

**FEATURES**

- BUS+FADER+DIMMER+DRIVER
- DC Input: 12-24-48 Vdc
- Remote command options:
 - DMX512+RDM
 - DALI
- Local command options:
 - Normally Open push-button
- Adjusting the brightness of white light
- Current outputs or voltage outputs for R-L-C loads
- Typical efficiency > 95%
- Adjusting the brightness up to completed off
- Soft start and soft stop
- Optimized output curve
- Extended temperature range
- 100% Functional test - 5 Years warranty

➔ For the whole and updated **Device Manual** refer to producer's website: <http://www.dalcnet.com>

Constant current variants

Application: Dimmer

| CODE | Input voltage | Output | Channels | Commands | |
|---------------------|---------------|-----------|----------|---------------------------|--|
| DLB1248-1CC350-DMX | 12-48V DC | 1 x 350mA | 1 | DMX – 1 N.O. push button | |
| DLB1248-1CC350-DALI | 12-48V DC | 1 x 350mA | 1 | DALI – 1 N.O. push button | |
| DLB1248-1CC500-DMX | 12-48V DC | 1 x 500mA | 1 | DMX – 1 N.O. push button | |
| DLB1248-1CC500-DALI | 12-48V DC | 1 x 500mA | 1 | DALI – 1 N.O. push button | |
| DLB1248-1CC700-DMX | 12-48V DC | 1 x 700mA | 1 | DMX – 1 N.O. push button | |
| DLB1248-1CC700-DALI | 12-48V DC | 1 x 700mA | 1 | DALI – 1 N.O. push button | |
| DLB1248-1CC950-DMX | 12-48V DC | 1 x 950mA | 1 | DMX – 1 N.O. push button | |
| DLB1248-1CC950-DALI | 12-48V DC | 1 x 950mA | 1 | DALI – 1 N.O. push button | |

Any current value in range from 150mA to 950mA is available on demand.

Constant voltage variants

Application: Dimmer

| CODE | Input voltage | Output | Channels | Commands | |
|------------------|---------------|------------|----------|---------------------------|--|
| DLB1248-1CV-DMX | 12-48V DC | 1 x 8A max | 1 | DMX – 1 N.O. push button | |
| DLB1248-1CV-DALI | 12-48V DC | 1 x 8A max | 1 | DALI – 1 N.O. push button | |

Protections

| | |
|------------|---------------------------------|
| OTP | Over temperature protection |
| OVP | Over voltage protection (*) |
| UVP | Under voltage protection (*) |
| RVP | Reverse polarity protection (*) |
| IFP | Input fuse protection (*) |
| SCP | Short circuit protection |
| OCP | Open circuit protection |
| CLP | Current limit protection |

(*) Only control logic protection

Reference standards

| | |
|---------------------------------|---|
| EN 61347-1:2008+A1:2011+A2:2013 | Lamp controlgear - Part 1: General and safety requirements |
| EN 55015:2013+A1:2015 | Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment |
| EN 61547:2009 | Equipment for general lighting purposes - EMC immunity requirements |
| EN 50581:2012 | Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |
| IEC/EN 62386-101 | Digital addressable lighting interface - Part 101: General requirements - System |
| IEC/EN 62386-102 | Digital addressable lighting interface - Part 102: General requirements - Control gear |
| IEC/EN 62386-207 | Digital addressable lighting interface - Part 207: Particular requirements for control gear - LED modules (device type 6) |
| IEC 60929-E.2.1 | Control interface for controllable ballasts - control by d.c. voltage - functional specification |
| ANSI E 1.3 | Entertainment Technology - Lighting Control Systems - 0 to 10V Analog Control Specification |
| ANSI E1.11 | Entertainment Technology - USITT DMX512-A - Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories |
| ANSI E1.20 | Entertainment Technology-RDM-Remote Device Management over USITT DMX512 Networks |
| - | MODBUS APPLICATION PROTOCOL SPECIFICATION V1.1b |

Technical Specifications

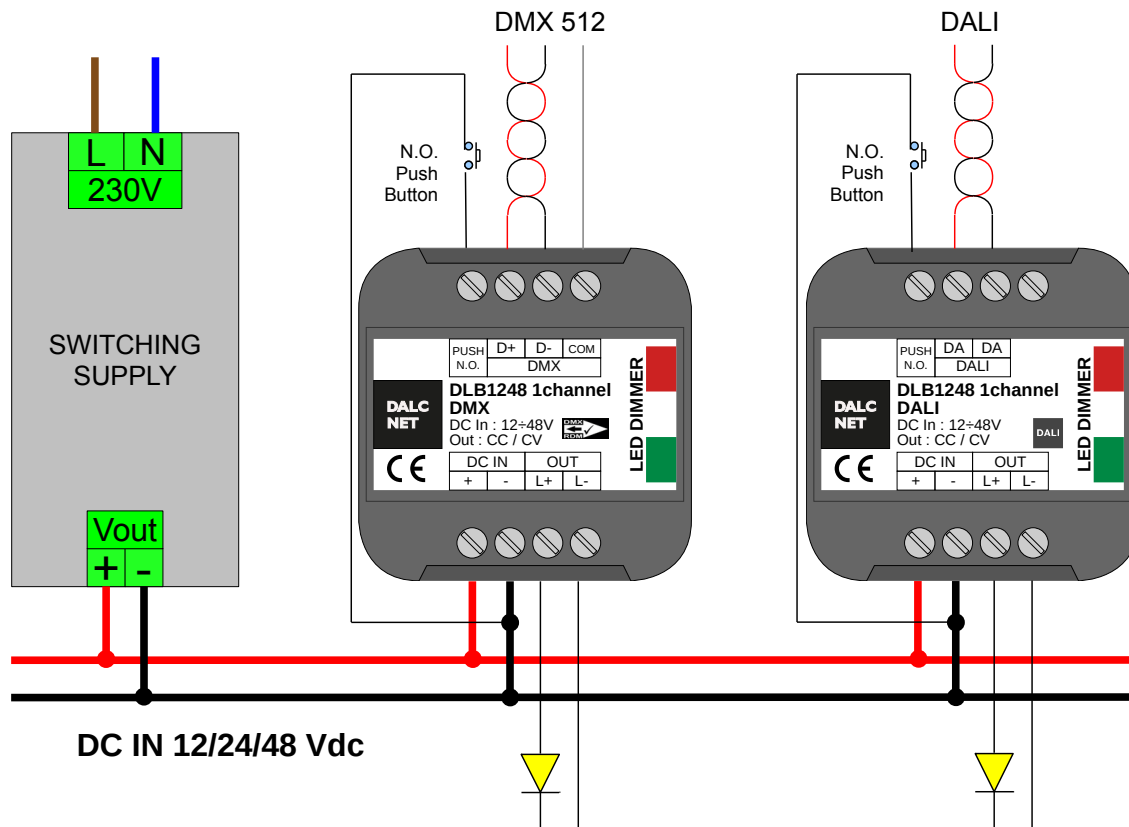
| | | Variants | | | | | Constant voltage | |
|--------------------------------------|------|--|--------|--------|--------|--|------------------|--|
| | | Constant current | | | | | | |
| | | 350mA | 500mA | 700mA | 950mA | | | |
| Supply voltage | | min: 10,8 Vdc .. max: 52,8 Vdc | | | | | | |
| Output voltage | | min: $V_{in}/4$ max: $V_{in}-0,9V$ | | | | = V_{in} | | |
| Output current | | 350 mA | 500 mA | 700 mA | 950mA | max 8 A peak ¹⁾ max 7,5A @20°C ¹⁾ max 6,5A @40°C ¹⁾ | | |
| Absorbed nominal power ¹⁾ | @12V | 4.2 W | 6 W | 8.4 W | 11.4 W | 78 W | | |
| | @24V | 8.4 W | 12 W | 16.8 W | 22.8 W | 156 W | | |
| | @48V | 16.8 W | 24 W | 33.6 W | 45.6 W | 312 W | | |
| Thermal shutdown | | 150 °C | | | | 150 °C | | |
| D-PWM dimming frequency | | 250Hz | | | | | | |
| D-PWM resolution | | 16 bit | | | | | | |
| D-PWM range | | 0,1 – 100% | | | | | | |
| Storage Temperature | | min: -40 max: +60 °C | | | | | | |
| Ambient Temperature ¹⁾ | | min: -10 max: +40 °C | | | | | | |
| Protection grade | | IP20 | | | | | | |
| Wiring | | 2.5mm ² solid - 1.5mm ² stranded - 30/12 AWG | | | | | | |
| Mechanical dimensions | | 45 x 58 x 25 mm | | | | | | |
| Package dimensions | | 56 x 68 x 35 mm | | | | | | |
| Weight | | 40g | | | | | | |

¹⁾ maximum value, dependent on the ventilation conditions

Installation

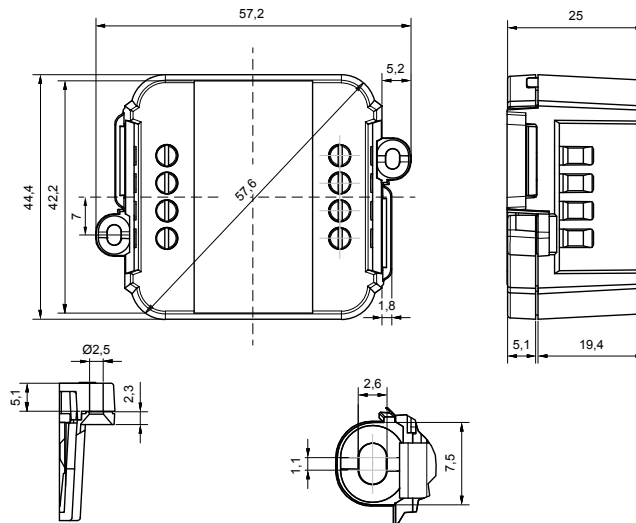
As shown below do the following steps to install the product:

- 1) connect the power supply (12-48 V) to the device terminals DC IN
- 2) connect the N.O. Push button and / or the BUS in the correct terminals of the device
- 3) connect the LED output terminals OUT



DLB1248-1CC350-DMX
 DLB1248-1CC500-DMX
 DLB1248-1CC700-DMX
 DLB1248-1CC950-DMX
 DLB1248-1CV-DMX

DLB1248-1CC350-DALI
 DLB1248-1CC500-DALI
 DLB1248-1CC700-DALI
 DLB1248-1CC950-DALI
 DLB1248-1CV-DALI

Mechanical Dimension:**Technical Notes****Installation:**

- Installation and maintenance must be performed only by qualified personnel in compliance with current regulations.
- The product must be installed inside an electrical panel protected against overvoltages.
- The product must be installed in a vertical or horizontal position with the cover / label upwards or vertically; Other positions are not permitted. It is not permitted to bottom-up position (with the cover / label updown).
- Keep separated the circuits at 230V (LV) and the circuits not SELV from circuits to low voltage (SELV) and from any connection with this product. It is absolutely forbidden to connect, for any reason whatsoever, directly or indirectly, the 230V mains voltage to the bus or to other parts of the circuit.

Power Supply:

- For the power supply use only a SELV power supplies with limited current, short circuit protection and the power must be dimensioned correctly.
- In case of using power supply with ground terminals, all points of the protective earth (PE = Protection Earth) must be connected to a valid and certified protection earth.
- The connection cables between the power source "low voltage" and the product must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Use double insulated cables.
- Dimension the power supply for the load connected to the device. If the power supply is oversized compared with the maximum absorbed current, insert a protection against over-current between the power supply and the device.
- For the constant current output, the voltage of LED module (V_f) must be less of 5V at the voltage of power supply.

Command:

- The length of the connection cables between the local commands (N.O. Push button or other) and the product must be less than 10m; the cables must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Use double insulated shielded and twisted cables.
- The length and type of the connection cables at the BUS (DMX512, Modbus, DALI or other) use cables as per specification of the respective protocols and regulations and they should be isolated from every wiring or parts at voltage not SELV. Use double insulated shielded and twisted cables.
- All the product and the control signal connect at the bus (DMX512, Modbus, DALI or other) and at the local command (N.O. Push Button or other) must be SELV (the devices connected must be SELV or supply a SELV signal)

Outputs:

- The length of the connection cables between the product and the LED module must be less than 10m; the cables must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Is preferable to use shielded and twisted cables.



■ LOCAL COMMAND

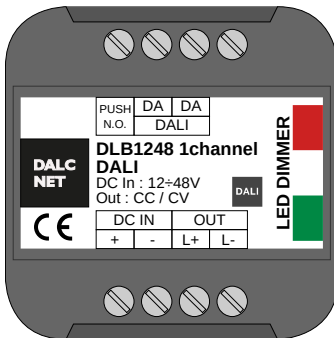
PUSH DIMMER FEATURE

The intensity and the status change (ON/OFF) are controlled by the N.O. push button.

| Button | Intensity |
|------------------------------|---|
| Click | On/Off |
| Double Click | Maximum intensity |
| Long pressure (>1s) from OFF | Turn ON at 1% (Nightly Time), then dimmer up/down |
| Long pressure (>1s) from ON | Dimmer up/down |

■ DALI BUS SETUP

In DALI BUS SETUP all the leds are controlled by an external DALI controller.



Features

- BUS DALI

Reference standards

| | |
|------------------|---|
| IEC/EN 62386-101 | Digital addressable lighting interface - Part 101: General requirements - System |
| IEC/EN 62386-102 | Digital addressable lighting interface - Part 102: General requirements - Control gear |
| IEC/EN 62386-207 | Digital addressable lighting interface - Part 207: Particular requirements for control gear - LED modules (device type 6) |

Functions

RELATION WITH LOCAL COMMANDS

At first power-up, in case of absence of connection to the BUS, local control is active.

When the BUS is detected, the control passes to the BUS.

In the absence of signal the control passes to local commands in the event of the button pressure.

The control mode is memorized on a non-volatile memory

ADDRESSING

| | |
|---|---|
| Simplified method (One ballast connected at a time) | ✓ |
| Random Address Allocation | ✓ |

CHANNEL MAP

The intensity and the status (ON/OFF) is controlled by a DALI controller.

| Channel | Function | Value |
|---------|----------|--------------------|
| 1 | Dimmer | Intensity [0..254] |

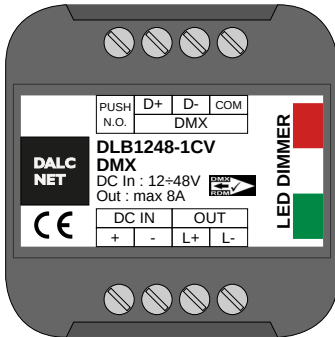


DEFAULT VALUES

| | FACTORY | RESET |
|----------------------|----------|-------------|
| ACTUAL LEVEL | 254 | 254 |
| POWER ON LEVEL | 254 | 254 |
| SYSTEM FAILURE LEVEL | 254 | 254 |
| MIN LEVEL | 1 | 1 |
| MAX LEVEL | 254 | 254 |
| FADE RATE | 7 | 7 |
| FADE TIME | 0 | 0 |
| SHORT ADDRESS | FF | (no change) |
| SEARCH ADDRESS | FF FF FF | FF FF FF |
| RANDOM ADDRESS | FF FF FF | FF FF FF |
| GROUP 0-7 | 0 | 0 |
| GROUP 8-15 | 0 | 0 |
| SCENE 0-15 | MASK | MASK |
| STATUS INFORMATION | 1??0???? | 0?100??? |
| VERSION NUMBER | 1 | (no change) |
| PHYSICAL MIN. LEVEL | 1 | (no change) |

■ DMX512+RDM BUS SETUP

With the **DMX+RDM BUS SETUP** in the "slave" condition the outputs are managed by an external DMX controller.



Features

- BUS DMX512 (NSC+SIP+RDM)



Reference standards

| | |
|------------|---|
| ANSI E1.11 | Entertainment Technology - USITT DMX512-A - Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories |
| ANSI E1.20 | Entertainment Technology-RDM-Remote Device Management over USITT DMX512 Networks |

Functions

RELATION WITH LOCAL COMMANDS

At first power-up, in case of absence of connection to the BUS, local control is active.

When the BUS is detected, the control passes to the BUS.

In the absence of signal the control passes to local commands in the event of the button pressure.

The control mode is memorized on a non-volatile memory

ADDRESSING

RDM

Notice: device addressing have to be carried out by a DMX-RDM programmer.

CHANNEL MAPS

The intensity and the status (ON/OFF) is controlled by a DMX controller.

| Channel | Function | Value |
|---------|----------|--------------------|
| 1 | Dimmer | Intensity [0..255] |



RDM COMMANDS

| <i>REQUESTED PARAMETERS</i> | |
|-----------------------------|---|
| DISC_UNIQUE_BRANCH | ✓ |
| DISC_MUTE | ✓ |
| DISC_UN_MUTE | ✓ |
| SUPPORTED_PARAMETERS | ✓ |
| PARAMETER_DESCRIPTION | ✓ |
| DEVICE_INFO | ✓ |
| SOFTWARE_VERSION_LABEL | ✓ |
| DMX_START_ADDRESS | ✓ |
| IDENTIFY_DEVICE | ✓ |
| | |
| | |

| <i>SUPPORTED PARAMETERS</i> | |
|-----------------------------|---|
| PRODUCT_DETAIL_ID_LIST | ✓ |
| DEVICE_MODEL_DESCRIPTION | ✓ |
| MANUFACTURER_LABEL | ✓ |
| DEVICE_LABEL | ✓ |
| BOOT_SOFTWARE_VERSION_ID | ✓ |
| BOOT_SOFTWARE_VERSION_LABEL | ✓ |
| DMX_PERSONALITY | ✓ |
| DMX_PERSONALITY_DESCRIPTION | ✓ |
| SLOT_INFO | ✓ |
| SLOT_DESCRIPTION | ✓ |
| DEFAULT_SLOT_VALUE | ✓ |