DALI-2 Rotary Switch Input Device

DALI2 CE RoHS COMPLIANT

Important: Read All Instructions Prior to Installation

Function introduction

80 mm

80 mm

Front side

17.5 mm

71.20 mm

55.57 mm

71.20 mm

55.57 mm

SR-2410R-DA2
Power is provided by DALI bus

DALI CE RoHS

DALI INPUT
DA   DA

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

DALI signal output

Back side
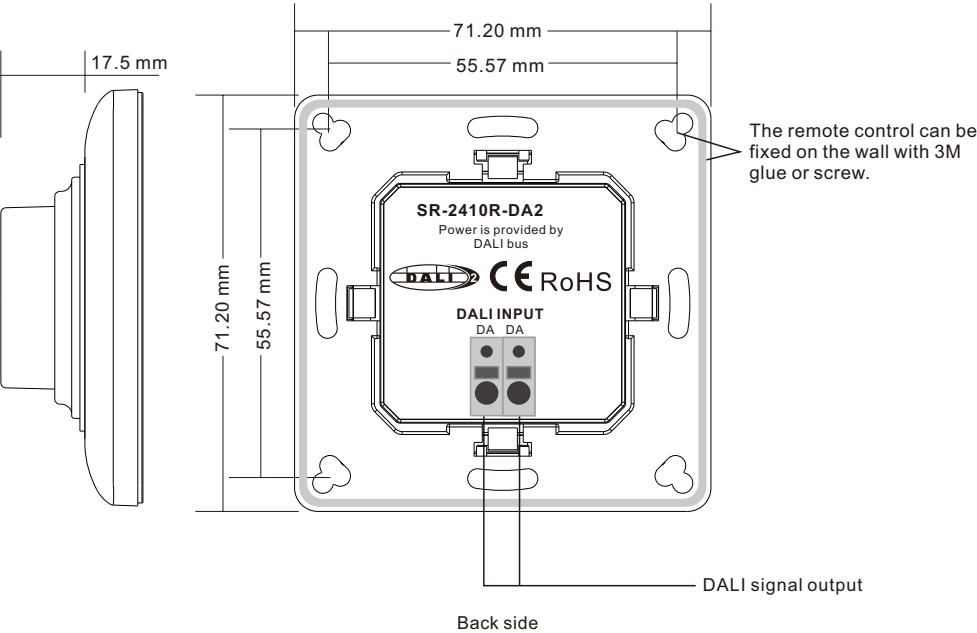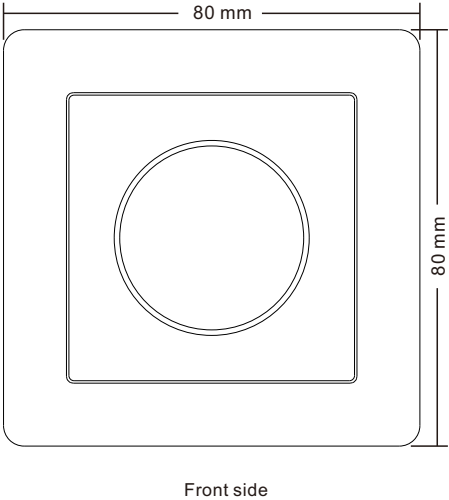
Product Features

• DALI-2 control device according to IEC62386-101, IEC62386-103, IEC62386-301 and IEC62386-302
• Provides 2 instances, instance 0 is push button instance, instance 1 is rotary movement instance
• DALI rotary switch for dimming, color and color temperature control
• Individual DALI Commands and operating modes can be assigned to the push and rotary button
• Multiple operating modes can be set by the DALI-2 controller using command SET OPERATING MODE (DTR0)
• Instance mode for sending DALI-2 rotating position event messages - integration in standard DALI-2 control systems
• Instance mode for sending rotating speed event messages - integration in specific control systems
• DIM mode, directly send DALI commands to DALI bus
• CCT mode, directly send DALI commands to DALI bus
• RGBW mode, directly send DALI commands to DALI bus
• Multi-master capable, multiple modules can be installed on one DALI line
• Factory default setting is DALI-2 instance mode for sending DALI-2 rotating position event messages
• 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)	12mA
Number of Addresses for DALI Control Gear	DALI
Number of Addresses for DALI Control Devices	1

General Data

Dimensions (L x W x H)	80 x 80 x 20.8 mm
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 - 1.3 mm2 (AWG26 - AWG16)
Wire Size Fine Core	0.2 - 1.3 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%

Safety & Warnings

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

Application

The DALI-2 switch supports different operating modes, it can work as a standard DALI-2 input device and send event messages to the DALI-2 control system, or directly send DALI commands to the DALI bus. The function is determined by the selection of the operating mode. Multiple operating modes can be set by the DALI-2 application controller using command SET OPERATING MODE (DTR0).

Set Operating Mode (DTR0)

0X00: Instance mode for sending DALI-2 rotating position event messages (factory default)

0X80: Instance mode for sending rotating speed event messages (for specific DALI control system)

0XA1: DIM mode, directly send DALI commands to DALI bus

0XA2: CCT mode, directly send DALI commands to DALI bus

0XA3: RGBW mode, directly send DALI commands to DALI bus

Instance Mode 0X00 (Factory default setting) (0)

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 device has two instances.

The first instance (instance 0) is assigned to the push button function and corresponds to instance type 1 (according to IEC62386-301: Particular requirements - Input devices-Push buttons).

The second instance (instance 1) is assigned to the rotary movement and uses the instance type 0 (according to IEC62386-302: Particular requirements - Input devices - Absolute input devices).

Events supported by instance 1 (instance type 2, Particular requirements - Input devices - Absolute input devices):

| Event name	Event Information	Description
Rotation Clockwise Started	00 0000 0000b	The rotary knob has started to rotate clockwise
Rotation Counter Clockwise Started	00 0000 0001b	The rotary knob has started to rotate counter clockwise
Rotation Stopped	00 0000 0010b	The rotation of the rotary knob has stopped

Events supported by instance 0 (instance type 1, Particular requirements - Input devices-Push buttons):

Event name	Event Information	Description
Button released	00 0000 0000b	The button is released
Button pressed	00 0000 0001b	The button is pressed

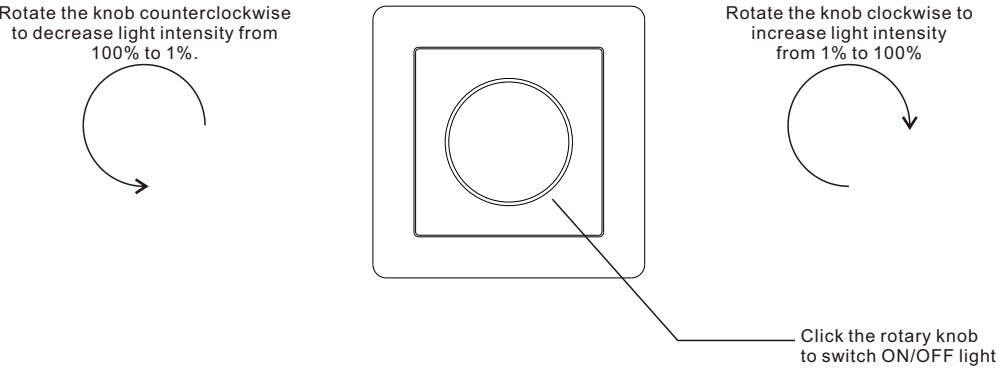|		
Short press	00 0000 0010b	The button is pressed and released, without being pressed quickly again (in case of double press enabled), or the button is pressed and quickly released (in case of double press is disabled)
Double press	00 0000 0101b	The button is pressed and released, quickly followed 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.

Under instance mode, integration in a system with DALI-2 compliant central control unit, push buttons and rotation results in input notifications (event messages)
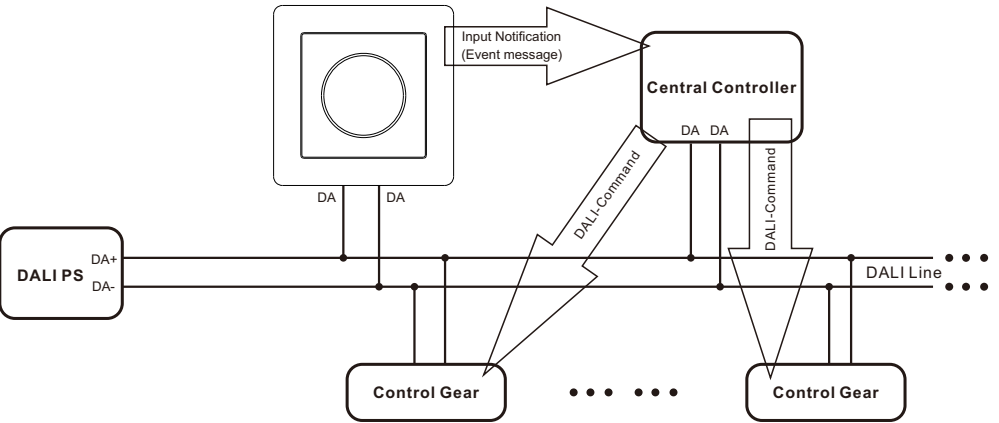
DIM mode 0XA1 (161)

When set as DIM mode, the switch will directly send DALI commands to the DALI bus, the functions are as follows:

Rotate the knob counterclockwise to decrease light intensity from 100% to 1%.

Rotate the knob clockwise to increase light intensity from 1% to 100%

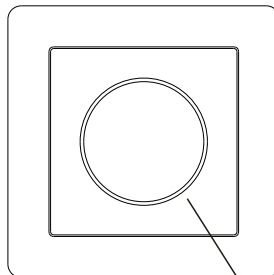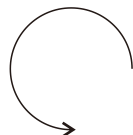Click the rotary knob to switch ON/OFF light

CCT mode 0XA2 (162)

When set as CCT mode, the switch will directly send DALI commands to the DALI bus, the functions are as follows:
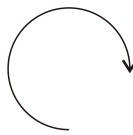
Rotate the knob counterclockwise:
1. Decrease light intensity from 100% to 1%(brightness mode).
2. Change color temperature from warm white to cold white(dual color mode)

Rotate the knob clockwise:
1. Increase light intensity from 1% to 100%(brightness mode).
2. Change color temperature from cold white to warm white(dual color mode)
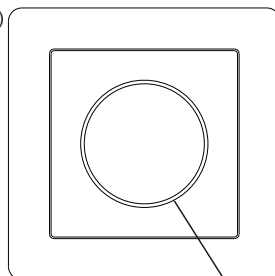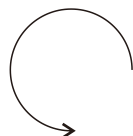
Click the knob to switch ON/OFF.
Double click the knob to switch between dual color mode and brightness mode.

RGBW mode 0XA3 (163)

When set as RGBW mode, the switch will directly send DALI commands to the DALI bus, the functions are as follows:
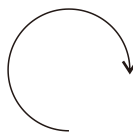
Rotate the knob counterclockwise:
1. Decrease overall brightness from 100% to 1%(brightness mode).
2. Change RGBW color(color control mode)

Rotate the knob clockwise:
1. Increase overall brightness from 1% to 100%(brightness mode).
2. Change RGBW color(color control mode)

Click the knob to switch ON/OFF.
Double click the knob to switch between RGB color mode and brightness mode.

Under DIM, CCT, RGBW modes, the switch will directly send DALI commands to the DALI bus.

Central Controller

DA DA

DA DA

DALI-Command

DALI-Command

DALI-Command

DALI PS

DA+
DA-

DALI Line

Control Gear

Control Gear