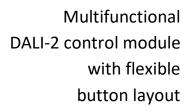
# **DALI-2 Touchpanel 04**

### Datasheet Multi Control Module



### Art.Nr. 24035290-G\_\_\_

Various DALI-2 Touchpanel Layouts: Art. Nr.: G000 unprinted glasses Art.Nr.: G10A (Dimming, 4 Scenes, 4 Groups) Art. Nr.: G11A (Dimming, 4 Scenes, Tunable White, 4 Groups) Art. Nr.: G12A (Dimming, 4 Scenes, Tunable White, 4 Target selection Buttons) Art. Nr.: G13A (Dimming, 4 Scenes, Colour RGB, 4 Groups) Art. Nr.: G14A (Dimming, 4 Scenes, Colour RGB, 4 Target selection Buttons)

#### Overview:

https://www.lunatone.com/wp-content/uploads/2020/11/DALI-2-Touchpanel-Layouts EN.pdf

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# DALI-2 Touchpanel 04 Multifunctional Control Module

### Overview

- multifunctional control module for DALI and DALI-2 systems
- multi-master capable: Several modules can be installed within a DALI circuit and / or a DALI group.
- capacitive touch interface
- up to 16 configurable keys
- 4 led lights configurable as indicators for selected groups or scenes
- Palm detection for fast control
- standard layouts and factory settings • for easy installation without configuration
- flexible layout individual design layout exchange on site. Additional glass inserts with different prints available as accessories.
- easy configuration via Lunatone DALI USB interface and DALI-Cockpit Software Tool
- touch interface material: glass
- plastic frame (RAL 9016) aluminium frame and customerspecific frame colours upon request
- integrated DALI-2 application controller

- application controller: direct control of DALI devices
- in addition to the standard DALI commands, the application controller also supports DALI DT8 TC and RGB (W) control as well as macros
- Instance-mode: Easy integration through 16 DALI-2 pushbutton instances and 5 DALI-2 analogue instances (slider)
- easy installation on a flush-mounted installation box
- the module is supplied by the DALI bus – no additional power supply necessary
- version with integrated DALI power supply available ("-PS")
- equivalent version without LED lights: **DALI-2 Touchpanel 03**
- DALI-2 control unit according to IEC62386-103

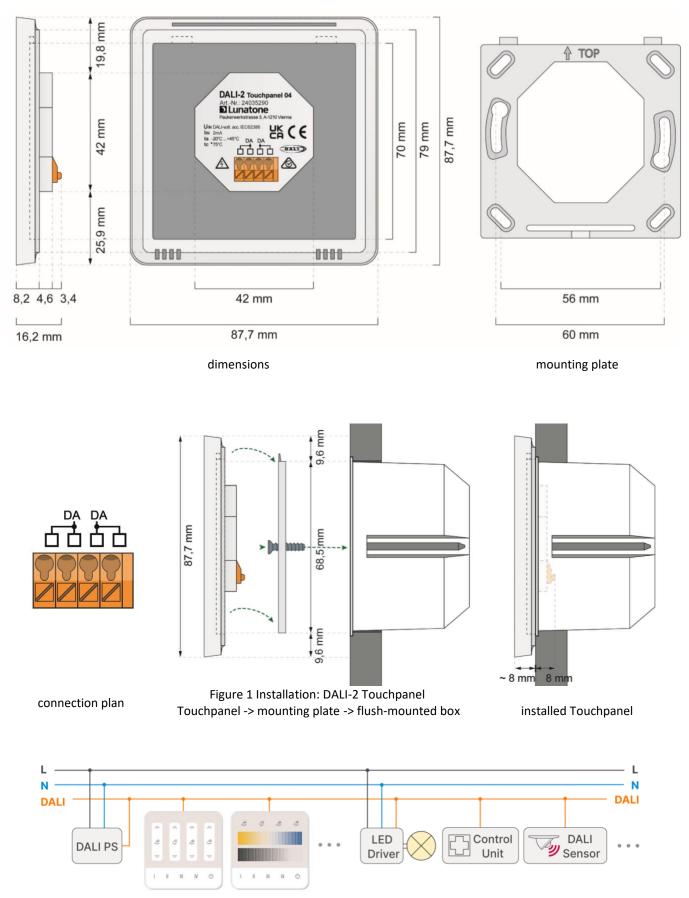


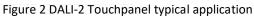


| Туре           | DALI-2 Touchpanel |
|----------------|-------------------|
| article number | 24035290          |
| GTIN           | 9010342013089     |

### Specification, Characteristics

| terminal markings                        | DA, DA                                       |  |
|--|--|--|
| voltage range                            | 9,5V 22,5Vdc according to IEC62386           |  |
| typical current consumption DALI (16,5V) | 2 mA   |  |
| DALI addresses                           | 0  |  |
| DALI-2 addresses                         | 1  |  |
| Insulation data:                         |  |  |
| impulse voltage category                 | ll   |  |
| pollution degree                         | 2  |  |
| rated insulation voltage                 | 250V   |  |
| insulation DALI / mains                  | reinforced isolation                         |  |
| insulation test voltage DALI / mains     | 3000Vac                                      |  |
| environmental conditions:                |  |  |
| storing and transportation temperature   | -20°C +75°C                                  |  |
| operational ambient temperature          | -20°C +45°C                                  |  |
| rel. humidity, not condensing            | 15% 90%                                      |  |
| general data:                            |  |  |
| dimensions (I x w x h)                   | 87,7mm x 87,7mm x 16,5mm                     |  |
| mounting                                 | back box installation                        |  |
| material                                 | touch-interface: glass, frame: plastic       |  |
| expected life time                       | 100.000h                                     |  |
| Protection class                         | II (when used/installed as intended)         |  |
| protection degree housing                | IP40   |  |
| protection degree terminals              | IP20   |  |
| Operating modes                          | Application Controller, DALI-2 Instance mode |  |
| terminals:                               |  |  |
| connection type                          | spring terminal connectors                   |  |
| wire size: solid core                    | 0,5 1,5 mm² (AWG20 AWG16)                    |  |
| wire size: fine wired                    | 0,5 1,5 mm² (AWG20AWG16)                     |  |
| wire size: using wire end ferrule        | 0,25 1 mm²                                   |  |
| stripping length                         | 8,5 9,5 mm / 0,33 0,37 inch                  |  |
| tightening/ release of wire              | push mechanism                               |  |
| standards:                               |  |  |
| DALI                                     | IEC62386-101:2014 IEC62386-103:2014          |  |
| EMV                                      | EN 61547<br>EN 50015 / IEC CISPR15           |  |
| safety                                   | EN 61347-2-11<br>EN 61347-1                  |  |
| Markings                                 | DALI-2, CE, UKCA, RCM                        |  |



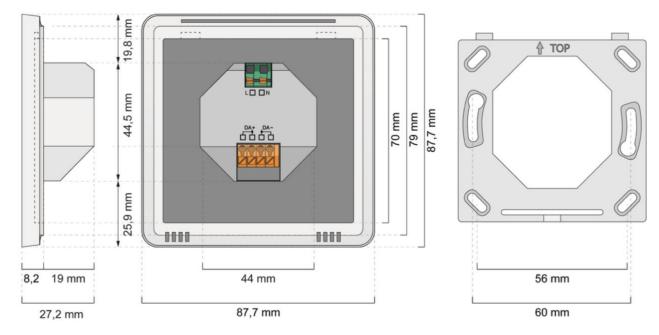


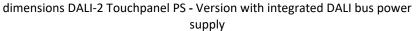
# Specification, Characteristics – DALI-2 Touchpanel PS: Version with integrated Bus Power Supply

Version with integrated bus power supply (70mA). If not stated otherwise in the table below all information for standard version applies – all DALI-2 Touchpanel versions are available with integrated power supply 70mA.

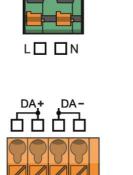
| type                               | DALI-2 Touchpanel-PS  |  |
|------------------------------------|-----------------------|--|
| article number                     | 24035290 <b>-PS</b>   |  |
| input L,N                          |                       |  |
| input type                         | supply, mains-voltage |  |
| markings                           | N, L                  |  |
| input voltage range                | 230V AC               |  |
| max. input supply current          | 17 mA                 |  |
| Input supply frequency             | 50Hz / 60Hz           |  |
| power consumption max.             | 2W                    |  |
| start-up time                      | <250ms                |  |
|                                    |                       |  |
|                                    |                       |  |
| output DA+, DA-                    |                       |  |
| output type                        | DALI                  |  |
| markings                           | DA-, DA+              |  |
| output voltage range               | 12Vdc 20,5 Vdc        |  |
| guaranteed DALI supply current     | 70mA                  |  |
| max. DALI supply current           | 80mA                  |  |
| Open circuit proof                 | yes                   |  |
| Short circuit proof                | yes                   |  |
|                                    |                       |  |
| insulation data                    |                       |  |
| Impulse voltage category           |                       |  |
| Pollution degree                   | 2                     |  |
| Rated insulation voltage           | 250V                  |  |
| Rated impulse withstanding voltage | 4 kV                  |  |
|                                    | reinforced isolation  |  |
| Insulation DALI / mains            |                       |  |

| 88mm x 88mm x 39mm |
|--------------------|
|                    |

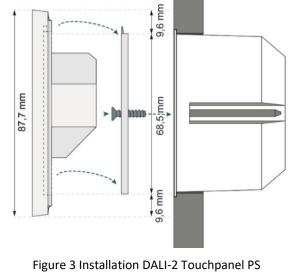




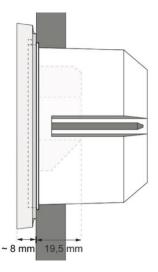
mounting plate



connection plan DALI-2 Touchpanel PS



Touchpanel -> mounting plate -> flush-mounted box



installed Touchpanel

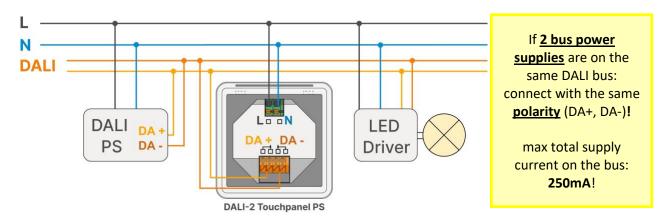


Figure 4 installation example DALI-2 Touchpanel PS with an additional DALI PS on the DALI bus

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### Installation

- The DALI-2 Touchpanel is directly connected and supplied by the DALI bus. A DALI bus power supply (e.g., DALI PS) is required, no additional power supply is needed.
- DALI-2 Touchpanel PS: includes a DALI bus power supply (70mA). If 2 or more bus power supplies are connected on the same DALI bus, they need to be connected with the same polarity. (marked with DA+, DA-), see Figure 4, page 6.
- It is possible to connect multiple DALI PS on a DALI line, but **the sum of all maximum supply currents must not exceed 250 mA!**
- DALI-2 Touchpanel (and DALI-2 Touchpanel PS with no additional DALI PS): 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 realized 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.

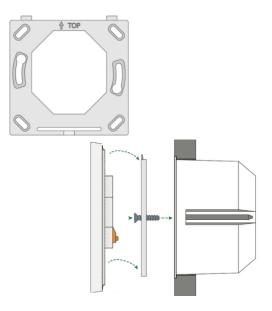
- Attention: The DALI-signal is not classified as SELV circuit (Safety Extra Low Voltage). Therefore, the installation regulations for low voltage apply.
- The voltage drop on the DALI line must not exceed 2V at maximum length (300m) and maximum bus load (250mA).

### Wall Mounting

The DALI-2 Touchpanel can be attached to an electrical socket using a mounting plate (included), see also Figure 1 on page 4 and Figure 3 on page 6

First the mounting plate is attached to the electrical socket, paying attention to the orientation - Marking: TOP.

Then the DALI touch panel can be hooked in from the top and fixed with the screw on the bottom.



### Addressing and Configuration

- After installation, the device can already be used with the default factory settings.
- Addressing and changes to the factory settings, such as setting the effective range and functions, are possible with the Software tool DALI Cockpit (Windows PC).
- When using the DALI-Cockpit Software, the PC must be connected to the DALI bus via a suitable interface module (DALI USB, DALI 4Net, DALI SCI RS232). The DALI-2 Touchpanel is automatically recognised by the DALI Cockpit during the addressing process and listed in the device overview.
- The addressing is done according to the DALI-2 specification and the device receives a corresponding address.
- For localisation a buzzer is integrated in each DALI-2 Touchpanel. Alternatively, the allocation can also be done via the serial number of the device.

### **Touch Panel Layout**

The DALI-2 Touchpanel is equipped with an interchangeable glass with layout print as user interface.

An overview of the Lunatone standard layouts can be found in section "Standard Layouts and Factory Settings" on page 16.

The devices are delivered with the ordered layouts. Also, customer-specific designs can be realized. Design templates can be found at: <u>https://www.lunatone.com/en/produkt/dali-2-touchpanel/</u>.

The User Interface can be adapted to the respective needs using standard graphics software. On request, it is also possible to use a glass without print and paper inserts (size of the inserts: 86.4mm x 86.4mm).

Thanks to the interchangeable user interface, the touch panel offers customer-specific flexibility and can be adjusted to any application.

The exchange of the layout is carried out by pressing on the upper edge – pushing the frame down, away from the glass, see Figure 5.

Additional glasses are available as accessories. Both standard and custom designs can be ordered from Lunatone.



Attention: If the position of the buttons does not match after changing the layout, the configuration also needs to be adjusted (DALI Cockpit Software).

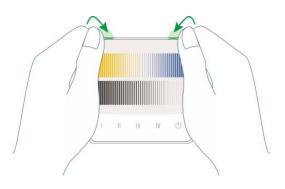


Figure 5 pressure points to exchange the glass

### **Operation and Function**

The DALI-2 Touchpanel is a universal module to control DALI compatible luminaries.

Each DALI-2 Touchpanel layout can implement up to 16 buttons. The function of each button can be configured individually.

The DALI-2 Touchpanel 04 includes 4 backlight LED which can be configured to indicate the latest group, scene or the state of the effective-range selection function BF35. The configuration is described in detail in section LED light indicators on page 16.

On delivery the buttons are preconfigured, matching the inserted layout.

If the design is changed, the button configuration should be adapted accordingly.

As with other Lunatone control devices, the settings can be changed with the DALI Cockpit Software tool.

In the DALI Cockpit device overview existing configurations can be saved or loaded by right-clicking on the device, using "Export device settings ..." or "Import device settings ..." accordingly, see Figure 6. All Lunatone standard layout configuration files and descriptions can be found under: <u>https://www.lunatone.com/en/produkt/dali-</u> <u>2-touchpanel/</u>

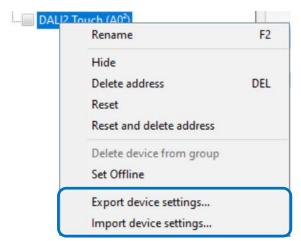


Figure 6 import or export device settings

With the DALI Cockpit Software tool, existing settings can be adjusted to fit the application e.g. number of buttons, button functions, effective range, etc. see.Figure 7 and Figure 8.

| device information                               |                |                                |   |
|--|----------------|--------------------------------|---|
| Device Info                                      |                |                                |   |
| Name DALI2 Touch                                 | Article Number | 24035410                       | GTIN 9010342013089  |
| Nanufacturer Lunatone                            | Serial Number  | 27340                          | FW 1.1  |
| Device Type -                                    | Туре           | Control Device                 |   |
| DALI Ver V2.0                                    | Short Address  | (A0 <sup>2</sup> ) DALI2 Touch | ✓ Set   |
| General Application Instances Device Description |                |                                | settings for DALI-2                                       |
|  |                |                                | instances   |
| DALI2 Touch General Properties                   |                |                                | settings for the<br>Touchpanel<br>application controller  |
| Beeper   |                |                                | Optional description /<br>information about the<br>device |
| DALI-2 Control Device Parameters                 |                |                                |   |
| Application Controller Enable                    | Ð              |                                | enable/disable button                                     |
|  | (i)            |                                | sound   |
| Power cycle notification Enable                  | U              |                                |   |

Figure 7 general settings – DALI Cockpit

# It is necessary to distinguish between application controller and DALI-2 instances.

**The application controller** gives direct DALI control commands that are immediately executed by the DALI drivers.

**The DALI-2 instances** generate event messages that are interpreted and processed by higher-level control units (WAGO, Beckhoff, LUNATONE DALI-2 KNX gateway). General information on the DALI-2 instance mode:

### https://www.lunatone.com/en/dali-2factsheet/ section: DALI-2 Instancemode

The application controller and instance event messages can be active at the same time.

### Additional Information: A

<u>deactivated</u> Application Controller is indicated in the DALI Cockpit device tree with: <sup>(Δ)</sup>.

A device with <u>active</u> instances is indicated with: <sup>1</sup>

| preview: layout<br>picture, button<br>positions, touch area |  | show/hide the layout<br>picture / touch area in<br>the preview (top left)   | load a layout image<br>for reference (preview<br>on the top left) |
|---|--|---|---|
| 7 8 9<br>4 5 6<br>1 2 3                                     | Device Info<br>Name DALI2 Touch<br>Manufacturer Lunatone<br>Device Type -<br>DALI Ver unknown<br>General Application Instances<br>Add new button | Article Number 24035465<br>Serial Number 100<br>Type Control Device<br>Short Address (A0 <sup>2</sup> ) DALI2 Touch | GTIN 9010342013089<br>FW 0.0                                      |
| settings for each<br>button (max. 16<br>buttons)            | Button 1 Button 2 Button 3 Button<br>Button Center X [%]: 10 +<br>Button Center Y [%]: 90 +  | Button Width [%]: 30 -<br>Button Height [%]: 30 -   | n 8 Button 9<br>Delete Button                                     |
| button positions  | Destination Addresses 1: All (DALI Broadcast) ~  | · · · · ·   |   |
| effective range   | 2: none ~<br>3: none ~<br>4: none ~  | 9<br>9<br>9   |   |
| button function   | Function:<br>BF1 - Pushbutton: sends CmdX  |   |   |
| DALI command/<br>function                                   | Command X  | Cmd   |   |
|   | GOTO SCENE 0   | ∼ Fade  | time<br>used ~  |

Figure 8 Application: Application Controller

### **Button position**

To adjust the button positions, a reference picture can be added to the preview on the top left corner of the Cockpit Window (Figure 8 "Add picture"). Supported image formats: bmp, jpg, png, gif, tif, tiff, emf.

The positions of the buttons are defined by 4 parameters:

Button Centre X in %Button Width X in %Button Centre Y in %Button Height Y in %

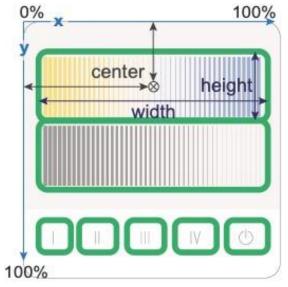


Figure 9 Button positions (indicated in green)

#### 12

#### Destination address / effective range

In the section "destination addresses" it is possible to define which devices are affected by the button function. Possible destination addresses:

- Broadcast (an alle)
- DALI group (0 15)
- DALI single address (0 63)

Up to 4 different target addresses can be defined for each button. When the button is pressed the target addresses 1 to 4 will be processed sequentially (see Figure 10)

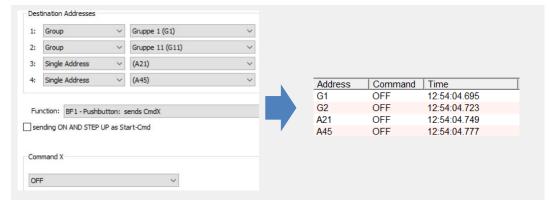


Figure 10 Example: Addressing Inputs 1-4 – sequentially processed

#### **Button Function (BF)**

Various "Button Functions" (BF) can be assigned to the individual buttons. The "Button Function" defines the behaviour of a button. A short or long press of the button can trigger different DALI commands. A toggle function (switching between on and off) is also possible.

For the DALI-2 Touchpanel following "Button Functions" are available, see Figure 11

| BF0 - no action  | ~ |
|--|---|
| BF0 - no action  |   |
| BF1 - Pushbutton: sends CmdX   |   |
| BF2 - Pushbutton: CmdX on short press, CmdY on long press                              |   |
| BF3 - Pushbutton: CmdX on short press, CmdY on extra long press                        |   |
| BF4 - Toggle button: CmdX/CmdY toggles with every press                                |   |
| BF5 - Toggle button: CmdX/CmdY depending on actual Light Level                         |   |
| BF6 - Dim button: CmdX/CmdY/UP/DOWN depending on actual Light Level                    |   |
| BF7 - Switch: CmdX to switch ON, CmdY to switch OFF                                    |   |
| BF8 - Changeover switch: CmdX/CmdY depending on actual Light Level                     |   |
| BF9 - Staircase control: CmdX and after the delay CmdY                                 |   |
| BF10 - Pushbutton: CmdX on short press and release, CmdY on long press with repetition |   |
| BF11 - Pushbutton with repetition: sends CmdX, repeats CmdY                            |   |
| BF13 - TW DimButton: CmdX/CmdY/COOLER/WARMER   |   |
| BF16 - DAP Circle  |   |
| BF17 - Scene Circle  |   |
| BF18 - Colour temperature Circle   |   |
| BF19 - RGB Circle  |   |
| BF20 - Slider  |   |
| BF21 - Slider Tc   |   |
| BF22 - Slider RGB  |   |
| BF27 - Colour Slider RED   |   |
| BF28 - Colour Slider GREEN   |   |
| BF29 - Colour Slider BLUE  |   |
| BF30 - RGBW Touch Area   |   |
| BF35 – Switch Destination Address  |   |

Figure 11 DALI-2 Touchpanel button functions

Key presses (short / long) are queried according to the timing diagram in Figure 12 Key Events and translated into internal signals (key events).

The following table (Table 1) shows how the selected "Button Function" (lines 0 to 13)

sends the commands **CmdX** and **CmdY** in connection with the "Key Events" (Figure 12). CmdX and CmdY refer to DALI commands.

**Note**: The DALI commands are transmitted to all assigned addresses.

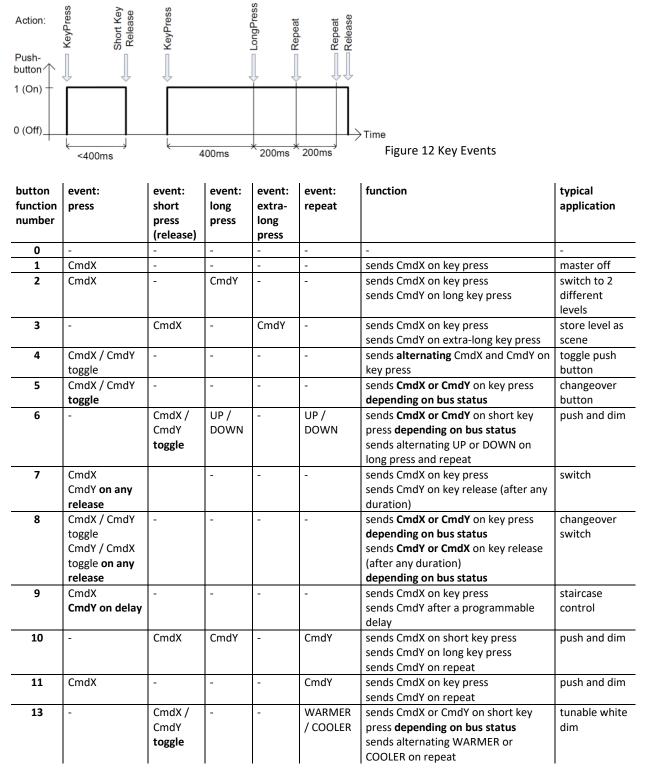
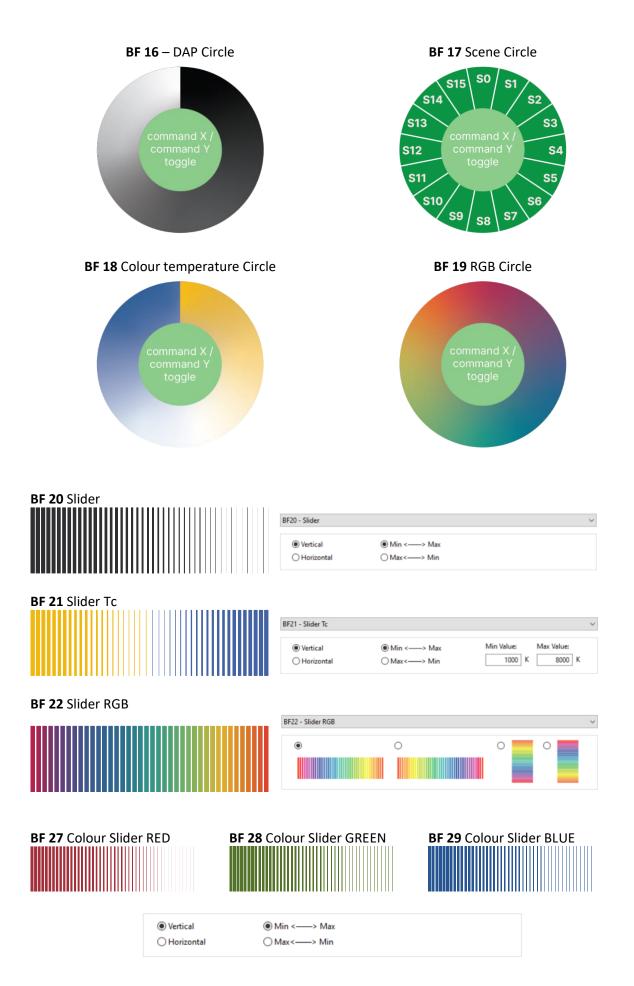


Table 1



| BF 30 RGBW Touch Area |                        |   |   |   |   |
|-----------------------|------------------------|---|---|---|---|
|                       | BF30 - RGBW Touch Area |   |   |   | ~ |
|                       | ۲                      | 0 | 0 | 0 |   |
|                       |                        |   |   |   |   |

#### **BF 35**: Switch destination Address:

| BF35 – Switch Destination Address | ;                    |        | ~ |
|-----------------------------------|----------------------|--------|---|
| Original Button Destinations      |                      |        |   |
| Alternative Destination           | All (DALI Broadcast) | $\sim$ |   |
| 0                                 |                      |        |   |

When a button is selected with this function, the effective ranges of all other keys on the touchpanel are switched to the specified effective range.

A button with BF35 and the selection "Original Button Destination" restores the effective ranges of the individual buttons.

With the DALI-2 Touchpanel 04 the state of a switched destination address can be shown via the LED light indicator, see section LED light indicators, page 16

#### Commands

The actual action, i.e. which function is triggered when pressing a button is determined by the button function and command assigned to the button. For button function 1-13, in most cases, an X command (CmdX) and also a Y command (CmdY) can be selected.

| Command X        |   |
|------------------|---|
| RECALL MAX LEVEL | ~ |
| Command Y        |   |
| OFF              | ~ |

The following options are available:

| Command name | action / function            |
|--------------|------------------------------|
| None         | no command is sent           |
| DIRECT ARC   | direct arc power – set light |
| POWER        | level in %                   |
| OFF          | off                          |
| UP           | dim up (using fade rate)     |
| DOWN         | dim down (using fade rate)   |
|              | increases light level by one |
| STEP UP      | increment                    |
|              | decreases light level by one |
| STEP DOWN    | increment                    |
| RECALL MAX   | recalls MAX value            |

| RECALL MIN     | recalls MIN value            |
|----------------|------------------------------|
|                | decreases light level by one |
| STEP DOWN AND  | increment, if value at MIN   |
| OFF            | switch off                   |
|                | increases light level by one |
| ON AND STEP UP | increment, if OFF switch on  |
|                | DALI-2-Cmd for switching     |
| GOTO LAST      | on to the last active level  |
| ACTIVE LEVEL   | (Memory-Function)            |
| (DALI 2)       | (Firmware 2.0 and up)        |
| GO TO SCENE    | go to scene 0-15             |

Table 2

Depending on the selected command, additional input fields might appear for further settings, see Figure 13.

| Command X         | the balance of the | n de vere   |        |
|-------------------|--------------------|-------------|--------|
|                   | Light Level:       | Fade time   |        |
| Light Level (DAP) | ~ 100 %            | [1] 0.7 sec | $\sim$ |

| Figure 13 additional | settings to a DALI comma | nd |
|----------------------|--------------------------|----|
|----------------------|--------------------------|----|

#### **Predefined macros**

Macros are predefined/ user defined command sequences that can be triggered by a single command.

The following macros are available:

| Nr  | Macro                                  | Function   |
|-----|--|--|
| M1  | Go Home                                | Light dims down to DAP 0 with<br>predefined fade time, then fade<br>time is set back to a<br>programmable value                                    |
| M2  | Sequential<br>Scenes                   | A list of the scenes can be<br>defined; the scene is switched<br>with each button press.   |
| M3  | Dynamic<br>Scenes                      | A dynamic sequence of up to 16<br>scenes can be defined, including<br>custom fade times and delays.  |
| M4  | Save actual<br>light level<br>as scene | When triggered the current level<br>is saved in a scene (options: light<br>level, RGB colour value, WAF<br>colour value or colour<br>temperature). |
| M5  | User<br>Defined<br>Cmd-List            | A user-defined macro script with up to 19 commands is executed.  |
| M6  | TC cooler                              | Activates the DT8 mode and sends the command "COOLER" 3 times.   |
| M7  | TC warmer                              | Activates the DT8 mode and<br>sends the command "WARMER"<br>3 times.   |
| M8  | Send RGB +                             | Activates the DT8 mode and sends an ascending RGB colour table value.  |
| M9  | Send RGB -                             | Activates the DT8 mode and sends a descending RGB colour table value.  |
| M10 | Delayed Off                            | Sends a DAP level and after a delay the OFF command. DAP level and delay are user defined.   |

Table 3

#### **LED light indicators**

On the top row of the DALI-2 Touchpanel 04, 4 LEDs are available for configuration.

| Device LEDs                       | <i>i</i> )       |
|-----------------------------------|------------------|
| Bus status indication – scene     | LED 1: Scene 1 V |
| O Bus status indication – group   | LED 2: Scene 2 V |
| 5 j j                             | LED 3: Scene 3 v |
| O Destination address button BF35 | LED 4: Scene 4 v |
|                                   |                  |

On the left the main functionality selection is made:

- Bus status indication scene: the LED lights up when the configured scene (0-15) is seen Broadcast on the DALI bus, (sent from the DALI-2 Touchpanel itself, or any other control device).
- Bus status indication group: the LED lights up when a DALI control ON command to the configured group (0-15) is seen on the DALI bus (sent from the DALI-2 Touchpanel itself, or any other control device). The LED turns off when an OFF command is sent to the respective group.
- Destination address button BF35: the respective button number of the DALI Touchpanel can be configured. Thereby the LED light up to indicate that a destination address change is active (BF35, see also section Button Function (BF) – BF35).



Figure 14 example LED indication 4 groups active

#### **Palm Control**

The first tab on the button tab allows configuration for light control when placing the whole hand on the DALI-2 Touchpanel.

| Palm         | Control     | Button 1     | Button 2   | Button 3  | Button 4 | Button 9 | • | • |
|--------------|-------------|--------------|------------|-----------|----------|----------|---|---|
|              | P           | alm Contro   |            |           |          |          |   |   |
| Dest         | tination Ad | dresses      |            |           |          |          |   |   |
| 1:           | All (DAL    | I Broadcast) | $\sim$     |           |          |          | / |   |
| 2:           | none        |              | $\sim$     |           |          |          | 1 |   |
| 3:           | none        |              | $\sim$     |           |          | ×        | 1 |   |
| 4:           | none        |              | $\sim$     |           |          |          | / |   |
| Funct<br>BF1 |             | itton: senc  | ls CmdX    |           |          | ,        | ~ |   |
| se 🗌         | nding O     | N AND ST     | EP UP as S | itart-Cmd |          |          |   |   |
| Cor          | nmand >     | (            |            |           |          |          |   |   |
| RE           | CALL MI     | N LEVEL      |            | ~         |          |          |   |   |

Palm control allows fast light control by placing the entire hand on the DALI-2 Touchpanel. Following buttons functions are available for palm control.

- BF0 no action deactivate palm control •
- BF1 Pushbutton: sends CmdX
- BF4 Toggle button independent of Bus • status
- BF5 Toggle button dependent of Bus status

The same effective ranges and control commands can be configured as for other buttons. The palm control tab cannot be deleted, to turn off palm control select BFO.

### **DALI-2** Instances

In this operating mode, no DALI control commands are sent on the bus, but DALI-2 event messages for DALI-2 compatible central control systems. General information on DALI-2 Instancemode can be found here.

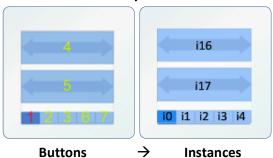
The DALI-2-Touchpanel supports up to 16 instances of type 1 (IEC62386-301, Input Devices – Push Button), and 5 instances of type 2 (IEC62386-301, Analogue Input Device) which are assigned to the 16 buttons and 5 sliders / circles accordingly.

The number of sliders (BF20-BF22,BF27-BF29) or circles (BF16-BF19) is therefore limited to 5 for the instance mode.

The instances are assigned to the buttons one after the other - see the example below:



Layout



**Buttons** 

Instances

| Button1 | Pushbutton                   | BF1  | Instance 0  |  |
|---------|------------------------------|------|-------------|--|
| Button2 | Pushbutton                   | BF1  | Instance 1  |  |
| Button3 | Pushbutton                   | BF1  | Instance 2  |  |
| Button4 | Slider Tc                    | BF21 | Instance 16 |  |
| Button5 | Slider                       | BF20 | Instance 17 |  |
| Button6 | Pushbutton                   | BF1  | Instance 3  |  |
| Button7 | Pushbutton                   | BF1  | Instance 4  |  |
| Palm    | Pushbutton                   | BF1  | Instance 21 |  |
| Butt    | Button – Instance Assignment |      |             |  |

17

Attention: sliders and circles or any other buttons with analogue instance types need to be configured as buttons 1-5 to ensure the functionality of the analogue instance!

#### DALI-2 Pusbutton Instance (instance type 1)

As defined in the standard, the following events are supported and sent on the DALI bus as INPUT NOTIFICATIONs, see Table 4

Which events are sent can be determined using the event filter. Further parameters of the instances 0-15 and 21 are: event filter and event timer settings (short timer, double timer, repeat timer, stuck timer), which can be configured via the DALI Cockpit Software, see Figure 15.

| Event<br>name      | Event<br>Information | Description   |
|--------------------|----------------------|---|
| Button<br>released | 00 0000<br>0000b     | The button is released  |
| Button<br>pressed  | 00 0000<br>0001b     | The button is pressed   |
| Short<br>press     | 00 0000<br>0010b     | The button is pressed<br>and released, without<br>being pressed quickly<br>again (in case of double<br>press enabled), or the<br>button is pressed and<br>quickly released (in case<br>double press is<br>disabled) |
| Double<br>press    | 00 0000<br>0101b     | The button is pressed and released, quickly   |

|        |         | followed by another button press |
|--------|---------|----------------------------------|
| Long   | 00 0000 | The button is pressed            |
| press  | 1001b   | without releasing it             |
| start  |         |                                  |
| Long   | 00 0000 | Following a long press           |
| press  | 1011b   | start condition the              |
| repeat |         | button is still pressed,         |
|        |         | the event occurs at              |
|        |         | regular intervals as long        |
|        |         | as the condition holds           |
| Long   | 00 0000 | Following a long press           |
| press  | 1100b   | start condition, the             |
| stop   |         | button is released               |
| Button | 00 0000 | The button has been              |
| free   | 1110b   | stuck and is now                 |
|        |         | released                         |
| Button | 00 0000 | The button has been              |
| stuck  | 1111b   | pressed for a very long          |
|        |         | time and is assumed              |
|        |         | stuck.                           |
|        |         |                                  |

#### Table 4

Default settings for pushbutton instances:

| Assigned Instance  | None                |
|--------------------|---------------------|
| groups             |                     |
| Event Scheme       | Instance addressing |
| Selected Event     | Short press,        |
| Filters            | Long press start    |
|                    | Long press repeat   |
|                    | Long press stop     |
|                    | Button Stuck/free   |
| Short press timer  | 500ms               |
| Double press timer | - (not used)        |
| Repeat timer       | 160ms               |
| Stuck Timer        | 20s                 |
|                    |                     |

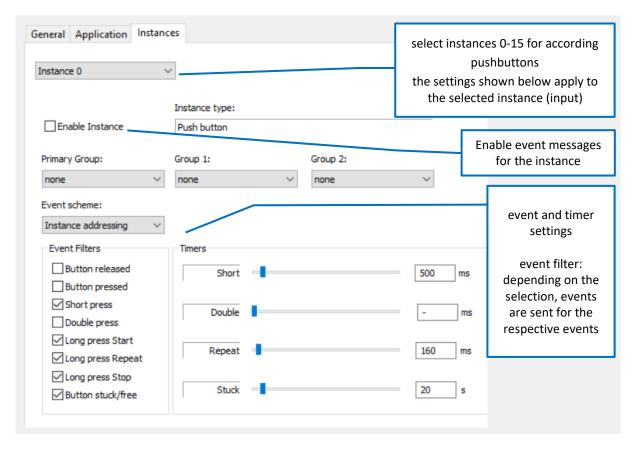


Figure 15 Instance Settings – Pushbutton Instances 0-15

#### DALI-2 Analog Instance (Instancetype 2)

The event input value of the analogue instance corresponds to the selected position value on the assigned slider or circle. If this value is changed, the instance generates a DALI-2 event ("INPUT NOTIFICATION").

Parameters of the analogue input device instances 16-20 are: event filter and event timer settings (report, deadtime), which can be configured via the DALI Cockpit Software, see Figure 16.

By using the report timer, the input value is sent periodically as a DALI-2 event regardless of input value changes. (Report Timer set to 0s, means no event is sent) The deadtime can be used to prevent the generation of an event by the instance for the set deadtime-period.

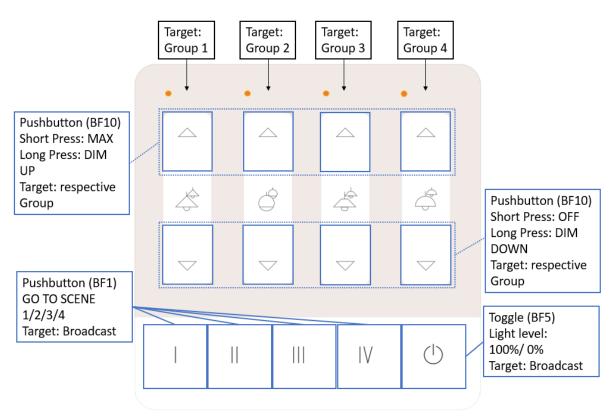
Default Settings for analogue input instances:

| Assigned Instance | None                |
|-------------------|---------------------|
| groups            |                     |
| Event Scheme      | Instance addressing |
| Selected Event    | Position            |
| Filters           |                     |
| Event Priority    | 5 (lowest)          |
| Report timer      | 255s                |
| Deadtime          | 12,75s              |
|                   |                     |

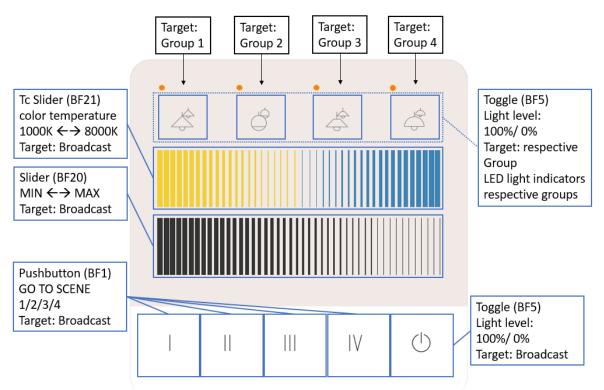
| nstance 16<br>Enable Instance        | V<br>Instance type:<br>Absolute input device |          |   | select instances 16-20<br>for settings of the<br>respective analogue<br>instances:<br>sliders/circles |
|--------------------------------------|--|----------|---|---|
| Primary Group:                       | Group 1:                                     | Group 2: |   |   |
| none                                 | v none v                                     | none     | ~ |   |
| Event scheme:<br>Instance addressing | ~<br>  |          |   |   |
| Event Filters                        | Timers                                       |          |   |   |
| Position                             | Report                                       |          |   | 0 s   |
|                                      | Deadtime                                     |          | 0 | .10 s   |

Figure 16 Instance Settings – Analogue Instances 16-20

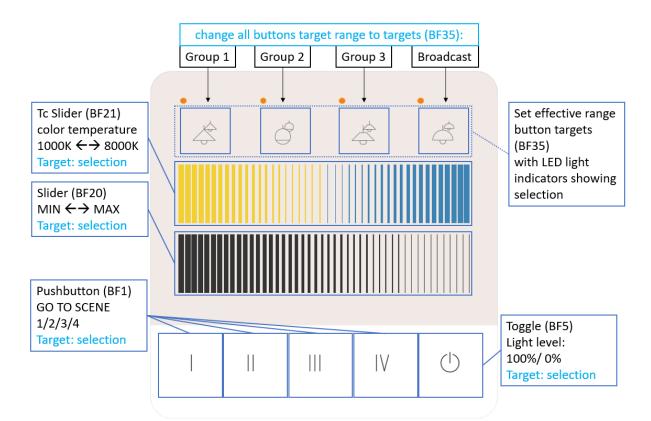
### Standard Layouts – Factory Settings



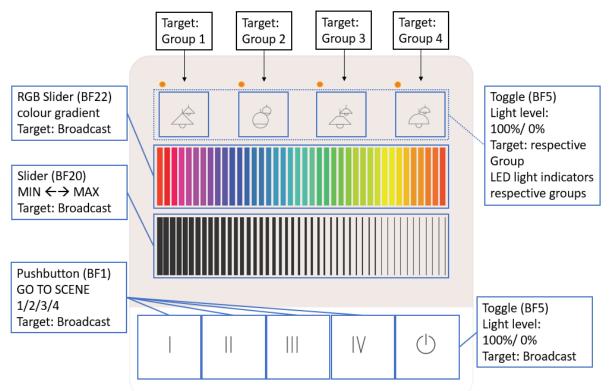
Layout Art. Nr.: G10A 4 groups separately dimmable with arrows



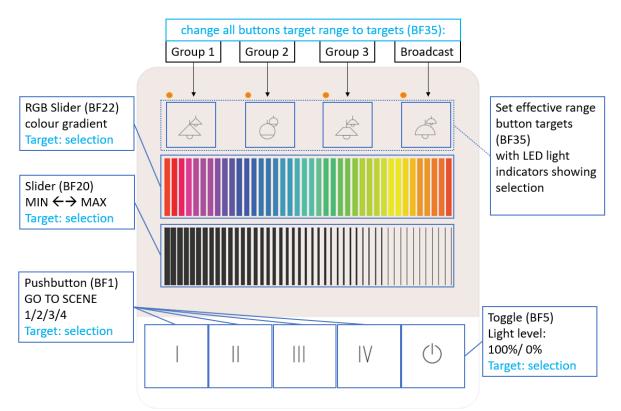
Layout Art. Nr.: G11A 4 groups on/off, brightness slider, tunable white slider



Layout Art. Nr.: G12A 4 target selection buttons, brightness slider, tunable white slider



Layout Art. Nr.: G13A 4 groups on/off, brightness slider, RGB slider



Layout Art. Nr.: G14A 4 target selection buttons, brightness slider, RGB slider

Purchase information

### Art. Nr. 24035290-G\_\_\_

DALI-2 Touchpanel 04 please indicate the desired Layout: G000 G10A to G14A below, or custom.

### Art. Nr. 24035290-PS-G\_\_\_

DALI-2 Touchpanel 04 PS Version with integrated DALI-PS 70mA please indicate the desired Layout: G000, G10A to G08A below, or custom.

#### Device Version without LEDs: DALI-2 Touchpanel 03

### **Online Layout Configurator:**

https://configurator.lunatone.com/touchp anel?lang=en

### **Glass Standard layouts**

Various layouts, overview: https://www.lunatone.com/wpcontent/uploads/2020/11/DALI-2-Touchpanel-Layouts EN.pdf

Art. Nr. 24035290-**G000** unprinted glass

Art. Nr. 24035290-**G10A** dimming, 4 scenes, 4 groups

Art. Nr. 24035290-**G11A** dimming, 4 scenes, tunable white, 4 groups

Art. Nr. 24035410-**G12A** dimming, 4 scenes, tunable white, 4 target selection buttons

Art. Nr. 24035410-**G13A** dimming, 4 scenes, colour RGB, 4 groups

Art. Nr. 24035410-**G14A** dimming, 4 scenes, colour RGB, 4 target selection buttons

### Glass sample sets:

Art. Nr. G000 3 pieces of clear, unprinted glasses

Art. Nr.: G01A - Art. Nr.: G14A Sample set of 3 pieces of according glasses

Art. Nr.: GMIX5 Set of 5 glasses - please state the desired article numbers (Art. Nr.: G01A - Art. Nr.: G14A)

# Additional Information and Equipment

Touchpanel Layout configuration files for the DALI cockpit <u>https://www.lunatone.com/wp-</u> <u>content/uploads/2021/03/TouchpanelLayout Konf</u> <u>igFiles.zip</u>

DALI Cockpit - free configuration software for DALI systems

https://www.lunatone.com/en/product/dalicockpit/

Lunatone DALI products

https://www.lunatone.com/en

Lunatone Datasheets and Manuals

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

DALI-2 Instancemode Information sheet https://www.lunatone.com/wpcontent/uploads/2021/10/DALI-2 Instance-Guide EN M0024.pdf

### Contact

Technical Support: <a href="mailto:support@lunatone.com">support@lunatone.com</a>

Requests: sales@lunatone.com

#### 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.