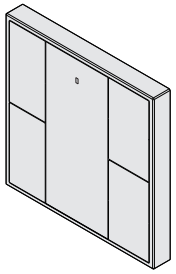
DALI-2 Panel 4-Key Instructions



Highlights

- DALI-2 control device with 4 push buttons according to IEC62386-101, IEC62386-103, IEC62386-301 and IEC62386-332
- Available in three color versions: metal, black and white
- Suitable for integration and in combination with DALI-2 compliant central control units
- Supports feedback functionality, provides 8 LEDs
- Multimaster capable, multiple modules can be installed on the DALI- line
- DALI bus powered, no extra power supply required
- Easy installation: the device can be installed in a flush-mounted installation box

Delivery scope

	Identcode
• e:cue DALI-2 Panel 4-Key (main body, frame, mounting plate)	
metal	CL23100279055
white	CL23100279255
black	CL23100279455

- Screws, 2 x
- Transparent central cover plate
- Safety instructions
- Instructions

Optional accessories

• SYMPL dali Node	AB444230035

Product specifications

Dimensions (W x H x D)	80 x 80 x 26.6 mm / 3.15 x 3.15 x 1.05 in
Weight	black, white: 89.5 g / 0.2 lb metal: 101.4 g / 0.22 lb
Mounting	Wall mount, suitable for most international in-wall mounted boxes
Max. casing temperature Tc	75 °C
Expected life time @Tc	50,000 H
Protection class	II in Intended Use
Protection degree housing	IP20
Protection degree terminals	IP20
Certificates	CE, DALI-2, UKCA, RoHS

DALI interface

Input type	DALI
Marking	DA, DA
Voltage range	12 V DC - 22.5 V DC (according IEC62386-101)
Typ. current consumption DALI (at 16.5 V)	2 mA
Max. current consumption DALI (Inrush current at 22.5 V)	10 mA
Number of addresses for DALI control gear	DALI
Number of addresses for DALI control devices	4 programmable push buttons
Number of feedback LEDs	8 programmable LEDs
Push confirmation LED	yes (1)

Terminals

Connection type	Push-In
Wire size solid core	0.2 … 1.5 mm² (AWG 26 … AWG 16)
Wire size fine core	0.2 … 1.5 mm² (AWG 26 … AWG 16)
Wire size using wire end ferrule	0.25 … 1.0 mm²
Stripping length	9 … 10 mm / 0.35 … 0.39 inch
Tightening / release of wire	Push button

Environment conditions

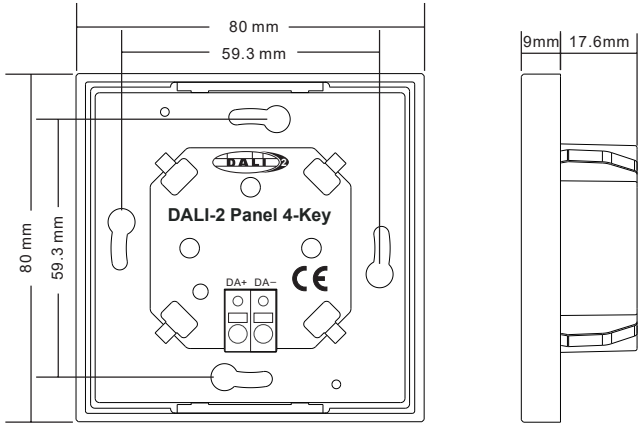
Storing temperature	-20 … +50 °C / -4 … 122 °F
Working ambient temperature	-20 … +50 °C / -4 … 122 °F
Relative humidity	8 … 80 %

For further product information and downloads see www.ecue.com.

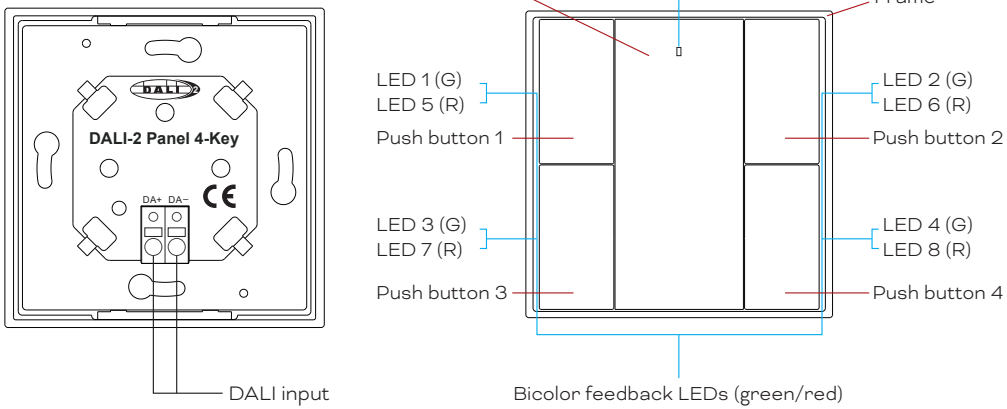
Safety & Warnings

- Do not install with power applied to device.
- Do not expose the device to moisture.
- Read the instructions prior to installation.

Dimensions

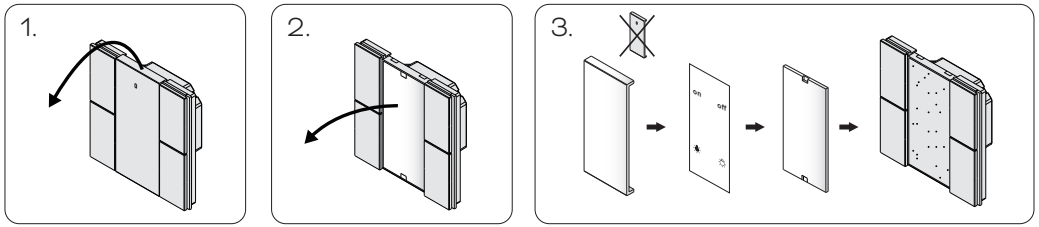


Connectors & Interfaces

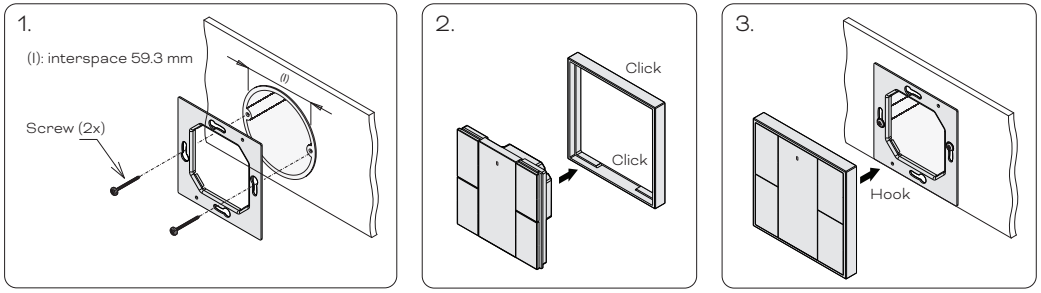


Customizable Button Function label

A Push button label can be added to indicate whatever functions are configured to the push buttons. Please download the customizable button function file in Excel format from https://eu.traxon-ecue.com/products/sympho-dali2-control-panel → Downloads or via this QR code. The file will generate corresponding label images after selecting the desired function for each button. Print it, cut the paper in shape and install as follows:



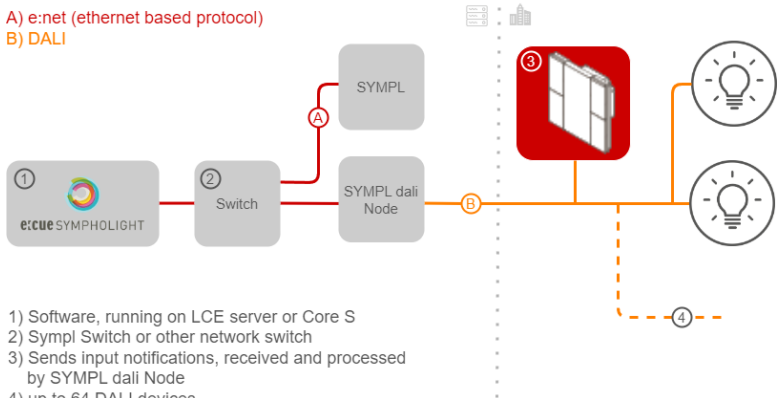
Installation



Application & Function

Integration in a system with DALI-2 compliant central control unit, button pushes result in input notifications (event messages).

The SYMPHO DALI-2 Panel 4-Key can be used as an input device for the integration in DALI-2 compliant central lighting control systems. In this mode each input ("instance") informs about changes by using so called "input notifications". These event-messages can be evaluated by other controllers on the DALI line e.g. as trigger for commands sent to luminaires.



The SYMPHO DALI-2 Panel 4-Key provides 4 instances (1 - 4) of type 1 (IEC62386-301, Input Devices - Push Button) which are assigned to the 4 button inputs.

According to the standard the following input notifications are supported:

Event Name	Event Information	Description
Button released	00 0000 0000b	The button is released.
Button pressed	00 0000 0001b	The button is pressed.
Short press	00 0000 0010b	The button is pressed and released, without being pressed quickly again (in case of double press enabled), or the button is pressed and quickly released (in case of double press is disabled).
Double press	00 0000 0101b	The button is pressed and released, quickly followed by another button press.
Long press start	00 0000 1001b	The button is pressed without releasing it.
Long press repeat	00 0000 1011b	Following a long press start condition the button is still pressed, the event occurs at regular intervals as long as the condition holds.
Long press stop	00 0000 1100b	Following a long press start condition, the button is released.
Button free	00 0000 1110b	The button has been stuck and is now released.
Button stuck	00 0000 1111b	The button has been pressed for a very long time and is assumed stuck.

Further parameters of the instances 1-4 are: event filter, event timer settings (short timer, double timer, repeat timer, stuck timer), which can be configured according to IEC62386-301.

Feedback Functionality

The SYMPHO DALI-2 Panel 4-Key provides visual feedback to inform the user of the system status. The visual feedback consists of two LEDs for each button, a total of 8 LEDs (= 8 feedback channels). These LEDs are turned on or off, depending on the feedback value.
The instance numbers of the 8 LEDs are as follows (according IEC62386-332, Input Devices – Feedback):

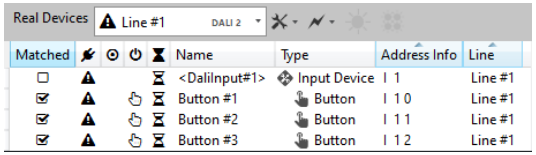
LED	Instance Number
LED 1 (G)	0
LED 2(G)	1
LED 3 (G)	2
LED 4 (G)	3
LED 5 (R)	4
LED 6 (R)	5
LED 7 (R)	6
LED 8 (R)	7

Feedback Commands

Command Name	Opcode byte
ACTIVATE FEEDBACK	0x10
STOP FEEDBACK	0x11

How to use the DALI Feedback Function:

1. Install your DALI system (DALI-2 Panel 4-Key, SYMPL dali Node).
2. Open SYMPHOLIGHT - license required.
3. In the Setup Tab, add the connected SYMPL dali Node to the project (=online).
4. Scan the DALI line in the Real Device view. The DALI-2 Panel 4-Key will be listed as an Input Device with 4 Buttons.

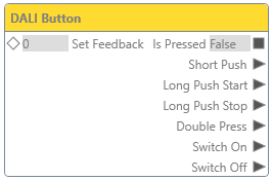


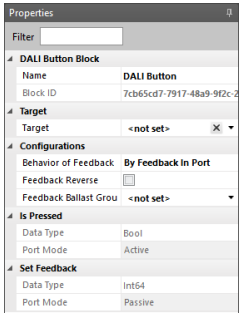
5. Identify and test the feedback function by clicking the icon. The feedback channel instance (LED) on the real device turns on/off.
6. Drag the real DALI devices onto the canvas, for DALI-2 Panel 4-Key: 4 x DALI button.
7. In the Automation Tab, add the following blocks to the Workspace to define the feedback value as appropriate for your project: DALI Button Block & DALI Feedback Channel Line Block.

When the feedback value is != 0, the feedback LED is on (= active). When the feedback value is =0, the feedback LED is off (= stopped).

DALI Button Block

Use this Block to include DALI Buttons in the Workflow Designer, e.g. to switch on/off lights based on button presses. To use the feedback function in the block: set the Target, set the Behavior of Feedback and set up the rest of the Workflow where necessary.

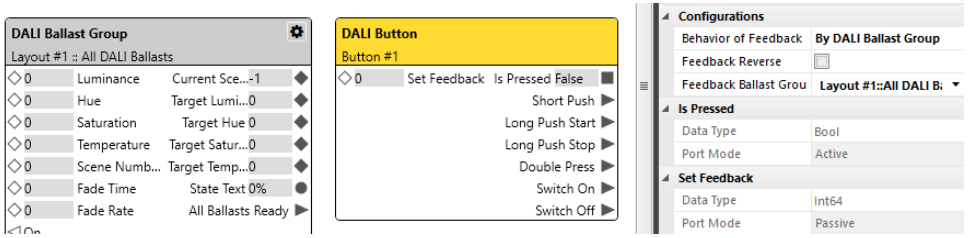




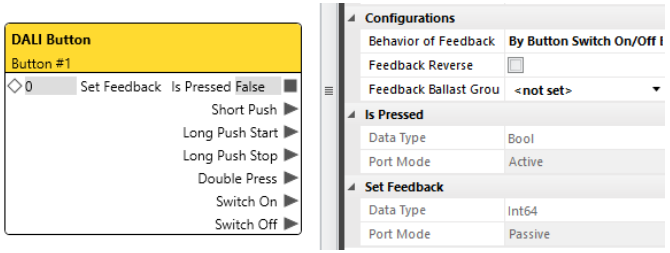
- Target: Define the target to bind the Block to a DALI button.
- Behavior of Feedback: Select the determinant of the feedback.

  Feedback deactivated: Disables the feedback of the DALI Button.

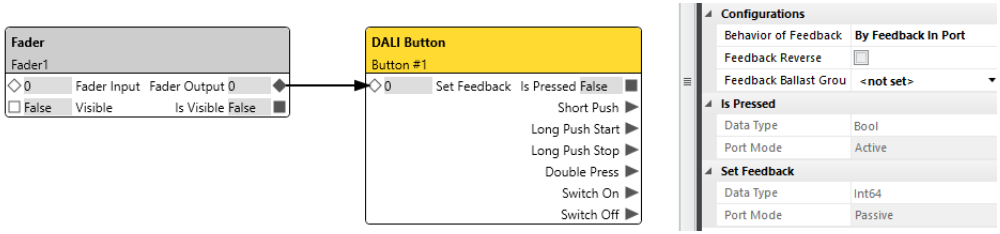
  DALI Ballast Group: For a DALI Button to give feedback based on the luminance or scene value of a DALI Ballast Group's reference ballast Select the ballast group at "Feedback Ballast Group". Its DALI Ballast Group Block is then required to be in the Workspace.



Switch Button: For a Switch Button to give feedback based on On / Off events.

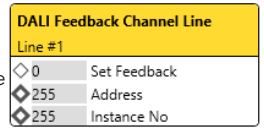


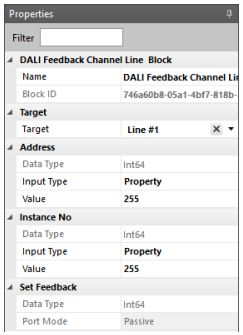
"Feedback" PortIn: For all button types to give feedback based on the block's incoming "Set Feedback" port.



- Feedback Reverse: Enable to inverse the Feedback commands: on an "activate feedback" command, the feedback is stopped (LED off). On a "stop feedback" command, the feedback is activated (LED on).

DALI Feedback Channel Line Block





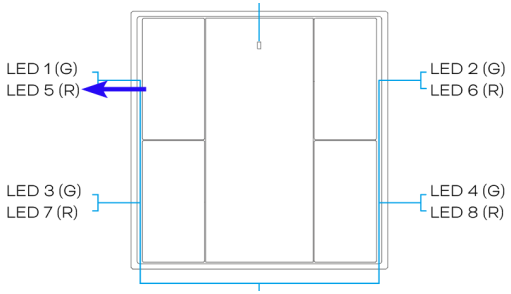
Use this Block to control feedback channels of a line in the direct way by short address and instance number. To use the feedback: set the target, set the address and instance properties, and connect the desired Workflow to the PortIn.

- Target: Define the target to bind the Block to a DALI line.
- Address: To filter devices of the DALI Line by short address. Set the Input Type. When defined as Property, configure a value. The short address range is 0 to 63.
- Instance No: To filter instances of the DALI Line by instance number. Set the Input Type. When defined as Property, configure a value. The instance number range is 0 to 31.

Note: Each button owns two LEDs of different color (two feedback channel instances). Only one color / LED is addressed by the DALI Button Block. To access the second color / LED, use the DALI Feedback Channel Line Block with the other LED's address and instance number.
Example:

1. You want to use the second feedback LED for Button #1 (I 1-0).

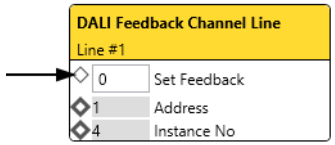
2. The second LED for the Button #1 is the LED 9.

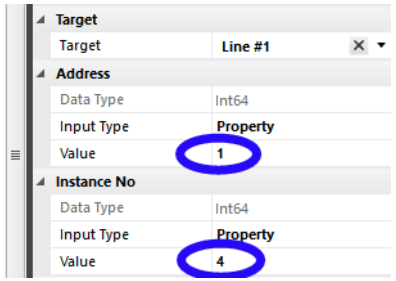


3. The instance number of the LED 9 is 4.

LED	Instance Number
LED 1 (G)	0
LED 2(G)	1
LED 3 (G)	2
LED 4 (G)	3
LED 5 (R)	4
LED 6 (R)	5
LED 7 (R)	6
LED 8 (R)	7

4. So you need to configure the DALI Feedback Channel Line Block like this:





Now the second color LED of the Button #1 gives feedback, i.e. goes on or off, depending on the incoming "Set Feedback" value.