

DALI MCU Digital Rotary Dimmer

70030120



Important: Read All Instructions Prior to Installation

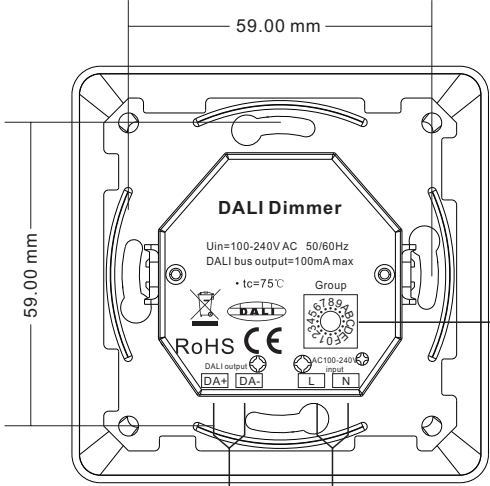
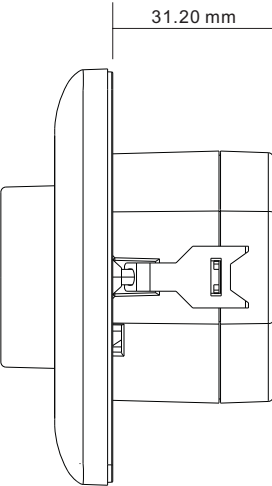
Function introduction

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

Front side



DALI signal output AC Power input

Back side

Product Data

| Designation | DALI MCU |
|---|--|
| DALI connection | DA+/DA-, max. 300m cable length, DALI power supply output current max 100mA. |
| Perm. Cable cross-section | 0.5-1.5 mm ² |
| Rated supply voltage | 100 - 240 VAC |
| Mains frequency | 50/60 Hz |
| Typ. current | 27mA (@ 230 V/50 Hz/full load) |
| Max. input power | 3.70W |
| Typ. power input on stand-by | 1.23W |
| Typ. input current in no-load operation | 7mA |
| Mains surge capability | 1KV (Between L-N) |
| THD | 10% (@ 230 V/50 Hz/full load) |
| Time to light | 242mS (@ 230 V/50 Hz/full load) |
| Turn off time | 205mS (@ 230 V/50 Hz/full load) |
| Output voltage tolerance | 9-21VDC |
| No. of dimming channels | 1 |
| Max. DALI devices per dimmer | 50 |
| Dimming range | 1%-100 % |
| DALI-mode | DT6 |
| DALI current draw | 5 mA |
| Ambient temperature (Ta) | 0 °C to +50 °C |
| Max. casing temperature (Tc) | 75 °C |
| Humidity | 10% – 95 % RH non-condensing |
| Storage temperature | -40 °C to +85 °C |
| Type of protection | IP 20 |
| Protection class | II |
| Weight | 110g |
| Dimensions | 81x81x53mm |

- DALI MCU digital rotary dimmer
- Built-in 100mA DALI power supply to power up to max. 50 DALI ECGs.
- Powered by DALI bus while not connected to AC mains.
- Max. 100 DALI ECGs on a DALI line can be controlled by 4 MCUs via broadcast (2 by AC mains, 2 by DALI bus).
- Enables to select and control 1 DALI Group from total 16 Groups
- Enables to set the DALI group number (0-15) to be controlled by rotary switch on the back.
- Supports DALI DT6 devices
- Enables to set and delete a minimum dimming level

Safety & Warnings

- DO NOT install with power applied to device.
- DO NOT expose the device to moisture.

Operation

This device is a DALI MCU with built-in DALI bus power supply which can power DALI bus while connected with 100-240VAC mains. It also can be powered by DALI bus while not connected with AC mains.

There can be up to only 2 MCUs connected to AC mains, the other MCUs powered by DALI bus

Each control circuit simultaneously affords the integration of as many as 100 DALI ECG and of up to 4 DALI MCU control devices (control points).

Set the minimum brightness value

Press and hold down the knob over 10 seconds until the light flashes, to set the current brightness value as the minimum brightness value for dimming, it is dimmable from this minimum brightness value to 100%.

Delete the minimum brightness value setting

Click the knob to switch off the light first, then press and hold down the knob over 10 seconds until the light flashes, the minimum brightness value will be deleted. It is dimmable from 1% to 100% then.

Set the DALI group number to be controlled by rotary switch on the back: (0-15 selectable)

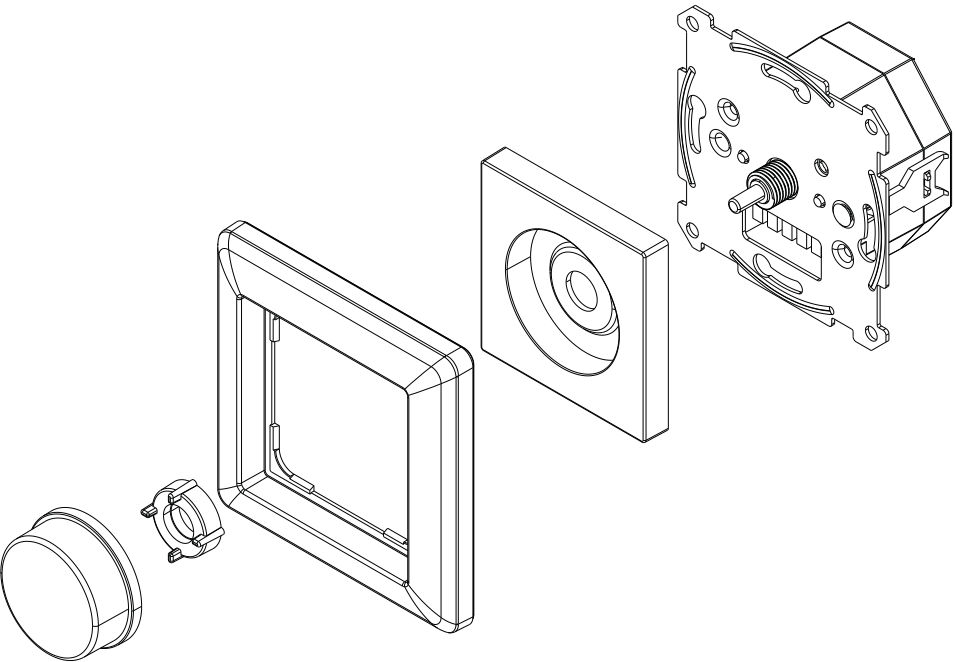
- This DALI MCU enables dimming commands to be sent to 1 DALI Group of devices on the DALI circuit. A rotary switch on the back is used to select the Group number from 16 Groups (0-15).
- When the rotary switch arrow position is at 0, all DALI devices on the circuit will be controlled via broadcast.
- When the rotary switch arrow position is at X except 0 (1-15), DALI Group X-1 will be selected and controlled.

Note: please make sure the DALI devices on the circuit are grouped by a DALI master first.

Please refer to the detailed Group setting table as follows:

| Rotary Switch Position | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|------------------------|-----------|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|
| DALI Group Selected | Broadcast | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |

Installation



Wiring diagram

Figure 1: Wiring scheme to control up to 50 DALI ECGs

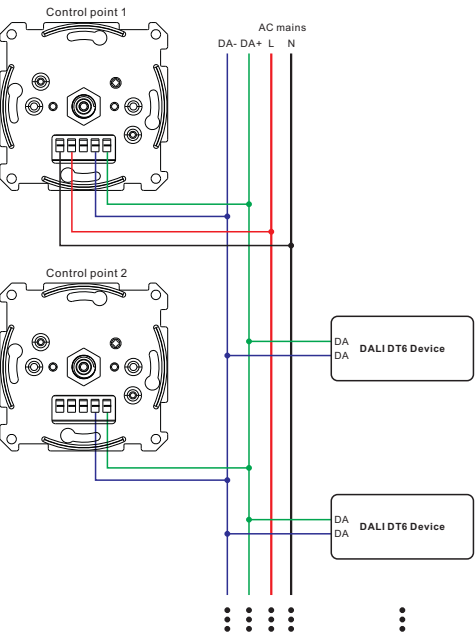
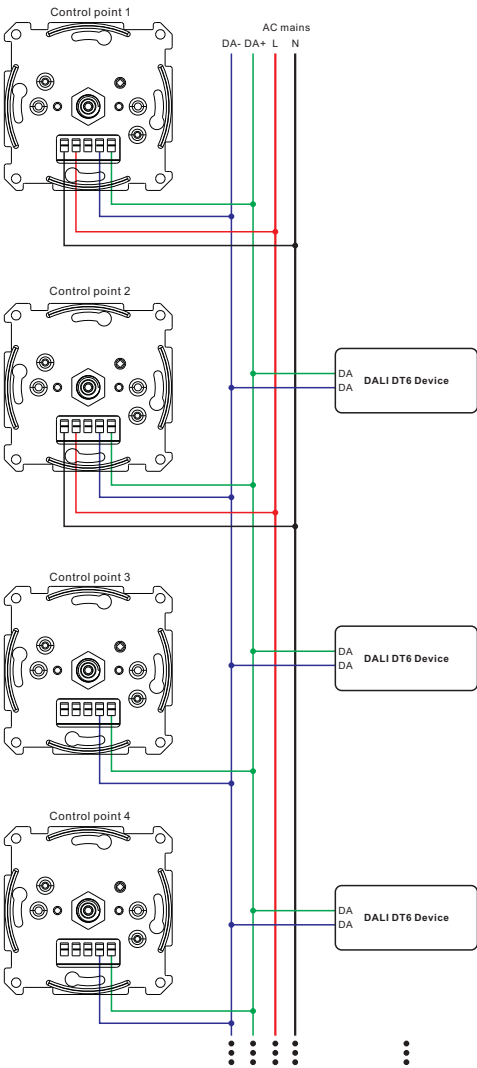


Figure 2: Wiring scheme with 2 MCUs powered by AC mains to control up to 100 DALI ECGs



1. To control up to 100 ECGs with the setup(Figure 2), there are 2 MCUs connected to AC mains.
2. To connect up to 50 ECGs with the setup(Figure 1), there is only 1 MCU connected to AC mains, the other MCUs powered by DALI bus.
3. There can be max 2 MCUs connected to the AC mains in the same control circuit.
4. It's suggested to have max 4 MCUs totally in the same control circuit.