

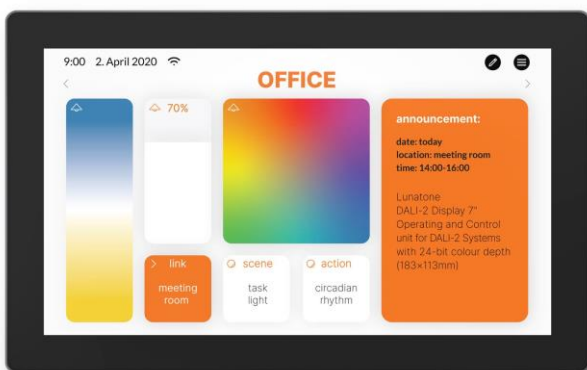


## DALI-2 Display 7"

### Datasheet

#### DALI-2 Control System

Multifunctional DALI-2 control  
and operating unit



### DALI-2 Display 7"

Art.Nr.: 86456840-W (white)

### DALI-2 Display 7"

Art.Nr.: 86456840-B (black)

### DALI-2 Display 7"plus

Art.Nr.: 86456840-P-W (white)

### DALI-2 Display 7"plus

Art.Nr.: 86456840-P-B (black)

# DALI-2 Display 7" Multifunctional Control Device

## Overview

- Multifunctional control device for DALI systems
- 7" capacitive touchscreen with 24-bit colour depth
- Dimensions: 178 x 111 x 8 mm
- comfortable operation via numerous widgets
- customisable user interface
- integration via LAN or WLAN in building management systems – *coming soon*
- dimming and switching of groups and individual addresses
- Tuneable White and RGB colour management
- configuration of scenes
- integrated sensors for measurement and visualisation of sensor values such as temperature, air quality, air pressure and humidity
- Multi-master capable: several modules can be installed within a DALI circuit.
- Easy installation: the device can be installed on a flush-mounted installation box.
- 24-56V or Power Over Ethernet - POE

### Additional functionality of the Display 7" plus:

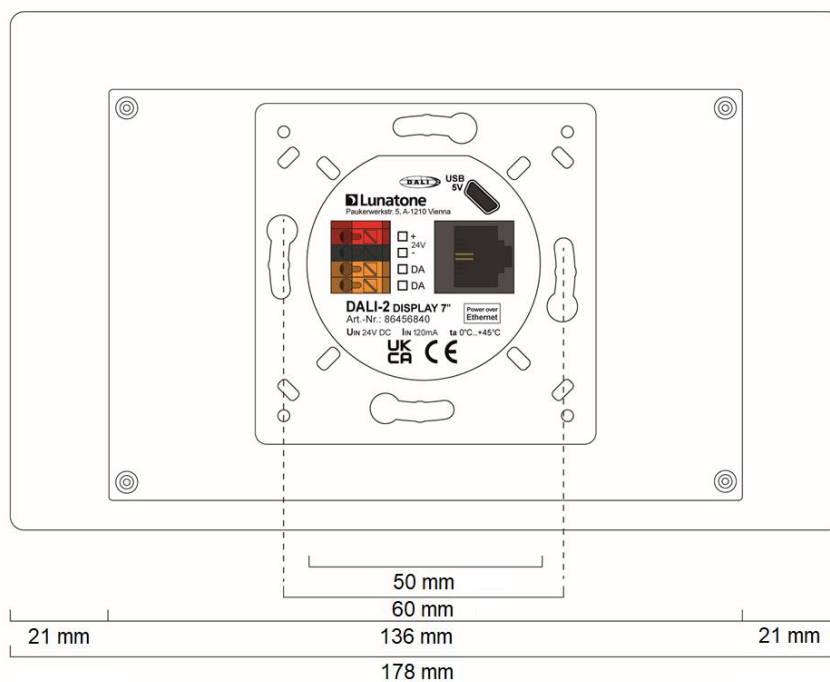
- addressing and set-up of DALI systems
- configuration of groups
- circadian daylight curves (human centric lighting)
- week schedules
- sequences
- control of blinds – *coming soon*
- version for emergency light monitoring available – [data sheet](#)

## Specification, Characteristics

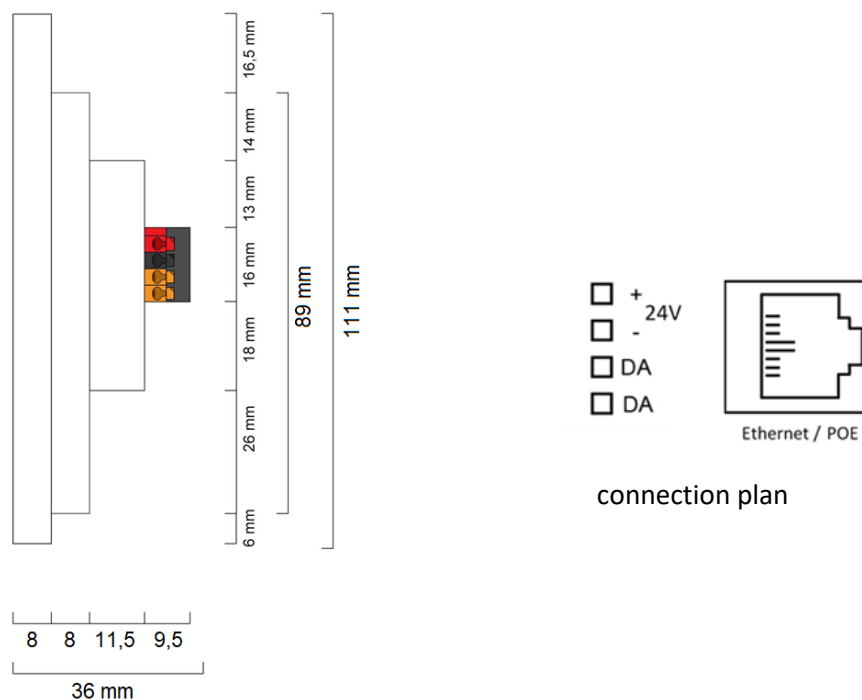
Type	DALI Display 7" (plus)	
article number	86456840-W 86456840-P-W	86456840-B 86456840-P-B
<b>Electrical data:</b>		
rated supply voltage display	24-56V DC	
power consumption	3,5W	
number of DALI lines	1	
Current consumption DALI-line	<2mA	
Interface	DALI	
<b>Mechanical data:</b>		
ambient temperature	0...+45°C	
type of protection	IP20	
dimensions L x W x H	178x111x8mm	
touchscreen size	7"	
touchscreen pixel	1024 x 600px	
colours	24Bit	
colour display frame	white	black
colour housing	metallic grey	

## Terminals

connection type	spring terminal connectors
wire size solid core	0,5 ... 1,5 mm <sup>2</sup> (AWG20 ... AWG16)
wire size stranded wired	0,5 ... 1,5 mm <sup>2</sup> (AWG20 ... AWG16)
wire size using wire end ferrule	0,25 ... 1 mm <sup>2</sup>
stripping length	8,5 ... 9,5mm / 0,33 ... 0,37inch
release of wire	push button



dimensions Art.Nr.: 86456840



connection plan

## Typical application

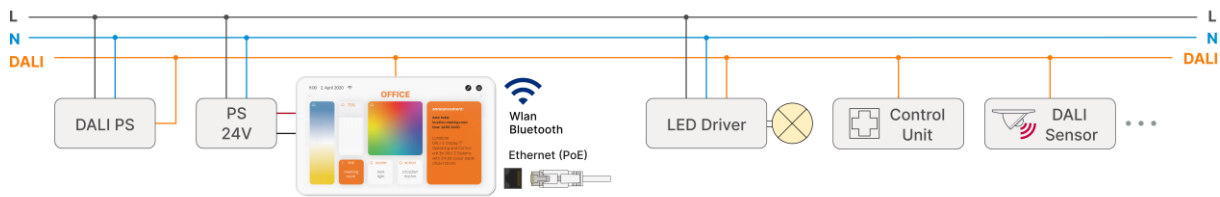


Figure 1 Typical Application

## Usage

The DALI display is used for set-up (Version Display 7"plus), configuration and control of a DALI system. The DALI protocol standard IEC62386, is used to control the lighting equipment.

Via the display interface all luminaries, groups, individual addresses can be controlled, and scenes can be recalled.

The user interface can be customized, including background images and colour, function, position, size of control widgets and more.

## Installation

- The DALI-2 Display can be directly connected to the DALI bus. A DALI bus power supply (e.g. DALI PS) is required.
- The device can be powered over ethernet (POE) or requires an additional 24V supply, which is connected to the corresponding terminals. (suitable power supply unit: PS 24V, 300mA Art.Nr.: 24166012-24HS)
- The connection to the DALI terminals can be made regardless of polarity. The bus input is protected against overvoltage (mains voltage).

- The wiring should be carried out as a permanent installation in a dry and clean environment.
- Installation may only be carried out in a voltage-free state of the system and by qualified specialists.
- National regulations for setting up electrical systems must be followed.
- The DALI wiring can be realised with standard low-voltage installation material. No special cables are required.
- Only 1 wire may be connected to each terminal. When using double wire end ferrules, the connection capacity of the terminal must be considered.



**Attention:** The DALI-signal is not classified as SELV circuit (Safety Extra Low Voltage). Therefore, the installation regulations for low voltage apply.



The voltage drop on the DALI line must not exceed 2V at maximum length (300m) and maximum bus load (250mA).

## Mounting

The DALI Display 7" can be directly attached to a standard flush-mounted installation box/ electrical socket.

For assembly, the backplate has to be attached to the electrical socket, considering the orientation (connector facing upwards, see Figure 2). Then the display can be put in from above and fixed with the two screws from below

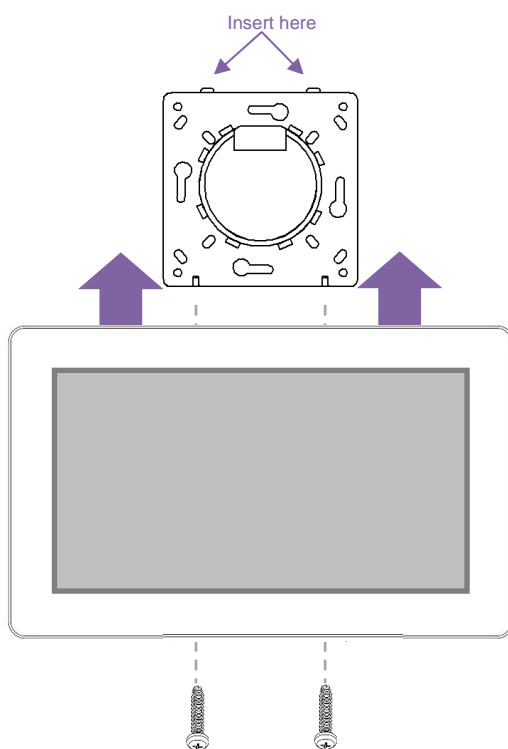


Figure 2 Mounting

## Safety instructions

- The device is only suitable for indoor installation.
- Keep the product away from liquids and moisture.
- Cleaning is possible with a dry duster. Please do not use abrasives or solvents. Avoid contact with liquids.
- The housing is made of glass and metal, contact with sharp-edged objects can damage the display.
- If the device is defective, send it to Lunatone Industrielle Elektronik GmbH. Under no circumstances should the display be opened. Dismantling / disassembling the display can lead to damage and / or injuries.

## Recycling

This product has been designed and manufactured using high quality materials and components that can be recycled and reused.

The device must be disposed of separately from household waste. Please follow the local regulations for the separate disposal of electronic products. The correct disposal of old devices protects our environment.

## Functionality and Features

The DALI-2 Display serves as a universal module for **control** of a DALI system, as well as **set-up and configuration** for version Display 7"plus.

By default, the display shows the **user interface for light control**. The user interface of the DALI display is made up of individual pages (boards) and the operating elements (widgets) on them. (delivery default: exemplary user interface)

**Boards:** Any number of boards (pages) can be created, these can be reached by swiping your finger to the right / left or using a link widget. The length of the board is flexible: with an up / down swipe of your finger, you can navigate up and down.

**Widgets:** Any number of widgets can be created for each board. These can be flexibly arranged on the board.

The user interface can be edited using the pencil symbol at the top right. See section: Editing the user interface on page 10.



Button: edit user interface



Tip: the button „edit user interface“ is not available if password protection was turned on.

The **set-up and configuration menu** can be opened with the menu button at the top right. General settings and DALI device settings can be found there, as well as the board overview and automations (version: 7"plus) Set-up and system configuration see page 7. Board overview and settings see page 9. For automations see page 12 and following.



Menu button

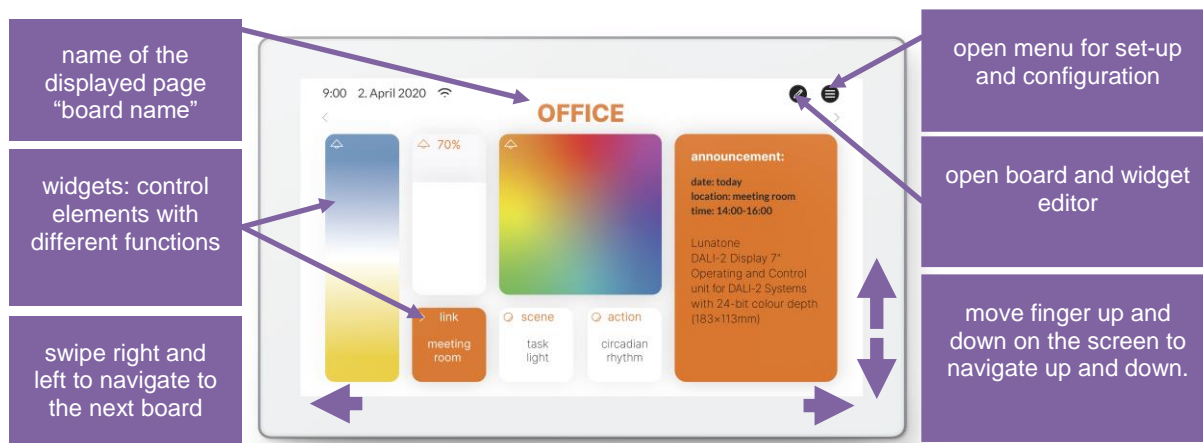



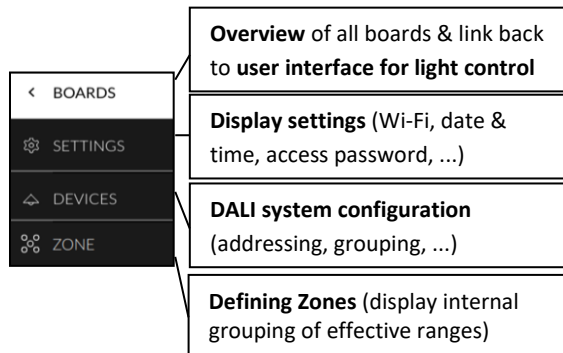
Figure 3 User Interface for Light Control DALI Display 7"

## Set-up and configuration Menu

The configuration menu can be reached via the menu button at the top  right.

The configuration menu contains settings for boards, general settings, and settings for the DALI system.

### Navigation and menu items



### Menu item: Boards

This tab provides an overview of the existing boards and their management.

The pen button at the top right enables the configuration options: renaming, reordering, removing and adding of boards. See section: Boards on page 9.

Clicking on the board tab again will open the interface for light control. Alternatively, clicking on one of the boards, will open the corresponding user interface.

### Menu item: Display Settings

General settings for the display can be made here, see also Figure 4.

- **Save/Load:** saving and loading display boards and widgets.
- **General:**
  - Setting the *name* of the display in the network
  - Information on *firmware version*
  - Setting the system language

- change the percentage displayed for sliders: between *linear percentage* and DALI norm percentage (logarithmic)
- Setting the *screensaver* brightness (in percent) and the timeout it takes effect after
- Settings *night time brightness* (in percent) and the time range
- Settings *night time screensaver* percentage and timeout
- **Date & Time:** setting the time zone, date and time
- **Wi-Fi/Ethernet:** establishing an internet connection and displaying the IP address. To avoid unwanted access by third parties, the device should only be connected to a secure network.
- **Access, Display Passwords:**
  - with enabling "*protect Menu & Board editing*" and entering a password, the access to the configuration menu and editing mode is restricted. The restriction takes effect after the last interaction plus the set time to lock. Access to boards can also be password protected (from firmware version 1.2.0 on) by selecting the respective board in the list
  - with enabling "*long press to Store Scene*" long press on a scene button saves the current lighting status as the selected scene (see also section: "Create scenes" page 13) (Disabling is available from firmware 1.2.0 on)

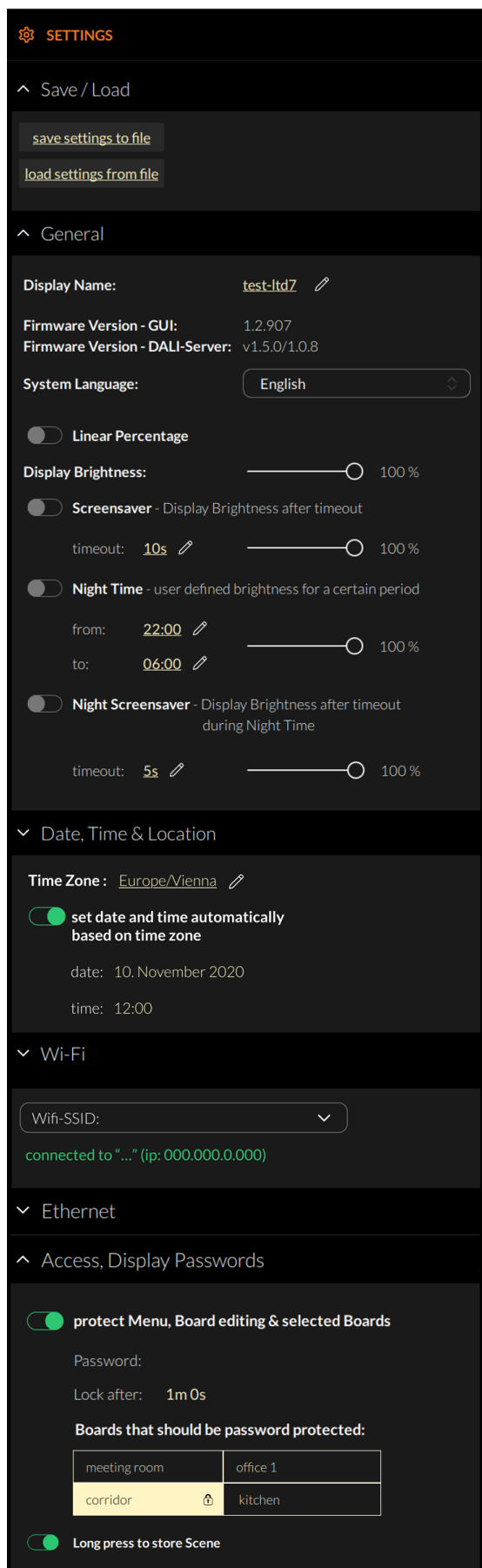


Figure 4 Overview Menu item: Display Settings

## Menu item: Devices

The tab includes set-up and configuration options for the DALI system. Addressed and configured DALI devices of the connected DALI bus are read and listed here.

The DALI Display 7" plus additionally supports addressing/readdressing as well as DALI system extensions.

With the Display 7" plus the devices found can then be grouped.

After the configuration has been completed, the user interface for light control can be created, containing boards and widgets for individual addresses, groups, and scenes.

### Addressing devices:

Select "addressing - search" at the top right (within the menu item "devices").



Function test: The on and off button can be used to test whether all DALI devices are connected. If all devices respond properly, addressing can be continued. If the devices do not respond, please check the DALI bus power supply (not included in the display) and the device wiring.

Available options:

- current device list: loads already addressed DALI bus

additional options for the Display 7" plus:

- New Installation: for new installations or re-addressing; new addressing of all devices on the DALI bus. (devices that already had an address will also get a new address).
- system extension: if devices were added to an existing system; the



existing system keeps its addresses and new addresses will be added.

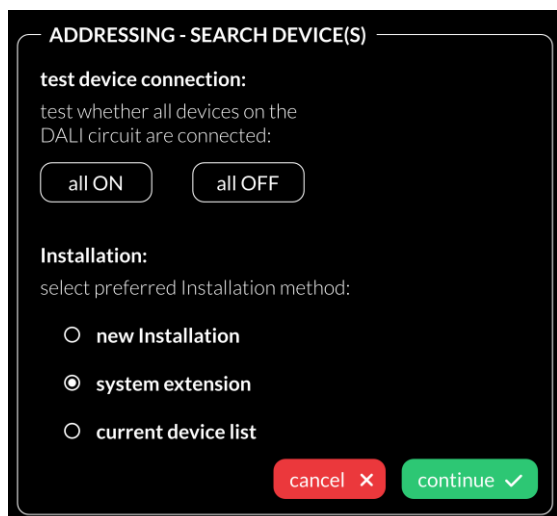


Figure 5 Pop-up addressing, search for devices

After read out/addressing, all devices are displayed in the device list.

**Assign device name:** Click on the respective device name in the device list

**Assign groups:** - Version 7" plus - Click on the respective group entry ("select") in the device list to add the device to the corresponding groups.

**State:** click on the state symbol to switch the respective devices on and off (for easy localization).

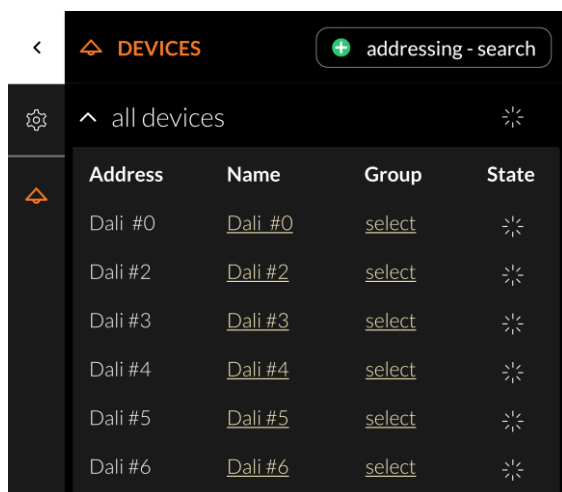


Figure 6 Menu item "Devices"

Further configuration of DALI devices is possible with the DALI Cockpit – see section "DALI Cockpit" page 21.

**DALI supply:** from software 1.10 onwards, if the bus supply fails on a DALI line, after addressing, "no bus supply" is shown in red in the device list and a red dot is shown in the header on the boards.

16:28

For displays with 4 DALI lines ([DALI-2 Display Bus Extension](#)), the addressing registers which DALI lines are in use and the red dot in the header only appears for these lines.

### Menu item: Zones

Firmware Version 1.1.0 and higher


Zones are a grouping of display internal DALI devices similar to DALI groups but without a limitation to 16 and without a limitation of one DALI line in case of a display with multi-line module. The devices in a Zone can consist of any number of devices (single addresses) and already formed DALI groups.

**Attention:** Zones in one display do not necessarily match zones of another display!

Within the display from here on only zones or devices can be selected as destination address (DALI groups are not available).



With this button it is possible to turn the selected devices on/off for review the assigned devices.

Additional zones can be added using the Add-Button: 

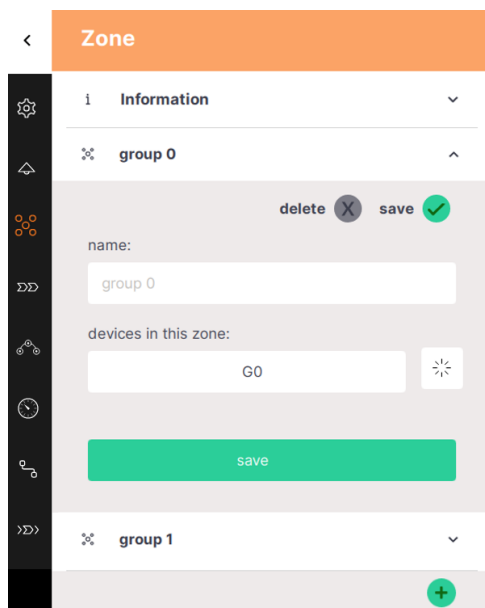


Figure 7 Menu item "Zone"

### Menu item: Links



Display 7" plus - Version 1.2.0 and higher

With Links, DALI commands directed to an address on one DALI line can be forwarded to addresses on one or more other DALI lines. Links can be used with the DALI-2 Display Bus Extension Module (Art. No. 86451848 - [data sheet](#)). Links enable the control of all four DALI lines with any control device (e.g. button) on any of the four DALI lines, by forwarding the commands.

Additional Links can be added using the Add-Button:

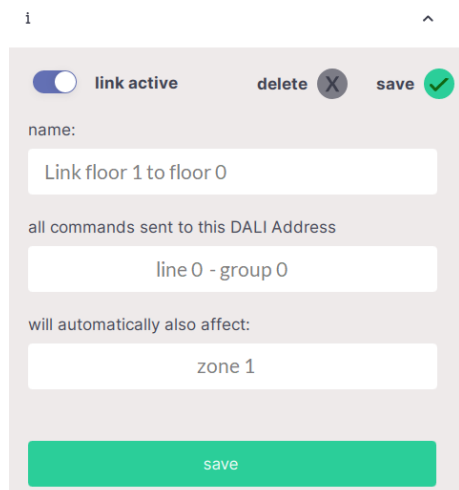


Figure 8 Menu item "Link"

## Edit user interface for light control

The user interface of the DALI Display is made up of individual pages (boards) and the operating elements (widgets) on them.

### Boards

An Overview to all boards can be found in the configuration menu at section BOARDS . To **create, delete, duplicate, or move** a board: select the edit symbol next to the title BOARDS.

- Create new boards -> button at the top left "new board".
- Edit board: click the pencil symbol in the board window: rename, duplicate (including or excluding the widgets) or delete.
- Change the order of the pages: select board (blue highlight) move with drag and drop.

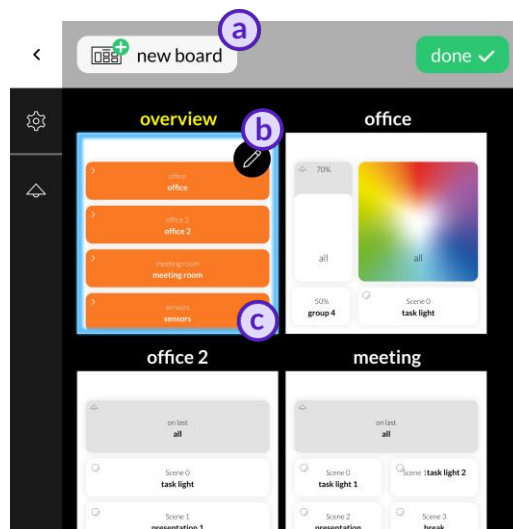
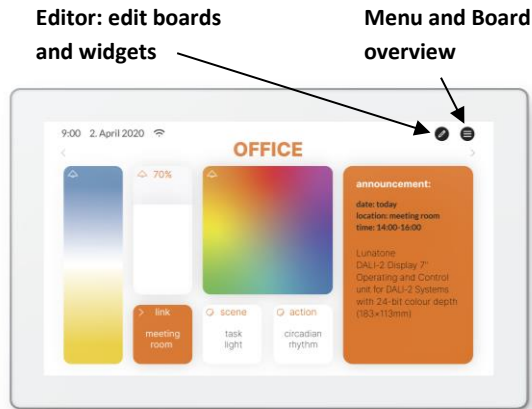


Figure 9 Menu item "Boards"

Close the board setting via the done button: . Return to one of the user interfaces by selecting the respective board.

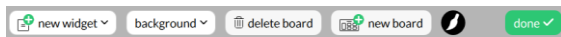


## Editor: Widgets and Background Images

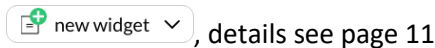
On the user interface: Click on the editor icon:



If the icon is not visible, check the settings in the menu: -> Settings -> Access, Display Passwords -> protect Menu & Board editing.



Widgets can be added:



, details see page 11


or a background image can be loaded:



, details see page 11

boards can be added or deleted:

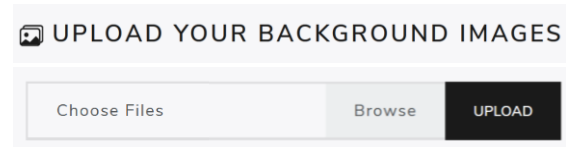


The paintbrush button  enables editing of the board style. Different colours can be assigned to the background and toolbar.

## Load background images

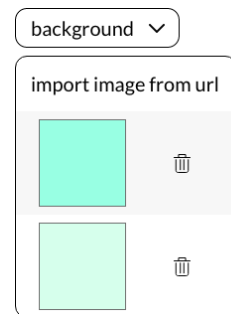
Loading images is possible via the web interface of the display, see section “Web Interface” on page 20.

On the web interface (see section “Web Interface” page 20) select the tab “Uploads” (see also Figure 19) – browse for the image to upload and select the button “upload”.




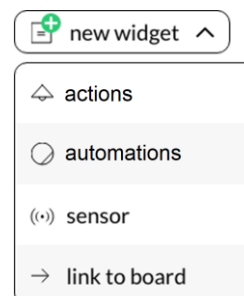
The background image should have the dimensions 1361x1361 and a resolution of 72dpi, RGB.

As soon as the image has been uploaded, it can be accessed on the display by clicking on “background”. An individual background image can be assigned to each board.




## Create a widget

In the user interface for light control: Click on the editor icon:  and select “new widget” and the requested category:



The following widget types are available, see Figure 10, Figure 11, and Figure 12

 The appearance of the widgets is configurable, widgets on your display may look different.

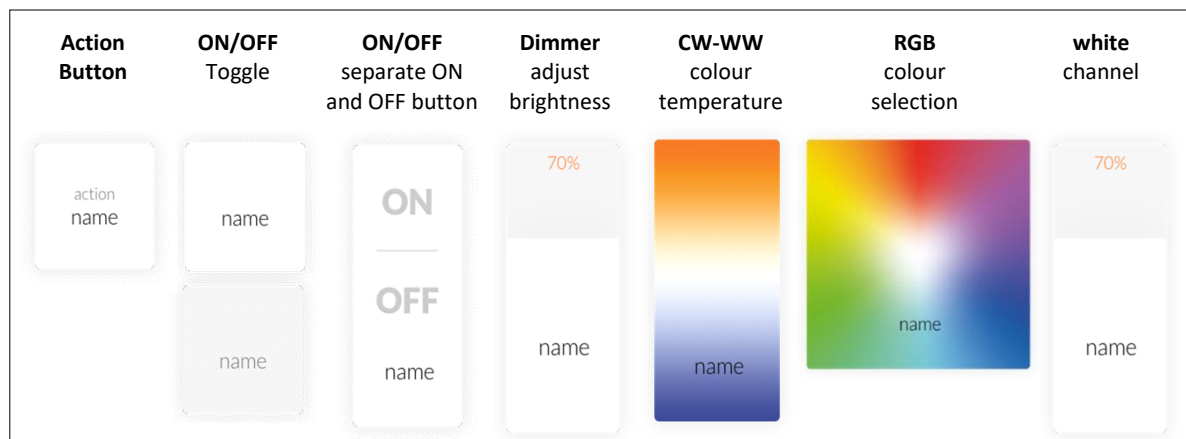


Figure 10 Widgets in category "actions" (including scene widget below)

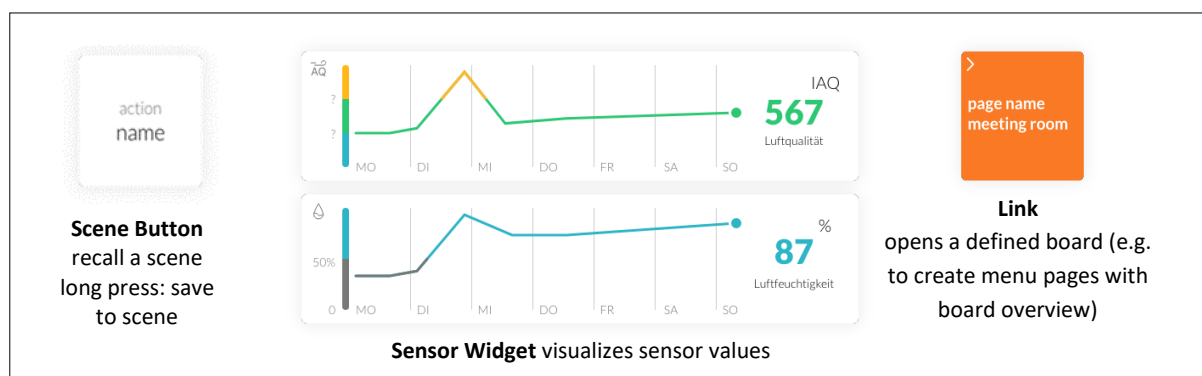


Figure 11 scene widget, sensor widget and link

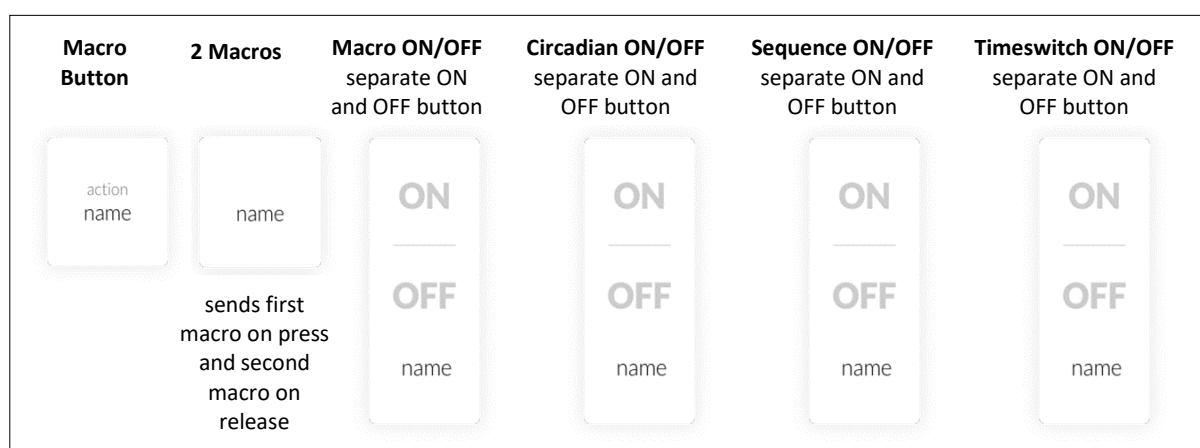


Figure 12 Widgets for automations

The action widgets allow DALI control via light level, go to last active level and scene commands. From Software 1.12 it is also possible to send a fade time alongside the commands.

The brightness slider sends DALI light level commands (unless required fade time should not be added to preserve smooth control). Tuneable white, RGB and White Channel control allow control of DALI DT8 dimmers.

The sensor widget enables the visualization of temperature, air pressure, humidity and air quality. DALI-2 Display 7" internal sensors or external Lunatone DALI-2 CS / DALI-2 CS THP AQ sensors on the DALI line can be selected for visualization.

From software 1.12 on, an offset can be configured, to correct the environmental influences on the sensor value.

The Automation widgets are discussed in each respective automation section

### Dialog box "New Widget"

The screenshot shows the 'New Widget' dialog box with the following elements and numbered steps:

- 1** **name**: A text input field for the widget's name.
- 2** **Devices and Groups associated with this widget**: A section showing 'no devices, no groups' with an 'edit +' button.
- 3** **Widget type**: A dropdown menu currently set to 'Action Button'.
- 4** **Select board**: A section header for board selection.
- 5** **Board: Office**: A dropdown menu currently set to 'Office'.

At the bottom, there are 'Cancel' and 'Ok' buttons.

Figure 13 Pop-up "New Widget"

1. Define the name of the widget,
2. Select the devices and groups to be controlled (define groups: see page 8)
3. Select / change the widget type,
4. Depending on the widget type, further settings can be made e.g. defining an action.
5. Select the board on which the widget should be displayed.

### Edit Widget

On the user interface for light control: click on the editor icon . select the widget to edit:

**Pencil icon:**

- edit (opens dialog box: "create widget")
- duplicate
- delete

**Brush icon:**

- edit style
- copy style
- assign style
- more (more style related options)

With the style: colour and shape of the widgets can be customized.

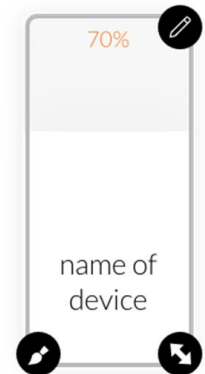
**Arrow icon:**

1. drag the arrow key to change the widget size

### Drag and Drop:

2. hold and move to change the order of the widgets

Edit the next widget or quit the widget editor with the button done:



### Create scenes

The scene widget on the display enables recalling and saving of scenes

A short press of the scene widget recalls the scene.

A long press of the scene widget saves the current light status (brightness, colour temperature, colour) of the effective range as the scene. The following procedure should be followed:

1. Create a scene widget (with the intended scene number and effective range), see also “Create a widget” page 12.
2. Set up the room lighting as desired for the scene (using for example the other widgets on the display).
3. long press the previously created scene widget
4. a pop-up appears to confirm saving of the scene settings.

**Info:** The functionality to save scenes can be blocked in the settings from firmware version 1.2.0. on – see also “Settings” > “Access, Display Passwords”, page 7

## Create Time Switches

Version Display 7"plus - Firmware 0.4.0 and higher

The 7 “plus display enables the creation of time and weekday-controlled commands: time switches. A time switch consists of a function to be executed, the active days of the week and a time stamp (absolute or related to sunrise or sunset).

Time switches can be configured, in the configuration menu

section TIME SWITCH



Additional time switches can be added using the Add-Button:

An entry should be deactivated for editing; from software 1.12 onwards the input fields are locked while the entry is active.

For information on the configuration see Figure 14

### Time Switch Widget

Version Display 7"plus - Firmware 1.2.0 and higher

Created time switches can be activated and deactivated on the configuration page or with a respective widget: when creating a widget (section “Create a widget”, page 11) select widget type: “Toggle Button for Time Switch”– and from the drop down menu select the created time switch.

The screenshot shows the 'Time Switch' configuration screen. It includes a list of existing switches, a 'time switch active' toggle, and a detailed configuration form. Callouts provide the following information:

- activate / deactivate the time switch:** Points to the 'active' status indicator in the list.
- Delete the time switch, save changes:** Points to the 'delete' and 'save' buttons.
- executing devices:** Points to the 'effective range' field.
- Define start and end date – no entry equals: always valid:** Points to the 'start date' and 'end date' fields.
- weekdays the time switch is active:** Points to the 'days active' section with buttons for MON, TUE, WED, THU, FRI, SAT, and SUN.
- Time of day or: hours before or after sunset / sundown:** Points to the 'recall' section, specifically the 'recall method' and 'time of day' fields.
- Command to send: ON (%), OFF, Scene, ...:** Points to the 'function' field.

Figure 14 Configuration of time switches

## Create Circadian Daylight Schedules

Version Display 7"plus - Firmware 0.4.0 and higher

The display 7 "plus enables the creation of circadian daylight schedules.

The circadian daylight control simulates the natural course of daylight by continuously adjusting the colour temperature and brightness. The colour temperature and brightness can be set for each hour. The values are interpolated every minute between these timepoints.


Two courses (one for the longest and one for the shortest day of the year) can be defined. The control system interpolates the values between the two courses over the year, to match the current season.

Circadian daylight schedules can be configured, in the

configuration menu



section CIRCADIAN

Additional circadian daylight schedules can be added using the add-button: 

An entry should be deactivated for editing; from software 1.12 onwards the input fields are locked while the entry is active.

For information on the configuration see Figure 15.

### Circadian Widget

Version Display 7"plus - Firmware 1.2.0 and higher

Created circadian daylight schedules can be activated and deactivated on the configuration page or with a respective widget: when creating a widget (section "Create a widget", page 11) select widget type: "Toggle Button for Circadian"– and from the drop down menu select the created circadian schedule.

## Create Sequences

Version Display 7"plus - Firmware 0.4.0 and higher


The display 7"plus enables the creation of sequences - an automatic playback of commands.

A sequence consists of a series of DALI commands (a maximum of 16), to implement e.g. a sequence of brightness and colour changes (via scenes). Time delays can be set between commands. A sequence can be called once or with repetitions (loop).

Sequences can be configured in the configuration menu



section SEQUENCE

Additional sequences can be added using the add-button: 

An entry should be deactivated for editing; from software 1.12 onwards the input fields are locked while the entry is active.

For information on the configuration see Figure 16

### Sequence Widget

Version Display 7"plus - Firmware 1.2.0 and higher

Created sequences can be started and stopped on the configuration page or with a respective widget: when creating a widget (section "Create a widget", page 11) select widget type: "Toggle Button for Sequences"– and from the drop down menu select the created sequence.



Circadian Daylight Schedule

Information

active

delete

save

circadian active

name:

enter name

effective range:

define range

date shortest day

date longest day

12:00

shortest day

longest day

1 color temperature control

2 color temp. (°K) ▾ 5800 K

3 brightness control

4 brightness ▾ 50 %

06:00 12:00 18:00

8.500

5.200

1.900

100%

50%

OFF

not controlled

Activate/ deactivate circadian daylight schedule

Delete the schedule

Save changes

executing devices

Specification of the longest and shortest day - over the year, the two different courses are interpolated.

if no information is given, only one course is used for the entire year.

Switch between the course of the shortest and longest day.

Switching between timepoints: 0:00 to 23:00

Resulting control course: colour temperature above, brightness below for the shortest or longest day (depending on the selection on the left)

Settings for the selected time point:

1. Colour temperature control: if enabled the colour value is defined for this time point. Else (if disabled) an interpolated value between the last and next actively set colour value is used.

2. Colour temperature: Enter the desired colour temperature (in case of active control)

3. brightness control: if enabled the brightness is defined for this time point. Else (if disabled) an interpolated value between the last and next actively set brightness is used

4. Brightness: Enter the desired brightness (in case of active control)

Figure 15 Configuration of Circadian daylight schedules



**Sequence**

i Information

DD Presentation Sequence

start stop delete save

name: Presentation Sequence

recall options

☒ x repetitions 0

☐ infinite loop

define entries

5. entry

1 entry active

2 recall after: (min:s) 10:00

3 effective range: all

4 function: OFF

	recalled after	range	function
1.	00:00	G0	45 %
2.	00:20	G0	S5
3.	00:30	G2, G4, G5	100 %
4.	01:00	all	S10
5.	10:00	all	OFF
6.	00:00	---	---
7.	00:00	---	---
8.	00:00	---	---
9.	00:00	---	---
10.	00:00	---	---

Start or stop a sequence

Delete the sequence  
Save changes

Number of repetitions of the sequence: 0 to infinity – (loop)

Sequence entry

Settings of the selected sequence entry

- 1) activate / deactivate entry
- 2) add delay to the previous entry
- 3) executing devices
- 4) function/command ON, OFF; Scene, ..

change between entries by selecting the respective entry in the list on the right

Figure 16 Configuration of Sequences

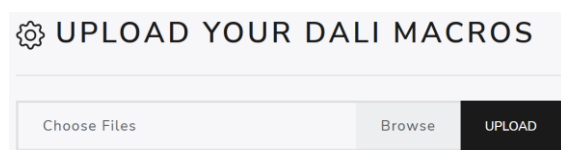
## Macros

### Load Macros

Firmware version 1.2.0 and higher

For the DALI display 7" and the DALI Display 7" plus existing macros from the DALI Cockpit Macro Editor can be uploaded via the web interface of the display, see section "Web Interface" on page 20.

On the web interface select the tab "Uploads" (see also Figure 19) – browse for the macro to upload and select the button "Upload".



Macros to upload can be created in the DALI Cockpit – "DALI Commands.." in the tab: "Commands Over Time" (for more information

see the DALI Cockpit Manual – Section Macros  
[https://www.lunatone.com/wp-content/uploads/2018/03/DALI-Cockpit\\_StartUp\\_Guide\\_Manual\\_EN\\_M0010.pdf](https://www.lunatone.com/wp-content/uploads/2018/03/DALI-Cockpit_StartUp_Guide_Manual_EN_M0010.pdf) )

Uploaded macros can be started and stopped via respective widgets, see section Macro Widget page 18

### Macro Editor

Version Display 7"plus - Firmware 1.2.0 and higher

On the display 7"plus macros can be created and edited directly. Also uploaded macros can be edited.

The macros can be configured in the configuration menu

section MACROS

New macros can be added using the add-button:

An entry should be deactivated for editing; from software 1.12 onwards the input fields are locked while the entry is active.

A macro consists of a series of DALI commands, DALI-2 commands or DALI-2 Event messages. Time delays can be set between commands. A macro can be called once or with repetitions. Depending on the selected DALI function an effective range – devices that are addressed – can be selected. For some DALI configuration commands, no effective range can be set, since they do not address any devices directly. For DALI-2 event messages and DALI-2 commands the DALI-2 address can be set in the function pop up window.

For more information on the configuration see Figure 16 and the example below for a DALI-2 pushbutton instance – event message

*Example: entry function settings for a DALI-2 Event - pushbutton press:*

Figure 17 macro entry function: pushbutton event

Created Macros can be started and stopped on the configuration page or via respective widgets, see next section Macro Widget page 18

## Macro Widget

Firmware 1.2.0 and higher

The uploaded or created macros can be started and stopped on the configuration page or with a respective widget. When creating a widget (section “Create a widget”, page 11) select widget type: “Toggle Button for Macros” or “Action Button for Macros” (from firmware version 1.2.3 on available) – and from the drop down menu select the created or uploaded macro.

With “Toggle Button for Macros” macros can be started and stopped – this option should be used for macros with infinite loops or very long sequences of commands.

With “Action Buttons for Macros” (Firmware 1.2.3 and higher) macros can only be started.

**Macros**

start or stop the macro

delete the macro / save changes

Number of repetitions: 0 (= not repeated) to any selected number

macro runs in a loop

all macro entries – select next entry by clicking on it in the list or with the arrows in the entry settings

**Settings of the selected macro entry**

1. activate / deactivate entry
2. add delay to the previous entry
3. selected devices – executing devices (not available for some commands e.g. DALI-2 events)
4. function/command: DALI commands, DALI-2 commands, DALI-2 event messages

change between entries by selecting the respective entry in the list on the right

**select function**

cancel or confirm changes

**Quick selection** of some common DALI commands

*all these functions can also be set via the detailed selection option -> "DALI Cmd" + according commands*


**Detailed selection – Option "DALI Cmd"**

- > selection: DALI commands, DALI-24bit (DALI-2) commands or DALI Events (DALI-2 Event messages)
- > subsequent drop down menus of all according command options

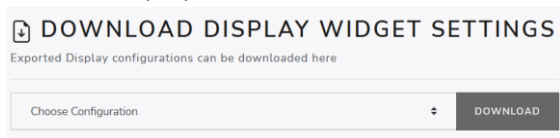
**Quick selection** of DALI Scene Commands

Figure 18 Configuration of Markos

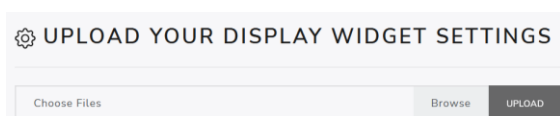
## Save and Load Configuration Files

The display widget configuration can be saved in the display menu  under “Settings” - in the “Save / Load” tab. The widget settings file includes general settings, boards and widgets but not the device list, zones and automations.

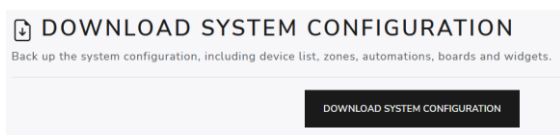
The saved widget settings can be downloaded on the web interface (see section “Web Interface” on page 20) on the tab “Download” e.g., to transfer created display user interfaces to other displays.



The files can be uploaded to a display on the web interface –under the respective display web interface - tab “Upload”.

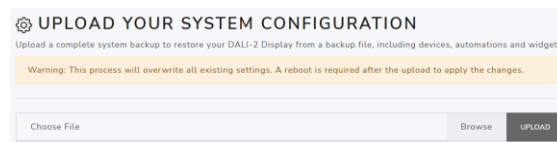


As of software 1.12, the entire display system configuration can be downloaded from the web interface tab “downloads” in addition to the widget settings. This includes all configurations: layout files, zones, devices and automations.



By uploading, the system configuration, on the tab “uploads”, the configuration of one display can be “copied” to another one.

**Attention:** the current settings of the display to which the files are uploaded, will be overwritten.



**Attention: Depending on the system configuration, the download and upload may take several minutes.** Please do not press the download or upload button repeatedly, and do not leave the respective page until the download file is available or until a prompt to reboot the device appears during the upload.

## Web Interface

The display web interface allows uploading images, loading firmware updates, and downloading/uploading display configuration files.

The web interface can be accessed via a web browser, by entering the IP address of the display in the browser.

The network settings and the IP address of the display can be found under “Settings” -> “Ethernet” or “Settings” -> “Wi-Fi”.

The PC, phone or tablet and the display must be in the same network and address range.

The web interface has several tabs - for downloads, uploads and firmware updates see also Figure 19 below.

## Firmware Update

Firmware updates are possible via the web interface of the display, see section “Web Interface” on page 20.

On the web interface on the tab “Firmware update” the firmware update file (.ifu) can be uploaded and the update can be started using the “Upload” button, see also Figure 19.

The update can take up to 15 minutes. After an automatic restart of the display, the update is complete.

**Attention:** The device should only be updated not downgraded, a downgrade will lead to data-loss

**Attention:** With the browser "Microsoft Edge" problems can occur during updates. It is recommended to use a different browser for firmware updates.

The latest software update file can be found [here](#)

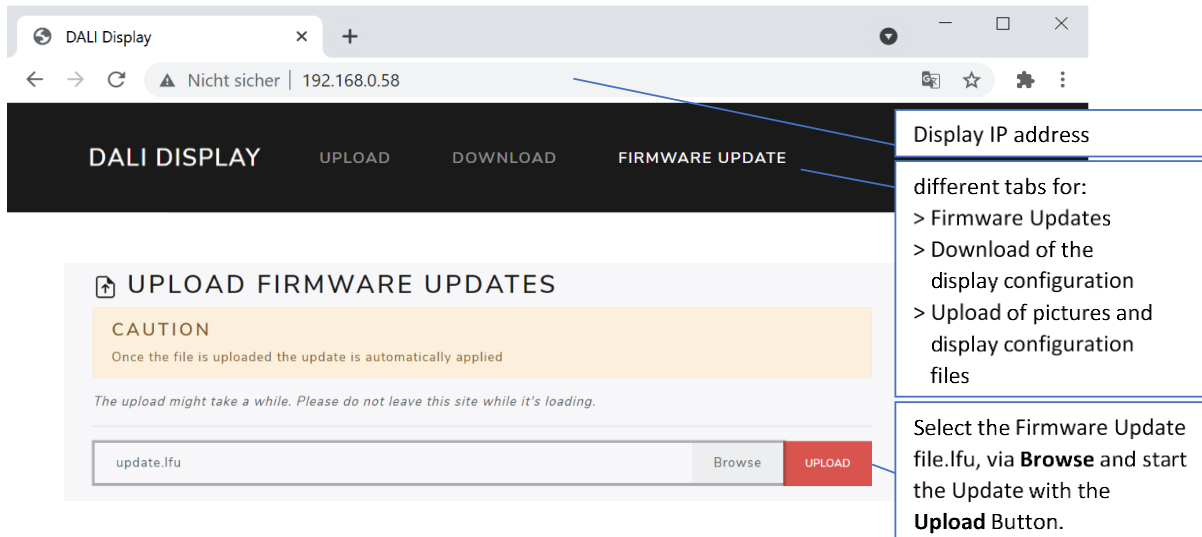


Figure 19 display web interface - tab Firmware Update

## Cloud access

From firmware 1.10 on the DALI-2 Display can be connected to the Lunatone cloud for tunnelling of DALI commands. Cloud support can be requested via [cloudsupport@lunatone.com](mailto:cloudsupport@lunatone.com)

More Information can be found here: <https://www.lunatone.com/en/product/lunatone-cloud-service/>

## DALI Cockpit

Firmware Version 1.2.0 and higher

The DALI-2 Display can be used as a DALI Cockpit Interface (DALI Cockpit Version 1.38 or higher), for configuration of the DALI devices on the connected DALI bus.

The Windows PC from which the DALI Cockpit is used, and the DALI-2 Display need to be in the same local network.

When selecting the DALI bus interface in the DALI Cockpit: choose the option "Network" and "DALI-2 Display, DALI-2 IoT, DALI-2 WLAN" and specify the device's IP address, see Figure 20



If the IP address is not known, the network can be searched for devices using the button next to the IP address input field: ...

The DALI-2 Display interface can then be selected in the DALI Cockpit device tree and allows addressing and configuration of all connected DALI devices, like other interface modules e.g. DALI USB. See also Figure 21

**Warning:** Addressing in the DALI Cockpit should only be either “System Extension” or “Read current device List”! If “new installation” is selected the device addresses are reassigned and the set effective ranges of widgets, zones, automations etc. in the display are no longer correct!

If the DALI-2 Display Plus is connected to a DALI-2 Display Bus Extension module, all 4 lines and their devices are available for configuration in the DALI Cockpit (Version 1.38.60 and higher).

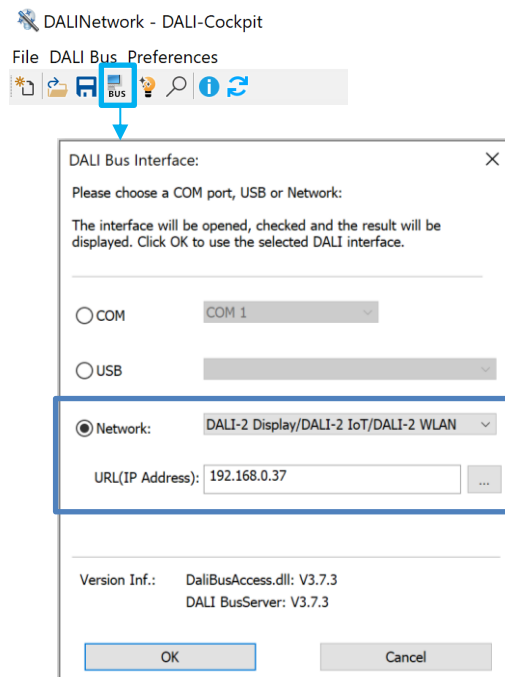


Figure 20 DALI Cockpit – selection of DALI bus interface

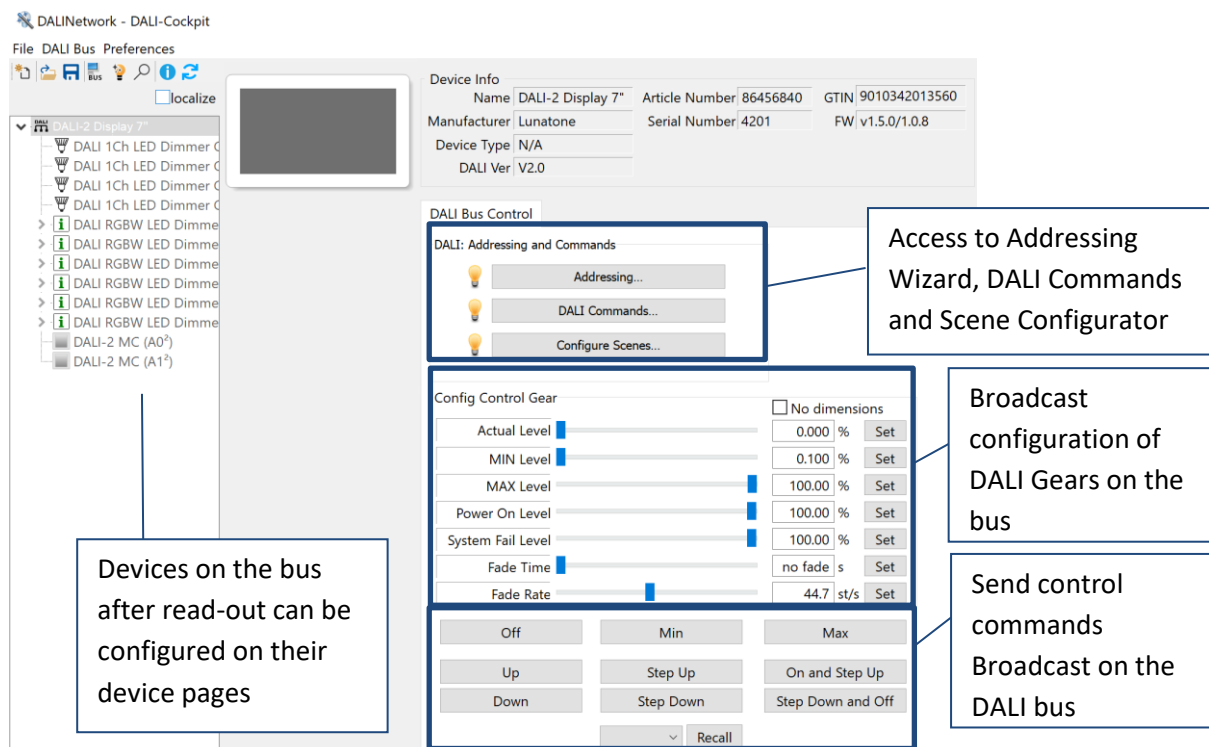


Figure 21 DALI Cockpit – display interface

## Troubleshooting

**Red Dot in the header:** The DALI bus is no longer powered. Clicking on the red dot goes to the device list. This can be used in multiline systems ([DALI-2 Display Bus Extension](#)) to identify the affected line. Check the DALI bus power supply for the respective line.

**Can the display content be rotated for portrait mounting?** No

**Display with DALI-2 Display Bus Extension, which lines to connect and use?** Any number of lines can be connected, it is not necessary to use all 4 lines.

**DALI-2 Display Single or Multimaster:** The DALI-2 Display has a collision detection and is multi master capable, as an interface it does not receive a DALI-2 or DALI address.

**Disable Ping:** The DALI-2 Display sends a ping on the DALI line by default. This can be disabled on the web interface section "General Settings"

**Does the device have a battery?** Yes, there is a battery to keep the time for a short period of time without power. If the device is connected to the internet and "automatic time and date" is activated, it will automatically correct the time according to the set time zone.

**What is the function of the USB port?** The USB port can be used as alternative power-supply of the DALI-2 Display, it is not used for any data-transfer.

**Notification: "Could not read firmware version"** This message can be caused by defect hardware, broken pins (due to wrong mounting) or insufficient power supply of the DALI-2 Display.

**Notification: "Firmware Update failed! Invalid or corrupt file":** Failing firmware

updates are usually caused by incorrect Ifu files and need to be resolved by uploading another software file. Please download the latest software [here](#) and retry the update:

**Notification: "Cannot run addressing on DALI Bus (lines: 1, 2, ...)":** This message is normal in multiline setups ([DALI-2 Display Bus Extension](#)) where one or more lines are disconnected. It can indicate a problem when a line should be connected but is listed in the error message. The affected line probably has an insufficient DALI power supply, a shorted bus, or no power at all. To resolve this error, check the wiring, bus status and power supplies of the respective line.

**Notification: "Scan cancelled (addressing failed)":** An error occurred during addressing of the DALI bus, check for any interference on the DALI bus (e.g. central controls ignoring quiescent mode) and retry the addressing.

**Notification: "Scan cancelled (could not communicate with DALI bus)":** This message occurs when a DALI scan cannot be started due to a communication error on the DALI line. The most likely cause is that no DALI bus is connected. Other possible causes are listed in section below: "Send error on line X"

**Notification: "Send error on line X":**

- **Bus voltage error:** The DALI bus is not powered. Check if the DALI bus power supply is connected and working
- **DALI initialize mode** Another participant on the DALI bus activated the initialize mode. The Initialize mode will be exited once the other participant ends it, or after a 15minute timeout
- **DALI quiescent mode** Another participant on the DALI bus activated the quiescent mode. Quiescent mode will be ended once other participants send the

- command or automatically after 15minutes.
- **Send buffer full** the display interface received too many commands at once. Possibly to many automations, queries and macros are running at the same time. Please wait for some time and try again, if the error persists contact support.
- **Syntax error in parameters:** Please contact support with details on how this error occurred.

## Version Overview

	Display 7" 86456840	Display 7" Plus 86456840-P
customisable user interface	✓	✓
LAN and WLAN	✓	✓
dimming and switching	✓	✓
Tuneable White and RGB colour management	✓	✓
configuration of scenes	✓	✓
configuration of DALI groups	-	✓
create zones	✓	✓
integrated sensors for measurement and visualisation of sensor values such as temperature, air quality, air pressure and humidity	✓	✓
addressing and set-up of DALI systems	-	✓
automation: circadian daylight curves	-	✓
automation: sequences	-	✓
automation: week schedules	-	✓
load cockpit macros	✓	✓
create and edit macros	-	✓
DALI Cockpit interface	✓	✓
Accessory: DALI-2 Display Bus Extension and Links	-	✓

## Emergency Display Plus Versions

DALI-2 Display 7" Emergency plus combines the functionality of the DALI-2 Display 7" plus with the DALI-2 Display emergency - [https://www.lunatone.com/wp-content/uploads/2022/08/86456840-EM\\_DALI-2\\_Display\\_7Inch\\_EM\\_EN\\_D0110.pdf](https://www.lunatone.com/wp-content/uploads/2022/08/86456840-EM_DALI-2_Display_7Inch_EM_EN_D0110.pdf)

**Art.Nr.: 86456840-P-EM-B** (black) and **Art.Nr.: 86456840-P-EM-W** (white)



## Purchase Information

**Art.Nr.: 86456840-W**

DALI-2 Display 7", white  
capacitive touchscreen with 24-bit colour  
depth, control unit for 64 DALI addresses,  
customisable user interface  
white, 178 x 111 x 8mm  
GTIN 9010342013744

**Art.Nr.: 86456840-P-W**

DALI-2 Display 7" plus, white  
capacitive touchscreen with 24-bit colour  
depth, control unit for 64 DALI addresses,  
customisable user interface, advanced  
configuration/control features: addressing,  
circadian control, schedules, sequences,  
white, 178 x 111 x 8mm  
GTIN 9010342013744

**Art.Nr.: 86456840-B**

DALI-2 Display 7", black  
capacitive touchscreen with 24-bit colour  
depth, control unit for 64 DALI addresses,  
customisable user interface  
black, 178 x 111 x 8mm  
GTIN 9010342013751

**Art.Nr.: 86456840-P-B**

DALI-2 Display 7" plus, black  
capacitive touchscreen with 24-bit colour  
depth, control unit for 64 DALI addresses,  
customisable user interface, advanced  
configuration/control features: addressing,  
circadian control, schedules, sequences,  
black, 178 x 111 x 8mm  
GTIN 9010342013751

## Additional Information and Equipment

**Art.Nr.: 24166012-24HS**

**PS 24V**, 300mA – fitting power supply  
[https://www.lunatone.com/wp-content/uploads/2018/03/24166012-24HS\\_PS24V\\_EN\\_D0065.pdf](https://www.lunatone.com/wp-content/uploads/2018/03/24166012-24HS_PS24V_EN_D0065.pdf)

**Art.Nr.: 86451848****DALI-2 Display Bus Extension**

for DALI-2 Display 7" PLUS  
[https://www.lunatone.com/wp-content/uploads/2022/08/86451848\\_Display-Bus-Extension\\_EN\\_D0111.pdf](https://www.lunatone.com/wp-content/uploads/2022/08/86451848_Display-Bus-Extension_EN_D0111.pdf)

Lunatone DALI products

<https://www.lunatone.com/en>

Lunatone Datasheets and Manuals

<https://www.lunatone.com/en/downloads-a-z/>

DALI Cockpit - free configuration software  
for DALI systems

<https://www.lunatone.com/en/product/dali-cockpit/>

## Contact

Technical Support: [support@lunatone.com](mailto:support@lunatone.com)

Requests: [sales@lunatone.com](mailto:sales@lunatone.com)

[www.lunatone.com](http://www.lunatone.com)



## Disclaimer

Subject to change. Information provided without  
guarantee. The datasheet refers to the current delivery.

The function in installations with other devices must be  
tested for compatibility in advance.