8-Key Push Button DALI Wall Switch
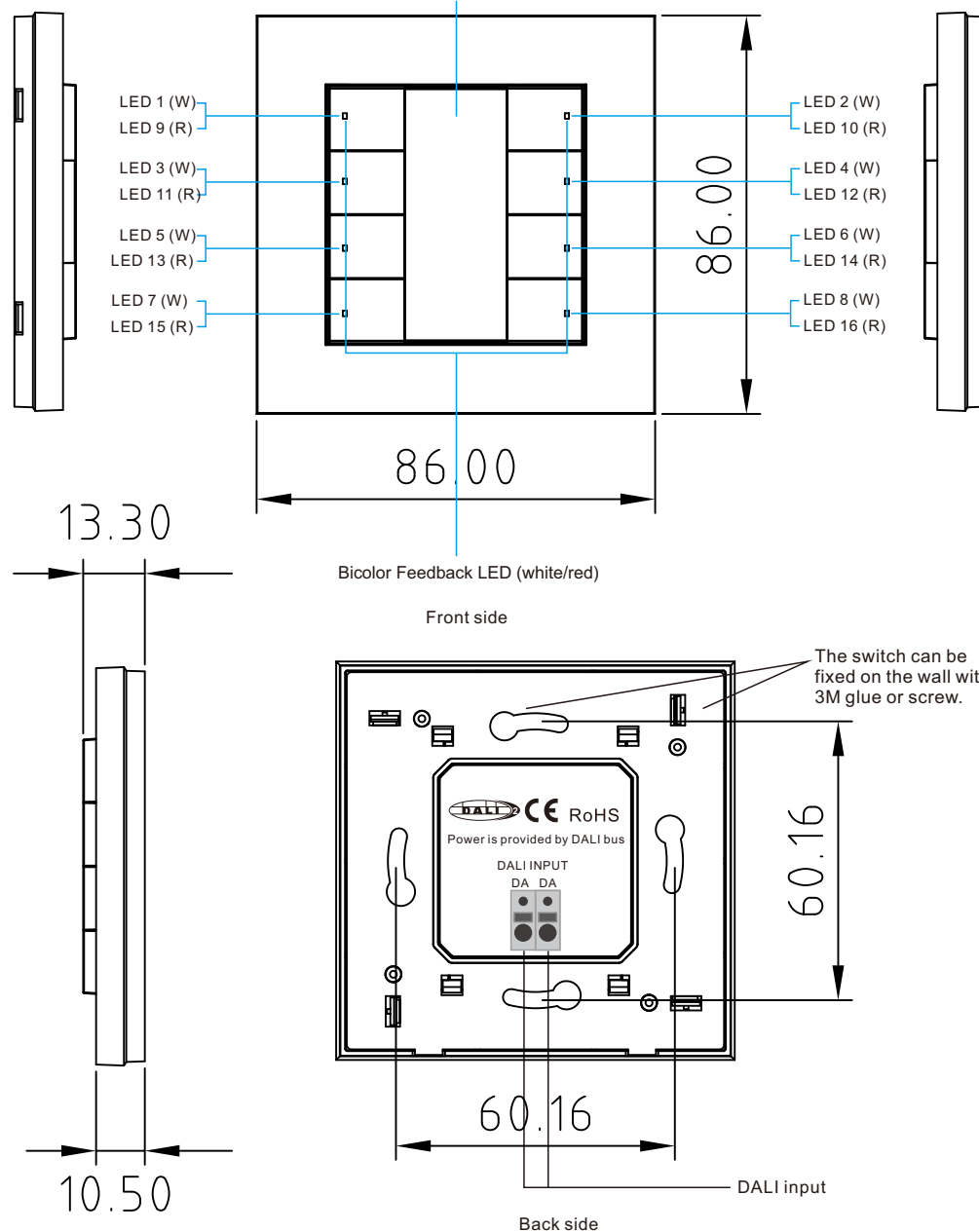
DALI2 CE RoHS COMPLIANT

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Important: *Read All Instructions Prior to Installation*

Function introduction

Working indication LED, blinks when operate the push buttons

LED 1 (W)
LED 9 (R)

LED 3 (W)
LED 11 (R)

LED 5 (W)
LED 13 (R)

LED 7 (W)
LED 15 (R)

LED 2 (W)
LED 10 (R)

LED 4 (W)
LED 12 (R)

LED 6 (W)
LED 14 (R)

LED 8 (W)
LED 16 (R)

86.00

86.00

13.30

Bicolor Feedback LED (white/red)

Front side

The switch can be fixed on the wall with 3M glue or screw.

DALI CE RoHS
Power is provided by DALI bus

DALI INPUT
DA   DA

60.16

60.16

10.50

DALI input

Back side

Product Features

• DALI-2 control device with 8 push buttons according to IEC62386-101, IEC62386-103, IEC62386-301 and IEC62386-332

• Supports feedback functionality, provides 16 LEDs

• Suitable for integration and in combination with DALI-2 compliant central control units

• Multimaster capable, multiple modules can be installed on the DALI- line

• DALI bus powered, no extra power supply required

• Easy configuration via DALI-2 compliant central controller USB interface

Product Data

DALI Interface

Input Type	DALI
Marking	DA, DA
Input Voltage Range	12VDC - 22.5VDC (according IEC62368-101)
Typ. Current Consumption DALI (at 16.5V)	2mA
Max. Current Consumption DALI (Inrush Current at 22.5V)	10mA
Number of Addresses for DALI Control Gear	DALI
Number of Addresses for DALI Control Devices	8 programmable push buttons
Number of Feedback LED	16 programmable LEDs

General Data

Dimensions (L x W x H)	86mm x 86mm x 13.3mm
Mounting	Wall Mounting or on Conduit Box
Max. casing temperature Tc	75°C
Expected Life Time @Tc	50,000H
Protection Class	II in Intended Use
Protection Degree Housing	IP20
Protection Degree Terminals	IP20
Function	Configurable
Start-up Time	<150ms

Terminals

Connector Type	Push-In
Wire Size Solid Core	0.2 - 1.5 mm2 (AWG26 - AWG16)
Wire Size Fine Core	0.2 - 1.5 mm2 (AWG26 - AWG16)
Wire Size Using Wire End Ferrule	0.25 - 1.0 mm2
Stripping Length	9 - 10 mm / 0.35 - 0.39 inch
Release Connector	Push Button

Environment Conditions

Storing Temperature	-20°C~+50°C
Working Ambient Temperature	-20°C~+50°C
Relative Humidity	8%- 80%

Standards

| DALI	IEC62386-101:2014 IEC62386-103:2014 IEC62386-301 IEC62386-332
EMC	EN 61547 EN 50015 / IEC CISPR15
Safety	EN 61347-2-11 EN 61347-1
Markings	DALI-2, CE

Safety & Warnings

• DO NOT installed with power applied to device.
• DO NOT expose the device to moisture.

Application

Integration in a system with DALI-2 compliant central control unit, push buttons results in input notifications (event messages)
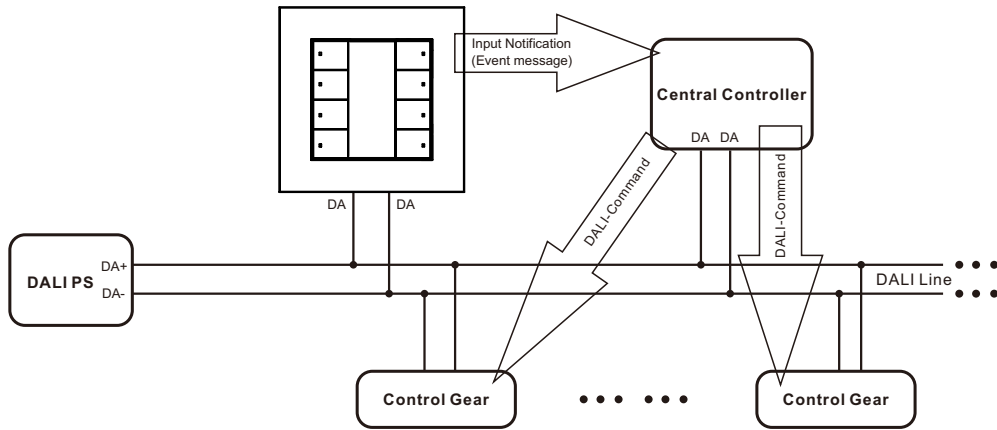
Application and Function

The DALI Switch can be used as 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 DALI-Switch provides 8 instances of type 1 (input device – push button).

Instance 1-8: Push Button, Instance Type 1 (according IEC62386-301, Input Devices – Push Button)
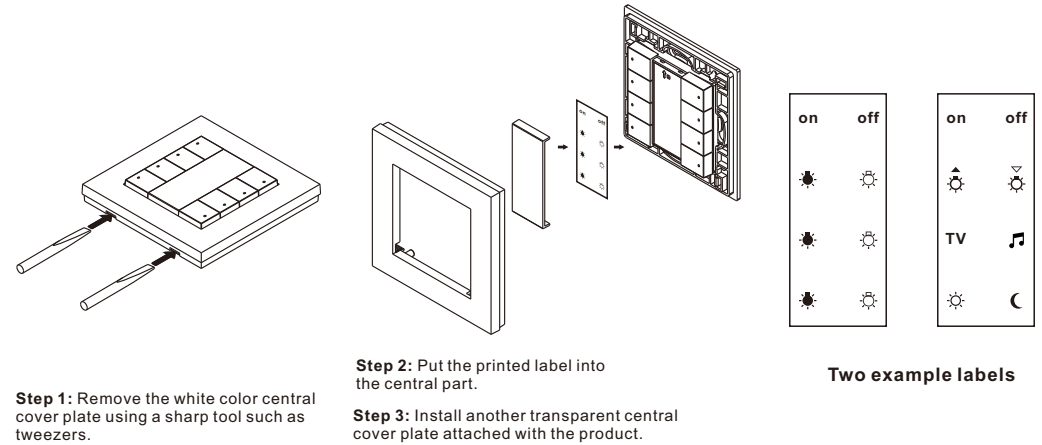
According to the standard the following INPUT NOTIFICATIONs are supported:

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.

Additional instance parameters like event filter, event timings (short timer, double timer, repeat timer, stuck timer) can be configured according to IEC62386-301.

Push Button Function Label

Push button function label can be printed and customized, to better indicate whatever functions configured to the push buttons. Please contact sales person to ask for the available customizable button function file in Excel format, which will generate corresponding label image after selecting the desired function for each button, just print it and install as follows:

Step 1: Remove the white color central cover plate using a sharp tool such as tweezers.

Step 2: Put the printed label into the central part.

Step 3: Install another transparent central cover plate attached with the product.

Two example labels

Feedback Functionality

This DALI wall switch supports feedback functionality, feedback is the means of informing the user about the system state, the supported feedback type by the switch is visible feedback using 16 LEDs.

The instance number of the 16 LEDs are as follows (according IEC62386-332, Input Devices – Feedback):

LEDs	Instance number
LED 1 (W)	0x20
LED 2 (W)	0x21
LED 3 (W)	0x22
LED 4 (W)	0x23
LED 5 (W)	0x24
LED 6 (W)	0x25
LED 7 (W)	0x26
LED 8 (W)	0x27
LED 9 (R)	0x28
LED 10 (R)	0x29
LED 11 (R)	0x30
LED 12 (R)	0x31
LED 13 (R)	0x32
LED 14 (R)	0x33
LED 15 (R)	0x34
LED 16 (R)	0x35

Commands to activate and stop feedback

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

Feedback variables and additional commands like feedbackActive, feedbackTiming, feedbackActiveBrightness, feedbackActiveColour, feedbackInactiveBrightness and feedbackInactiveColour can be configured according to IEC62386-332.

Control of Feedback LEDs

Control of feedback LEDs uses Feature command, it has 3 Bytes, the 1st Byte is device address (Address Byte), the 2nd Byte is the LED address (Instance Byte), it can be short address, or group address, or broadcast, the 3rd Byte is operation code (opcode Byte):

For example:
Command: FF2010
FF is device address, means broadcast, 20 is the short address of the 1st instance, then 21 will be the short address of the 2nd instance, other instances' short addresses can concluded according to this, the 3rd Byte 10 means turning on the LED, 11 means turning off the LED.
The above command means: broadcast to all devices, turn on the LED with instance address 0.

Command: 01FD11
01 is device address, short address, FD means all instances' short addresses (broadcast), the 3rd Byte 10 means turning on the LED, 11 means turning off the LED.
The above command means: turn off LED of all instances addresses of the device with short address 0.

Command: FFA010
FF is device address, means broadcast, A0 means the LED with instance group address 0, if the instance group address is 1, then this value should be A1, the 3rd Byte 10 means turning on the LED, 11 means turning off the LED.
The above command means: broadcast to all devices, turn on LED with instances group address 0.

For example: broadcast to all devices, turn on or turn off LED1-LED16.

LED1 ON
Send command: FF2010

LED1 OFF
Send command: FF2011

LED2 ON
Send command: FF2110

LED2 OFF
Send command FF2111

LED3 ON
Send command: FF2210

LED3 OFF
Send command: FF2211

LED4 ON
Send command: FF2310

LED4 OFF
Send command: FF2311

LED5 ON
Send command: FF2410

LED5 OFF
Send command: FF2411

LED6 ON
Send command: FF2510

LED6 OFF
Send command: FF2511

LED7 ON
Send command: FF2610

LED7 OFF
Send command: FF2611

LED8 ON
Send command: FF2710

LED8 OFF
Send command FF2711

LED9 ON
Send command: FF2810

LED9 OFF
Send command: FF2811

LED10 ON
Send command: FF2910

LED10 OFF
Send command: FF2911

LED11 ON
Send command: FF2A10

LED11 OFF
Send command: FF2A11

LED12 ON
Send command: FF2B10

LED12 OFF
Send command: FF2B11

LED13 ON
Send command: FF2C10

LED13 OFF
Send command: FF2C11

LED14 ON
Send command: FF2D10

LED14 OFF
Sens command: FF2D11

LED15 ON
Send command: FF2E10

LED15 OFF
Send command: FF2E11

LED16 ON
Send command: FF2F10

LED16 OFF
Send command: FF2F11

All LEDs ON
Send command: FFFD10

All LEDs OFF
Send command: FFFD11

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