

WAGO Software



WAGO DALI Configurator for the configuration of the DALI network and the DALI Multi-Master 753-647

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Every conceivable measure has been taken to ensure the accuracy and completeness of this documentation. However, as errors can never be fully excluded, we always appreciate any information or suggestions for improving the documentation.

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1 Notes about this Documentation



Note

Always retain this documentation!

This documentation is part of the product. Therefore, retain the documentation during the entire service life of the product. Pass on the documentation to any subsequent user. In addition, ensure that any supplement to this documentation is included, if necessary.

1.1 Scope

This documentation applies for the WAGO DALI Configurator in conjunction with the DALI Multi Master Module 753-647.

1.2 Copyright

This Manual, including all figures and illustrations, is copyright-protected. Any further use of this Manual by third parties that violate pertinent copyright provisions is prohibited. Reproduction, translation, electronic and phototechnical filing/archiving (e.g., photocopying) as well as any amendments require the written consent of WAGO Kontakttechnik GmbH & Co. KG, Minden, Germany. Non-observance will involve the right to assert damage claims.

1.3 Symbols



DANGER

Personal Injury!

Indicates a high-risk, imminently hazardous situation which, if not avoided, will result in death or serious injury.



DANGER

Personal Injury Caused by Electric Current!

Indicates a high-risk, imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Personal Injury!

Indicates a moderate-risk, potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Personal Injury!

Indicates a low-risk, potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

Damage to Property!

Indicates a potentially hazardous situation which, if not avoided, may result in damage to property.

NOTICE

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, if not avoided, however, will not result in damage to property.





Information

Additional Information:

Refers to additional information which is not an integral part of this documentation (e.g., the Internet).

1.4 Number Notation

Table 1: Number Notation

Number Code	Example	Note
Decimal	100	Normal notation
Hexadecimal	0x64	C notation
Binary	'100' '0110.0100'	In quotation marks, nibble separated with dots (.)

1.5 Font Conventions

Table 2: Font Conventions

Font Type	Indicates
<i>italic</i>	Names of paths and data files are marked in italic-type. e.g.: <i>C:\Program Files\WAGO Software</i>
Menu	Menu items are marked in bold letters. e.g.: Save
>	A greater-than sign between two names means the selection of a menu item from a menu. e.g.: File > New
Input	Designation of input or optional fields are marked in bold letters, e.g.: Start of measurement range
"Value"	Input or selective values are marked in inverted commas. e.g.: Enter the value "4 mA" under Start of measurement range .
[Button]	Pushbuttons in dialog boxes are marked with bold letters in square brackets. e.g.: [Input]
[Key]	Keys are marked with bold letters in square brackets. e.g.: [F5]

2 Important Notes

This section describes the legal principles and system requirements for using the software in compliance with intended purpose, underlying provisions and stated specifications.

2.1 Legal Bases

2.1.1 Subject to Changes

WAGO Kontakttechnik GmbH & Co. KG reserves the right to provide for any alterations or modifications. WAGO Kontakttechnik GmbH & Co. KG owns all rights arising from the granting of patents or from the legal protection of utility patents. Third-party products are always mentioned without any reference to patent rights. Thus, the existence of such rights cannot be excluded.

2.1.2 Personnel Qualification

Any steps related to the use of WAGO software may only be performed by qualified employees with sufficient knowledge of handling the respective PC system used.

Steps in which files are created or changed on the PC system may only be performed by qualified employees with sufficient knowledge in the administration of the PC system used in addition to the aforementioned.

Steps in which the behavior of the PC system in a network is changed may only be performed by qualified employees with sufficient knowledge in the administration of the network used in addition to the aforementioned.

2.2 Safety Advice (Precautions)



Note

Use up-to-date security software!

Secure operation of the PC system can be at risk as a result of malware such as viruses and Trojans, as well as related threats such as denial-of-service attacks. Therefore, make sure that the latest security software and definitions are always installed on the PC system.



Information

Disable or uninstall software that is no longer required!

The vulnerability of a PC system against malware and related threats increases with the number of installed or active software components (applications and services). Therefore, uninstall or disable software components that are not needed for the purpose at hand.

2.3 Requirements

2.3.1 PC Hardware

Table 3: Requirements PC Hardware

Component	Requirements
Operating system	Windows 7 / Windows 8 / Windows 10
Random access memory (RAM)	Min. 512 MB
Free hard disk storage unit	Min. 20 MB for the WAGO DALI Configurator and 610 MB for the .NET 4.0 Framework
Processor	Min. 1 GHz
Other	Installed network card, .NET 4.0 Framework (Redistributables are provided), standard web browser with Java support

2.3.2 PC Software

Table 4: Required PC Software

Component	Reference source (order number)
WAGO-I/O-PRO	WAGO (759-333)
.NET Framework 4.0	Microsoft (free download under: www.microsoft.com)
WAGO DALI Configurator from Version 3.0	WAGO Stand Alone Tool, download under: www.wago.com

Table 5: Optional PC Software

Component	Reference source (order number)
WAGO-I/O-CHECK	WAGO (759-302)
WAGO Ethernet Settings	WAGO (free download at: www.wago.com)

2.3.3 WAGO I/O SYSTEM

Table 6: Required Hardware of the WAGO I/O SYSTEM

Component	Reference source (order number)
Fieldbus controller/PLC WAGO I/O SYSTEM 750, e. g. ETHERNET PLC (750-881) or PFC200 Controller	WAGO (750-881) WAGO (750-8212)
DALI Multi-Master Module	WAGO (753-647)
End Module	WAGO (750-600)
Current supply for the indirect supply of the DALI Bus participants via the DALI Multi-Master Module (753-647), e. g.: DALI Multi-Master DC/DC Converter or Current supply	WAGO (753-620) WAGO (787-1007)

NOTICE

Destruction of DALI subscribers due to misuse of the WAGO power supply 787-1007!

Please note that the power supply by WAGO (Item No.: 787-1007) may only be connected to the DALI Multi-Master Module 753-647. The power supply for the DALI bus is provided indirectly via the DALI Multi-Master Module. A direction connect to the DALI bus can result in the destruction of the attached DALI slaves. Therefore, never connect the WAGO Power Supply 787-1007 to a DALI network directly without a DALI Multi-Master Module 753-647 connected between the power supply and the network.

Note



Do not connect another power supply to the DALI bus when powering the DALI network subscribers via the integrated DALI Multi-Master's power supply unit

No other power supply must be active on the DALI bus when indirectly powering the DALI network subscribers via the 753-647 DALI Multi-Master (e.g., when using a 753-620 DALI Multi-Master DC/DC Converter or a 787-1007 Power Supply).

Otherwise, it is not possible to address the DALI network subscribers.

2.3.4 Fieldbus Coupler/Controller Compatibility List

Table 7: Compatibility List, Version of November 2016

Fieldbus Coupler/Controller	Lowest Firmware Version ¹⁾	Note
750-333	17	
750-343	Not supported	
750-370	06	
750-375	All	
750-377	All	
750-829	05	
750-830	04	
750-831	03	
750-833	16	
750-849	05	Allow control mode over Ethernet box must be checked! ²⁾
750-88x	05	
750-810x	08	
750-820x	08	
750-821x	11	

¹⁾ In general, it is advisable to use the most recent available firmware version.

²⁾ WBM page "Features" > "Wago Communication over Ethernet"



Note

Limit the PLC cycle time to maximum 60 ms

The DALI function blocks in the PLC program must be run at least every 60 ms for communication with the DALI Configurator.

3 WAGO DALI Configurator



Information

Download the WAGO DALI Configurator

You can download the WAGO DALI Configurator as a stand-alone tool from the WAGO website at:

<http://www.wago.com>.

The WAGO DALI Configurator allows easy commissioning of a DALI network via the DALI Multi-Master Module (753-647).

The WAGO DALI Configurator provides functions not only for easy startup and configuration, but also for the service, care and maintenance of a DALI network. That includes configuring the entire DALI network offline, including the electronic control gears (ECGs) and control devices (sensors), as well as saving and restoring device configurations, so that a replaced device can be reconstructed with database values. You can copy the device settings to another device or to multiple duplicates. If you are replacing an ECG, but keeping the lighting, you can write the hours of operation of the lighting to the DALI Multi-Master Module. The network overview appears in a tree structure. All online DALI Multi-Master Modules are displayed in the module navigation. The tree structure shows the DALI network of the DALI Multi-Master Module currently selected. Multiple selection of devices allows efficient configuration.



Information

Logging operating hours with firmware version 04 or later

The “Logging of operating hours” function is integrated into firmware versions 04 and later.

This function is disabled for DALI Multi-Master Modules with firmware < 04.

3.1 Overview of the Essential Functions

- Addressing of the DALI bus subscribers
- Scene and group formation
- Configuration of the control gears (ECGs)
- Configuration of the control devices (sensors)
- Specific settings for the I/O module
- Diagnostic function
- Import and export function
- ECGs/lamps defect messages
- Manual connection/disconnection
- Signaling a communication interruption
- Displaying, resetting and logging^{*)} operating hours

^{*)} For DALI Multi-Master Modules with firmware version 04 or higher

3.2 Installation

The WAGO DALI Configurator is installed as a stand-alone tool from a "Setup.exe" file with user-guided wizards.

3.2.1 Launching the WAGO DALI Configurator



Note

If available, you can launch the WAGO DALI Configurator from the WAGO-I/O-CHECK startup tool (version 3.5.1.1 or higher).

The WAGO-I/O-CHECK startup software is available under Item No 759-302 on a CD-ROM.

The requirements for online configuration described in the following section include:

- The hardware configuration of your fieldbus node is correct.
- The DALI network is installed without errors and is wired.
- The WAGO DALI Configurator software is available on your PC (as a stand-alone tool or as part of the WAGO-I/O-CHECK software).

3.2.2 Launching from WAGO-I/O-CHECK

To launch the software from WAGO-I/O-CHECK directly, the program must also be available on the PC.

1. Read the hardware configuration of your fieldbus node from the WAGO-I/O-CHECK startup tool.
2. Right-click the icon for the DALI Multi-Master Module.
3. In the context menu, select the **Settings** menu item (see the figure below). The WAGO DALI Configurator opens.

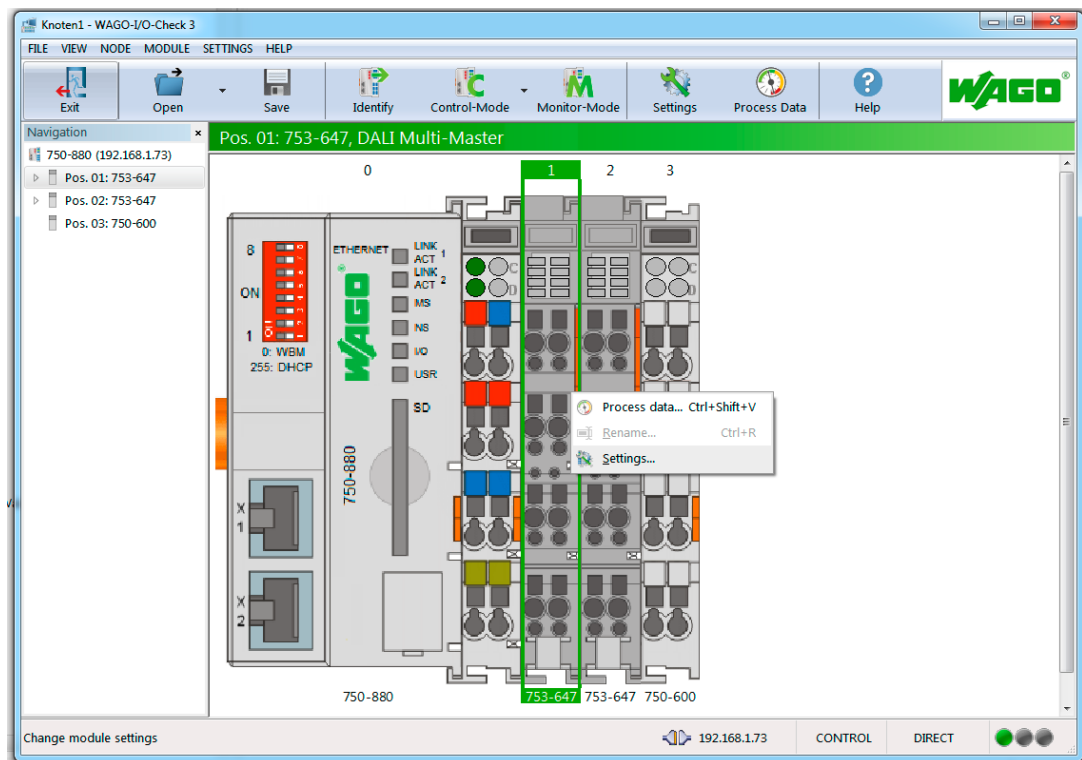


Figure 1: Launching the WAGO DALI Configurator from WAGO-I/O-CHECK

3.2.3 Launching as Stand-Alone Tool

Launch the WAGO DALI Configurator by double-clicking the .exe file. The WAGO DALI Configurator opens.

The **“START”** tab opens first.

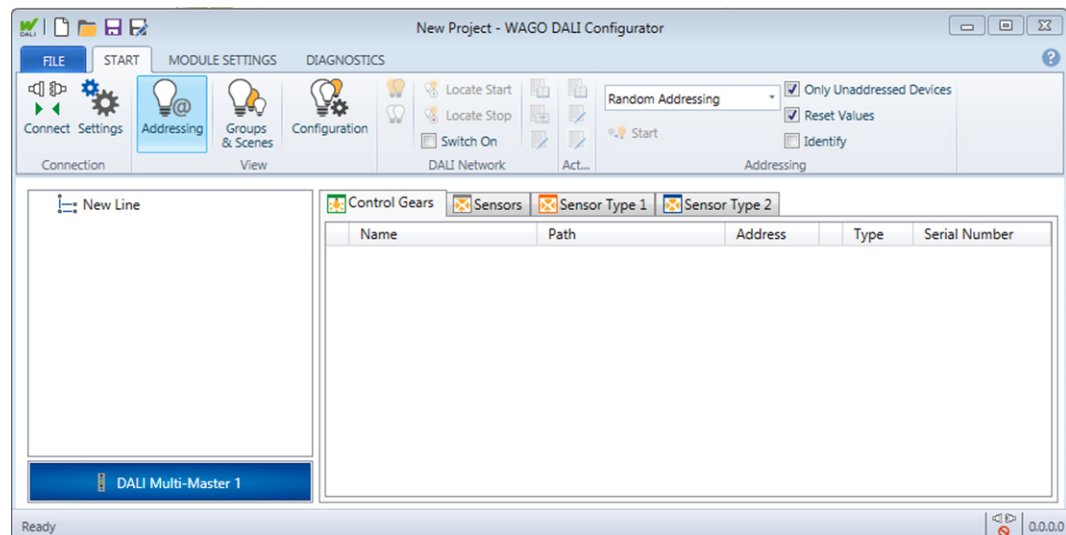


Figure 2: Launching the WAGO DALI Configurator by Clicking the .exe File

The user interface, its functions and its views are described in the next section.

3.2.3.1 Changing the Language of the User Interface

The WAGO DALI Configurator supports the following languages: German, English and French.

By default, the WAGO DALI Configurator starts in the language of the operating system or, if this is not supported, in English.

You can change the language of the user interface by starting the WAGO DALI Configurator with the following command line argument in the Windows command prompt:

- For German: <Installation path>\“WAGO.DaliConfigurator.exe” /Language:de
- For English: <Installation path>\“WAGO.DaliConfigurator.exe” /Language:en
- For French: <Installation path>\“WAGO.DaliConfigurator.exe” /Language:fr

4 User Interface

The user interface is divided into seven areas:

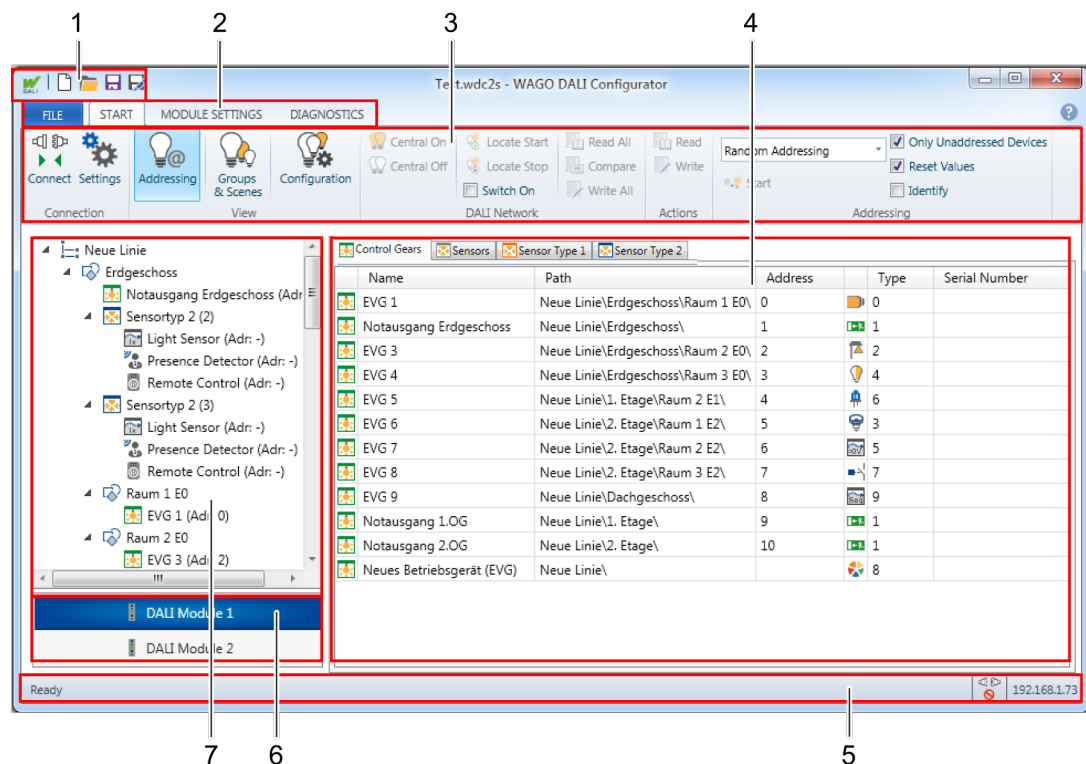


Figure 3: User Interface

Table 8: Legend for Figure “User Interface”

No.	Explanation
1	Toolbar for quick access
2	Tabs
3	Ribbon with context-dependent buttons, selection boxes and checkboxes
4	Context-dependent configuration area
5	Status Bar
6	Module navigation: selection of the current DALI Multi-Master Module
7	Tree structure

There are four tabs. Each of the tabs contains its own user interface views.

- FILE
- START
- MODULE SETTINGS
- DIAGNOSTICS

Each of these tabs has its own ribbon with buttons, selection boxes and/or checkboxes, which are described in more detail in the following sections.

4.1 “START” Tab

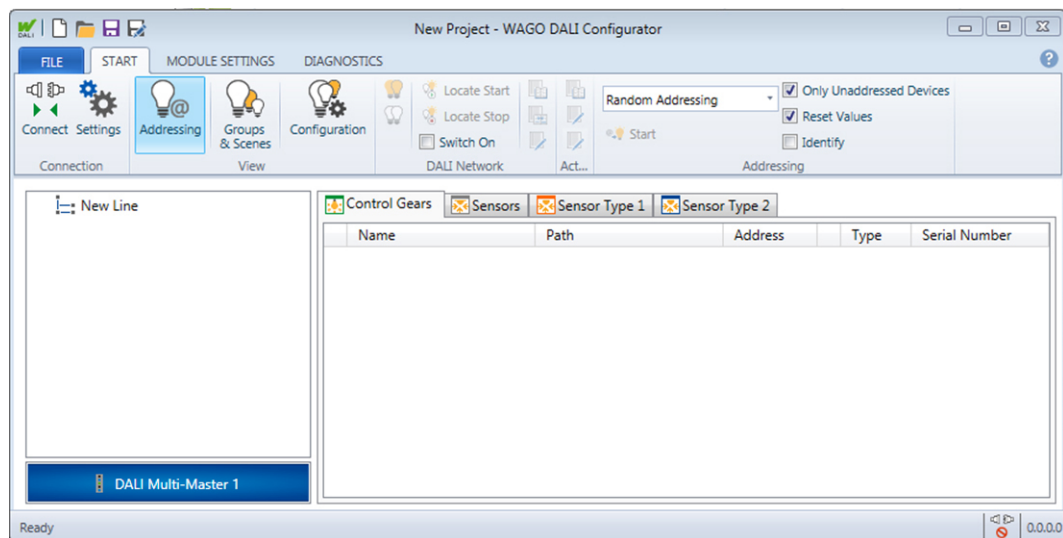


Figure 4: View of the “START” Tab

On the “**START**” tab, the ribbon runs horizontally below the tabs. The buttons, selection boxes and checkboxes on the ribbon depend in part on context.

Table 9: Buttons of the “START” Tab – Connection

Button	Label	Description
Connection		
	[Connect]	(Only visible if not connected) Establishes the connection to the DALI Multi-Master Module.
	[Disconnect]	(Only visible if connected) Disables the connection to the DALI Multi-Master Module.
	[Settings]	Click this button to open the “Communication Settings” dialog; see section “Communication Settings.”

You can work with three main views:

- Addressing
- Groups & Scenes
- Configuration

Click the corresponding buttons on the ribbon to switch between these views.

Table 10: Buttons of the “START” Tab – View

Button	Label	Description
View		
	[Addressing]	Click this button to switch to the view for addressing; see section “Addressing.”
	[Groups & Scenes]	Click this button to switch to the view for assigning the devices in groups and scenes; see section “Groups & Scenes.”
	[Configuration]	Click this button to switch to the view for configuring the devices; see section “Configuration.”

Table 11: Buttons of the “START” Tab – DALI Network

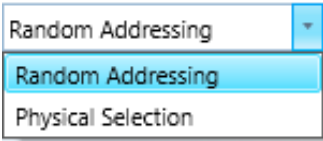
Button	Label	Description
DALI Network		
	[Central On]	Click this button to switch on all lights connected to the DALI line.
	[Central Off]	Click this button to switch off all lights connected to the DALI line.
	[Locate Start]	Click this button to start the localization function for one or more selected DALI control gears for identifying and, if necessary, checking the physical installation location.
	[Locate Stop]	Click this button to stop the localization function.
☒ / ☐ *)	Switch ON	☒ A steady light is used for the localization function of ECGs.
		☐ A flashing light is used for the localization function of ECGs.
	[Read all]	Click this button to read addresses, group and scene information and configuration parameters of all connected DALI network devices.
	[Compare all]	Click this button to compare a configuration (offline) with another configuration available in the DALI network (online).
	[Write all]	Click this button to write all data to the DALI network devices available online.

*) Default

Table 12: Buttons of the "START" Tab – Actions

Button	Label	Description
Actions		
	[Read]	Contextual: • In the Addressing view: Addressed devices are searched (depending on the selected tab) • In the Groups & Scenes view: Group and scene settings are read. • In the Configuration view: The device parameters selected in the topology tree are read (depending on the selected tab)
	[Write]	Contextual: • In the Addressing view: Disabled • In the Groups & Scenes view: Group and scene settings are written • In the Configuration view: The device parameters of the selected device(s) are written
	[Save Persistent Variables]	The persistent variables of the selected control gears (ECGs) and control devices (sensors) are written (DALI command: "Save Persistent Variables"). Since the service life of the flash memory in the devices decreases with the number of write cycles, this function should be used in moderation.

Table 13: Buttons of the "START" Tab – Addressing

Button	Label	Description
Addressing		
		Here you can select between: • "Random Addressing" (the DALI network device should be assigned a random address) and • "Physical Addressing" (only for sensor type 1 and sensor type 2; the DALI network device should be identified and subsequently addressed e.g., by pushing a button or by unscrewing a lamp and screwing it back in).
	[Start]	Click this button to launch the addressing operation for the tab currently selected (Control Gears, Sensors, Sensor Type 1 or Sensor Type 2).
☒ *) / ☐	Only unaddressed devices	☒ Only devices without short addresses are assigned new addresses.
		☐ All devices are assigned new addresses.
☒ *) / ☐	Reset values**)	☒ The devices are reset to their reset values.
		☐ The devices are not reset to their reset values.
☒ / ☐ *)	Identify	☒ Each newly addressed device is identified after the address assignment.
		☐ No identification occurs during addressing.

*) Default

**) Not for sensor type 2

4.1.1 Communication Settings



To set the communication parameters for the link between the DALI Configurator and WAGO fieldbus controller, click the **[Settings]** button on the ribbon. The “**Communication Settings**” dialog appears:

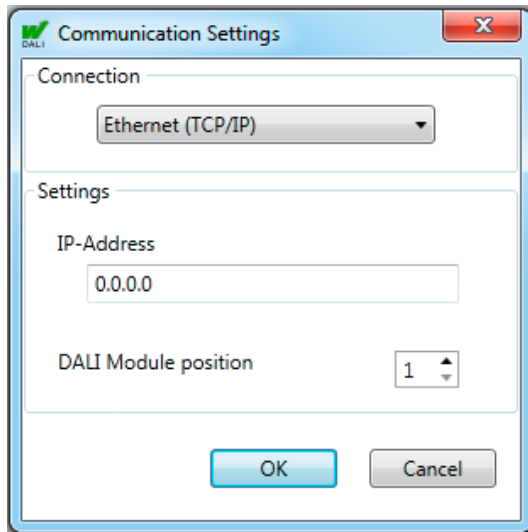


Figure 5: “Communication Settings” Dialog

In this dialog, you can choose the connection type in the **Connection** selection box:

- ETHERNET or
- Serial connection

In the **Settings** area, you can do the following based on the selection made:

- Enter an IP address in the “**IP Address**” input field, or
- Select the associated COM port in the **Port** selection box.

Select or enter the required numbers for the I/O module in question in the “**DALI Module Position**” selection box. Click the **[OK]** button to confirm your entries.

4.1.2 Addressing



To set the tree structure for the network topology, to add DALI network devices, to assign device labels and to address all DALI network devices, click the **[Addressing]** button.

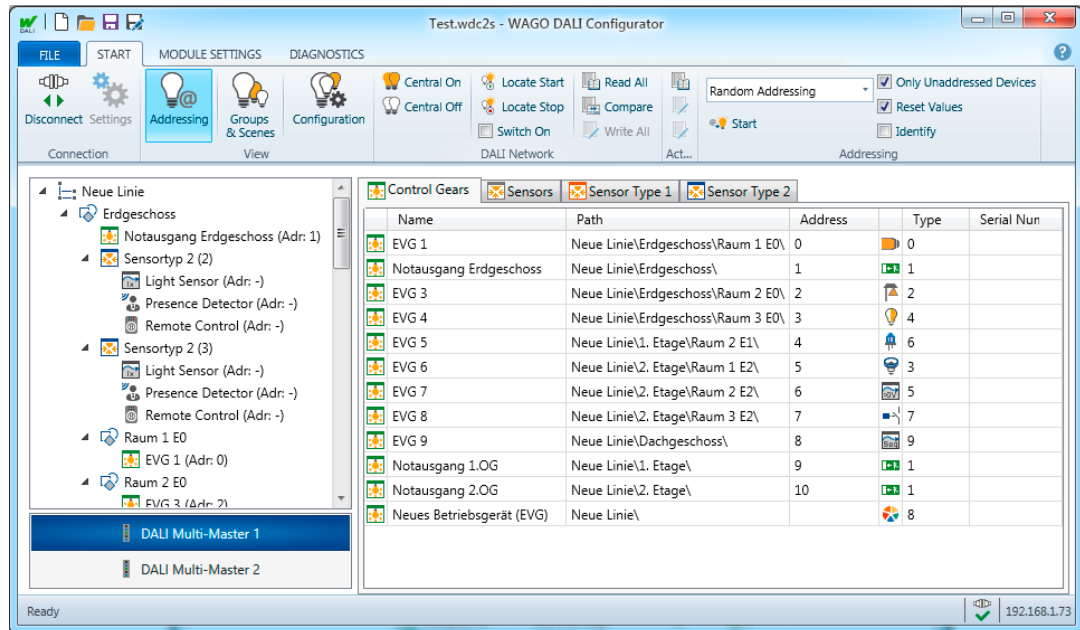


Figure 6: “Addressing” View, “Control Gears” Tab (Example)

Four other tabs are available in the configuration area that can be used to add DALI network devices to your network:



Figure 7: Tabs in the “Addressing” View

- Control Gears (ECGs)
- Sensors
- Sensor Type 1 (pushbutton couplers and multi-sensors)
- Sensor Type 2 (pushbutton couplers and multi-sensors)

Sensors

contain DALI sensors that correspond to the *DALI 2* Standard

Sensor Type 1 includes:

- WAGO DALI Multi-Sensor Kit 2851-8201
- WAGO DALI Sensor Coupler 2851-8202
- Sensor Adapter OSRAM DALI PROFESSIONAL,
combinable with:
 - Sensor OSRAM DALI HIGHBAY
 - Sensor OSRAM DALI VISION
- Pushbutton coupler OSRAM DALI PRO PB Coupler
- Light installation sensor OSRAM DALI LS/PD LI
- Radar sensor OSRAM DALI Professional Sensor Coupler HF LS LI

Sensor Type 2 includes:

- WAGO DALI MSensor-02 5DPI 41rc (ceiling installation) 2851-8301
- WAGO DALI MSensor-02 5DPI 41w (socket installation) 2851-8302
- WAGO DALI MSensor-02 5DPI 41rs (surface-mount) 2851-8303
- Pushbutton coupler TRIDONIC DALI XC
- Tridonic MSensor 5DPI 14xx (MSensor Mini)

The following table provides an overview of the network devices that can be added:

Table 14: List of Available DALI Network Devices

Icon	Function	Icon/Type		Label
	Control gear (ECG)		0	Fluorescent light (standard ECG)
			1	Separate emergency lighting
			2	Discharge lamp
			3	Low voltage halogen lamp
			4	Filament lamp
			5	Converting the digital signal into a DC voltage
			6	LED lamp
			7	Switching function
			8	Color control device
			9	Sequencer
			15	Load referencing
			16	Thermal gear protection
			17	Dimming curve selection
			19	Centrally supplied emergency operation
			20	Load shedding
			21	Thermal lamp protection
			23	Non-replaceable light source
			49	Integrated Bus Power Supply
		OEM	50	Memory Bank 1 Extension
			51	Energy Reporting
			52	Diagnostics and Maintenance

Table 14: List of Available DALI Network Devices

Icon	Function	Icon/Type		Label
	Control gear (ECG)		250	Error message: duplicate address or undefined response. ^{*)}
		[List of all recognized device types]	255	Multiple device types are supported.
	Sensors		0	Universal input
			1	Button
			2	Absolute input
			3	Presence detector
			4	Light sensor
		 [+ device type]		Error message: duplicate address or undefined response. ^{*)}
	Sensor type 1: Light sensor			MSensor – Brightness sensor function
	Sensor type 1: Presence detector			MSensor – Presence detection function
	Sensor type 1: Button			Button
	Sensor type 1: Error message	 [+ device type]		Error message: duplicate address or undefined response. ^{*)}
	Sensor type 2: Light sensor			MSensor – Brightness sensor function
	Sensor type 2: Presence detector			MSensor – Presence detection function
	Sensor type 2: Remote control			MSensor – Remote control
	Sensor type 2: Button			Button
	Sensor type 2: Error message	 [+ device type]		Error message: duplicate address or undefined response. ^{*)}

^{*)} Procedure for resolving duplicate addresses: See section “DIAGNOSTICS Tab.”

4.1.2.1 Control Gears (ECGs)

4.1.2.1.1 Start Addressing



Note

Addressing applies to currently selected tab

Addressing is always only carried out for the devices of the tab currently selected (Control Gears, Sensors, Sensor Type 1, Sensor Type 2), not for all device types at the same time.

1. To start addressing, first establish the connection to the DALI Multi-Master Module by clicking the **[Connect]** button.
2. Click the **[Start]** button.
3. Click **[Yes]** to confirm the dialog.

The detected ECGs are listed on the “**Control Gears**” tab.

The **tree structure** can be expanded on the left side of the configuration area. It also contains a list of detected ECGs.

4.1.2.1.2 Add

In the case of offline configuration, the required ECGs can also be created manually from the context menu:

1. To assign an ECG to a DALI Multi-Master Module, first select the “**Control Gears**” tab.
2. Right-click in the configuration area on the “**Control Gears**” tab to display the context menu. A context menu appears.
3. In the context menu, select “**Add ECG.**” A dialog appears:

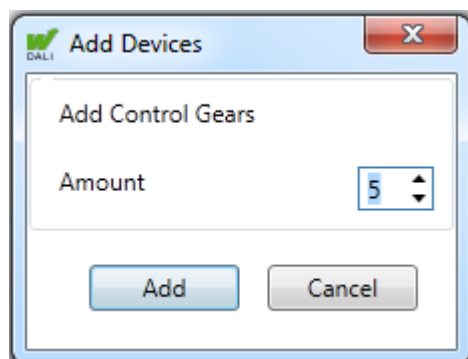


Figure 8: “Add Devices” Dialog

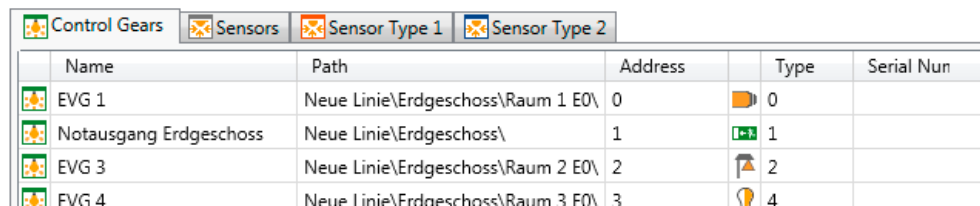
4. Enter the required number of ECGs in the selection box and click the **[Add]** button to confirm your entry.

The ECGs created are now listed in the table on the “**Control Gears**” tab.

The table contains the following information:

- Name
- Path
- Address
- (Type symbol)
- Type
- Serial number

5. Double-click in the respective table cell to edit the “Name,” “Address” and “Serial Number” entries.



Name	Path	Address	Type	Serial Nun
EVG 1	Neue Linie\Erdgeschoss\Raum 1 E0\	0	0	
Notausgang Erdgeschoss	Neue Linie\Erdgeschoss\	1	1	
EVG 3	Neue Linie\Erdgeschoss\Raum 2 E0\	2	2	
FVG 4	Neue Linie\Erdgeschoss\Raum 3 E0\	3	4	

Figure 9: Edit Table Cells

The **tree structure** can be expanded in the topology tree on the left side of the configuration area. It now contains the added ECGs.

4.1.2.1.3 Edit

Context menu

To edit the entries of the individual ECGs, right-click the desired row. A context menu appears.



Note

Multiple selection is possible!

To edit several ECGs at the same time, click the desired entries while holding down the **[Shift]** key. Click and hold down the **[Ctrl]** button to select and deselect specific entries.

Table 15: Context Menu of the “Control Gears” List

Menu Item	Description
Delete Device(s)	Use this menu item to delete the selected ECG(s) from the list.
Delete Device(s) and Clear Short Address	Use this menu item to delete the selected ECG(s) from the list. In addition, the short address is also deleted from the respective ECG.
Show Device in Tree Structure	Use this menu item to highlight the selected device in the tree structure.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values. Groups and scenes are also reset.
Add ECG	Use this menu item to open the dialog for adding ECGs. Use the spinner to select the desired number and click [Add] to confirm the selection.
Swap Name	Use this menu item to open another submenu in which the available ECGs are listed. Click the desired ECG in the list to swap the name of the selected ECG with the name of the ECG you clicked on.

Name

To change the name of an ECG, double-click in the corresponding table cell. The area changes into an input field in which you can enter the desired name. Press the **[Return]** button on your keyboard. The following table entry is selected, and you can edit the entry.

Address

To enter an address for an ECG, double-click in the corresponding table cell. The area changes into an input field in which you can enter the required address. Press the **[Return]** button on your keyboard. The following table entry is selected, and you can edit the entry.

Serial number

To enter or change the serial number of an ECG, double-click in the corresponding cell. The area changes into an input field in which you can enter the serial number.



Information

Table sorting

Click in the individual columns of the header to sort the table rows in ascending or descending order. A small black arrow marks the column by which the rows are currently sorted.

4.1.2.1.4 Locate

To assign an appropriate name to an existing ECG, you have to identify its installation location.

1. First, make sure that all ECGs are switched off by clicking the **[Central Off]** button on the ribbon.
2. Click the **[Locate Start]** button on the ribbon.
3. Click an ECG in the list to highlight it. The ECG flashes so that you can identify it and assign it an appropriate name.



Note

Select the type of signaling

To use a steady light for signaling instead of a flashing light of the ECG, check the **Switch ON** checkbox on the ribbon.

4. Rename the ECG. Press the **[Return]** button on your keyboard to select and rename the following list entry.
5. Go through and name the ECGs individually.
6. When done, click the **[Locate Stop]** button on the ribbon.

4.1.2.1.5 Using a Barcode Scanner to Sort ECGs

If the serial number of the ECG is available as a barcode (e.g., part of a building plan), you can use a barcode scanner to record the individual ECGs and to assign them to the desired table row:

1. Start the random addressing.
2. If the serial number (8-byte length) of the ECG is available, click in the **Serial Number** column to select the table cell for editing.
3. Scan the serial number of the ECG to which you want to assign the first address. The address is replaced on the bus (and in the table cell), and the table cell below that is highlighted for editing.
4. Scan the desired barcodes one after the other. The addresses are now sorted based on the scan order.

4.1.2.2 Sensors

4.1.2.2.1 Start Addressing

Note

**No mixed operation of DALI-2 sensors and sensor type 1 sensors**

Operating DALI-2 sensors and sensor type 1 sensors together can have unwanted consequences.

Therefore, mixed operation of these sensors is prohibited.

Note

**Addressing applies to current tab**

Addressing is always only carried out for the devices of the tab currently selected (Control Gears, Sensors, Sensor Type 1, Sensor Type 2), not for all device types at the same time.

1. To start addressing, first establish the connection to the DALI Multi-Master Module by clicking the **[Connect]** button.
2. Click the **[Start]** button.
3. Click **[Yes]** to confirm the dialog.

The detected devices are listed in a table on the “**Sensors**” tab. With firmware versions 20 and above, the DALI Multi-Master Module (753-647) is always detected as a sensor.

Control Gears Sensors Sensor Type 1 Sensor Type 2			
Name	Path	Address	Serial Number
DALI multi master	New Line\	0	FFFFFFFFFFFFFFF

Figure 10: DALI Multi-Master Module as Sensor

The tree structure can be expanded on the left side of the configuration area. It also contains a list of detected devices.

4.1.2.2.2 Add

In the case of offline configuration, the desired sensors can also be created manually via the context menu:

1. To assign a sensor to a DALI Multi-Master Module, first select the **"Sensors"** tab.
2. Right-click in the configuration area on the **"Sensors"** tab to display the context menu. A context menu appears.
3. In the context menu, select **"Add sensor."** A dialog appears:

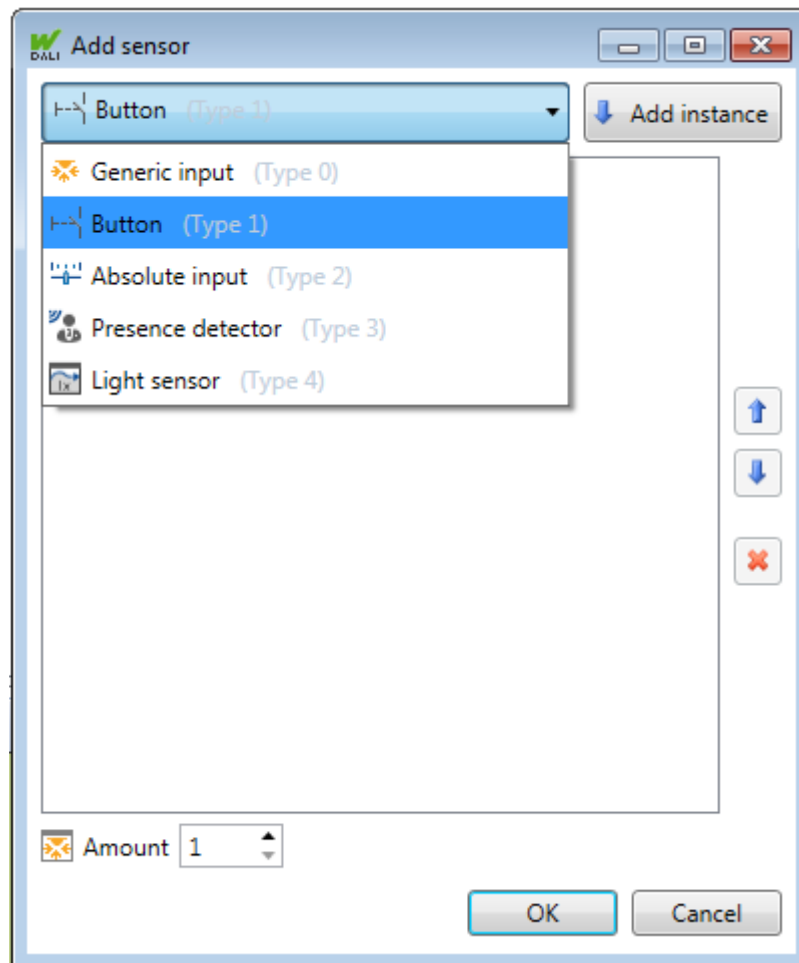


Figure 11: "Add Sensors" Dialog, Selection List

4. Select an instance type from the selection list.
5. Add your selection to the list of instances by clicking the **[Add Instance]** button. An instance of the selected type is added every time this button is clicked.
6. Add the desired number of instances in the desired order to the sensor by repeating steps 4 and 5 until all desired instances are listed.

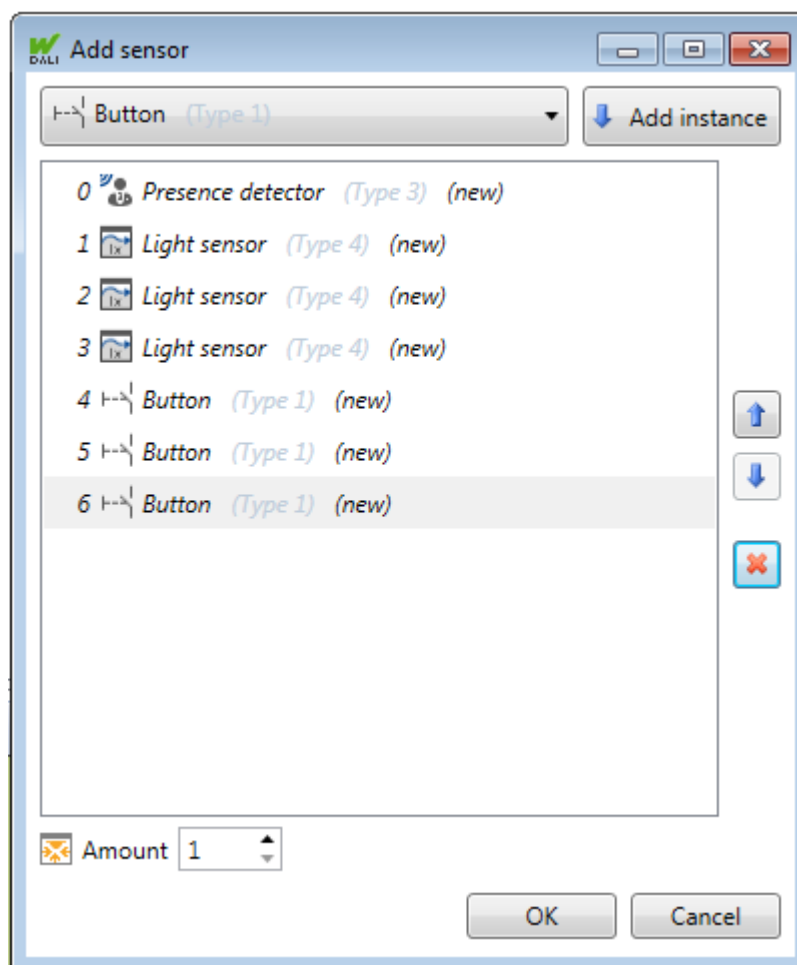


Figure 12: Listed Instances

7. If necessary, you can change the order of the instances subsequently by using the  or  button. You can delete marked instances from your list as needed with the  button.

Note



Observe the manufacturer documentation!

The specific description of the instances of individual sensors is available in the manufacturer's documentation for the corresponding sensors.

8. Now use the spinner to select the desired number of sensors and click **[OK]** to confirm the selection:

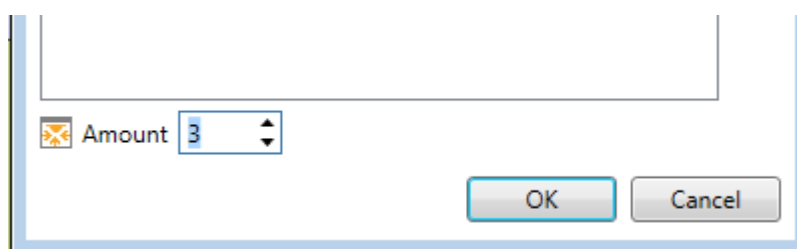
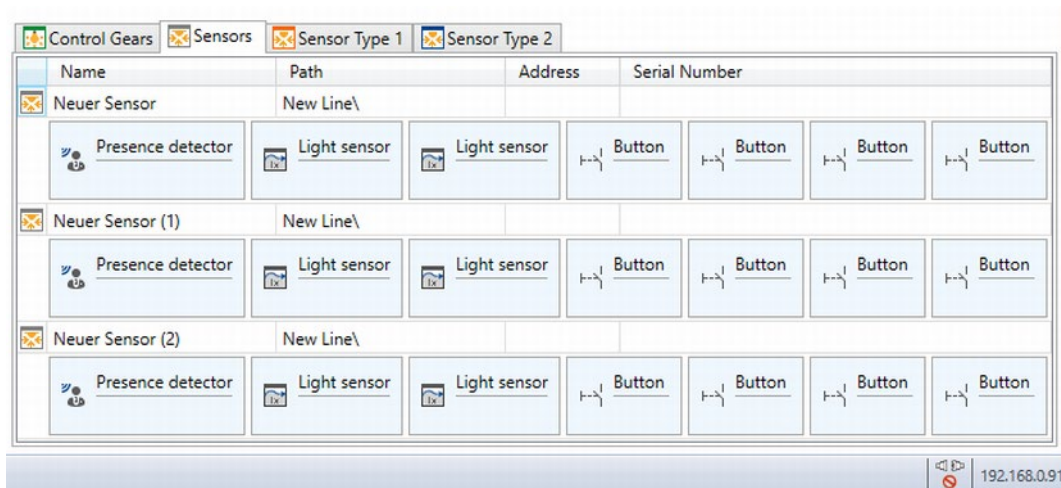


Figure 13: Select Number of Sensors

The sensors created are now listed in a table on the “**Sensors**” tab.
The table contains the following information:

- Name
- Path
- Address
- Serial number



Name	Path	Address	Serial Number
Neuer Sensor	New Line\		
Presence detector	Light sensor	Light sensor	Button
Neuer Sensor (1)	New Line\		
Presence detector	Light sensor	Light sensor	Button
Neuer Sensor (2)	New Line\		
Presence detector	Light sensor	Light sensor	Button

Figure 14: Table of Sensors

9. Double-click in the respective table cell to edit the “Name,” “Address” and “Serial Number” entries.

The **tree structure** can be expanded in the topology tree on the left side of the configuration area. It now contains the added sensors.

4.1.2.2.3 Edit

Context menu

To edit the entries of the individual sensors, right-click the desired row. A context menu appears.



Note

Multiple selection is possible!

To edit several sensors at the same time, click the desired entries while holding down the **[Shift]** key. Click and hold down the **[Ctrl]** button to select and deselect specific entries.

Table 16: Context Menu of the “Sensors” Table

Menu Item	Description
Delete Device(s)	Use this menu item to delete the selected device(s) from the list.
Delete Device(s) and Clear Short Address	Use this menu item to delete the selected device(s) from the table. In addition, the short address is also deleted from the respective device.
Show Device in Tree Structure	Use this menu item to highlight the selected device in the tree structure.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values.
Add Sensor ^{*)}	Use this menu item to open the “Add Sensor” dialog. Add the desired number of instances in the desired order to the sensor (see also the previous section “Add”). Use the spinner to select the desired number of sensors, and click [OK] to confirm the selection.
Manage Instances ^{*)}	Use this menu item to open the “Manage Instances” dialog in order to edit sensor instances. There you can add instances to the sensor, delete instances or change their order. Confirm the changes by clicking the [OK] button.
Swap Name	Use this menu item to open another submenu in which the available sensors of the same type are listed. Click the desired sensor in this list to swap its name.

*)



Note

Observe the manufacturer documentation!

The specific description of the instances of individual sensors is available in the manufacturer’s documentation for the corresponding sensors.

Name

To change the name of a sensor, double-click in the corresponding table cell in the **Name** column. The table cell changes into an input field in which you can enter the required name.

Address

To enter an address for a sensor, double-click in the corresponding table cell in the **Address** column. The table cell changes into an input field in which you can enter the desired address.

Serial Number

To enter or change the serial number of a sensor, double-click in the corresponding table cell in the **Serial Number** column.

The table cell changes into an input field in which you can enter the serial number.

4.1.2.2.4 Locate

To assign an appropriate name to an existing sensor, you have to identify its installation location.

1. Click the **[Locate Start]** button on the ribbon.
2. Click a device in the list to highlight it. The device emits a signal so that you can identify it and assign it an appropriate name.
3. Rename the device. Press the **[Return]** key on your keyboard to select and rename the following list entry.
4. Go through and name the devices individually.
5. When done, click the **[Locate Stop]** button on the ribbon.

4.1.2.3 Type 1 Sensors

4.1.2.3.1 Start Addressing



Note

Addressing applies to current tab!

Addressing is always only carried out for the devices of the tab currently selected (Control Gears, Sensors, Sensor Type 1, Sensor Type 2), not for all device types at the same time.

1. Make sure that the connection to the desired DALI Multi-Master Module has been established.
2. In the selection box, choose between the “Random Addressing” and “Physical Addressing” entries.
3. Click the **[Start]** button.
4. Click **[Yes]** to confirm the dialog.

The detected devices are listed on the “**Sensor Type 1**” tab.

The **tree structure** can be expanded on the left side of the configuration area. It also contains a list of detected devices.

4.1.2.3.2 Add

In the case of offline configuration, the desired sensor types can also be created manually from the context menu:

1. To assign a type 1 sensor to a DALI Multi-Master Module, first select the “**Sensor Type 1**” tab.
2. Right-click in the configuration area on the “**Sensor Type 1**” tab to display the context menu. A context menu appears.
3. In the context menu, select **Add device(s) > Add pushbutton coupler** or **Add multi-sensor**. The corresponding dialog appears.
4. Enter the desired number of pushbutton couplers or sensor couplers in the selection box and click **[Add]** to confirm your entry.

The desired number of type 1 sensors is listed in a **table** on the “**Sensor Type 1**” tab.

The table contains the following information:

- Name
- Path
- Address (input field “Adr” within the icon)
- Serial number

5. Double-click in the respective table cell to edit the “Name,” “Address” and “Serial number” entries.

The **tree structure** can be expanded in the topology tree on the left side of the configuration area. It now contains the added type 1 sensors.

4.1.2.3.3 Edit

Context menu

To edit the entries of the individual buttons/sensors, right-click the desired row. A context menu appears.



Note

Multiple selection is possible!

To edit several devices at the same time, click the desired entries while holding down the **[Shift]** key. Click and hold down the **[Ctrl]** button to select and deselect specific entries.

Table 17: Context Menu of the “Sensor Type 1” List

Menu Item	Description
Delete Device(s)	Use this menu item to delete the selected device(s) from the list.
Delete Device(s) and Clear Short Address	Use this menu item to delete the selected device(s) from the list. In addition, the short address is also deleted from the respective device.
Show Device in Tree Structure	Use this menu item to highlight the selected device in the tree structure.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values. Groups and scenes are also reset.
Add Device(s)	Use this menu item to open a submenu: • “Add Pushbutton Coupler”: Use this menu item to open the dialog for adding pushbutton couplers. Use the spinner to select the desired number and click [Add] to confirm the selection. • “Add Multi-Sensor”: Use this menu item to open the dialog for adding multi-sensors. Use the spinner to select the desired number and click [Add] to confirm the selection.
Swap Name	Use this menu item to open another submenu in which the available sensors are listed. Click the desired sensor in the list to swap the name of the selected sensor with the name of the sensor you clicked on.

Name

To change the name of a button/sensor, double-click in the corresponding table cell. The area changes into an input field in which you can enter the desired name.

Address/Adr

To enter or change an address for a sensor type 1, click in the icon in the input field.

Serial number

To enter or change the serial number of a sensor, double-click in the corresponding cell. The area changes into an input field in which you can enter the serial number.

4.1.2.3.4 Locate

To assign an appropriate name to an existing device of sensor type 1, you have to identify its installation location.

1. Click the **[Locate Start]** button on the ribbon.
2. Click a device in the list to highlight it. The device emits a signal so that you can identify it and assign it an appropriate name.
3. Rename the device. Press the **[Return]** button on your keyboard to select and rename the following list entry.
4. Go through and name the devices individually.
5. When done, click the **[Locate Stop]** button on the ribbon.

4.1.2.4 Type 2 Sensors

4.1.2.4.1 Start Addressing



Note

Addressing applies to current tab!

Addressing is always only carried out for the devices of the tab currently selected (Control Gears, Sensors, Sensor Type 1, Sensor Type 2), not for all device types at the same time.

1. Make sure that the connection to the desired DALI Multi-Master Module has been established.
2. In the selection box, choose between the “Random Addressing” and “Physical Addressing” entries.



Note

“Physical Addressing” option for pushbutton couplers only

Physical Addressing is only possible for sensor type 2 when no MSensors are connected!

3. Click the **[Start]** button.
4. Click **[Yes]** to confirm the dialog.

The detected devices are listed on the “**Sensor Type 2**” tab.

The **tree structure** can be expanded on the left side of the configuration area. It also contains a list of detected devices.

4.1.2.4.2 Add

In the case of offline configuration, the desired sensor types can also be created manually from the context menu:

1. To assign a sensory type 2 to a DALI Multi-Master Module, first select the **“Sensor Type 2”** tab.
2. Right-click in the configuration area on the **“Sensor Type 2”** tab to display the context menu. A context menu appears.
3. In the context menu, select **Add device(s) > Add pushbutton coupler** or **Add multi-sensor**. The corresponding dialog appears.
4. Enter the desired number of pushbutton couplers or multi-sensors in the selection box and click **[Add]** to confirm your entry.

The desired number of type 2 sensors is listed on the **“Sensor Type 2”** tab in a **table**.

The table contains the following information:

- Name
 - Path
 - Address (“Adr” input field with the sensors within the icon)
 - Serial number
5. Double-click in the respective table cell to edit the “Name,” “Address” and “Serial Number” entries.

The **tree structure** can be expanded in the topology tree on the left side of the configuration area. It now contains the added type 2 sensors.

4.1.2.4.3 Edit

Context menu

To edit the entries of the individual pushbutton couplers/multi-sensors, right-click the required row. A context menu appears.



Note

Multiple selection is possible!

To edit several devices at the same time, click the desired entries while holding down the **[Shift]** key. Click and hold down the **[Ctrl]** button to select and deselect specific entries.

Table 18: Context Menu for the "Sensor Type 2" List

Menu Item	Description
Delete Device(s)	Use this menu item to delete the selected device(s) from the list.
Delete Device(s) and Clear Short Address	Use this menu item to delete the selected device(s) from the list. In addition, the short address is also deleted from the respective device.
Show Device in Tree Structure	Use this menu item to highlight the selected device in the tree structure.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values.
Add Device(s)	Use this menu item to open a submenu: • "Add Pushbutton Coupler": Use this menu item to open the dialog for adding pushbutton couplers. Use the spinner to select the desired number and click [Add] to confirm the selection. • "Add Multi-Sensor": Use this menu item to open the dialog for adding multi-sensors. Use the spinner to select the desired number and click [Add] to confirm the selection.
Swap Name	Use this menu item to open another submenu in which the available sensors of the same type are listed. Click the desired sensor in this list to swap its name.

Name

To change the name of a button/sensor, double-click in the corresponding table cell. The area changes into an input field in which you can enter the desired name.

Address/Adr

To enter or change an address for a type 2 sensor, double-click in the respective table cell or click in the icon in the input field.

Serial number

To enter or change the serial number of a sensor, double-click in the corresponding cell. The area changes into an input field in which you can enter the serial number.

4.1.2.4.4 Locate

To assign an appropriate name to an existing device of sensor type 2, you have to identify its installation location.

1. Click the **[Locate Start]** button on the ribbon.
2. Click a device in the list to highlight it. The device emits a signal so that you can identify it and assign it an appropriate name.
3. Rename the device. Press the **[Return]** button on your keyboard to select and rename the following list entry.
4. Go through and name the devices individually.
5. When done, click the **[Locate Stop]** button on the ribbon.

4.1.2.5 Topology Tree

The ECGs and sensors are listed in a tree structure on the left side of the configuration area. The individual levels and sublevels can be expanded and collapsed using the adjacent arrow.

4.1.2.5.1 Select/Deselect Devices

- **Select device:** To select a single device, click the device to highlight it.
- **Select multiple devices:** To select multiple devices, hold down the **[Ctrl]** key and click all desired devices.
Alternatively, you can also select successive devices by holding down the **[Shift]** key and clicking the first and last device.
- **Deselect device:** To deselect a specific device, hold down the **[Ctrl]** key and click the respective device.
The selection is removed.

4.1.2.5.2 Change Order

To change the order of the devices, you have the option of resorting them by dragging and dropping. You can also move the devices up or down via the context menu.

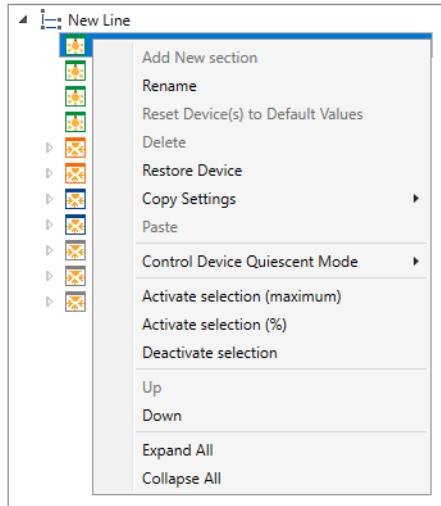


Figure 15: Moving Devices with the Context Menu



Note

Sorting with drag and drop only for devices!

The drag and drop function is not for sorting ranges. If you try to drag and drop a range **above** another range, it will be moved **into** that range!

Therefore, use the function ("Up"/"Down") in the context menu to sort ranges.

4.1.2.5.3 Activating/Deactivating Individual Devices, Groups or Scenes

You have the option of activating or deactivating individual ECGs, entire groups or scenes. The "**Activate Selection (%)**" menu item in the context menu opens a dialog in which you can set the activation value of a device; see also table "Context Menu of the Entries in the Tree Structure."

4.1.2.5.4 Context Menu

Right-click a level in the tree structure or a device in the sublevel to display the context menu for the respective selection. The following menu items are available:

Table 19: Context Menu for the Entries in the Tree Structure

Menu Item	Description
Add New Range	Use this menu item to create a new range to which you can add devices by dragging and dropping.
Rename	Use this menu item to change the respective node into an input field in which you can enter the desired name.
Reset Device(s) to Default Values	Use this menu item to reset the device parameters to the default values. For ECGs, groups and scenes are also reset.
Remove	This menu item is only enabled for areas. Use this menu item to remove the selected area from the tree structure.
Restore Device	Use this menu item to transfer the configuration settings of a specific device to a new replacement device if it has the same address as the previous one.
Copy Settings • Groups • Scenes • General device configuration • Device type specific • All	Use these menu items to copy the respective settings of the device currently selected to the cache to then transfer the settings to another device.

Table 19: Context Menu for the Entries in the Tree Structure

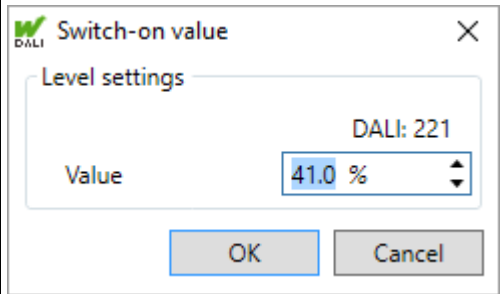
Menu Item	Description
Insert	Use this menu item to transfer saved settings from the cache (see menu item "Copy Settings") to the device currently selected.
Control Device Quiescent Mode - Start Quiescent Mode - Stop Quiescent Mode	You can use these menu items to put the currently selected control device into or out of quiescent mode. If no control devices are selected, or no control devices are connected, the menu items are grayed out.
Activate Selection (Maximum) ^{*)}	This menu item activates the currently selected ECG. If multiple ECGs are selected, they are all activated. If no ECG is selected or no ECG is connected, the menu item is grayed out.
Activate Selection (%) ^{*)}	Use this menu item to open the dialog for entering the activation value of the currently selected ECG:  Figure 16: "Activation Value" Dialog If no ECG is selected or no ECG is connected, the menu item is grayed out.
Deactivate Selection ^{*)}	This menu item deactivates the currently selected ECG. If multiple ECGs are selected, they are all deactivated. If no ECG is selected or no ECG is connected, the menu item is grayed out.

Table 19: Context Menu for the Entries in the Tree Structure

Menu Item	Description
Up	Use this menu item to change the order of the selected range (or of the selected device). This moves your selection one place up. Moving is only possible within a range (or within a device section). A range and device section cannot be moved into each other. If your selection is in the top position of the range in question (or the device section in question), the menu item is grayed out.
Down	Use this menu item to change the order of the selected range (or of the selected device). This moves your selection one place down. Moving is only possible within a range (or within a device section). A range and device section cannot be moved into each other. If your selection is in the bottom position of the range in question (or the device section in question), the menu item is grayed out.
Expand All	Use this menu item to expand the tree structure completely.
Collapse All	Use this menu item to collapse the tree structure completely.

*) Only ECG

4.1.2.6 Setting up Building/Room Structure

To assign the ECGs and sensors in a clear manner, you can create and name areas and subareas in the tree structure as required.

1. Right-click the tree structure.
2. Select the **Add New Area** submenu item.
3. Click the new tree level and select the **Rename** menu item in the context menu. The selected area changes into an input field.
4. Enter an intuitive name for the tree level, e.g., 1st Floor.
Info: To create a sublevel (e.g., “Room 1”) for the “1st Floor” tree level, the “1st Floor” level must be selected. In contrast, to create another level of the same type (e.g., “2nd Floor”), the higher-level level must be marked.
5. Repeat these steps until you have created the desired building/room structure.



Figure 17: Setting up the Tree Structure



Note

Edit level structure

You can drag and drop areas at any time to edit or correct the room structure, even subsequently.

4.1.2.6.1 Assign Devices to Your “Rooms”

You can drag and drop ECGs/sensors to the desired tree levels. In the example figure “Setting up the Tree Structure,” these tree levels have been named as floors or rooms.

4.1.2.6.2 Assignment to Groups and Scenes

In addition to the name and address of an ECG, the topology tree also indicates whether the ECG is already assigned to a group and/or scene:

- A hyphen (-) means that the ECG is not yet assigned to a group/scene.
- A value indicates that the ECG is assigned to exactly this one group/scene.
- Three dots (...) mean that the ECG is assigned to more than one group/scene.

Using a tooltip, you can display a complete listing of which groups and/or scenes the ECG is assigned to. To do so, move the mouse cursor to the ECG in question:

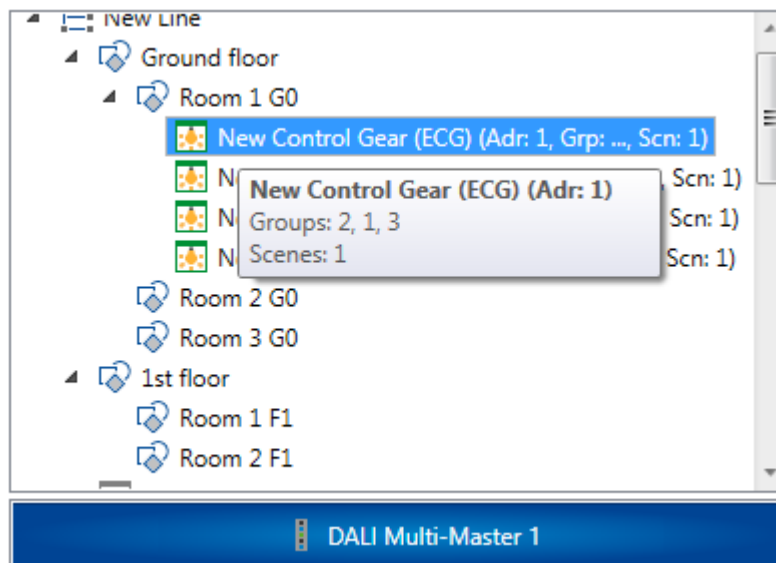


Figure 18: Tooltip – Displaying Assignments to Groups/Scenes

4.1.3 Groups & Scenes



To assign your DALI control gears to groups and scenes and to set dimming values, colors or color temperatures, click the **[Groups & Scenes]** button.

In the configuration area, there are two trees for “Groups” and “Scenes.” You can drag and drop devices from the tree structure to the group tree and scene tree to assign them. You can change/resort the assignment at any time by dragging and dropping.

You can also rearrange the order of the devices (“Up”/“Down”) via the context menu in the group tree (or scene tree), but only within the respective group (or scene).

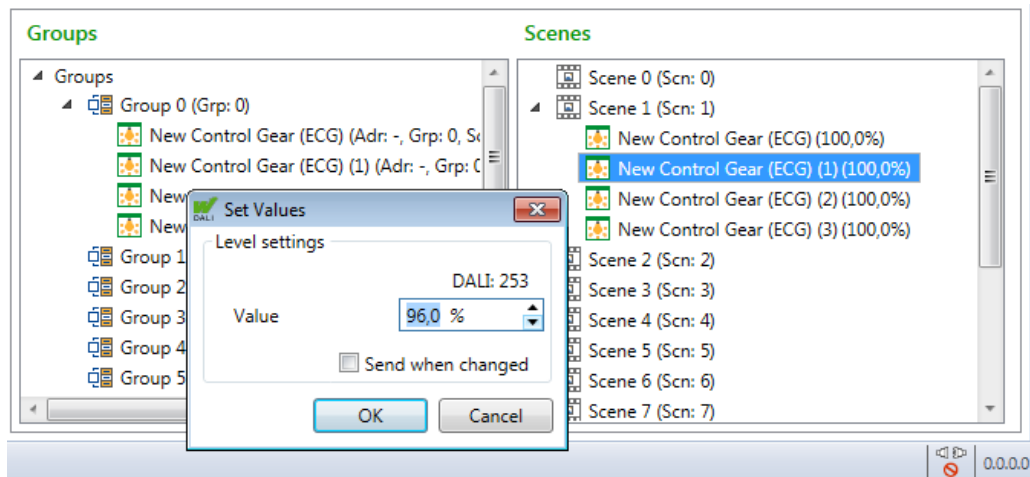


Figure 19: View of the “Groups & Scenes, Set Scene Value” Configuration Area (Example)

4.1.3.1 Assign Groups

If you have dragged a device to a group in the group tree, an arrow appears on the left next to the respective group tree entry. You can click on the arrow to expand the devices assigned to the respective group.

4.1.3.2 Groups Context Menu

Right-click a group or device to display the context menu:

Table 20: "Groups" Context Menu

Menu Item	Description
Rename	Select this menu item to change the selected group into an input field in which you can enter the desired name. To exit the input field, confirm your entry by pressing the [Return] key on your keyboard or by clicking another group tree entry.
Remove Device(s) from Group	Use this menu item to remove attached devices from the group.
Activate Selection (Maximum)	This menu item activates the currently selected ECG(s). If no ECG is selected or no ECG is connected, the menu item is grayed out.
Activate Selection (%)	Use this menu item to open the dialog for entering the activation value of the currently selected ECG(s). If no ECG is selected or no ECG is connected, the menu item is grayed out.
Deactivate Selection	This menu item deactivates the currently selected ECG(s). If no ECG is selected or no ECG is connected, the menu item is grayed out.
Up ^{*)}	Use this menu item to change where the selected device is listed in the order. This moves your selection one place up. Moving is only possible within the respective group. If your selected ECG is in the top position of the group in question, the menu item is grayed out.
Down ^{*)}	Use this menu item to change where the selected device is listed in the order. This moves your selection one place down. Moving is only possible within the respective group. If your selected ECG is in the bottom position of the group in question, the menu item is grayed out.

^{*)} Only for ECG

4.1.3.3 Assigning Scenes

If you drag a device or group of devices to a scene in the scene tree, the “**Set Scene Value**” dialog appears:

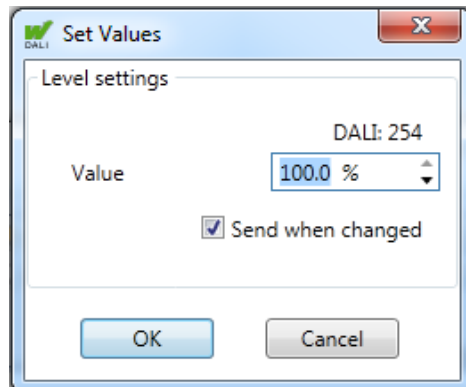


Figure 20: “Set Scene Value” Dialog (Example 1: Dimming Value)

Specify the dimming value settings in this dialog.

1. Select a value with the spinner or enter a value.
2. Check the **Send on change** checkbox.
3. Confirm your entries by clicking **[OK]**.

The dialog closes and an arrow appears on the left of the respective scene tree entry.

You can click on the arrow to expand the devices assigned to the respective scene. The specified dimming value of a device follows in square brackets.

With some devices (type 8 control gears), you can also specify the **Color value** and **Color temperature**:

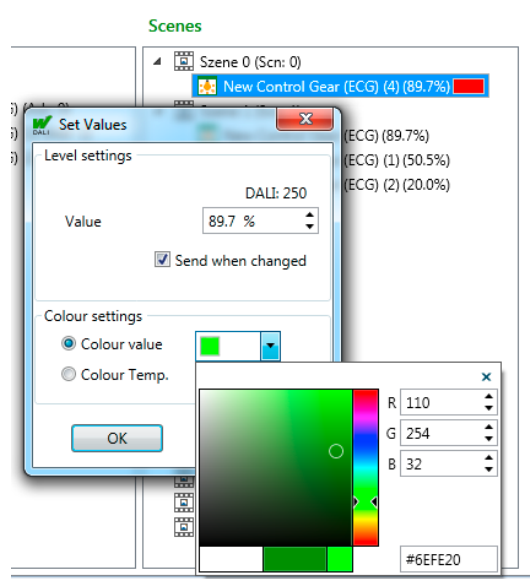


Figure 21: “Set Scene Value” Dialog (Example 2: Color Value)

4.1.3.4 “Scene” Context Menu

Right-click a scene or attached devices to display the associated context menu:

Table 21: “Scene” Context Menu

Menu Item	Description
Rename	Select this menu item to change the selected scene into an input field in which you can enter the desired name (e.g., “Room 1”). To exit the input field, confirm your entry by pressing the [Return] key on your keyboard or by clicking another scene tree entry.
Set Scene Values	Use this menu item to open the “ Set Scene Value ” dialog. See also section “Assigning Scenes.”
Delete Device(s) from Scene	Use this menu item to remove attached devices from the scene.
Recall Scene	Only enabled if a connection is established and exactly one scene is selected. Use this menu item to retrieve the selected scene (broadcast).
Activate Selection (Maximum)	This menu item activates the currently selected ECG(s). If no ECG is selected or no ECG is connected, the menu item is grayed out.
Activate Selection (%)	Use this menu item to open the dialog for entering the activation value of the currently selected ECG(s). If no ECG is selected or no ECG is connected, the menu item is grayed out.
Deactivate Selection	This menu item deactivates the currently selected ECG(s). If no ECG is selected or no ECG is connected, the menu item is grayed out.

Table 21: "Scene" Context Menu

Menu Item	Description
Up *)	Use this menu item to change where the selected device is listed in the order. This moves your selection one place up. Moving is only possible within the respective scene. If your selected ECG is in the top position of the scene in question, the menu item is grayed out.
Down *)	Use this menu item to change where the selected device is listed in the order. This moves your selection one place down. Moving is only possible within the respective scene. If your selected ECG is in the bottom position of the scene in question, the menu item is grayed out.

*) Only for ECG

4.1.4 Configuration



To read or write the configuration parameters from DALI network devices, click the **[Configuration]** button.

Additional tabs are available to you in the configuration area.

The tabs displayed depend on which gear types are in the selection of the topology tree (tree structure).

If the top level (default name “New Line”) of the tree structure is selected, corresponding tabs are created for each gear type below it.

Low Voltage Halogen Lamps (DT3)	Supply Voltage Controller for Incandescent Lamps (DT4)	Digital Signal into DC Voltage (DT5)
LED Module (DT6)	Switching Function (DT7)	Colour Control (DT8)
Load referencing (DT15)	Thermal gear protection (DT16)	
Dimming curve selection (DT17)	Centrally supplied emergency operation (DT19)	Load shedding (DT20)
Thermal lamp protection (DT21)	Non-replaceable light source (DT23)	Push Button (DT1)
Presence Detector (DT2)	Light Sensor (DT3)	MSensor (Common)
Sensor (Common)	Button (IT1)	Presence detector (IT3)
Light sensor (IT4)	Memory Banks	Memory Banks
Control Gear (Common)	Fluorescent Lamps (DT0)	Emergency Lighting (DT1)
Discharge Lamps (DT2)		

Name	Value	Scaled Value	Unit / Remarks
Version Number (Versionsnummer)			
Physical Min level (Minimale Physikalische Lampenleistung)			%
Operating mode (Betriebsart)	0		Possible locked, if device type 19 is present
Power on level (Lampenleistung bei Spannungswiederkehr)	254	100.000	% / Possible locked, if device type 19 is present
System failure level (Lampenleistung bei Systemstörungen)	254	100.000	% / Possible locked, if device type 19 is present
Min level (Min Lampenleistung)	85	0.991	% / Possible locked, if device type 19 is present
Max level (Max Lampenleistung)	254	100.000	% / Possible locked, if device type 19 is present
Fade time (Überblendzeit)	0		
Fade rate (Überblendgeschwindigkeit)	7		
Extended fade time (Erweiterte Überblendzeit)	0		

Figure 22: Tabs of the “Configuration” View (Example)

Parameters that only have read permission (R) are highlighted in blue and cannot be changed. For parameters with read/write permission (R/W), you can double-click on a cell in the “Value” or “Scaled Value” column in order to activate the cell for editing.

4.1.4.1 “Control Gear (ECG) (Common)” Tab



You have access to the following parameters in the table on the “**Control Gear (ECG) (Common)**” tab:

Table 22: “Control Gears (ECG) (Common)” Tab

Name	Description	Unit	Read/Write
Version Number	Version number		R
Physical Min level	Minimum physical lamp output	Percent [%]	R
Operating mode ^{*)}	Operating mode		R/W
Power on level ^{*)}	Lamp output with voltage recovery	Percent [%]	R/W
System failure level ^{*)}	Lamp output in the event of system malfunction (e.g., interrupted DALI line)	Percent [%]	R/W
Min level ^{*)}	Minimum lamp output	Percent [%]	R/W
Max level ^{*)}	Maximum lamp output	Percent [%]	R/W
Fade time	Fade time (time for the dimming value change)		R/W
Fade rate	Fade speed		R/W
Extended fade time	Is used if the value for “Fade time” is 0 and the device type “LED Module (DT6)” is used with a “Fast fade time” of 0 as well		R/W

^{*)} The parameterization may be locked if the ECG is also of device type 19; see table “Centrally Supplied Emergency Operation (DT19)” Tab.”

4.1.4.2 “Fluorescent Light (DT0)” Tab

You have access to the following parameters in the table on the **“Fluorescent Light (DT0)”** tab:

Table 23: “Fluorescent Light (DT0)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R

4.1.4.3 “Emergency Lighting (DT1)” Tab

You have access to the following parameters in the table on the **“Emergency Lighting (DT1)”** tab:

Table 24: “Emergency Lighting (DT1)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Emergency Min Level	Minimum lamp output for emergency lighting: minimum brightness level to operate the light in emergency mode. The value can lie between “1” and “Emergency Max Level.”	Percent [%]	R
Emergency Max Level	Maximum lamp output for emergency lighting: maximum brightness level to operate the light in emergency mode. The value can lie between “Emergency Min Level” and “254.”	Percent [%]	R
Rated Duration	Duration test interval: duration that the lamp can be operated in emergency mode (e.g., based on the battery charge). The value can lie between 0 and 255. The value is multiplied by 2 min.		R
Features	Functions: information about type and functionality of the ECG.		R

Table 24: "Emergency Lighting (DT1)" Tab

Name	Description	Unit	Read/Write
Emergency Level	Lamp output for emergency lighting: brightness value to operate the lamp in emergency mode. The value must lie between "Emergency Min Level" and "Emergency Max Level."	Percent [%]	R/W
Function test delay time	Function test delay: maximum time period within which the function test is started again if it could not be started previously at the scheduled time, e.g., due to a low battery charge.	Hours [h]	R/W
Function test interval	Time after which a function test is carried out again.	Days [days]	R/W
Duration test delay time	Duration test delay: maximum time period within which the light duration test is started again if it could not be started previously at the scheduled time.	Hours [h]	R/W
Duration test interval	Time after which a light duration test is carried out again.	Weeks [weeks]	R/W
Test execution timeout	Maximum execution time: indicates when a test could not be performed even after the delay time.	Days [days]	R/W
Prolong time	Emergency mode shutoff delay: time period during which the light remains at the emergency level after returning to normal mode.	Minutes [min]	R/W

4.1.4.4 “Discharge Lamp (DT2)” Tab

You have access to the following parameters in the table on the **“Discharge Lamp (DT2)”** tab:

Table 25: “Discharge Lamp (DT2)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Thermal Overload Time	Duration of the thermal overload	Hours [h]	R
Features	Supported functions according to IEC 62386-203	Bits	R

4.1.4.5 “Low Voltage Halogen Lamp (DT3)” Tab

You have access to the following parameters in the table on the **“Low Voltage Halogen Lamp (DT3)”** tab:

Table 26: “Low Voltage Halogen Lamp (DT3)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Features	Supported functions according to IEC 62386-204	Bits	R

4.1.4.6 “Filament Lamp (DT4)” Tab



You have access to the following parameters in the table on the “**Filament Lamp (DT4)**” tab:

Table 27: “Filament Lamp (DT4)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Features, Byte 1	Supported functions according to IEC 62386-205	Bits	R
Features, Byte 2		Bits	R
Features, Byte 3		Bits	R
Maximum Load Current Rating	Maximum load current: The value can lie between 0 and 255. The value 255 (= 38.25 A) means “unknown.”	Amp [A]	R
Dimming Curve	Specification of the scale of the dimming curve: 0 = standard logarithmic 1 = linear		R/W

4.1.4.7 “Converting the Digital Signal into a DC Voltage (DT5)” Tab



You have access to the following parameters in the table on the “**Converting the Digital Signal into a DC Voltage (DT5)**” tab:

Table 28: “Converting the Digital Signal into a DC Voltage (DT5)” Tab

Name	Description
Extended Version Number	Extended version number
Converter Features	Converter functions: information about type and functionality of the ECG

4.1.4.8 “LED Module (DT6)” Tab

You can view and set some of the following parameters in the table on the “**LED Module (DT6)**” tab:

Table 29: “LED Module (DT6)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Min Fast Fade Time	Min. fast fade time: The value can lie between 0 and 27. The value is multiplied by 25 ms.	Milli-seconds [ms]	R
Gear Type	Device type: information about type and functionality of the ECG.		R
Features	Features: information about the functionality of the ECG.		R
Fast Fade Time	Fast fade time: the value can lie between 0 and 27. The value is multiplied by 25 ms.	Milli-seconds [ms]	R/W
Dimming Curve	Dimming curve: The response indicates what dimming curve is currently used: • “0” means standard logarithmic dimming curve • “1” means linear dimming curve		R/W

4.1.4.9 “Switching Function (DT7)” Tab



You have access to the following parameters in the table on the “**Switching Function (DT7)**” tab:

Table 30: “Switching Function (DT7)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Gear Type	Device type: information about type and functionality of the ECG.		R
Features	Features: information about the functionality of the ECG.		R
Up Switch On Threshold	Switch-on threshold for switch up	Percent [%]	R/W
Up Switch Off Threshold	Switch-off threshold for switch up	Percent [%]	R/W
Down Switch On Threshold	Switch-on threshold for switch down	Percent [%]	R/W
Down Switch Off Threshold	Switch-off threshold for switch down	Percent [%]	R/W
Error Hold Off Time	Error hold time: minimum time that an error must exist for it to be displayed: • “0” means the error is immediately displayed • “255” means the error is not displayed	Seconds [s]	R/W

4.1.4.10 “Color Control (DT8)” Tab

You can specify the color settings of a device on the **“Color Control (DT8)”** tab:

Table 31: “Color Control (DT8)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
xy-Coordinate Capable	Supports xy coordinates		R
Color Temperature Capable	Supports color temperature		R
Automatic activation	Automatic activation		R/W
Color value and color temperature:			
Power On Color	Color after voltage recovery	Color [Color]	R/W
System Failure Color	Color in the event of system malfunctions	Color [Color]	R/W
Color temperature:			
Color Temperature Tc Physical Coolest	Physically coolest color temperature Tc	Color [Color]	R/W
Color Temperature Tc Physical Warmest	Physically warmest color temperature Tc	Color [Color]	R/W
Color Temperature Tc Coolest	Coolest color temperature Tc	Color [Color]	R/W
Color Temperature Tc Warmest	Warmest color temperature Tc	Color [Color]	R/W

Click the “Scaled Value” table column to open the **“Set Scene Value”** dialog, where you can set the **Color value** or **Color temperature**. Click the **[OK]** button to confirm your entries.

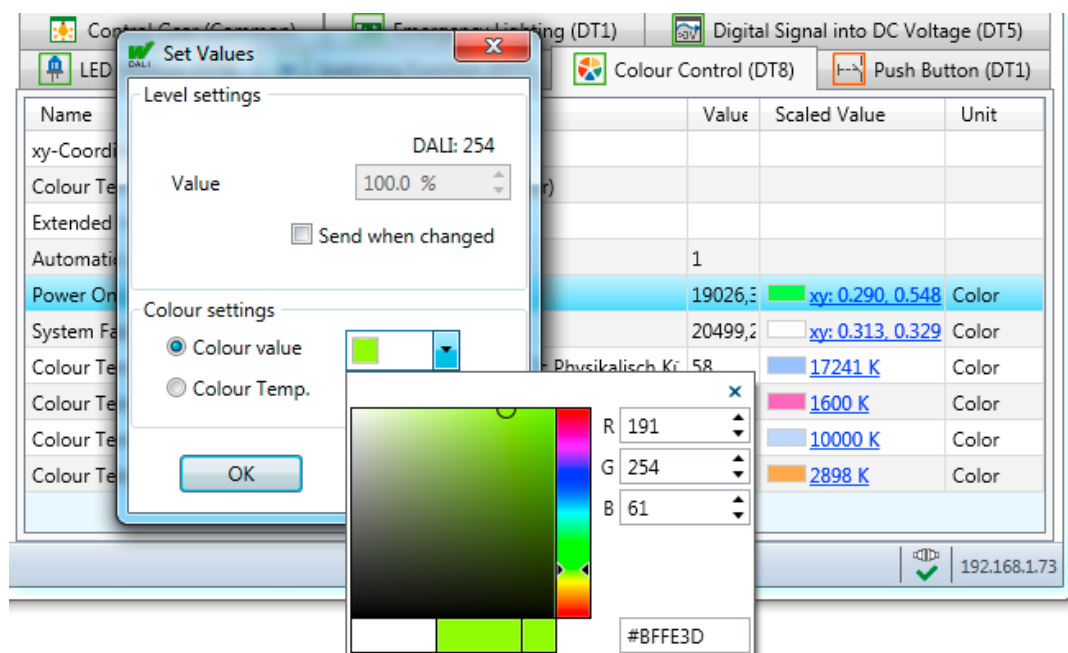


Figure 23: Change Color Settings – Color Value

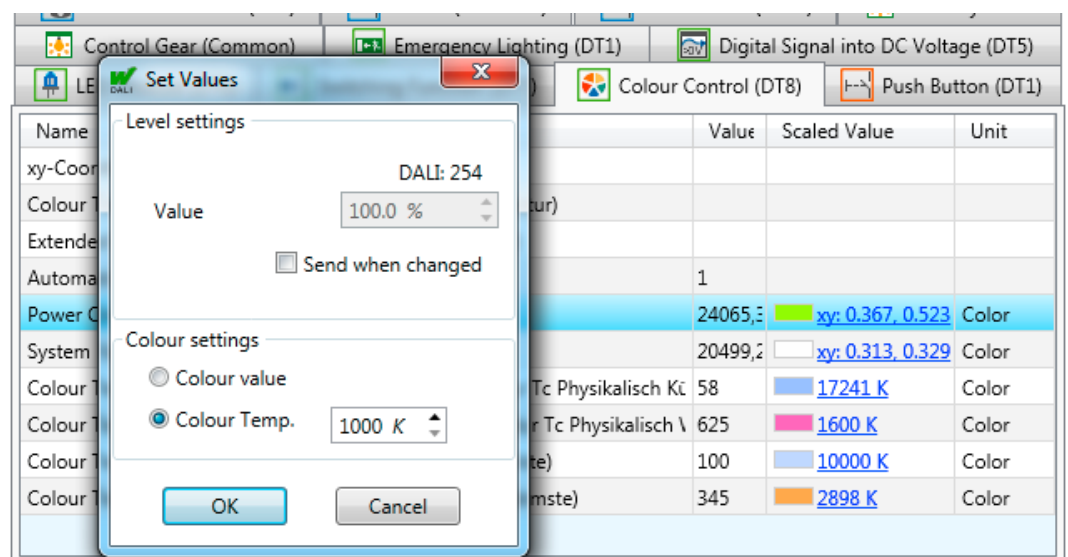


Figure 24: Change Color Settings – Color Temperature

4.1.4.11 “Load Referencing (DT15)” Tab

You have access to the following parameters in the table on the “**Load Referencing (DT15)**” tab:

Table 32: “Load Referencing (DT15)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Measurement Failed	An error occurred during measurement.		R

4.1.4.12 “Thermal Gear Protection (DT16)” Tab

You have access to the following parameters in the table on the “**Thermal Gear Protection (DT16)**” tab:

Table 33: “Thermal Gear Protection (DT16)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Overload Counter	Number of overload events		R
Shutdown Counter	Number of shutdown events		R

4.1.4.13 “Dimming Curve Selection (DT17)” Tab

You have access to the following parameters in the table on the “**Dimming Curve Selection (DT17)**” tab:

Table 34: “Dimming Curve Selection (DT17)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Dimming Curve	Dimming curve: 0 = disabled 1 = enabled		R/W

4.1.4.14 “Centrally Supplied Emergency Operation (DT19)” Tab



You have access to the following parameters in the table on the “**Centrally Supplied Emergency Operation (DT19)**” tab:

Table 35: “Centrally Supplied Emergency Operation (DT19)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Infinite Lock Active	Permanent lock is active		R
Emergency Physical Max Level	Maximum physical lamp output of the emergency lighting		R
Parameter Locked ^{*)}	Locking and unlocking parameters when the corresponding manufacturer code is written and the permanent lock is not enabled (see “Infinite Lock Active”): 0 = access not blocked 1 = access blocked		R/W
Lock Code ^{*)}	Lock code to set “Parameter Locked”		R/W
Emergency Level	Lamp output for emergency lighting: The value can lie between 0 and 100 %. Processing of the value may be locked.	Percent [%]	R/W
Emergency Mode Condition	Specifies the event whose occurrence enables the emergency lighting: 0 = short circuit on the DALI bus 1 = DALI power supply failure Processing of the value may be locked.		R/W

^{*)} The parameters form a grouping, so they are highlighted in yellow, since changing the value of “Parameter Locked” always requires entering the corresponding manufacturer code.

4.1.4.15 “Load Shedding (DT20)” Tab

You have access to the following parameters in the table on the “**Load Shedding (DT20)**” tab:

Table 36: “Load Shedding (DT20)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Reduction Factor 1	Reduction factor 1 The value can lie between 0 and 100. 100 % reduction means switching the light off.	Percent [%]	R/W
Reduction Factor 2	Reduction factor 2 The value can lie between 0 and 100. 100 % reduction means switching the light off.	Percent [%]	R/W
Reduction Factor 3	Reduction factor 3 The value can lie between 0 and 100. 100 % reduction means switching the light off.	Percent [%]	R/W

4.1.4.16 “Thermal Lamp Protection (DT21)” Tab

You have access to the following parameters in the table on the “**Thermal Lamp Protection (DT21)**” tab:

Table 37: “Thermal Lamp Protection (DT21)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Overload Counter	Number of overload events		R
Shutdown Counter	Number of shutdown events		R

4.1.4.17 “Non-Replaceable Light Source (DT23)” Tab



You have access to the following parameters in the table on the “**Non-Replaceable Light Source (DT23)**” tab:

Table 38: “Non-Replaceable Light Source (DT23)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R

4.1.4.18 “Integrated Bus Power Supply (DT49)” Tab



You have access to the following parameters in the table on the “**Integrated Bus Power Supply (DT49)**” tab:

Table 39: “Integrated Bus Power Supply (DT49)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Memory Bank Version	Version of the memory bank		R
Guaranteed Supply Current	Guaranteed supply current of integrated DALI bus power supply	Milliampere [mA]	R
Maximum Supply Current	Maximum supply current of integrated DALI bus power supply	Milliampere [mA]	R
Bus Power Supply Status	DALI bus power supply status 0 = off 1 = on		R

4.1.4.19 “Memory Bank 1 Extension (DT50)” Tab

OEM

You have access to the following parameters in the table on the “**Memory Bank 1 Extension (DT50)**” tab:

Table 40: "Memory Bank 1 Extension (DT50)" Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Manufacturer GTIN	Luminaire manufacturer GTIN with manufacturer specific prefix to derive manufacturer name		R
Identification Number	Luminaire identification number		R
Content Format ID	Format ID of the content		R
Year of Manufacture	Luminaire year of manufacture [00 - 99]	Year [YY]	R
Week of Manufacture	Luminaire week of manufacture [1 - 53]	Week [WW]	R
Nominal Input Power	Nominal input power	Watt [W]	R
Power at Minimum Dim Level	Power at minimum dim level	Watt [W]	R
Nominal Minimum AC Mains Voltage	Nominal minimum AC mains voltage [90 – 480]	Volt [V]	R
Nominal Maximum AC Mains Voltage	Nominal maximum AC mains voltage [90 – 480]	Volt [V]	R
Nominal Light Output	Nominal light output	Lumen [lm]	R
CRI	CRI [0 – 100]		R
CCT	CCT [0 – 17000]	Kelvin [K]	R
Light Distribution Type	Light Distribution Type 0 = not specified 1 = type I 2 = type II 3 = type III 4 = type IV 5 = type V 6 – 254 = reserved for additional types		R

Table 40: "Memory Bank 1 Extension (DT50)" Tab

Name	Description	Unit	Read/Write
Luminaire Color	Luminaire color [0 – 255]		R
Luminaire Identification	Luminaire identification number [0 – 255]		R

4.1.4.20 "Energy Reporting (DT51)" Tab



You have access to the following parameters in the table on the "Energy Reporting (DT51)" tab:

Table 41: Energy Reporting (DT51)" Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Memory Bank 202 Version	Version of the memory bank 202		R
Memory Bank 203 Version	Version of the memory bank 203		R
Memory Bank 204 Version	Version of the memory bank 204		R
Scale Factor Active Energy	Scale factor for measured active energy values in this memory bank (expressed as power of 10)		R
Active Energy	Active energy (depends on scale factor)	Watt-hours [Wh]	R
Scale Factor Active Power	Scale factor for measured active power values in this memory bank (expressed as power of 10)		R
Active Power	Active power (depends on scale factor)	Watt [W]	R

Table 41: Energy Reporting (DT51) Tab

Name	Description	Unit	Read/Write
Scale Factor Apparent Energy	Scale factor for measured apparent energy values in this memory bank (expressed as power of 10)		R
Apparent Energy	Apparent energy (depends on scale factor)	Volt-ampere-hours [VAh]	R
Scale Factor Apparent Power	Scale factor for measured apparent power values in this memory bank (expressed as power of 10)		R
Apparent Power	Apparent power (depends on scale factor)	Volt-ampere [VA]	R
Scale Factor Active Energy Load Side	Scale factor for measured active energy loadside values in this memory bank (expressed as power of 10)		R
Active Energy Load Side	Active energy load side (depends on scale factor)	Watt-hours [Wh]	R
Scale Factor Active Power Load Side	Scale factor for measured active power loadside values in this memory bank (expressed as power of 10)		R
Active Power Load Side	Active power load side (depends on scale factor)	Watt [W]	R

4.1.4.21 “Diagnostics and Maintenance (DT52)” Tab



You have access to the following parameters in the table on the “**Diagnostics and Maintenance (DT52)**” tab:

Table 42: “Diagnostics and Maintenance (DT52)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Extended version number		R
Memory Bank 205 Version	Version of the memory bank 205 (That memory bank provides diagnostics and maintenance information related to the control gear)		R
Memory Bank 206 Version	Version of the memory bank 206 (That memory bank provides diagnostics and maintenance information related to the light source.)		R
Memory Bank 207 Version	Version of the memory bank 207 (That memory bank provides information to enable predictive maintenance of the luminaire.)		R
ECG Operating Time	Operating time of the ECG (Counts the control gear operating time in seconds if the control gear is powered. The scaled value is given in minutes.)	Minutes [min]	R
ECG Start Counter	Start counter of the ECG (Counts the number of control gear starts that are induced by a power cycle of the external supply. A power cycle is counted if the power on time is at least 600 ms.) [0 - 16777213]		R
ECG External Supply Voltage	External supply voltage of the ECG (RMS (Root Mean Square) value of external supply voltage) [0 - 65533]	Volt root mean square [Vrms]	R

Table 42: "Diagnostics and Maintenance (DT52)" Tab

Name	Description	Unit	Read/Write
ECG External Supply Voltage Frequency	External supply voltage frequency of the ECG (Frequency of external supply voltage. Indication as follows: 0 in case of 0 Hz (pure DC or rectified AC voltage). Example: 17 in case of 16.7 Hz, 50 in case of 50 Hz. [0 - 253]	Herz [Hz]	R
ECG Power Factor	Power factor of the ECG (100 = the ECG has a power factor of 1.00) [0 - 100]		R
ECG Overall Failure Condition	Overall failure condition of the ECG 0 = no ECG error 1 = ECG error		R
ECG Overall Failure Condition Counter	Overall failure condition counter of the ECG (A failure condition counter counts up if a 0 to 1 transitions of the failure condition flag that is related to the counter occurs.) [0 - 253]		R
ECG External Supply Under-voltage	External supply undervoltage of the ECG 0 = external supply voltage $\geq$ external supply undervoltage 1 = external supply voltage $<$ external supply undervoltage		R
ECG External Supply Under-voltage Counter	External supply undervoltage counter of the ECG [0 - 253]		R

Table 42: "Diagnostics and Maintenance (DT52)" Tab

Name	Description	Unit	Read/Write
ECG External Supply Overvoltage	External supply overvoltage of the ECG 0 = external supply voltage ≤ external supply overvoltage 1 = external supply voltage > external supply overvoltage		R
ECG External Supply Overvoltage Counter	External supply overvoltage counter of the ECG [0 - 253]		R
ECG Output Power Limitation	Output power limitation of the ECG 0 = no ECG output power overrun 1 = ECG output power range is exceeded (This is the case when the lamp connected to the ECG requires more current than the ECG can supply)		R
ECG Output Power Limitation Counter	Output power limitation counter of the ECG [0 - 253]		R
ECG Thermal Derating	Thermal derating of the ECG 1 = the output current of the control gear may be reduced.		R
ECG Thermal Derating Counter	Thermal derating counter of the ECG [0 - 253]		R
ECG Thermal Shutdown	Thermal shutdown of the ECG 1 = Lamp switched off due to overtemperature		R
ECG Thermal Shutdown Counter	Thermal shutdown counter of the ECG [0 - 253]		R

Table 42: "Diagnostics and Maintenance (DT52)" Tab

Name	Description	Unit	Read/Write
ECG Temperature	Temperature of the ECG (Indicates the internal temperature of the control gear. Offset Value: 60) Example: A Value of 60 means 0 °C, a value of 0 means -60 °C. [0 - 253]	Degree Celsius [°C]	R
ECG Output Current Percent	Output current percent of the ECG (Output current in % related to the nominal output current setting of the control gear.) [0 - 100]	Percent [%]	R
Light Source Start Counter Resettable	Counts the starts of the light source, one step up for every 0 to 1 transition. [0 - 16777213]		R/W
Light Source Start Counter	Counts the starts of the light source, one step up for every 0 to 1 transition. [0 - 16777213]		R
Light Source On Time Resettable	Counts the light source operating time in seconds. (The scaled value is given in minutes.)	Minutes [min]	R/W
Light Source On Time	Counts the light source operating time in seconds. (The scaled value is given in minutes.)	Minutes [min]	R
Light Source Voltage	Indicates the actual control gear output voltage. [0 - 65533]	Volt [V]	R
Light Source Current	Indicates the actual control gear output current. [0 - 65533]	Ampere [A]	R

Table 42: "Diagnostics and Maintenance (DT52)" Tab

Name	Description	Unit	Read/Write
Light Source Overall Failure Condition	Overall failure condition of the Light source. Reflects the status of "lampFailure" 1 = Error 0 = No error		R
Light Source Overall Failure Condition Counter	Overall failure condition counter of the light source [0 - 253]		R
Light Source Short Circuit	Short circuit of the light source 1 = the light source has a lamp failure with short circuit 0 = no short circuit		R
Light Source Short Circuit Counter	Short circuit counter of the light source [0 - 253]		R
Light Source Open Circuit	Open circuit of the light source 1 = the light source has a lamp failure with open circuit 0 = no open circuit		R
Light Source Open Circuit Counter	Open circuit counter of the light source [0 - 253]		R
Light Source Thermal Derating	Thermal derating of the light source (The value of the threshold is such that lifetime and/or performance of the light source could be affected if the "Light Source Temperature" is higher than the threshold.) 1 = temperature is higher than the threshold, the output current of the control gear may be reduced 0 = temperature is below the threshold		R
Light Source Thermal Derating Counter	Thermal derating counter of the light source [0 - 253]		R

Table 42: "Diagnostics and Maintenance (DT52)" Tab

Name	Description	Unit	Read/Write
Light Source Thermal Shutdown	Thermal shutdown of the light source 1 = temperature is above the threshold value 0 = temperature is not above the threshold value		R
Light Source Thermal Shutdown Counter	Thermal shutdown counter of the light source [0 - 253]		R
Light Source Temperature	Indicates the temperature of the light source. (Offset value: 60) Example: A value of 60 means 0 °C, a value of 0 means -60 °C. [0 - 253]	Degree Celsius [°C]	R
Rated Median Useful Life Of Luminaire	Represents the rated median useful life time of the luminaire including light source, control gear and other components (Scaling factor and unit: 1000 h) Example: A value of 50 means 50000 h [0 - 253]	Hours [h]	R
Internal ECG Reference Temperature	Represents the internal control gear reference temperature (Offset value: 60) Example: A value of 60 means 0 °C, a value of 0 means -60 °C. [0 - 253]	Degree Celsius [°C]	R

Table 42: "Diagnostics and Maintenance (DT52)" Tab

Name	Description	Unit	Read/Write
Rated Median Light Souce Starts	Represents the rated median useful light source starts of the luminaire (Scaling factor and unit: 100) Example: A value of 5000 means 500000 starts		

4.1.4.22 "Memory Banks" Tabs



There is a "Memory Banks" tab for ECGs and sensors.

Note



Read memory banks for a selected device

The memory banks for a selected device must be read before they can be displayed! Click the **[Read]** button on the ribbon.

Note



Observe the manufacturer's documentation!

The specific description for memory banks of individual ECGs/sensors is available in the manufacturer's documentation of the respective ECG/sensor.

4.1.4.22.1 Multiple Devices

If multiple devices are selected, you can write one individual byte to the respective memory bank in all selected devices.

1. First, select the desired value from the "Write Value" list box.
2. Select the relevant address from the "For address" list box.
3. Select the desired memory bank from the "To memory bank" list box.
4. Click the **[Write]** button on the ribbon to confirm your selection.

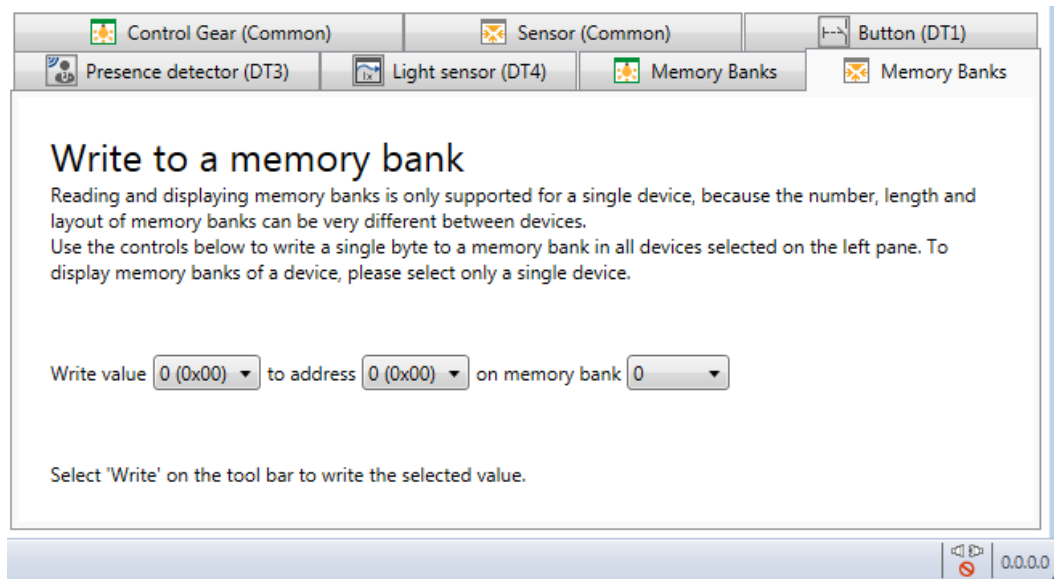


Figure 25: Write Memory Bank, Multiple Devices (Example)

Note

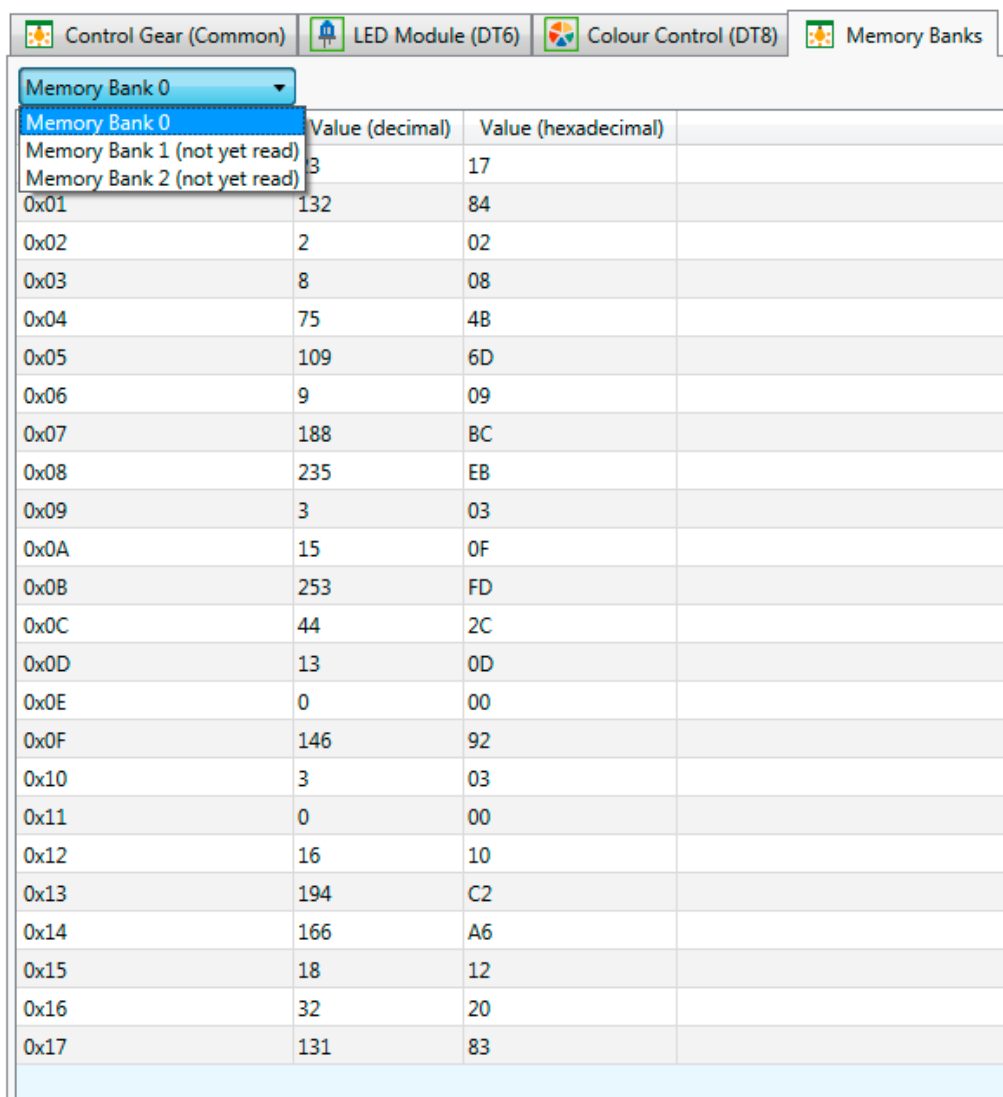


The “Lock byte” is not written automatically

A memory bank is initially “read only.” The “Lock byte” is used to (un)lock write access. To allow access to the memory bank, the “Lock byte” must be written first.

4.1.4.22.2 Single Device

If a single device is selected, multiple bytes can also be written to the memory bank:



	Value (decimal)	Value (hexadecimal)
0x01	132	84
0x02	2	02
0x03	8	08
0x04	75	4B
0x05	109	6D
0x06	9	09
0x07	188	BC
0x08	235	EB
0x09	3	03
0x0A	15	0F
0x0B	253	FD
0x0C	44	2C
0x0D	13	0D
0x0E	0	00
0x0F	146	92
0x10	3	03
0x11	0	00
0x12	16	10
0x13	194	C2
0x14	166	A6
0x15	18	12
0x16	32	20
0x17	131	83

Figure 26: Write Memory Bank, Single Device (Example)

4.1.4.23 “Sensor (Common)” Tab



You have access to the following parameters in the table on the “**Sensor (Common)**” tab:

Table 43: “Sensor (Common)” Tab

Name	Description	Read/Write
Version number	Version number (Version of the specification (IEC 62386-103) according to which this device (Control Device) was made.)	R

Table 43: "Sensor (Common)" Tab

Name	Description	Read/Write
Operation mode	Operating mode (States identified by a number in the range [0.255], characterized by a collection of variables and memory settings. Operating modes are used to select functions to be displayed by a device, including its required response to commands.) Note: Several operating modes are possible. Their function is manufacturer/device-specific.	R/W
Power cycle notification	"On"/"off" notification (Upon completion of its external power cycle, a bus unit shall generate one power cycle event message per device if notification is enabled for at least one of its logical units) 0 = not active 1 = active	R/W
Application controller enabled	Control device is activated (The control unit is either "active" or "not active", which is to be indicated by this setting. When disabled, the ECG may not send forward frames, except for power cycle notification, if applicable. This setting shall not affect the response to incoming forward transmissions, including the transmission of backward frames after requests.) 0 = not active 1 = active	R/W
Application controller always active	Control device is active continuously (If a control unit is present, it can be continuously active). 0 = not active 1 = active	R

4.1.4.24 “Universal Input (IT0)” Tab



You have access to the following parameters in the table on the “**Universal Input (IT0)**” tab:

Table 44: “Universal Input (IT0)” Tab

Name	Description	Read/Write
Instance active	Instance active With this parameter the sending of signals/events for this instance can be activated/deactivated. 0 = not active 1 = active	R/W
Resolution	Resolution of the input signal (The accuracy of the signal is determined by "Resolution". The resolution used is manufacturer-specific)	R
Event filter	Event filter (The event filter can be used to switch specific events on or off. As long as the event filter of a specific event is deactivated, the event in question is not created). [0 - 16777215]	R/W
Event scheme	Event address scheme: a definition according to which addressing type events are to be reported. (The instance of an input device must use the selected event source addressing scheme when it transmits an event message, see table "Event addressing scheme" below).	R/W
Event priority	Event priority (Specifies the priority with which events are sent. The lower the value set here, the higher the priority). [2 - 5]	R/W

Table 45: Event Addressing Scheme

"eventScheme"	Description
0 (default)	Instance addressing
1	Device addressing by short address and instance type.
2	Device/instance addressing by short address and instance number.
3	Device group addressing by device group and instance type.
4	Instance group addressing by instance group and instance type.

4.1.4.25 "Button (IT1)" Tab



You have access to the following parameters in the table on the **"Button (IT1)"** tab:

Table 46: "Button (IT1)" Tab

Name	Description	Unit	Read/Write
Extended Version Number	Version number (Version of the specification (IEC 62386-103) according to which this instance type (Button) was made.)		R
Instance active	Instance active With this parameter the sending of signals/events for this instance can be activated/deactivated. 0 = not active 1 = active		R/W
Resolution	Resolution of the input signal (The accuracy of the signal is determined by "Resolution". The resolution used is manufacturer-specific)		R
Event scheme	Event address scheme: a definition according to which addressing type events are to be reported. (The instance of an input device must use the selected event source addressing scheme when it transmits an event message, see table "Event addressing scheme").		R/W

Table 46: "Button (IT1)" Tab

Name	Description	Unit	Read/Write
Event priority	Event priority (Specifies the priority with which events are sent. The lower the value set here, the higher the priority). [2 - 5]		R/W
Button released event enabled	Enable "button released" event 0 = not active 1 = active		R/W
Button pressed event enabled	Enable "Button pressed" event. 0 = not active 1 = active		R/W
Short press event enabled	Enable "Short button press" event. 0 = not active 1 = active		R/W
Double press event enabled	Enable "double button press" event. 0 = not active 1 = active		R/W
Long press start event enabled	Enable "long button press start" event. 0 = not active 1 = active		R/W
Long press repeat event enabled	Enable "repeat long button press" event. 0 = not active 1 = active		R/W
Long press stop event enabled	Enable "long press stop" event. 0 = not active 1 = active		R/W
Button stuck / free event enabled	Enable "button stuck" event. 0 = not active 1 = active		R/W

Table 46: "Button (IT1)" Tab

Name	Description	Unit	Read/Write
Min Short Press Time	Minimum short button press time (Physical smallest possible time for the detection of a short button press).	Seconds [s]	R
Min Double Press Time	Minimum double button press time (Physical smallest possible time for the detection of a double button press).	Seconds [s]	R
Short Press Time	Short button press (The time that distinguishes a short button press from a long one. If a key is released within this time, either a "short button press" or a "double button press" will follow; if the key is held down beyond this time, a "long button press follows".)	Seconds [s]	R/W
Double Press Time	Double button press (The time that distinguishes a single (short) button press from a double button press. If a button is not pressed again within this time, a "short button press" is triggered; otherwise a "double button press" is triggered.)	Seconds [s]	R/W
Repeat Time	Repetition time (The repetition interval of "long button press" events)	Seconds [s]	R/W
Stuck Time	Time for "button stuck" (If a button remains pressed or jumps back and forth beyond this period, it is assumed to be broken).	Seconds [s]	R/W

4.1.4.26 “Absolute Input (IT2)” Tab



You have access to the following parameters in the table on the “**Absolute Input (IT2)**” tab:

Table 47: “Absolute Input (IT2)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Version number (Version of the specification (IEC 62386-103) according to which this instance type (Absolute input) was made.)		R
Instance active	Instance active With this parameter the sending of signals/events for this instance can be activated/deactivated. 0 = not active 1 = active		R/W
Resolution	Resolution of the input signal (The accuracy of the signal is determined by "Resolution". The resolution used is manufacturer-specific)		R
Event scheme	Event address scheme: a definition according to which addressing type events are to be reported. (The instance of an input device must use the selected event source addressing scheme when it transmits an event message, see table "Event addressing scheme").		R/W

Table 47: "Absolute Input (IT2)" Tab

Name	Description	Unit	Read/Write
Event priority	Event priority (Specifies the priority with which events are sent. The lower the value set here, the higher the priority). [2 - 5]		R/W
Position event enabled	Enable "Position" event 0 = not active 1 = active		R/W
Dead Time	Dead time (Specifies the time within which no events (signals) are sent despite a change in value. If the value was 0, every value change would be sent immediately). [0 - 255] (0 - 12.75s)	Seconds [s]	R/W
Report Time	Report time (Cycle time after which an event is sent, even if the input signal has not changed) [0 - 255] (0 - 255s)	Seconds [s]	R/W

4.1.4.27 “Presence Detector (IT3)” Tab



You have access to the following parameters in the table on the “**Presence Detector (IT3)**” tab:

Table 48: “Presence Detector (IT3)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Version number (Version of the specification (IEC 62386-103) according to which this instance type (Presence detector) was made.)		R
Instance active	Instance active With this parameter the sending of signals/events for this instance can be activated/deactivated. 0 = not active 1 = active		R/W
Resolution	Resolution of the input signal (The accuracy of the signal is determined by "Resolution". The resolution used is manufacturer-specific)		R
Event scheme	Event address scheme: a definition according to which addressing type events are to be reported. (The instance of an input device must use the selected event source addressing scheme when it transmits an event message, see table "Event addressing scheme").		R/W
Event priority	Event priority (Specifies the priority with which events are sent. The lower the value set here, the higher the priority). [2 - 5]		R/W

Table 48: "Presence Detector (IT3)" Tab

Name	Description	Unit	Read/Write
Event Occupied enabled	Enable "Occupied" event. 0 = not active 1 = active		R/W
Event Vacant enabled	Enable "Vacant" event. 0 = not active 1 = active		R/W
Event Repeat enabled	Enable "Repeat" event. 0 = not active 1 = active		R/W
Event Movement enabled	Enable "Movement" event. 0 = not active 1 = active		R/W
Event No Movement enabled	Enable "No movement" event. 0 = not active 1 = active		R/W
Dead Time	Dead time (Specifies the time within which no events (signals) are sent despite a change in value. If the value was 0, every value change would be sent immediately). [0 - 255] (0 - 12.75s)	Seconds [s]	R/W
Hold Time	Hold time (The hold time (display time) after a motion event). [0 - 255] (0 – 42.3min)	Minutes [min]	R/W
Report Time	Report time (Cycle time after which an event is sent, even if the input signal has not changed) [0 - 255] (0 - 255s)	Seconds [s]	R/W

4.1.4.28 “Light Sensor (IT4)” Tab



You have access to the following parameters in the table on the “**Light Sensor (IT4)**” tab:

Table 49: “Light Sensor (IT4)” Tab

Name	Description	Unit	Read/Write
Extended Version Number	Version number (Version of the specification (IEC 62386-103) according to which this instance type (Light sensor) was made.)		R
Instance active	Instance active With this parameter the sending of signals/events for this instance can be activated/deactivated. 0 = not active 1 = active		R/W
Resolution	Resolution of the input signal (The accuracy of the signal is determined by "Resolution". The resolution used is manufacturer-specific)		R
Event scheme	Event address scheme: a definition according to which addressing type events are to be reported. (The instance of an input device must use the selected event source addressing scheme when it transmits an event message, see table "Event addressing scheme").		R/W
Event priority	Event priority (Specifies the priority with which events are sent. The lower the value set here, the higher the priority). [2 - 5]		R/W

Table 49: "Light Sensor (IT4)" Tab

Name	Description	Unit	Read/Write
Illuminance level event enabled	Enable "Illuminance level" event. 0 = not active 1 = active		R/W
Dead Time	Dead time (Specifies the time within which no events (signals) are sent despite a change in value. If the value was 0, every value change would be sent immediately). [0 - 255] (0 - 12.75s)	Seconds [s]	R/W
Report Time	Report time (Cycle time after which an event is sent, even if the input signal has not changed) [0 - 255] (0 - 255s)	Seconds [s]	R/W
Hysteresis Min	Minimum hysteresis (For changes in brightness below this value, transmission of the "Illuminance" event is suppressed. This is independent of the set hysteresis). [0 - 255] (0 - 255)		R/W
Hysteresis	Hysteresis, from which value change a brightness event is sent. [0 - 25] (0 - 25)	Percent [%]	R/W

4.1.4.29 “Button (DT1)” Tab



You have access to the following parameters in the table on the “**Button (DT1)**” tab:

Table 50: “Button (DT1)” Tab

Name	Description	Read/Write
Sensor Active	Sensor active	R/W
Short Press	Short button press	R/W
Long Press	Long button press	R/W
Double Press	Double button press	R/W
Switch	Switch	R/W

4.1.4.30 “Presence Detector (DT2)” Tab



You have access to the following parameters in the table on the “**Presence Detector (DT2)**” tab:

Table 51: “Presence Detector (DT2)” Tab

Name	Description	Unit	Read/Write
Sensor Active	Sensor active		R/W
Repetition Time	Repetition time	Seconds [s]	R/W

4.1.4.31 “Light Sensor (DT3)” Tabs

You have access to the following parameters in the table on the “**Light Sensor (DT3)**” tab:

Table 52: “Light Sensor (DT3)” Tab – Sensor Type 1

Name	Description	Unit	Read/Write
Sensor Active	Sensor active		R/W
Send On Delta	Send on change in value: Send on change in the brightness value.	Percent [%]	R/W
Min Send Time	Minimum time until updating the brightness value.	Seconds [s]	R/W
Max Send Time	Maximum time until updating the brightness value.	Seconds [s]	R/W

Table 53: “Light Sensor (DT3)” Tab – Sensor Type 2

Name	Description	Unit	Read/Write
Send On Delta	Send on change in value: Send on change in the brightness value.	Percent [%]	R/W
Min Send Time	Minimum time until updating the brightness value.	Seconds [s]	R/W
Max Send Time	Maximum time until updating the brightness value.	Seconds [s]	R/W

4.1.4.32 “MSensor (Common)” Tab

You have access to the following parameters in the table on the “**MSensor (Common)**” tab:

Table 54: “MSensor (Common)” Tab

Name	Description	Read/Write
Sensor Active	Sensor active	R/W

4.1.4.33 “Presence Detector (DT4)” Tab



You have access to the following parameters in the table on the “**Presence Detector (DT4)**” tab:

DALI

Name	Description	Unit	Read/Write
Sensor Active	Sensor active		R/W
Repetition Time	Repetition time	Seconds [s]	R/W

4.1.4.34 “Button (Common)” Tab



You can view the following parameters in the table on the “**Button (Common)**” tab:

Table 55: “Button (Common)” Tab

Name	Description	Read/Write
Sensor Active	Sensor active	R/W

4.1.4.35 “Button (FT50)” Tab



You have access to the following parameters in the table on the “**Button (FT50)**” tab:

Table 56: “Button (FT50)” Tab

Name	Description	Read/Write
Switch	Is put into operation as a switch	R/W
On Short Press	Short button press on	R/W
Off Short Press	Short button press off	R/W
On Long Press	Long button press on	R/W
Off Long Press	Long button press off	R/W
Double Press	Double button press	R/W
Switch Closed	Switch closed	R/W
Switch Opened	Switch opened	R/W

4.2 “MODULE SETTINGS” Tab

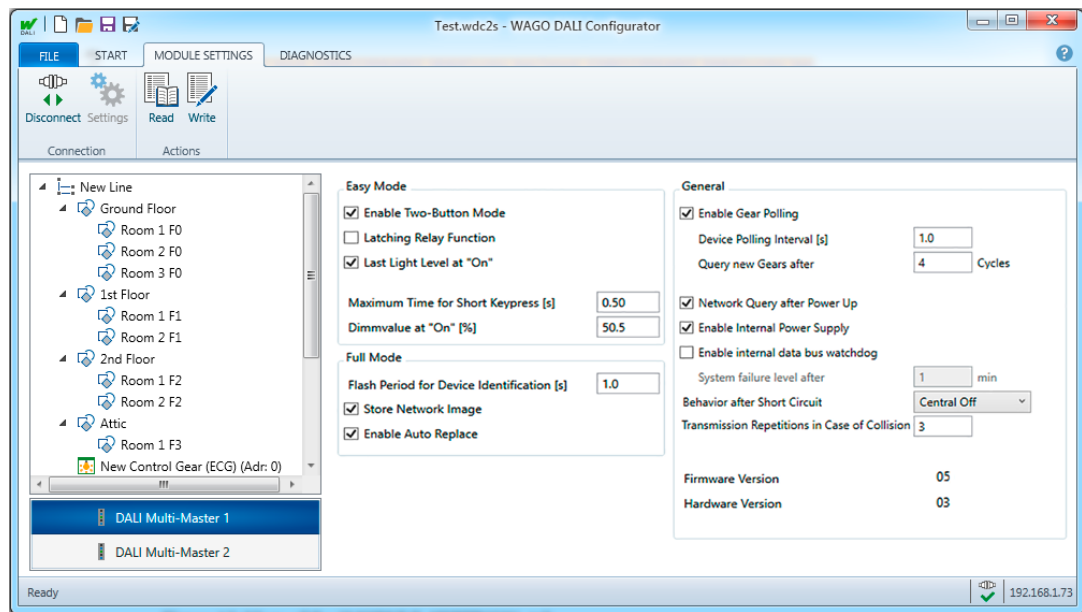


Figure 27: View of the “MODULE SETTINGS” Tab

The view of the configuration of the I/O module is found on the “**MODULE SETTINGS**” tab. You can configure general settings for the DALI Multi-Master Module (753-647) here.

The view is divided into the following four areas:

- Easy Mode
- Full Mode
- General
- Version

You can press the **[Read]** button on the ribbon to display the settings of the current DALI Multi-Master Module.

You can also make changes to the settings and then write the changes to the DALI Multi-Master Module by clicking the **[Write]** button on the ribbon.

Table 57: Buttons of the "MODULE SETTINGS" Tab

Button	Label	Description
Connection		
	[Connect]	(Only visible if not connected) Establishes the connection to the DALI Multi-Master Module.
	[Disconnect]	(Only visible if connected) Disables the connection to the DALI Multi-Master Module.
	[Settings]	Click this button to open the "Communication Settings" dialog; see section "START Tab" > ... > "Communication Settings."
Actions		
	[Read]	Use this button to read out the settings of the DALI Multi-Master Module.
	[Write]	Use this button to write the settings made on this tab to the DALI Multi-Master Module.

4.2.1 Configuration Settings Overview

4.2.1.1 “Easy Mode”

“Easy mode” provides lighting control using simply binary signals without complicated PLC programming.

Table 58: Overview of the “Easy mode” Configuration Settings

Function	Ex. Value	Description
2-button mode	☒ *)	2-button mode enabled
	☐	1-button mode enabled
Latching relay function	☒	Latching relay function enabled (dimming is blocked)
	☐ *)	Latching relay function disabled
Switch on at last dimming value	☒ *)	Save the last dimming value when switching off as the starting value for switching on
	☐	Switch on at fixed dimming value (default 229 corresponds to 50.7 %)
Maximum Time for Short Button Press [s]	0.50 [s]	Time up to which a button press is recognized as a short button signal
Dimming Value When Switching ON [%]	50.5	Setting at what brightness value should be switched on.

*) Default

4.2.1.2 “Full Mode”

In “Full mode,” the I/O module can query and control the status of the attached devices in the DALI line by systematic polling.

Table 59: Overview of the “Full Mode” Configuration Settings

Function	Ex. Value	Description
Flash Period for Device Identification [s]	1.0 [s]	Flashing period for locating the devices
Store Network Image	☒ *)	Store network settings every 24 hours from RAM to EEPROM enabled
	☐	Store network settings every 24 hours from RAM to EEPROM disabled
Automatic Replace	☒ *)	Automatic replacement of replacement devices enabled
	☐	Automatic replacement of replacement devices disabled

*) Default

4.2.1.3 General Settings

Table 60: Overview of the “General” Configuration Settings

Function	Ex. Value	Description
Enable Cyclic Gear Polling	☒ *)	Gear polling enabled
	☐	Gear polling disabled Note: Deactivation can lead to inconsistency in the internal module database.
Gear polling interval [s]	1.0 [s]	Interval for gear polling (1 ... × sec.)
Query new gears after ... cycles	4	Number of query cycles after which the network must be queried for new control gears (x ... y cycles)
Network Query after Power On	☒ *)	Network query after restart enabled
	☐	Network query after restart disabled
Enable Internal Power Supply	☒ *)	Internal power supply enabled
	☐	Internal power supply disabled
Enable Local Bus Watchdog	☒	Local bus watchdog enabled
	☐ *)	Local bus watchdog disabled
Trigger System Failure Level after	1	Number of minutes after which the “System Failure Level” (lamp output in the event of system failure) is triggered. The value can lie between 1 and 255 minutes. The analysis is performed if the local bus watchdog is enabled. Info: Only supported by firmware version > 4
Behavior after Short Circuit	Behavior of the DALI Multi-Master Module after the end of a short circuit:	
	No action	DALI Multi-Master Module performs no separate action.
	Central Off*	If the short circuit lasted between 3 s and 7 s, the DALI Multi-Master Module switches off all ECGs (see also “Construction Site Function”).
	Last dimming value	All lights are set to the dimming value that existed before occurrence of the short circuit. Info: Only enabled in firmware versions > 4

Table 60: Overview of the “General” Configuration Settings

Function	Ex. Value	Description
Transmission Repetitions in Case of Collision	3	Number of transmissions/repetitions in case of error Info: Function is supported up to firmware version 19

*) Default

Table 61: Overview of Configuration Settings Information

Information		
Firmware Version	03	Displays the firmware version of the selected DALI Multi-Master Module.
Hardware Version	01	Displays the hardware version of the selected DALI Multi-Master Module.

Use the “Enable Internal Power Supply” function to disable the internal DALI power supply in the DALI Multi-Master Module (753-647) in order to connect an external DALI power supply.

NOTICE

Destruction of DALI subscribers due to misuse of the WAGO power supply (787-1007)

Please note that the power supply from WAGO (item no.: 787-1007) must only be connected to the DALI Multi-Master Module. Power for the DALI bus is supplied indirectly via the DALI Multi-Master Module.

A direct connection to the DALI bus can result in the destruction of the attached DALI subscribers. Therefore, never connect the WAGO power supply (787-1007) to a DALI network directly without a DALI Multi-Master Module connected between the power supply and the network.

In the “General” area of the configuration settings, you can determine the control of device polling (bus scan) and the behavior in the event of faulty telegrams.

4.2.2 Use “Construction Site Function”

Use of the “**Behavior after Short Circuit**” function can also be helpful before initial startup, e.g., to switch off the lighting at a construction site overnight:

1. Make sure that the “Central Off” function is selected (default setting) in the “**Behavior after Short Circuit**” selection box.
2. Connect a button between the two DALI bus lines to short circuit the DALI bus.
3. Make sure that the “**Lamp Output on System Failure**” (**System failure level**) for the ECGs lies between 1 and 254 (default setting: 254, i.e., 100 %).
4. Perform a short circuit within a time window of 3 ... 7 seconds.

The “OFF” command is sent as a broadcast and all ECGs and lights are switched off simultaneously.

4.3 “DIAGNOSTICS” Tab

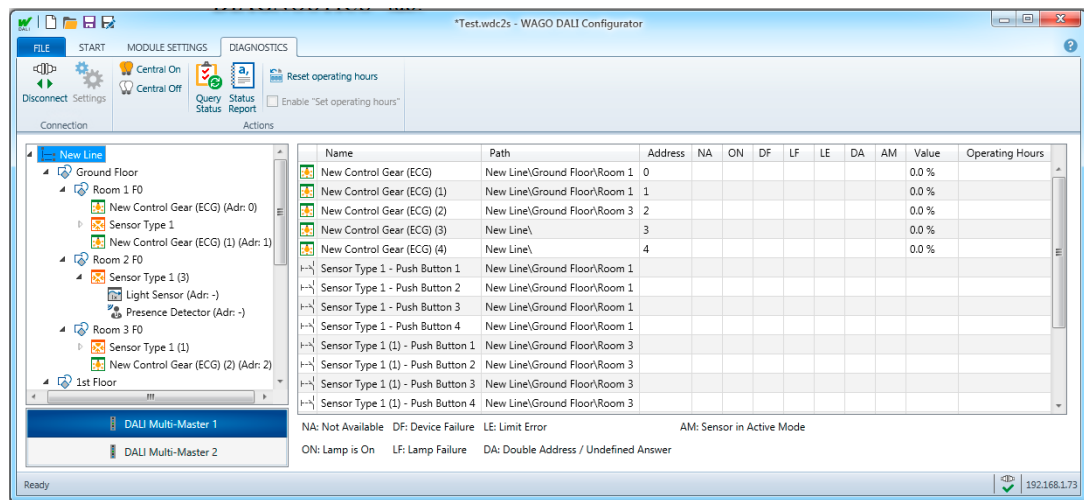


Figure 28: View of the “DIAGNOSTICS” Tab

The diagnostic view of the DALI Multi-Master Module (753-647) is found on the “**DIAGNOSTICS**” tab.

Table 62: Buttons of the “DIAGNOSTICS” Tab – Connection

Button	Label	Description
Connection		
	[Connect]	(Only visible if not connected) Establishes the connection to the DALI Multi-Master Module.
	[Disconnect]	(Only visible if connected) Disables the connection to the DALI Multi-Master Module.
	[Settings]	Click this button to open the “Communication Settings” dialog; see section “START Tab” > ... > “Communication Settings.”

Table 63: Buttons of the "DIAGNOSTICS" Tab – Actions

Button	Label	Description
Actions		
	[Central On]	Click this button to switch on all lights connected to the DALI line.
	[Central Off]	Click this button to switch off all lights connected to the DALI line.
	[Status Query]	Click this button to update the diagnostic information, operating values and operating hours.
	[Status Report]	Click this button to create a diagnostic report that you can open later, e.g., as an Excel file. The content of the diagnostics report is a snapshot of the current status of all connected DALI subscribers. The " Save As " dialog appears. Enter the desired storage location and file name of the CSV file and click the [Save] button to confirm.
	[Reset Operating Hours]	Click this button to reset the operating hours of the selected devices to the value "0."
☐ *) / ☒	[Enable "Set Operating Hours"]	Check this checkbox to allow editing of table cells for writing the operating hours. (This function is only available with firmware versions 4 and above, so the checkbox is grayed out in firmware versions < 4!)

*) Default

Note



Operating hours are written to the internal database of the I/O module, not to the ECG

The set operating hours are written to the internal database of the DALI Multi-Master Module (753-647), not to the respective ECG itself.

In addition to the columns with the icon, name, path, address, value and operating hours, the table in the configuration area also contains the following columns in which the status of a device is indicated in the respective table row:

- NA: **Not available**
- ON: Light is **on**
- DF: **Device fault**
- LD: **Lights defective**
- LE: **Limit error**
- DA: **Duplicate address detected/undefined response**
- AM: Sensor in **active mode**

Any errors are indicated by a red exclamation mark:



Note

Move table columns

If the later columns (Value, Operating Hours) of the table in the configuration area are not visible because the screen is too small, it makes sense to collapse the earlier table columns (Name, Path).

Table 64: Meaning of the Status Indication in the Diagnostic Table

Status	Explanation	Remedy
NA	Device not available	Check the device, connection and addressing. If required, re-address the device (see section "START Tab" > ... > "Addressing").
ON	The lamp is switched on	---
DF	Device fault or device failure	Check the failed device. Replace the device if defective. If necessary, use the Replace function to transfer data (topology tree context menu, menu item " Restore Device " – see section "START Tab" > ... > "Tree Structure").
LD	Lamp is defective	Replace the defective lamp.
LE	Underrun or overrun of the limiting value	Check the limiting value settings for the respective device in the configuration (see section "START Tab" > ... > "Configuration").
DA	Duplicate address detected or Undefined response	To remove a duplicate address, switch to the Addressing view on the "START" tab. Delete the address of the respective device from the table cell. Then re-address the device (see section "START Tab" > ... > "Addressing").
AM	Sensor is in active mode and is transmitting data	---

4.3.1 Update Diagnostic Information



In the tree structure on the left side, choose the DALI Multi-Master Module (753-647) for which you want to display the list of all connected devices. Multiple selection is possible.

1. Select the desired DALI Multi-Master Module (753-647) by clicking it.
2. Click the **[Status Query]** button on the ribbon.

All attached devices are listed with their associated statuses in the table on the right side for the DALI Multi-Master Module (753-647) currently selected.

	Name	Path	Address	NA	ON	DF	LF	LE	DA	AM	Value
	ECG1	New Line\Room 1\	0		✓						10,1 %
	ECG2	New Line\Room 1\	1		✓						10,1 %
	ECG3	New Line\Room 1\	2		✓						10,1 %
	ECG4	New Line\Room 1\	3		✓						50,5 %
	ECG5	New Line\Room 2\	4		✓						87,2 %
	ECG6	New Line\Room 2\	5		✓						76,1 %
	ECG7	New Line\Room 2\	6		✓						66,4 %
	ECG8	New Line\Room 2\	7		✓						54,8 %
	Multi Sensor Room 1 - Light Sensor	New Line\Room 1\Multi Sensor Room 1\	1							✓	56,00 lx
	Multi Sensor Room 1 - Presence Detector	New Line\Room 1\Multi Sensor Room 1\	2							✓	
	Multi Sensor Room 1 - Remote Control	New Line\Room 1\Multi Sensor Room 1\	3							✓	
	Push Button Room 1	New Line\Room 1\	0								

NA: Not Available DF: Device Failure LE: Limit Error

AM: Sensor in Active Mode

ON: Lamp is On LF: Lamp Failure DA: Double Address / Undefined Answer

Figure 29: View of the Configuration Area on the “DIAGNOSTICS” Tab

4.3.2 Generate Status Report



You have the option of creating a diagnostic report of the connected DALI network devices as a CSV file:

1. Click the **[Status Report]** button on the ribbon. The “**Save As**” dialog appears.
2. Enter the desired storage location and file name for the CSV file.
3. Click **[Save]** to confirm the dialog.

The file created can now be opened, e.g. as an Excel table.

4.3.3 Light Operating Hours

Note



Move table columns

If the later columns (Value, Operating Hours) of the table in the configuration area are not visible because the screen is too small, it makes sense to collapse the earlier table columns (Name, Path).

4.3.3.1 Reset Operating Hours



The operating hours counted in the last table column “Operating Hours” can be reset to “0.”

1. Click to select the device whose operating hours you want to reset.
2. Click the **[Reset Operating Hours]** button on the ribbon.

4.3.3.2 Set Operating Hours

Note



Logging operating hours depends on firmware

You can only edit the table cells for DALI Multi-Master Modules with firmware version 4 or higher, and only if the function has been unlocked by checking the “**Set Operating Hours**” checkbox.

For I/O modules with a firmware version lower than 4, the function is disabled and the respective checkbox grayed out.

Note



A short address is required to write operating hours

To write operating hours, enter the desired value in the respective table cell of the “**DIAGNOSTICS**” tab. The respective device must have a short address. An error message appears otherwise.

For DALI Multi-Master Modules with firmware 4 or higher, you can write operating hours, e.g. for applications where an ECG is replaced, but the lighting continues to be used.

1. Make sure that the respective device has a short address.
2. Check the “**Enable ‘Set Operating Hours’**” checkbox on the ribbon. This unlocks the table cells.
3. You can now edit the table cell entry.

4.4 Status Bar

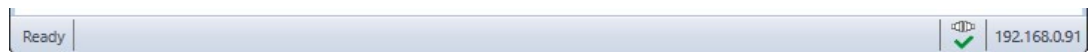


Figure 30: Status Bar (Example)

Information on the status of the started action appears in the status bar at the bottom of the user interface.

Furthermore, messages on the following events are displayed on the DALI Multi-Master Module:

Table 65: Events on the DALI Multi-Master Module

Message	Description
"Error on DALI bus: No voltage or short circuit."	No power supply to the DALI bus, or short circuit on the DALI bus
"Communication error"	Communication error within the I/O module
"Interface is busy, please wait"	The I/O module cannot process queries from the configurator. This can happen if device polling is enabled when it is switched on and there is no power supply to the DALI bus.

The status of the connection to a DALI Multi-Master Module is represented on the right by an icon:

Table 66: Status of Connection to the DALI Multi-Master Module

Symbol	Description
	The DALI Multi-Master Module is connected.
	There is no connection to a DALI Multi-Master Module.

In addition, the current connection settings are displayed, i.e., the IP address or COM port of the connected fieldbus node if applicable.

If an action (e.g., Read, Write etc.) is called, a progress bar displays the progress of the action.

If an error occurs, it is indicated by an icon and given a text name.

4.5 “FILE” Tab

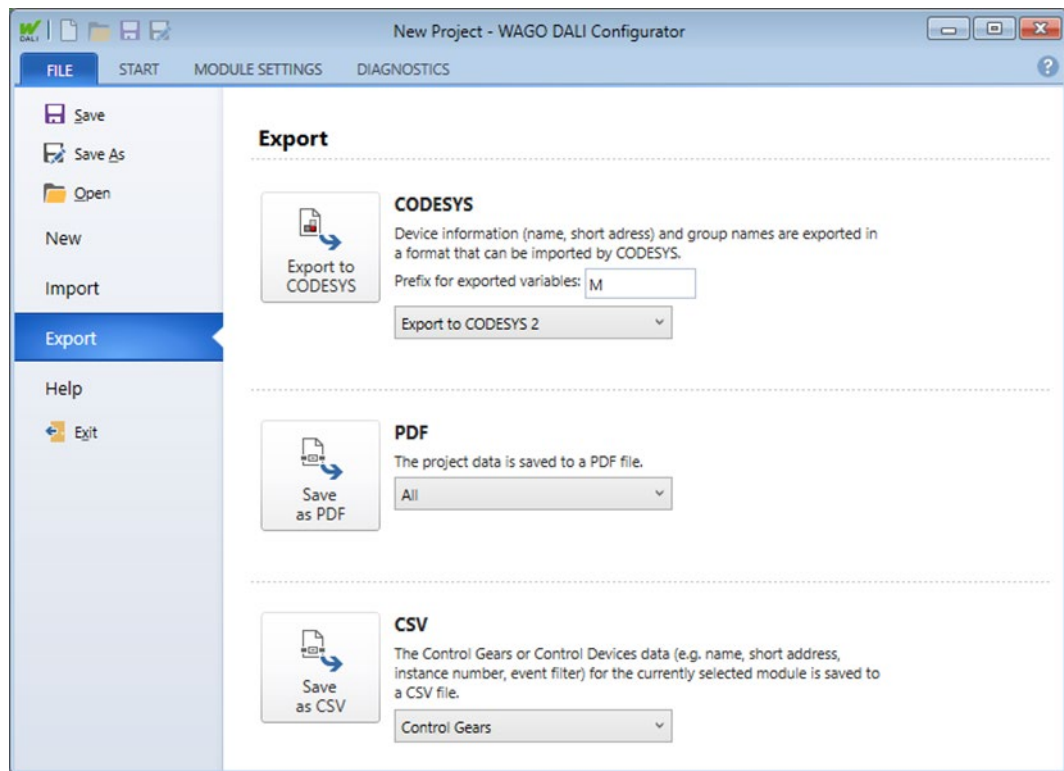


Figure 31: View of the “FILE” Tab

For some buttons, there is a Backstage view on the “**FILE**” tab, as is familiar from MS Office and other software.

With the buttons listed here, you have the option to:

- Save a project
- Save the project under a different name
- Open an existing project
- Create a new project or a new solution folder
- Import project data (XML or CSV)
- Export device information to a format importable by CODESYS
- Export device information to a format importable by **e!COCKPIT**
- Save the project data to a PDF file
- Export the project data to a CSV file
- Open the user manual as a PDF
- Display WAGO contact information, or
- Close the program

Table 67: Buttons of the "FILE" Tab

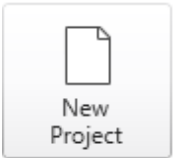
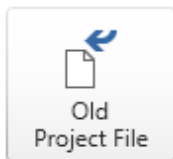
Button	Label	Description
	[Save]	The configuration of the current project is saved as a project folder. File format: ".wdc2s" ("WAGO DALI Configurator 2 Solution"). Note: For a new project, select the desired storage location in your directory structure, assign a file name and click [Save] to confirm.
	[Save As]	Select the desired storage location in your directory structure and the desired file name for the .wdc2s file of the current project. Click [Save] to confirm.
	[Open]	Select the desired .wdc2s file in your directory structure and click [Open] to confirm.
		This button displays a Backstage view with other buttons for creating a new project or a new solution folder.
	[New Project]	Click this button to create a new empty project for the selected DALI Multi-Master Module. The project data of the other DALI Multi-Master Modules remains unchanged. After a new project is created, the program switches to the "START" tab.
	[New Solution]	Click this button to create a new empty solution folder. A solution folder contains the project data of all DALI Multi-Master Modules. After a new solution folder is created, the program switches to the "START" tab.
		This button displays a Backstage view with other buttons for importing old project files (XML format) or project data (CSV format) of the selected DALI Multi-Master Module.
	[Old Project File]	Click this button to open an old project file (from WAGO DALI Configurator version 1). The project data for the selected DALI Multi-Master Module is replaced by this project.
	[Import CSV File]	Click this button to import control gears (ECGs) and control devices (sensors) from a CSV file and add them to the project data of the selected DALI Multi-Master Module.

Table 67: Buttons of the "FILE" Tab

Button	Label	Description
		This button displays a Backstage view with other buttons for exporting your project data.
	[Export to CODESYS]	Click this button to export device information (name, short address) and the group name of all connected DALI Multi-Master Modules in a format that can be imported by CODESYS or e!COCKPIT . Use the selection box to choose between "Export to CODESYS 2" (default) and "Export to e!COCKPIT ."
	[Save As PDF]	Click this button to create the project documentation for your project or your project folder as a PDF file. Use the selection box to choose between "All" (default) and "Selected I/O Module."
	[Save As CSV]	Click this button to export the project data for control gears (ECGs) and control devices (sensors) of the currently selected DALI Multi-Master Module (e.g., name, short address, groups, instance number and event filter) to a CSV file. Use the selection box to choose between "Control Gears" (default) and "Control Devices."
		This button displays a Backstage view with the WAGO contact address and contact information for WAGO Support. In addition, you can also open the software manual from a button.
	[Exit]	Terminates execution of the program and closes the window.

4.5.1 Generate Project Documentation: “WAGO DALI Configurator Report”

The **[Save As PDF]** button is available to you in the Backstage view of the **[Export]** button.

Click this button to create a report for your project or project folder in the form of a PDF file.

In addition to the project name and creation date, it lists the comprehensive device overview with group association, scene values and device settings.

Furthermore, a checklist for installation and startup is generated in which the project manager is named and comments can be entered. The customer, electrician and lighting designer can countersign the report (see figure “Report, Checklist”).

Checklist

Project Name: New Project

Project Manager:

Date created: 27.09.2016 17:25:07

Comments:

.....

.....

Installation

☐ All lamps are installed and ready.

☐ All sensors are installed and ready.

Commissioning

☐ All lamps are operating.

☐ All lamps are configured.

☐ All sensors are operating.

☐ All sensors are configured.

Notes

.....

.....

.....

Customer (Date, Signature)

Electrician (Date, Signature)

Lighting Planner (Date, Signature)

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Figure 32: Report, Checklist

1. Click the **[Export]** button. The associated Backstage view is shown.
2. In the **PDF** area, specify whether the report for the current project (“Selected I/O module”) or the entire project folder with all attached DALI Multi-Master Modules (“All”) should be created.
3. Click the **[Save As PDF]** button. The “**Save Report**” dialog appears.
4. Enter the desired storage location and file name of the PDF file and click the **[Save]** button to confirm. The PDF is generated.

5 Startup – Example Configuration

5.1 Establish Connection

1. Launch the WAGO DALI Configurator. You are at the beginning on the “**START**” tab.
2. Click the [ **Settings**] button on the ribbon. The “**Communication Settings**” dialog appears.
3. Select the **Connection** (“Ethernet (TCP/IP)” or “Serial”).
4. Enter the **IP Address** or select the **Port**.
5. Select the appropriate **DALI Module position**.
6. Confirm your entries by clicking [**OK**].
7. Click the [ **Connect**] button on the ribbon.

5.2 Address Control Gears (ECG)

1. Make sure that the [ **Addressing**] button on the ribbon is active and that you are on the “ **Control Gears**” tab.
2. If necessary, clear the **Only Unaddressed Devices** checkbox on the ribbon.
3. Select the “Random Addressing” entry in the ribbon selection box.
4. Click the [ **Start**] button on the ribbon. A dialog appears with the questions “Would you like to start addressing with the following settings?”
5. Click [**Yes**] to confirm the dialog. The control gears found are listed.
6. Click the [ **Locate Start**] button on the ribbon.
7. Double-click the first table cell and rename the control gear as required. Press the [**Return**] key on your keyboard to confirm your entry. The next table cell is selected for editing.
8. Also rename the other control gears.
9. Click the [ **Locate Stop**] button on the ribbon to stop the process.

5.3 Create Room Structure

1. Right-click the **New Line** tree structure.
2. Select the **Add new section** menu item in the context menu.
3. Right-click the new **New Section** entry.
4. Select the **Rename** menu item in the context menu.
5. Enter a suitable name, e.g., “Room 1”.
6. Repeat steps 1 to 5 until you have created the required number of areas.
7. Distribute the control gears to the areas as required by dragging & dropping each control gear to the respective area.

5.4 Assigning Lighting Groups

1. Click the [ **Groups & Scenes**] button on the ribbon.
2. Drag a required section from the room structure to a group of the group tree in the configuration area.
3. Right-click the respective group.
4. Select the **Rename** menu item in the context menu.
5. Enter a suitable name, e.g., “Group room 1”.
6. Do the same with the remaining areas.

5.5 Assigning a Light Scene

1. Drag a required group from the list of “**Groups**” to a scene of the scene tree. The “**Set Values**” dialog appears.
2. Enter a value for the level setting (%).
3. Select the **Send when changed** checkbox.
4. Confirm your entries by clicking **[OK]**.
5. Expand the edited scene by clicking the arrow next to the scene. The same dimming value is specified for all control gears in the scene.
6. To edit the level setting of individual control gears, right-click the control gear and select **Configure Scene** menu item in the context menu. The “**Set Values**” dialog opens, but this time for the currently selected control gear only.

7. Change the dimming value of the individual control gear as required.
8. Right-click the scene and select the **Rename** menu item in the context menu to rename the scene, e.g. to “Projector” or “Presentation”.

5.6 Configuring Control Gears (ECG)

1. Click the  **Configuration** button on the ribbon.
2. First make sure that the required section is selected in the tree structure.
Edit the table entries in the “ **Control Gear (Common)**” tab.
3. Click the  **Write** button in the ribbon to apply the changes made to the DALI Multi-Master Module.

5.7 Addressing and Assigning Sensors

1. Click the  **Addressing** button on the ribbon.
2. Select the respective tab, e.g. “**Sensors**”, “**Sensor Type 1**” or “**Sensor Type 2**”.
3. Click the  **Start** button on the ribbon. A dialog appears with the questions “Would you like to start addressing with the following settings?”
4. Click **[Yes]** to confirm the dialog. The sensors found are listed.
5. Double-click in the first table row and name the sensor as required.
6. You can also rename the remaining sensors.
7. Click the  **Locate Start** button on the ribbon.
8. Click the  **Locate Stop** button on the ribbon to stop the process.
9. The sensors are also listed in the tree structure. Distribute the sensors in the areas as required.

5.8 Configuring Sensors

1. Click the [ **Configuration**] button on the ribbon.
2. First make sure that the required sensor is selected in the tree structure. Edit the table entries under the corresponding tabs.
3. Click the [ **Write**] button in the ribbon to apply the changes made to the DALI Multi-Master Module.

5.9 Querying the Control Gear Status

1. Go to the “**DIAGNOSTICS**” tab.
2. Click the [ **Query Status**] button on the ribbon. All attached control gears with their respective status are listed for the DALI Multi-Master Module currently selected in the table on the right side.
3. To create a snapshot of the current status as a CSV file, click the [ **Status Report**] button on the ribbon. The “**Save as**” dialog appears.
4. Enter the required storage location and file name for the CSV file.
5. Click [**Save**] to confirm the dialog.

The file created can now be opened externally, e.g. as an Excel table.

5.10 Generating Project Documentation

1. Go to the “**FILE**” tab.
2. Click the [**Export**] button. The related Backstage view is shown.
3. In the PDF area, select if the report for the current project (“Selected Module”) or the entire project folder with all attached DALI Multi-Master Modules (“All”) should be created.
4. Click the [**Save as PDF**] button. The “**Save report**” dialog appears.
5. Enter the required storage location and file name of the PDF file and click the [**Save**] button to confirm. The PDF is generated.

5.11 Setting Cyclic Control Gear Query and Saving the Project

1. Go to the “**MODULE SETTINGS**” tab.
2. Select the **Enable Gear Polling** checkbox.
3. Change the value in the **Device Polling Interval [s]** input field as required.
4. Click the  **Write** button on the ribbon.
5. Click the icon  in the quick access toolbar to save the configuration. The “**Save configuration**” dialog appears.
6. Enter a file name and click **[Save]** to confirm your entry.

6 Glossary

A

Auto-Replace Function

In the event that exactly one device is defective and is replaced by an unaddressed device, the “Replace” function automatically assigns the old short address of the previous device to the new device and subsequently restores the settings for the device using the data stored in the I/O module database.

C

Control Gear

Control gears are found in DALI networks as one or more components between the power supply and one or more lamps. They are used to supply power to the lighting and for their DALI communication. The control gears provide the switch-on voltage and warm-up current for the lamps to prevent a cold start, thus enhancing the power factor and reducing electromagnetic interference.

→ See “ECG.”

Control Device

“Control Device” is the IEC designation for the device and includes both the DALI (Multi)-Master Module and the active sensors.

D

DALI (Digital Addressable Lighting Interface)

“DALI” is a protocol for control of lighting control gears in building automation, such as power supplies (“electronic transformers”), electronic control gears (ECGs) and electronic dimmers.

The individual specifications are described in the IEC 62386 series of standards.

→ See also: “IEC 62386.”

DALI-2 (Digital Addressable Lighting Interface Edition 2)

DALI-2 is a further development of the IEC 62386 series of standards that adapts the structure of the individual parts of the standards, distinguishes between the electrical and functional requirements on the control gears and sets the requirements on the sensors in order to achieve a higher level of interoperability for backwards compatibility with existing DALI installations.

DALI Short Address

Each device with a DALI interface is addressed in the network using a DALI short address. For some multifunction devices, such as the multi-sensors, each individual function (brightness, presence, remote control) can be

assigned a dedicated DALI short address, enabling the function to be addressed individually.

E

Easy Mode

In “Easy” mode, attached DALI devices are represented in binary form with two bits each on the process image. These two bits correspond to the button functions (ON/OFF, DIMMING) and are implemented in the DALI Multi-Master Module (753-647). The status is queried in cycles.

“Easy” mode is implemented via modules in the firmware.

→ See also “Full Mode.”

ECG (Electronic Control Gear)

→ See “Control Gear.”

F

Full Mode

In “Full” mode, switching commands are specified by a higher-order control system via a PLC application.

Transmission within the I/O module takes place via the module-internal mailbox. Querying of process data is acyclic.

“Full” mode is implemented by modules in WAGO-I/O-PRO.

→ See also “Easy Mode.”

I

IEC 62386

“**IEC 62386**” (“Digitally addressable interface for lighting”; German version DIN EN 62386: “Digital adressierbare Schnittstelle für die Beleuchtung”) is a series of standards that defines details specific to DALI. The series of standards is being revised by the IEC SC 34C subcommittee and contains the following parts (version of 2018):

- 101: System
- 102: Control gears
- 103: Control devices
- 201 to 224: Device types 0–23:
 - 201: Device type 0: Fluorescent lamps
 - 202: Device type 1: Emergency lighting with individual battery
 - 203: Device type 2: Discharge lamps
 - 204: Device type 3: Low-voltage halogen lamps,
 - 205: Device type 4: Incandescent lamp dimmers
 - 206: Device type 5: Conversion of the digital input signal to DC
 - 207: Device type 6: LED modules
 - 208: Device type 7: Switching function
 - 209: Device type 8: Color control
 - 210: Device type 9: Sequencers

- 216: Device type 15: Load referencing
- 217: Device type 16: Thermal gear protection
- 218: Device type 17: Dimming curve selection
- 220: Device type 19: Centrally-supplied emergency operation
- 221: Device type 20: Load shedding
- 222: Device type 21: Thermal lamp protection
- 224: Device type 23: Integrated light source
 - 301 to 304: Input devices:
- 301: Push buttons
- 302: Absolute input devices
- 303: Occupancy sensors
- 304: Light sensors

M

Multi-Master

In a “multi-master,” control of the intelligent measuring and automation devices on the fieldbus is performed locally, in contrast to a master/slave system.

The WAGO DALI Multi-Master Module (753-647) is a multi-master that supports the DALI interface and can utilize this interface together with other master devices.

R

Random Address

The “random address” (or “search address”) is a 24-bit address generated by an ECG during initialization.

S

Single Master

In contrast to a multi-master, a “single master” does not support collision detection and is not suitable for connection at the same interface with other masters.

Settling Time

The “settling time” is the minimum time period between two frames.

V

Virtual Group

A DALI group is a logical combination of devices to which a common group address is assigned so that these devices execute a common function synchronously. These devices do not necessarily have to be physically linked (e.g., the group for all emergency lighting systems, all hallway lights etc.).

In case the 16 available group addresses (0 ... 15) are not sufficient

because further groups are required, an additional 16 virtual groups can be created (with group addresses 17 ... 31). These groups cannot, however, be addressed via a DALI group command, but only one after the other by individual commands from the DALI Multi-Master Module (753-647). A maximum of eight devices may be assigned to each virtual group in order not to slow down or impede DALI data exchange on the bus.

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