.414 4 = 2 5 = 2.828 6 = 4 7 = 5.657 8 = 8 9 = 11.314 10 = 16 11 = 22.627 12 = 32 13 = 45.255 14 = 64 15 = 90.51
Scene 0…15	101	0…101	Dimming value for scene 0…15 [%]. (101 = no scene)

<table>
<tr><td>Operating Hours</td><td>0</td><td></td><td>Setting of opreating hours [h]; the DALI module automatically counts the operating hours for each DALI ECG.</td></tr>
<tr><td>Max. Operating Hours</td><td>15000</td><td></td><td>Maximum operating hours for the lights [h]; lamp maintenance is applied to a DALI ECG as soon as its maximum operating hours are exceeded.
Lamp maintenance is explained under Diagnostics > Lamp maintenance.</td></tr>
<tr><td>Maintenance Factor</td><td>100</td><td>1…100</td><td>The maintenance factor indicates the maximum dimming value for a new unit [%]. A 4-point characteristic curve compensates for light aging/soiling based on the operating hours of the light.
Example:
Configuration: Maintenance factor = 80 %; Max. operating hours = 15000
<table>
<tr><th>Operating hours [h]</th><th>Maximum dimming value [%]</th></tr>
<tr><td>0</td><td>80</td></tr>
<tr><td>7500</td><td>90</td></tr>
<tr><td>> 15000</td><td>100</td></tr>
</table>
Note
Override max. value
Maintenance factor compensation overrides the maximum value as soon as a maintenance factor < 100 is set.</td></tr>
<tr><td>Power Consumption</td><td>0</td><td></td><td>Power consumption of the DALI ECG [W]</td></tr>
</table>

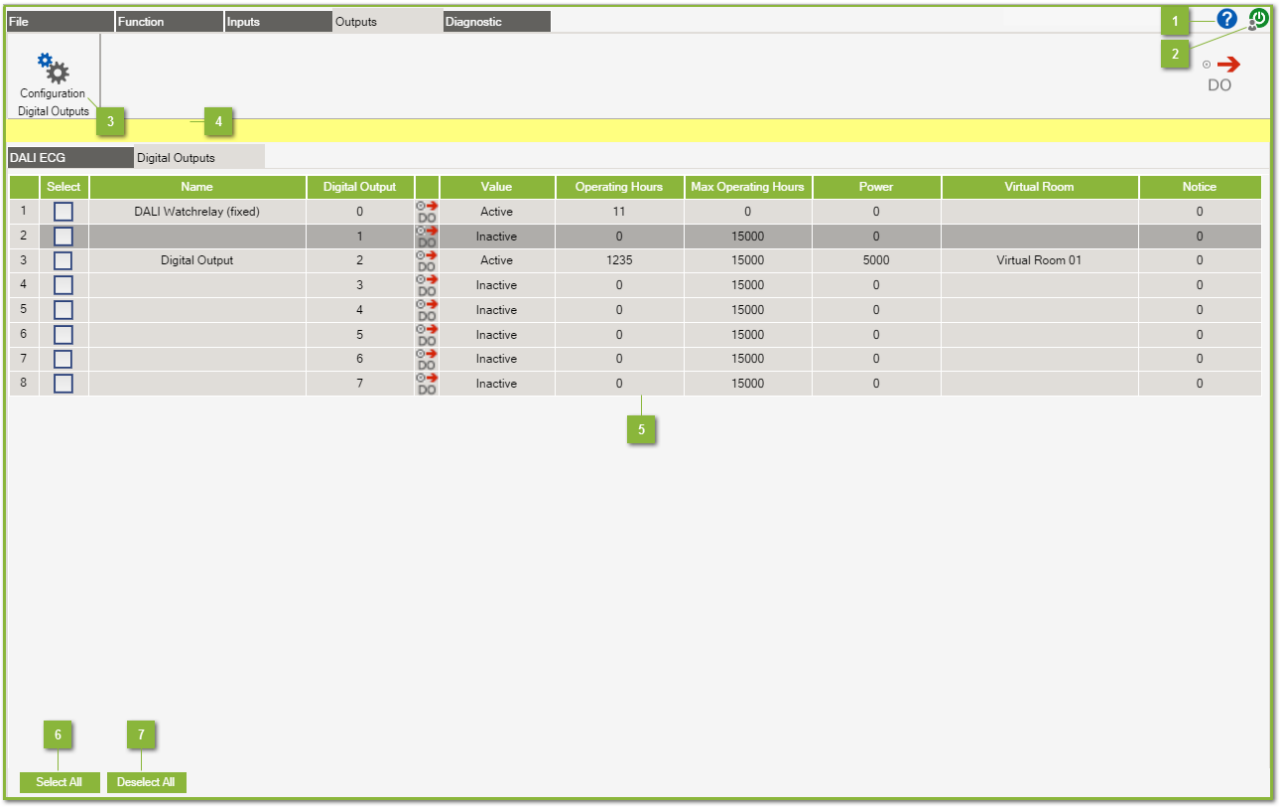
3 OK

Click on **[Ok]** to close the dialog window and write the selected parameters to the database, or to the DALI ECG.

4 Cancel

Click on **[Cancel]** to close this window ignore any changes made.

4.4.3. Digital Outputs



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Configuration

Click on the **[Configuration]** button to open a dialog window for configuring the digital outputs. A description of this dialog window is given in the Section Software > Outputs > Digital outputs > Configure digital outputs. The current configuration will be applied to the marked digital output.

Note

Multiple selection
If more than one digital output is selected when the configuration is opened, all of the settings will be copied to the selected digital outputs when the dialog window is closed by clicking **[Ok]**.

4 Alarm banner

The alarm banner is displayed as soon as an error is detected. The following alarms can be issued:

Severity	Message	Description
Warning	Maximum number of digital outputs exceeded.	More digital outputs are connected to WAGO Lighting Management than are supported by the software.

5 Table

Designation	Description
Select	Selection of the digital outputs which are to be commonly configured (multiple selection); columns/functions which do not support multiple selections are inhibited as soon as more than one digital output is selected.
Name	Device name (e.g., system ID concept); every device name can have a maximum of 30 characters.
Digital Output	Number of the digital output (counting begins at zero); the connected digital outputs are detected automatically.
Value	Status indication of digital outputs in plain text (active/inactive).
Operating Hours	Indication of current operating hours
Max. operating hours	Display of maximum operating hours; configuration of the maximum operating hours is explained in the Section Software > Outputs > Digital outputs > Configure digital outputs.
Load	Indication of connected load; information on the configuration of the connected load is given in the Section Software > Outputs > Digital outputs > Configure digital outputs.
Virtual room	Allocation of the digital outputs to virtual rooms; simply click inside the column to open the dialog window for selecting the virtual rooms. The dialog window for allocating the output to the virtual rooms is explained in the Section Software > Outputs > Select virtual room. This column supports multiple selections.
Note	Selection of note saved for the specific device; only the number of the note is shown in the table. Notes are defined under File > Editing notices. This column supports multiple selections.

Note

Watch relay!
The first digital output is defined as the watch relay and cannot be changed. This digital output is set as long as WAGO Lighting Management is runing. The digital output is switched off as soon as WAGO Lighting Management is set to stop.
Application example:
The18 V power supply for the DALI modules is enabled via the digital output (watch relay). As soon as this digital output is switched off the DALI bus is no longer supplied with power and the DALI ECGs switch to **System Failure Level**. The **System Failure Level** can be set under Outputs > DALI ECG > [Configuration].

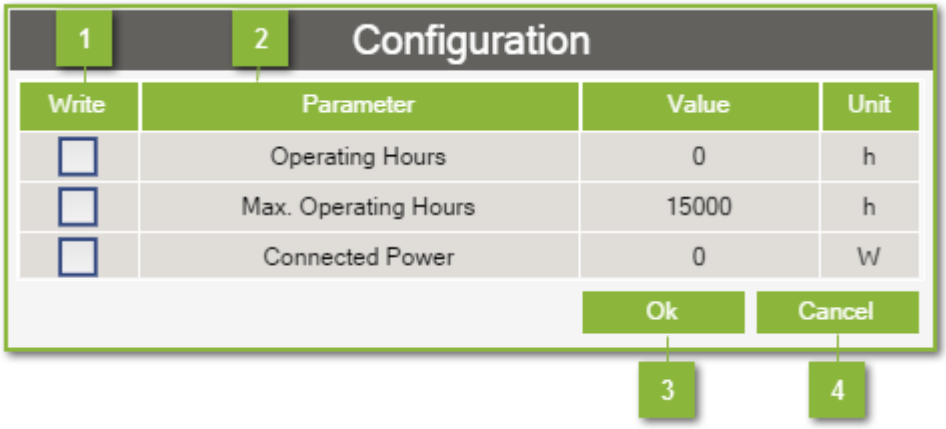
6 Select all

[Select all] selects all of the digital outputs.

7 Deselect all

[Deselect all] deselects all of the digital outputs.

4.4.3.1. Configuration of digital outputs



Note

Multiple selection
If more than one digital output is selected when the configuration is opened, all of the settings will be copied to the selected digital outputs when the dialog window is closed by clicking **[Ok]**.

1 Write

Only those parameters whose check-boxes are marked will be applied to the database when you click **[Ok]**.
This check-box is marked automatically when the parameter (value) is changed.

2 Configuration parameters:

Designation	Default	Description
Operating Hours	0	Setting of operating hours [h]; WAGO Lighting Management automatically counts the operating hours for each digital output.
Max. operating hours	15000	Maximum operating hours for the lights [h]; lamp maintenance is applied to the digital output as soon as its maximum operating hours are exceeded. Lamp maintenance is explained under Diagnostics > Lamp maintenance.
Connected load	0	Power consumption of the connected lights [W]

3 OK

Click on **[Ok]** to close the dialog window and write the selected parameters to the database.

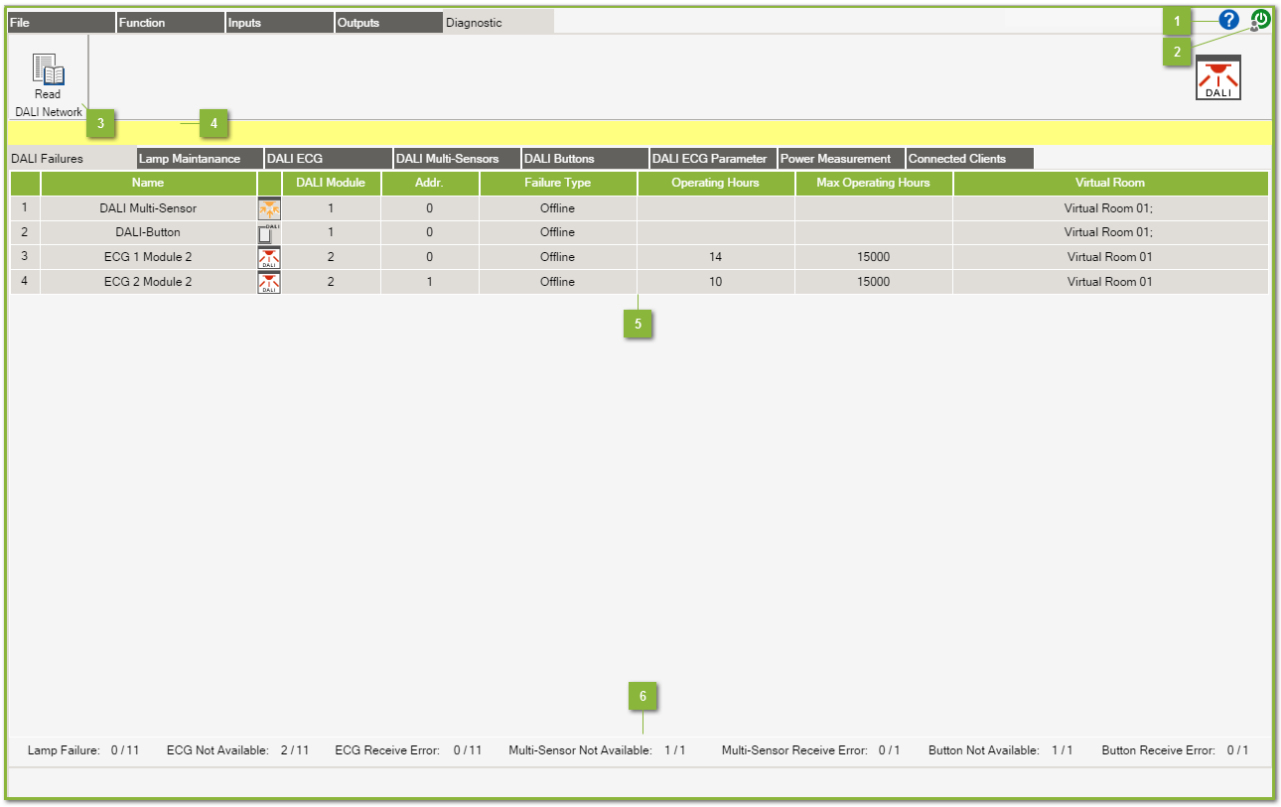
4 Cancel

Click on **[Cancel]** to close this window ignore any changes made.

4.5. Diagnostics

4.5.1. DALI Errors

The **DALI Failures** tab checks the current status of all DALI devices created in WAGO Lighting Management. As a result, the status of all DALI ECGs, DALI buttons and DALI Multi-sensors at all DALI modules will be exported.



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Read

Click on the **[Read]** button to export the status of all DALI devices that have been created.

4 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

Severity	Message	Description
Warning	No response from DALI device	The address of the DALI device cannot be located.
Warning	Collision on the backward frame	Several DALI devices have responded simultaneously.
Warning	Collision detected.	Collision detected when sending.
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited.
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is currently connected with the DALI Configurator.
Error	DALI module firmware not supported by the software	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Warning	Table overflow (other entries are present.)	More entries are present than can currently be displayed in the table.
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

5 Table

Designation	Description
Name	Device name (e.g., system ID concept)
DALI module	DALI module to which the DALI device is connected
Addr.	Addresses of the DALI device
Failure Type	Indication of the error type; the following types of errors are evaluated: 1.) Not accessible 2.) Lights defective 3.) Receive error
Operating Hours	Indication of the current operating hours for the DALI ECGs; this field remains blank for the DALI sensors.
Max. Operating Hours	Indication of the maximum operating hours; information on the configuration of the maximum operating hours is given in the Section Software > Outputs > DALI ECG > Configuration DALI ECG. This field remains blank for the DALI sensors.
Virtual Room	Indication of the virtual rooms to which the DALI device has been assigned; if the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>).

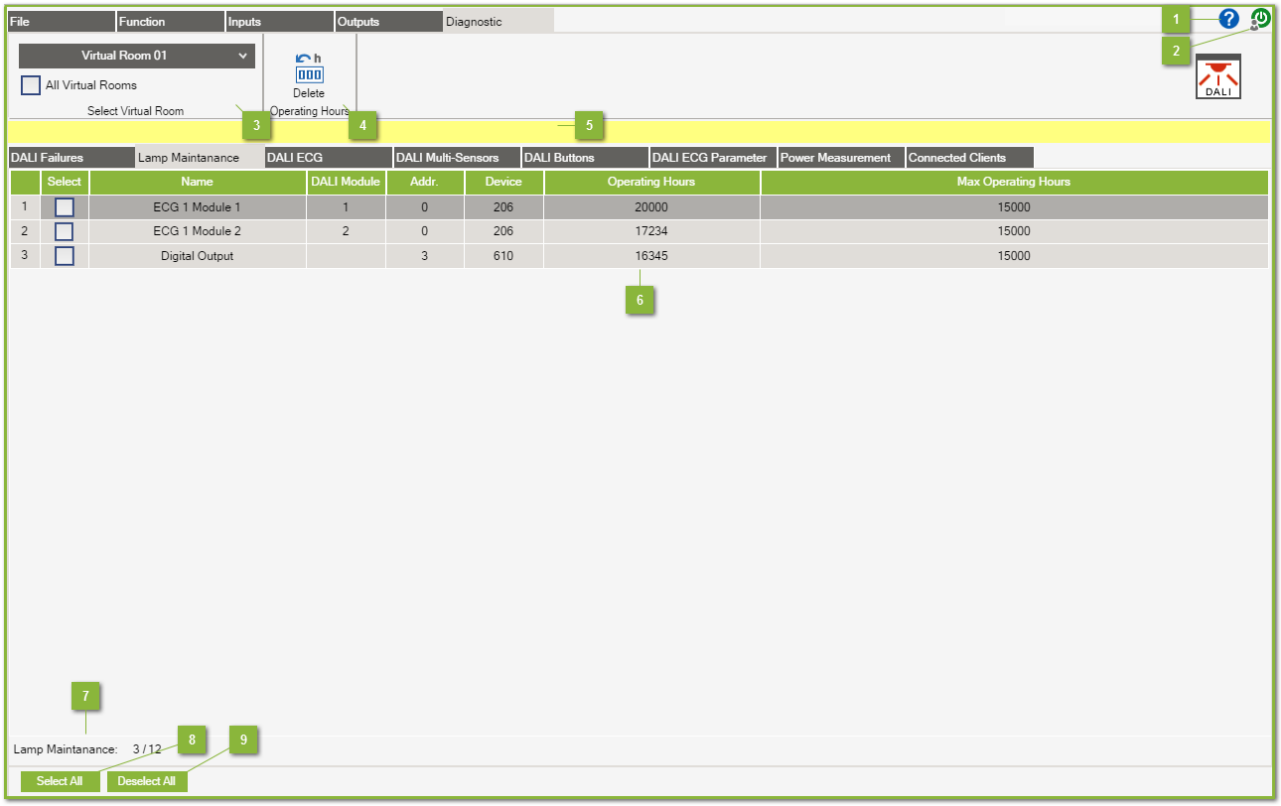
6 Status

This status indication denotes the number of alarms in relation to the number of DALI devices. The status indication is filtered as a function of the selection of the virtual rooms.

Designation	Description
Lamp failure	Number of lamp failures in relation to the total number of DALI ECGs
ECG Not Available	Number of inaccessible DALI ECGs in relation to the total number of DALI ECGs
ECG Receive Error	Number of DALI ECGs with receive errors in relation to the total number of DALI ECGs
Multi-Sensor Not Available	Number of inaccessible DALI Multi-sensors in relation to the total number of DALI Multi-sensors
Multi-Sensor Receive Error	Number of DALI Multi-sensors with receive errors in relation to the total number of DALI Multi-sensors
Button Not Available	Number of inaccessible DALI buttons in relation to the total number of DALI buttons
Button Receive Error	Number of DALI buttons with receive errors in relation to the total number of DALI buttons

4.5.2. Lamp maintenance

The **Lamp Maintenance** tab shows the outputs which have exceeded their maximum operating hours. The status indication is filtered as a function of the selection of the virtual rooms.



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select virtual room

Select the virtual room using the selection menu.

4 Delete

When you click **[Delete]**, the operating hours of the selected DALI ECGs and digital outputs are deleted.

5 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

Severity	Message	Description
Warning	No response from DALI device	The address of the DALI ECG cannot be located.
Warning	Collision on the backward frame	Several DALI ECGs have responded simultaneously.
Warning	Collision detected.	Collision detected when sending.
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited.
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is currently connected with the DALI Configurator.
Error	DALI module firmware not supported by the software.	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Warning	Table overflow (other entries are present.)	More entries are present than can currently be displayed in the table (e.g., maximum number of DALI ECGs exceeded).
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

6 Table

Designation	Description
Select	Select the DALI ECGs and digital outputs whose operating hours are to be reset (multiple selections).
Name	Device name (e.g., system ID concept)
DALI module	DALI module to which the DALI ECG is connected This field remains blank for the digital outputs.
Addr.	Addresses of the DALI ECG, or number of the digital output
Device	<table><tr><th>Symbol</th><th>Description</th></tr><tr><td></td><td>Standard ECG</td></tr><tr><td></td><td>Self-contained emergency lighting</td></tr><tr><td></td><td>Discharge lamp</td></tr><tr><td></td><td>Low voltage halogen lamp</td></tr><tr><td></td><td>Incandescent lamp</td></tr><tr><td></td><td>Converting the digital signal into a 1 - 10 V DC voltage</td></tr><tr><td></td><td>LED lamp</td></tr><tr><td></td><td>DALI switching function</td></tr><tr><td></td><td>Colour control device</td></tr><tr><td>DO</td><td>Digital Output</td></tr></table>
Operating Hours	Indication of current operating hours
Max. operating hours	Display of maximum operating hours. Configuration of the maximum operating hours for the DALI ECGs is explained in the Section Software > Outputs > DALI ECG > Configuration DALI ECG. Configuration of the maximum operating hours for the digital outputs is explained in the Section Software > Outputs > DALI ECG > Configuration of digital outputs.

7 Status

This status indication denotes the number of lamp maintenance actions in relation to the number of lights. The status indication is filtered as a function of the selection of the virtual rooms.

8 Select all

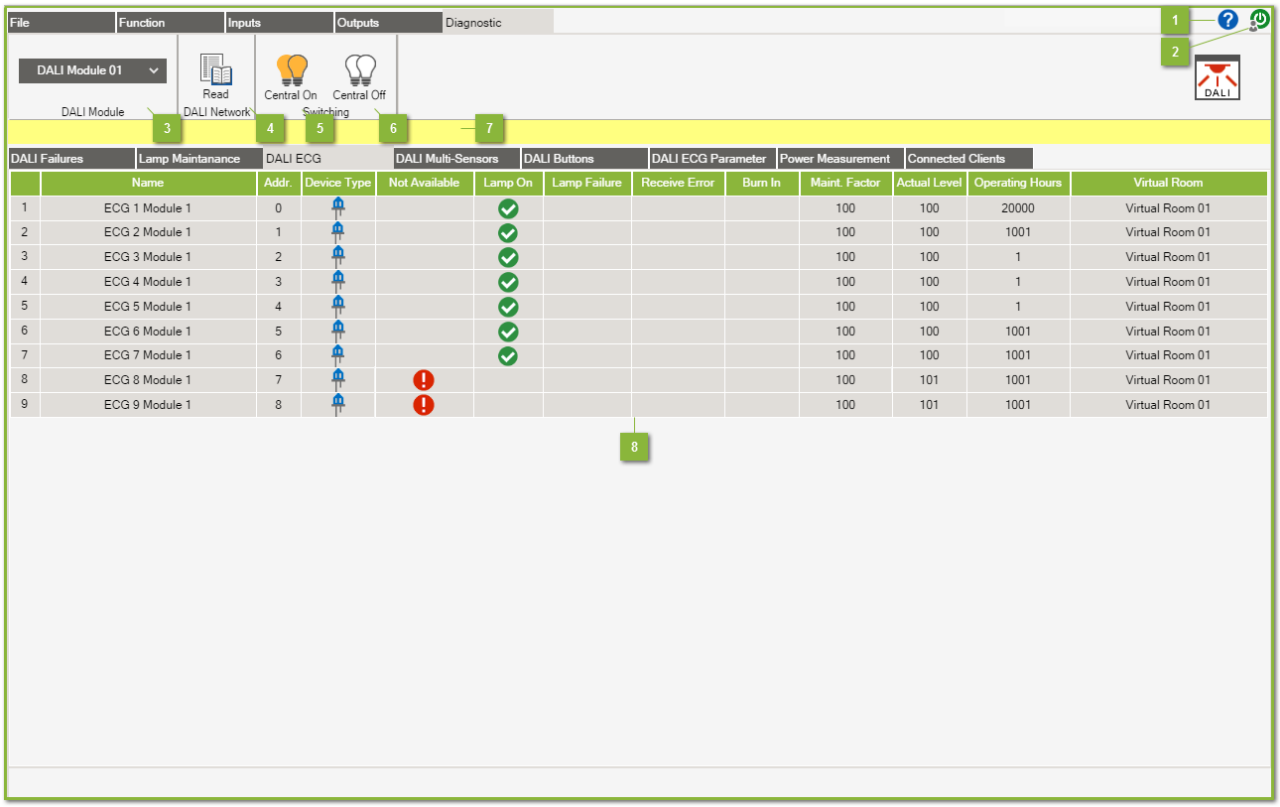
[Select all] selects all of the devices.

9 Deselect all

[Deselect all] deselects all of the devices.

4.5.3. DALI ECG

The **DALI ECG** tab displays the status of the DALI ECG at the selected DALI module.



	Name	Addr.	Device Type	Not Available	Lamp On	Lamp Failure	Receive Error	Burn In	Maint. Factor	Actual Level	Operating Hours	Virtual Room
1	ECG 1 Module 1	0			✓				100	100	20000	Virtual Room 01
2	ECG 2 Module 1	1			✓				100	100	1001	Virtual Room 01
3	ECG 3 Module 1	2			✓				100	100	1	Virtual Room 01
4	ECG 4 Module 1	3			✓				100	100	1	Virtual Room 01
5	ECG 5 Module 1	4			✓				100	100	1	Virtual Room 01
6	ECG 6 Module 1	5			✓				100	100	1001	Virtual Room 01
7	ECG 7 Module 1	6			✓				100	100	1001	Virtual Room 01
8	ECG 8 Module 1	7		!					100	101	1001	Virtual Room 01
9	ECG 9 Module 1	8		!					100	101	1001	Virtual Room 01

1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select DALI module

Use the selection menu to select the DALI module.

4 Read

Click on the **[Read]** button to export the status of the DALI ECG.

5 Central On

The entire lighting on the DALI module is switched on when you click on the **[Central On]** button.

6 Central Off

The entire lighting on the DALI module is switched off by clicking on **[Central Off]**.

7 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

Severity	Message	Description
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited.
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is currently connected with the DALI Configurator.
Error	DALI module firmware not supported by the software.	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

Information

Wiring diagram

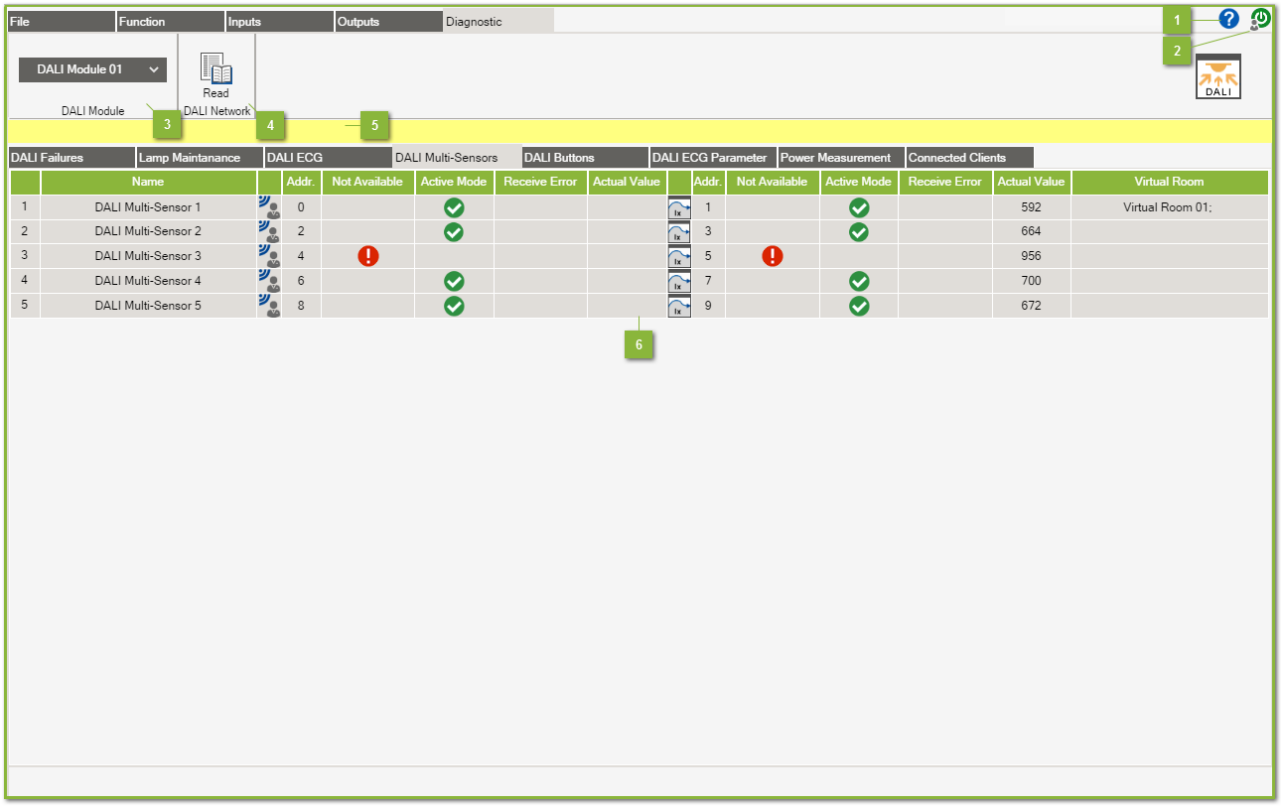
The pin assignment for the DALI Multi-Master is given under Appendix > Wiring diagram > DALI Multi-Master.

8 Table

Designation	Description
Name	Device name (e.g., system ID concept)
Address	Addresses of the DALI ECG.
Device type	<table><tr><th>Symbol</th><th>Description</th></tr><tr><td></td><td>Standard ECG</td></tr><tr><td></td><td>Self-contained emergency lighting</td></tr><tr><td></td><td>Discharge lamp</td></tr><tr><td></td><td>Low voltage halogen lamp</td></tr><tr><td></td><td>Filament lamp</td></tr><tr><td></td><td>Converting the digital signal into a 1 - 10 V DC voltage</td></tr><tr><td></td><td>LED lamp</td></tr><tr><td></td><td>DALI switching function</td></tr><tr><td></td><td>Color control device</td></tr></table>
Not Available	The symbol is displayed if there is no response from the DALI ECG.
Lamp On	The symbol is displayed when the DALI ECG is switched on.
Lamp Failure	The symbol is displayed when the DALI ECG detects a light error.
Receive Error	The symbol is displayed when the response from the DALI ECG is not properly received. Possible causes for this can be duplicate addresses or exceeding the maximum line length.
Burn In	The symbol is displayed when the burn-in function is activated for the DALI ECG.
Maint. Factor	Display of current maintenance factors
Actual Level	Display of current dimming values
Operating Hours	Indication of current operating hours
Virtual Room	Indication of the virtual rooms to which the DALI ECG has allocated.

4.5.4. DALI Multi-sensors

The **DALI Multi-Sensors** tab displays the status of the DALI Multi-sensors at the selected DALI module.



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select DALI module

Use the selection menu to select the DALI module.

4 Read

Click on the **[Read]** button to export the status of the DALI Multi-sensors.

5 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

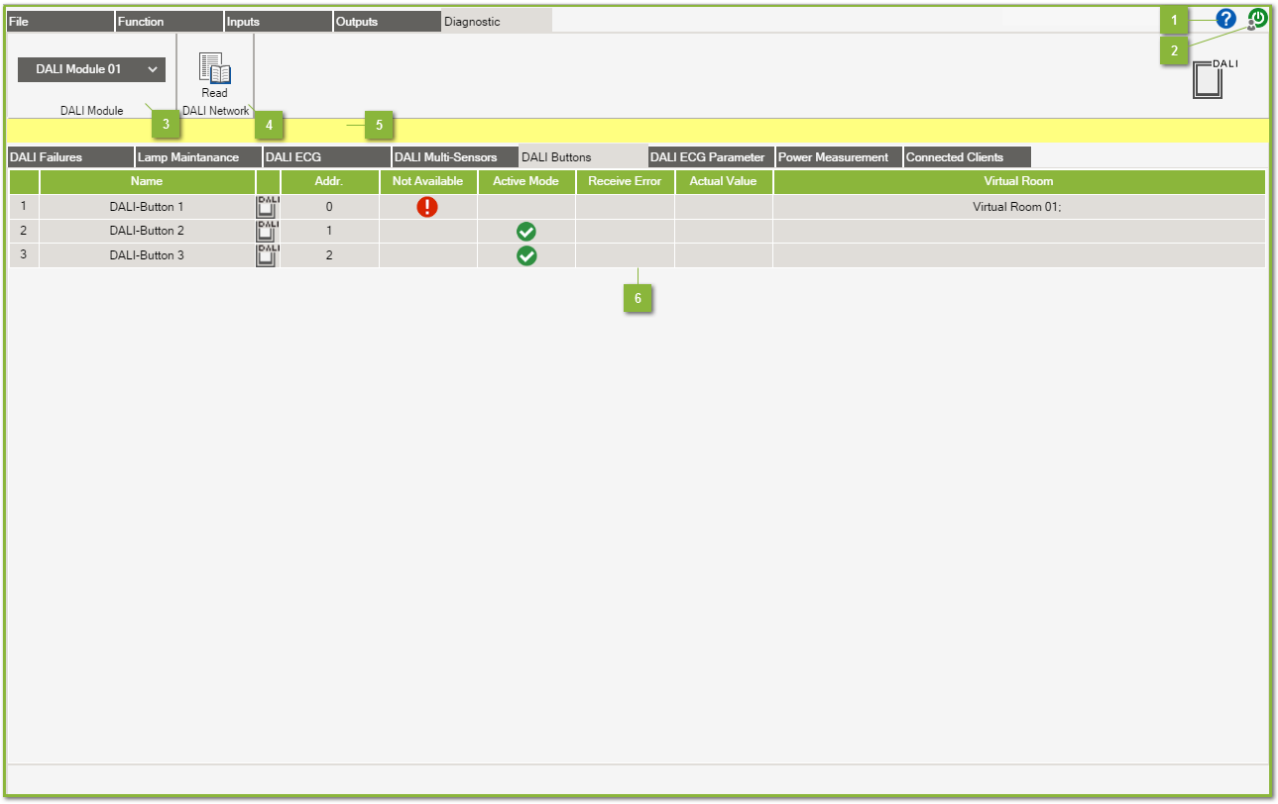
Severity	Message	Description
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited.
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is currently connected with the DALI Configurator.
Error	DALI module firmware not supported by the software.	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

6 Table

Designation	Description
Name	Device name (e.g., system ID concept)
Device type	Presence detector
Addr.	Addresses of presence detectors/motion detectors
Not Available	The symbol is displayed if there is no response from the presence detector/motion detector.
Active Mode	The symbol is displayed when the DALI Multi-sensor is transmitting its presence signal level automatically to WAGO Lighting Management.
Receive Error	The symbol is displayed when the response from the presence detector/motion detector is not properly received. Possible causes for this can be duplicate addresses or exceeding the maximum line length.
Actual value	Indication of presence; the text Presence is displayed as soon as presence is detected.
Device type	Light intensity sensor
Addr.	Addresses of the light intensity sensor
Not Available	The symbol is displayed if there is no response from the light intensity sensor.
Active Mode	The symbol is displayed when the DALI Multi-sensor is transmitting its brightness level automatically to WAGO Lighting Management.
Receive Error	The symbol is displayed when the response from the light intensity sensor is not properly received. Possible causes for this can be duplicate addresses or exceeding the maximum line length.
Actual Value	Indication of current brightness
Virtual Room	Indication of the virtual rooms to which the DALI Multi-sensors have been allocated. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>).

4.5.5. DALI buttons

The **DALI Buttons** tab displays the status of the DALI buttons at the selected DALI module.



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select DALI module

Use the selection menu to select the DALI module.

4 Read

Click on the **[Read]** button to export the status of the DALI buttons.

5 Alarm banner

The alarm banner is displayed as soon as an error is detected. You can acknowledge the alarm using the **[Quit]** button. The following alarms can be issued:

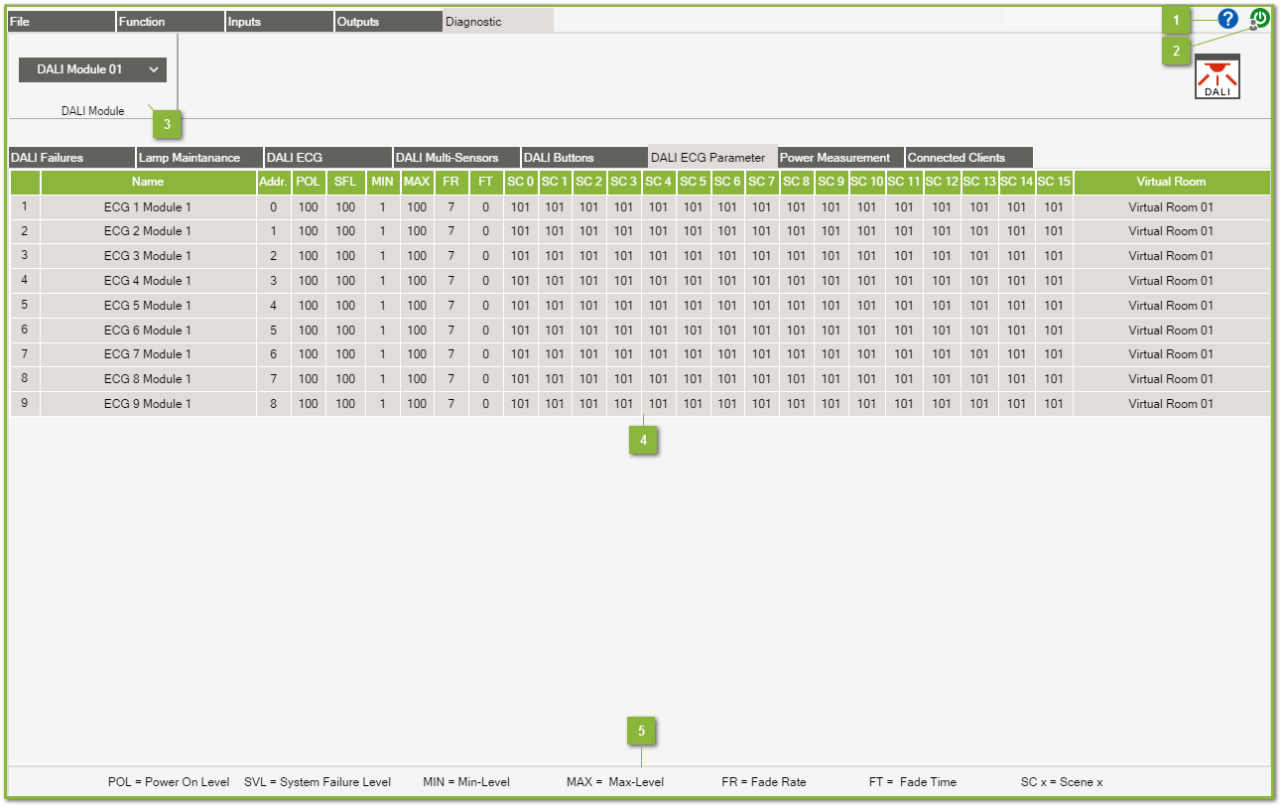
Severity	Message	Description
Error	Watchdog has triggered (no response from the DALI module)	The time limit has been exceeded before a response was received from the DALI module.
Error	Short circuit on the DALI bus	The DALI bus has been short circuited.
Information	DALI module being accessed by the DALI Configurator.	WAGO Lighting Management cannot communicate with the DALI module because the module is currently connected with the DALI Configurator.
Error	DALI module firmware not supported by the software.	WAGO Lighting Management requires at least Firmware 4 from the DALI module. Please contact WAGO Support support@wago.com if you have older firmware.
Information	Communication with the DALI module has not been initialized.	The connection to the DALI module has not been fully set up. WAGO Lighting Management cannot transmit any DALI commands yet.

6 Table

Designation	Description
Name	Device name (e.g., system ID concept)
Device type	DALI buttons
Addr.	Addresses of the DALI button.
Not Available	The symbol is displayed if there is no response from the DALI button.
Active Mode	Addresses of the DALI button.
Receive Error	The symbol is displayed when the response from the DALI button is not properly received. Possible causes for this can be duplicate addresses or exceeding the maximum line length.
Actual Value	Display of button signals in plain text (e.g., Button 1)
Virtual Room	Indication of the virtual rooms to which the DALI buttons have been allocated. If the room name has less than the maximum number of characters, it is displayed in plain text (e.g., Virtual Room 1). If the room name has more than the maximum number of characters, only the room numbers will be displayed (e.g., 1;3). If the room numbers exceed the maximum number of characters, an arrow is displayed at the end (e.g., 1;2;3;==>).

4.5.6. DALI ECG parameters

The **DALI ECG Parameter** tab displays the parameters of the DALI ECGs at the selected DALI module.



	Name	Addr.	POL	SFL	MIN	MAX	FR	FT	SC 0	SC 1	SC 2	SC 3	SC 4	SC 5	SC 6	SC 7	SC 8	SC 9	SC 10	SC 11	SC 12	SC 13	SC 14	SC 15	Virtual Room
1	ECG 1 Module 1	0	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
2	ECG 2 Module 1	1	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
3	ECG 3 Module 1	2	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
4	ECG 4 Module 1	3	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
5	ECG 5 Module 1	4	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
6	ECG 6 Module 1	5	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
7	ECG 7 Module 1	6	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
8	ECG 8 Module 1	7	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01
9	ECG 9 Module 1	8	100	100	1	100	7	0	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	Virtual Room 01

1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Select DALI module

Use the selection menu to select the DALI module.

4 Table

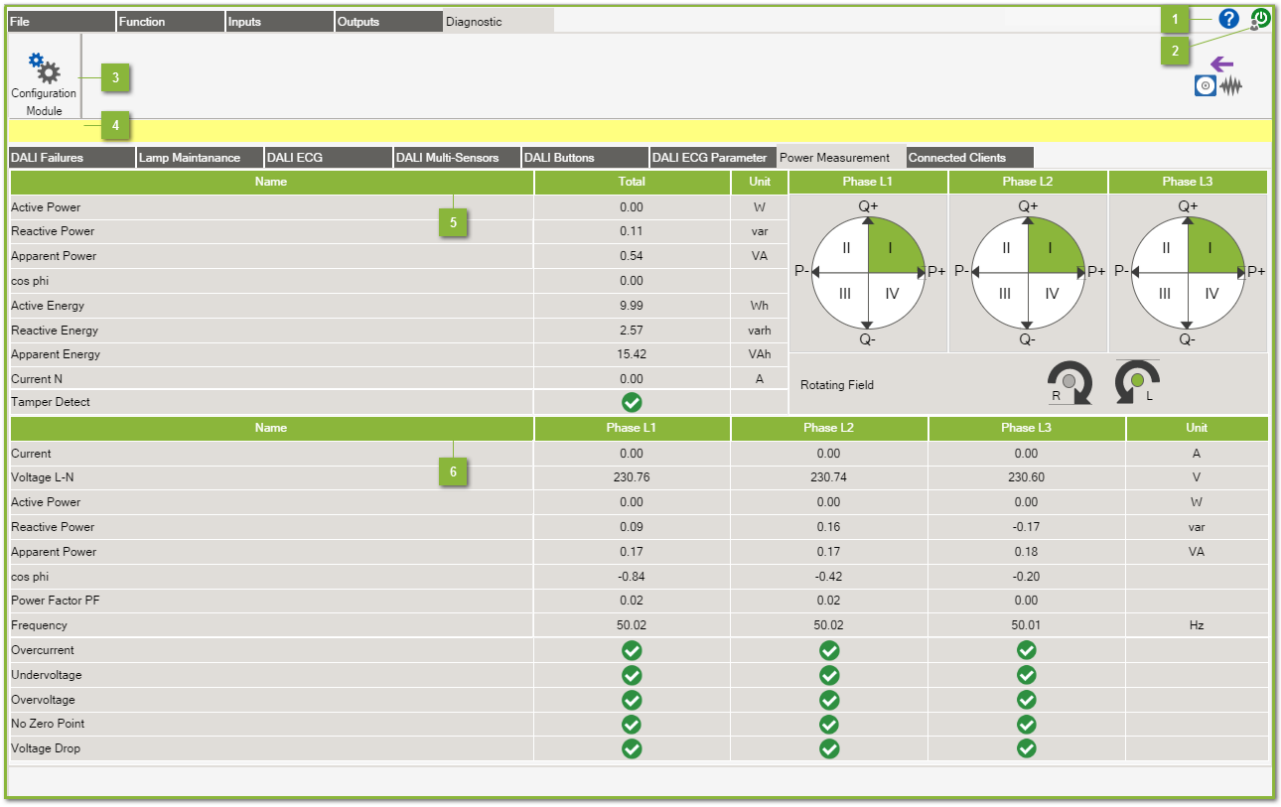
Designation	Description
Name	Device name (e.g., system ID concept)
Addr.	Addresses of the DALI ECG
POL	Display of switch-on value (Power-on level)
SFL	Display of System Failure Level
MIN	Display of min. level
MAX	Display of max. level
FR	Display of fade rate
FT	Display of fade time
SC 0 to SC 15	Display of scene values [%] (scene value 101 = no scene defined).
Virtual Room	Display of the virtual rooms to which the DALI ECG has allocated.

5 Legend

Explanation of abbreviations given in the table.

4.5.7. Power measurement

The **Power Measurement** tab shows the current measured values from the 3-phase power measurement module (750-495).



Information

MODBUS Interface

All of the measured values shown here are made available to WAGO Lighting Management via the MODBUS interface.

This interface is described in the Section Software > MODBUS interface > Read > Power measurement.

1 Help

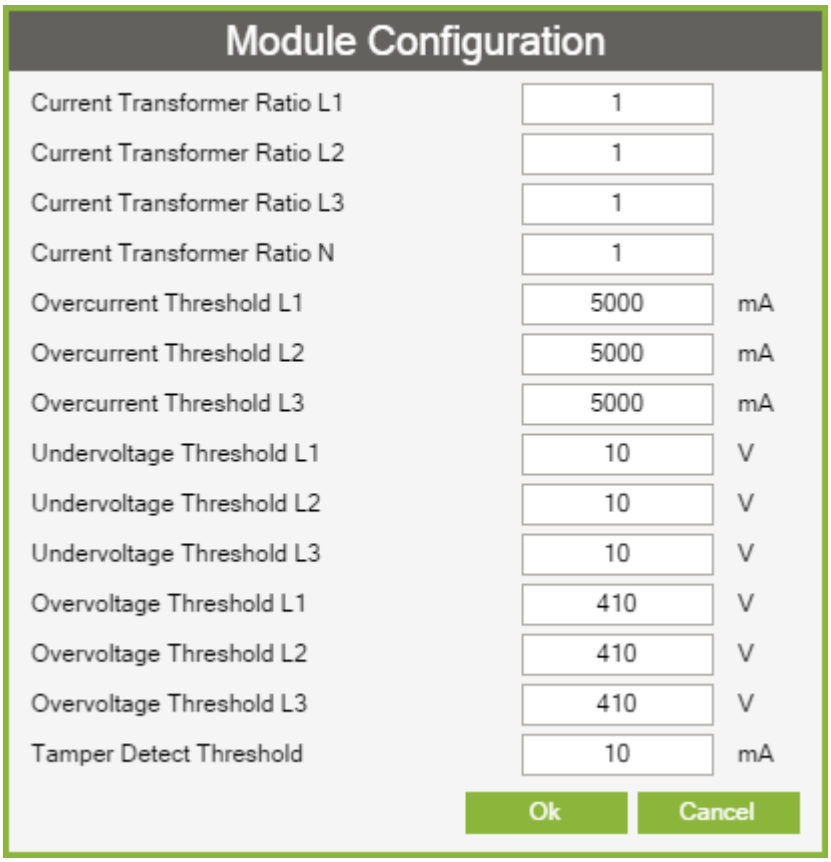
Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Configuration

Click on the **[Configuration]** button to open a dialog window for configuring the 3-phase power measurement module.



Designation	Default	Range	Description
Current Transformer Ratio L1	1	1…5000	Current transformer ratio, Phase L1
Current Transformer Ratio L2	1	1…5000	Current transformer ratio, Phase L2
Current Transformer Ratio L3	1	1…5000	Current transformer ratio, Phase L3
Current Transformer Ratio N	1	1…5000	Current transformer ratio, Neutral conductor
Overcurrent Threshold L1	5000		4 for overcurrent detection, Phase L1 [mA]
Overcurrent Threshold L2	5000		Threshold for overcurrent detection, Phase L2 [mA]
Overcurrent Threshold L3	5000		Threshold for overcurrent detection, Phase L3 [mA]
Undervoltage Threshold L1	10		Threshold for undervoltage detection, Phase L1 [V]
Undervoltage Threshold L2	10		Threshold for undervoltage detection, Phase L2 [V]
Undervoltage Threshold L3	10		Threshold for undervoltage detection, Phase L3 [V]

Overvoltage Threshold L1	410		Threshold for overvoltage detection, Phase L1 [V]
Overvoltage Threshold L2	410		Threshold for overvoltage detection, Phase L2 [V]
Overvoltage Threshold L3	410		Threshold for overvoltage detection, Phase L3 [V]
Tamper Detect Threshold	10		Threshold for current detection in the neutral conductor [mA]

Click on **[Ok]** to close the dialog window and write the configuration to the WAGO Lighting Management database and to the 3-phase power measurement module.

Note

Configuration of the 3-phase power measurement module
The configuration from the project file is written automatically to the 3-phase power measurement module when the Project settings are loaded.

4 Alarm banner

The alarm banner is displayed as soon as an error is detected. The following alarms can be issued:

Severity	Message	Description
Error	Timeout	The time limit has been exceeded before a response was received from the 3-phase power measurement module.
Error	Error when reading the settings	The configuration of the 3-phase power measurement module was not read correctly
Error	Error when writing the settings	The configuration of the 3-phase power measurement module was not written correctly
Error	Invalid preset values	The configuration of the 3-phase power measurement module is invalid
Error	Undervoltage threshold	The 3-phase power measurement module has detected a violation of the undervoltage threshold value.
Error	750-495 3-phase power measurement module not available	There is no 3-phase power measurement module (750-495) connected to WAGO Lighting Management.

Information

Wiring diagram
The pin assignment for the 3-phase power measurement module is given under Appendix > Wiring diagram > 3-phase power measurement module.

5 Table of total values

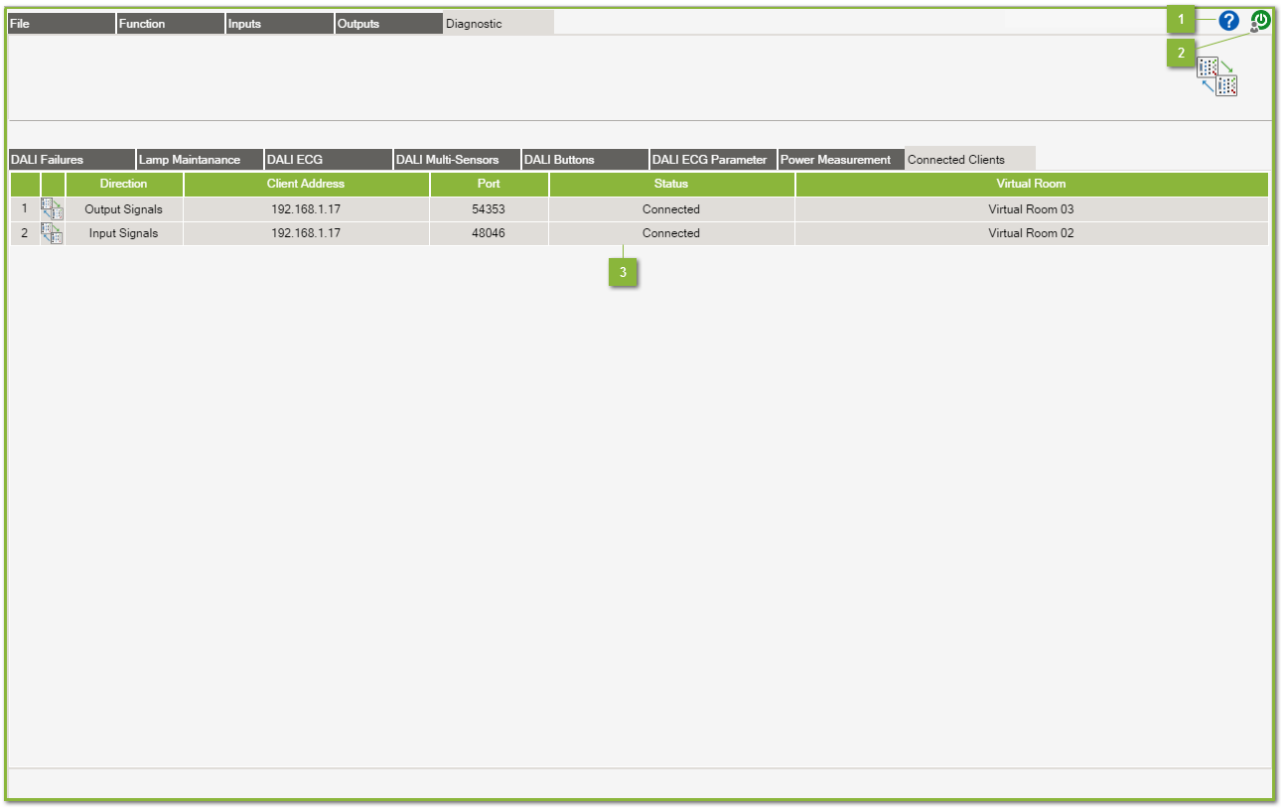
Designation	Description
Name	Name of the specific measured value
Total	Total value over all three phases and the neutral conductor
Unit	Unit of the respective measurement value
Phase L1	4-quadrant display for Phase L1
Phase L2	4-quadrant display for Phase L2
Phase L3	4-quadrant display for Phase L3

6 Table of phase values

Designation	Description
Name	Name of the specific measured value
Phase L1	Measured values, Phase L1
Phase L2	Measured values, Phase L2
Phase L3	Measured values, Phase L3
Unit	Unit of the respective measurement value

4.5.8. Connected clients

The tab **Connected clients** provides an overview of the WAGO Lighting Management controllers (clients) connected to the device.



1 Help

Clicking on the **[Help]** button opens the online documentation for WAGO Lighting Management.

2 Logout

Click the **[Logout]** button to sign out of the system.

3 Table

Designation	Description
Direction	Indicates whether WAGO Lighting Management makes the input signals or the output signals for the virtual room available; Output signals = The virtual room is providing the dimming level to a different WAGO Lighting Management controller (client). Input signals = The virtual room is providing the switching signals and brightness level to a different WAGO Lighting Management controller (client).
Client Address	IP address of the client
Port	Port Number
Status	Connection status
Virtual Room	Virtual room that is providing the values to the client

5. MODBUS Interface

5.1. Read

5.1.1. Status of virtual room

Description	Address
Current dimming value	4001 - 4060
Current light level (raw value)	4101 - 4160
Presence for virtual room 1…16 (bit encoded)	4250
Presence for virtual room 17…32 (bit encoded)	4251
Presence for virtual room 33…48 (bit encoded)	4252
Presence for virtual room … (bit encoded)	4253

5.1.2. Status of digital inputs/outputs

Description	Address
Digital inputs 1…16 (bit-encoded)	4200
Digital inputs 17…32 (bit-encoded)	4201
Digital inputs 33…48 (bit-encoded)	4202
Digital inputs 49…64 (bit-encoded)	4203
Digital outputs 1…16 (bit-encoded)	4204
Digital outputs 17…32 (bit-encoded)	4205

5.1.3. DALI Multi-sensors

Total

Description	Address (absolute values)	Address (percentages)
DALI Multi-sensors	2000	
DALI Multi-sensors not available	2199	2200
DALI Multi-sensors communication error	2399	2400

Number per virtual room 1…60

Description	Address (absolute values)	Address (percentages)
DALI Multi-sensors	2001 - 2060	
DALI Multi-sensors not available	2201 - 2260	2261 - 2320
DALI Multi-sensors communication error	2401 - 2460	2461 - 2520

5.1.4. DALI buttons

Total

Description	Address (absolute values)	Address (percentages)
DALI buttons	3000	
DALI buttons not available	3199	3200
DALI buttons communication error	3399	3400

Number per virtual room 1…60

Description	Address (absolute values)	Address (percentages)
DALI keys	3001…3060	
DALI buttons not available	3201…3260	3261…3320
DALI buttons communication error	3401…3460	3461…3520

5.1.5. DALI ECG

Total

Description	Address (absolute values)	Address (percentages)
DALI ECG	1000	
DALI ECGs not available	1199	1200
DALI ECGs communication error	1399	1400
DALI lamp failure	1599	1600

Quantity per virtual room 1…60

Description	Address (absolute values)	Address (percentages)
DALI-ECG	1001…1060	
DALI ECGs not available	1201…1260	1261…1320
DALI ECGs communication error	1401…1460	1461…1520
DALI lamp failure	1601…1640	1641…1720

5.1.6. Lamp maintenance

Description	Address (absolute values)	Address (percentages)
Lamp maintenance, total	1799	1800
Lamp maintenance virtual room	1801…1860	1861…1920

5.1.7. Operating Hours

Description	Start address	End address
DALI module 1 (ECG 1…64)	5000	5127
DALI module 2 (ECG 1…64)	5128	5255
DALI module 3 (ECG 1…64)	5256	5383
DALI module 4 (ECG 1…64)	5384	5511
DALI module 5 (ECG 1…64)	5512	5639
DALI module 6 (ECG 1…64)	5640	5767
DALI module 7 (ECG 1…64)	5768	5895
DALI module 8 (ECG 1…64)	5896	6023
DALI module 9 (ECG 1…64)	6024	6151
DALI module 10 (ECG 1…64)	6152	6279
Digital outputs (1…32)	4301	4364

Note

Operating Hours
The operating hours are available as DWORD and occupy two MODBUS registers.

Example:
DALI ECG 11 at DALI module 1 has the following MODBUS start address:
5000 + (11-1) * 2 = 5020

5.1.8. Power measurement
Status

Description	Comment	Address
General status	Bit 0 = Valid Bit 1 = Error Bit 2 = Manipulation detection Bit 3 = Rotating field (1 = rotating field, right)	0
Status L1	Bit 0 = Overcurrent Bit 1 = Undervoltage Bit 2 = Overvoltage Bit 3 = No zero point Bit 4 = Voltage drop	1
Status L2	Bit 0 = Overcurrent Bit 1 = Undervoltage Bit 2 = Overvoltage Bit 3 = No zero point Bit 4 = Voltage drop	2
Status L3	Bit 0 = Overcurrent Bit 1 = Undervoltage Bit 2 = Overvoltage Bit 3 = No zero point Bit 4 = Voltage drop	3

Measured values

Description	Address (Low Word)	Address (High word)
	REAL	
Total effective power [W]	4	5
Total reactive power [var]	6	7
Total apparent power [VA]	8	9
Total power factor PF	10	11
Total effective power [Wh]	12	13
Total reactive power [varh]	14	15
Total apparent power [VAh]	16	17
Current N [A]	18	19
Current L1 [A]	20	21
Current L2 [A]	22	23
Current L3 [A]	24	25
Voltage L1 - N [V]	26	27
Voltage L2 - N [V]	28	29
Voltage L3 - N [V]	30	31
Effective power L1 [W]	32	33
Effective power L2 [W]	34	35
Effective power L3 [W]	36	37
Reactive power L1 [var]	38	39
Reactive power L2 [var]	40	41
Reactive power L3 [var]	42	43
Apparent power L1 [VA]	44	45
Apparent power L2 [VA]	46	47
Apparent power L3 [VA]	48	49
Cos Phi L1	50	51
Cos Phi L2	52	53
Cos Phi L3	54	55
Power Factor PF L1	56	57
Power Factor PF L2	58	59
Power Factor PF L3	60	61
Frequency L1 [Hz]	62	63
Frequency L2 [Hz]	64	65
Frequency L3 [Hz]	66	67

Quadrant

Description	Address
Quadrant L1	68
Quadrant L2	69
Quadrant L3	70

5.2. Write

5.2.1. File Management

Description	Address
Load file from FTP server.	63995
Save file locally and send to FTP server.	63996
Send file to FTP server.	63997
Load file locally.	63998
Save file locally.	63999

Note

Execute function
The action is executed as soon as a value > 0 is written to the MODBUS register.

5.2.2. External values for virtual room

Description	Address
External dimming value for virtual room (daylight regulation or slave function for external dimming value) [%]	32101…32160
Light level (raw value) for virtual room	32201…32260
Event for virtual room (Priority 4) [%]	32301…32360
Overriding of virtual room (Priority 2) [%]	32401…32460
Reset overriding of virtual room (value > 0)	32501…32560

Note

Heartbeat
You can set connection monitoring for the MODBUS register under File > Project settings > Heartbeat MODBUS.

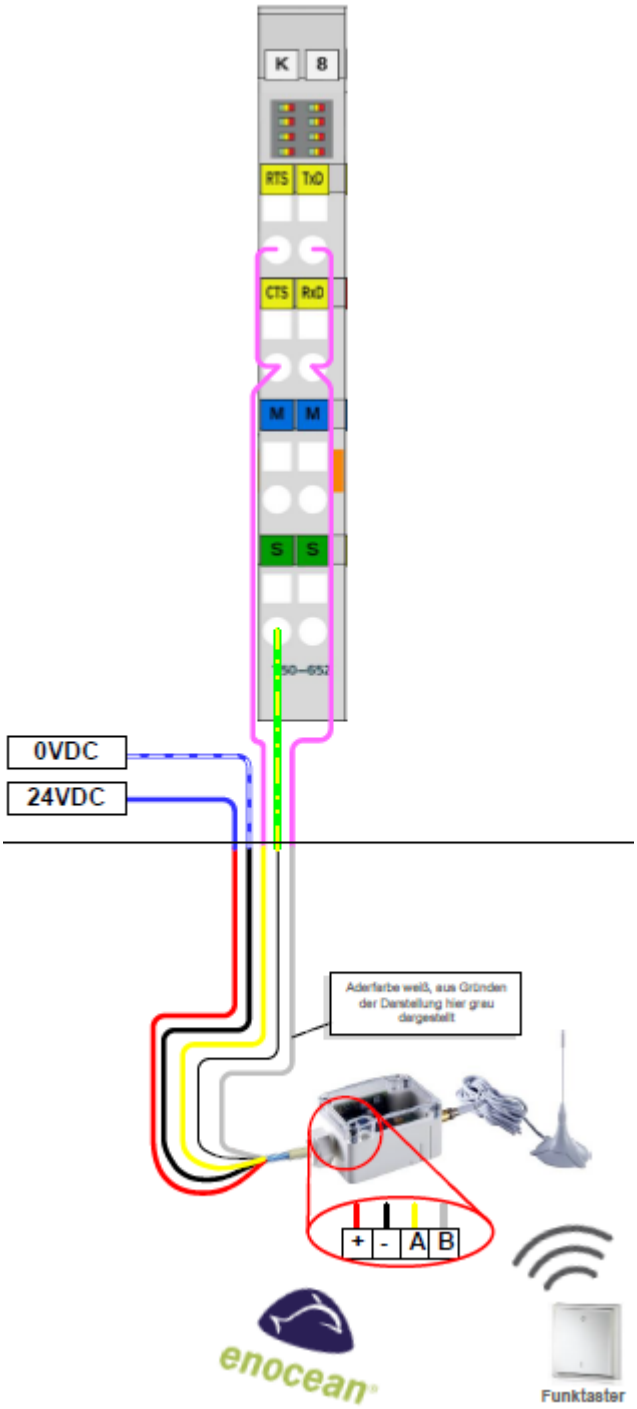
5.2.3. MODBUS buttons

WAGO Lighting Management supports 64 MODBUS buttons in the range from 32801 to 32864. Configuration of the MODBUS keys is explained in the Section Software > Inputs > MODBUS Buttons.

Note

Button signal
When a value > 0 is written to the MODBUS register, this is interpreted as a button signal.

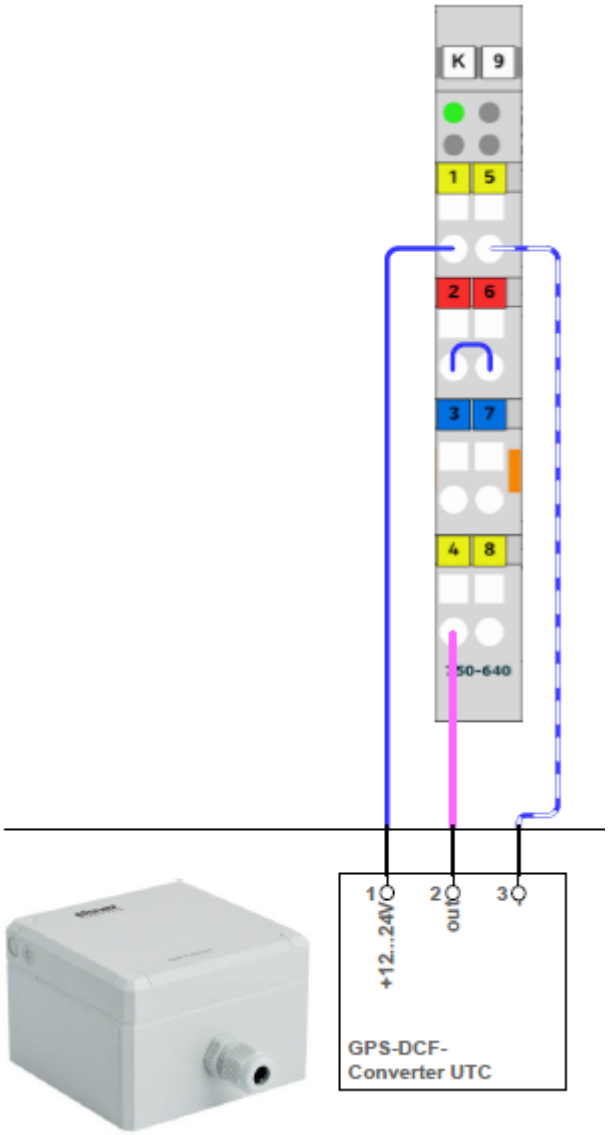
Appendix
Wiring diagram
EnOcean gateway



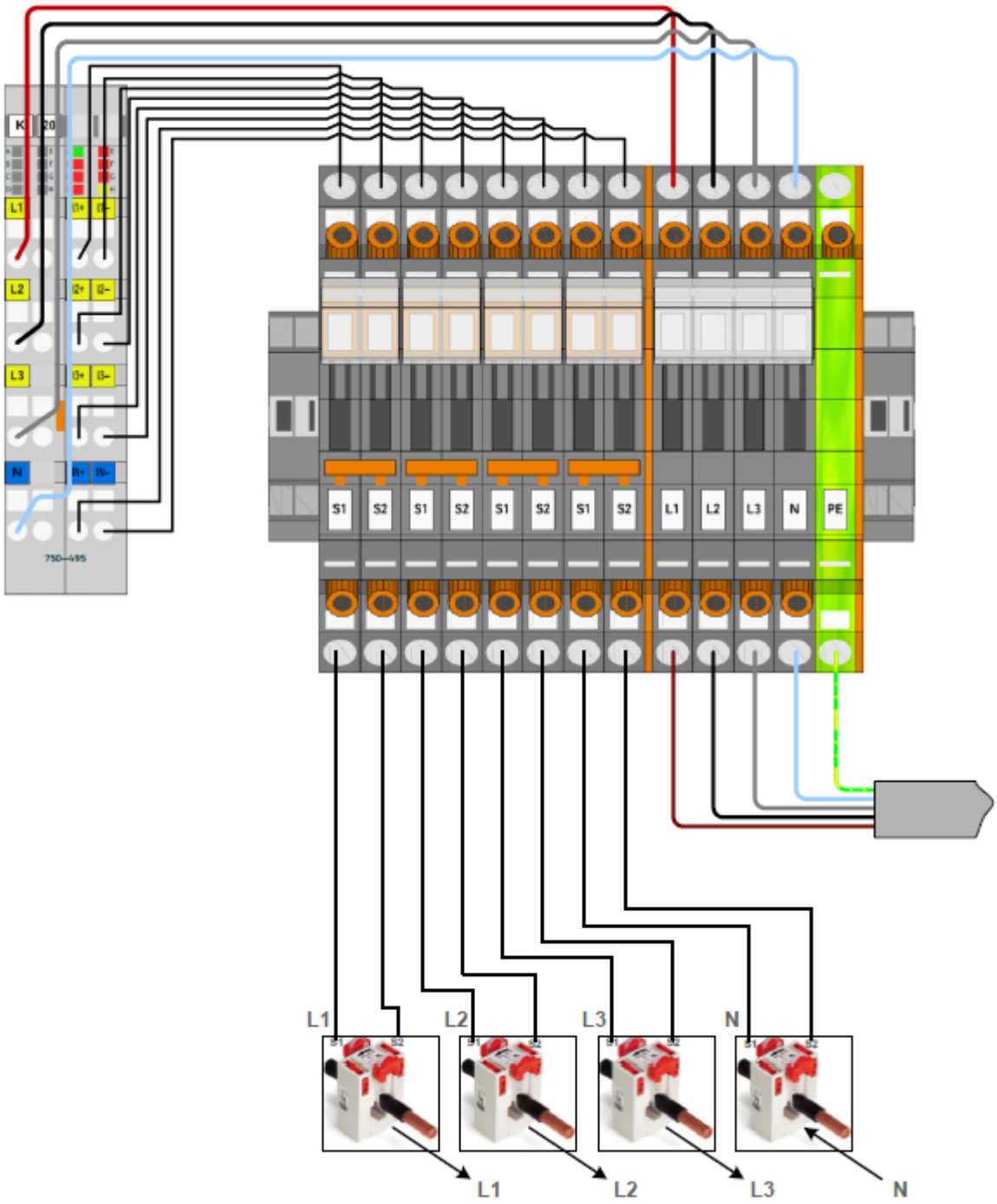
Note

Important note!
The device address must be set to 0 and the baud rate to 9600 baud (standard values) at the EnOcean gateway (STC65-RS485 ECG) for proper communication with WAGO Lighting Management.

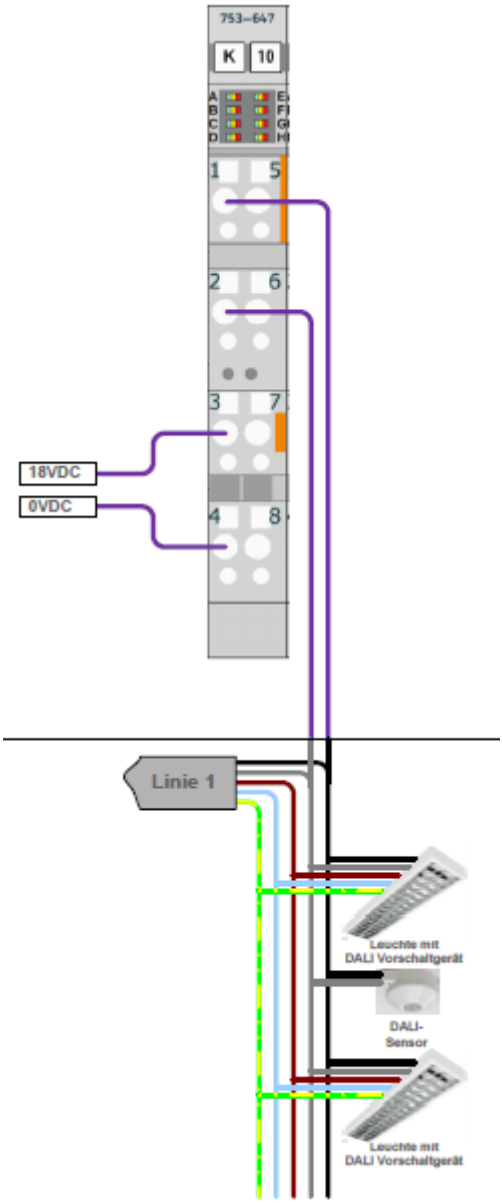
GPS/DCF converter



3-phase power measurement module



DALI Multi-Master



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