# BL-01

## 4 Channels 0/1-10V DMX512 Decoder
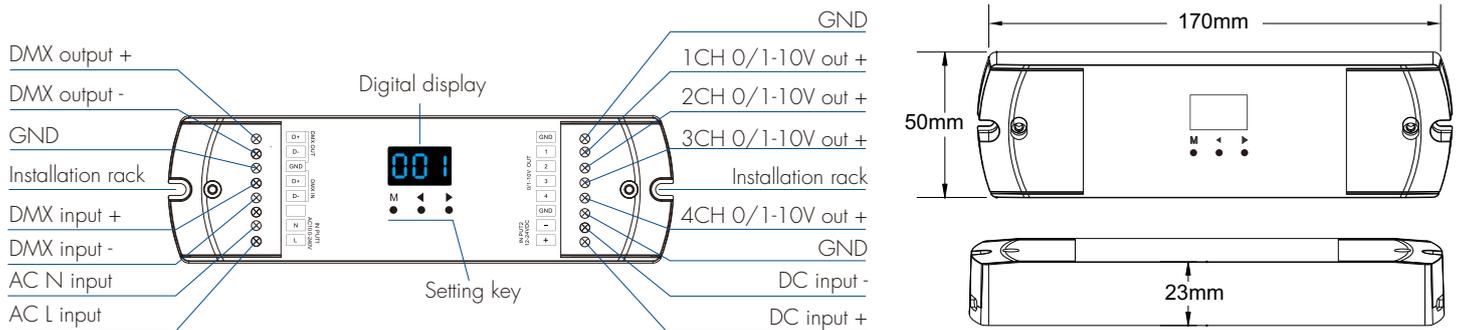
**DMX512**

- Comply with the DMX512 standard protocols.
- Digital numueric dispaly, set DMX decode start address by buttons.
- RDM function can realize intercommunication between DMX master and decoder.
  For example, DMX decoder address can be set by DMX master console. ●
  1/2/4 DMX channel output selectable.
- 0-10V or 1-10V output selectable.
- Logarithmic or linear dimming curve selectable.
- Stand-alone RGB/RGBW mode and 4 channel dimmer mode selectable,
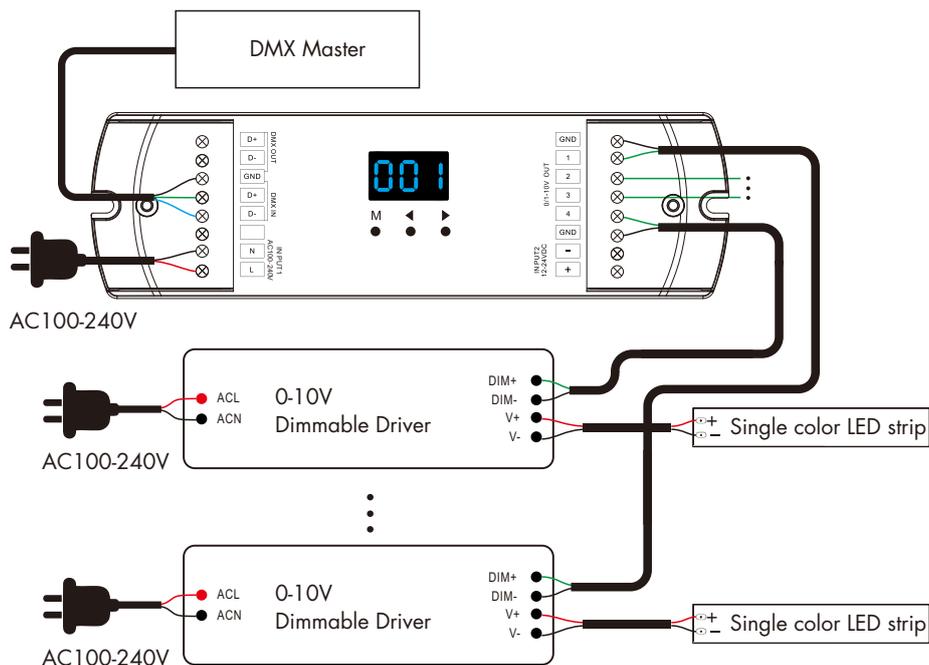  which be controlled by buttons with built-in programs, instead of DMX signal.

**FC CE RoHS**

## Technical Parameters

| Input and Output | | Environment | | Safety and EMC | |
|---|---|---|---|---|---|
| Input voltage | 12-24VDC or 100-240VAC | Operation temperature | Ta: -30°C ~ +55°C | EMC standard | EN IEC 55015/ EN IEC 61547 |
| Input signal | DMX512 | Case temperature (Max.) | Tc: +65°C | | |
| Output signal | 0/1-10V analog | IP rating | IP20 | Safety standard | EN 61347-1/-2 EN 62493 |
| Output current | 4CH,20mA/CH | **Package** | | | |
| **Warranty** | | Size | L175 x W54 x H27mm | Certification | CE RoHs FCC |
| Warranty | 5 years | Gross weight | 0.129kg | | |

## Mechanical Structures and Installations



- DMX output +
- DMX output -
- GND
- Installation rack
- DMX input +
- DMX input -
- AC N input
- AC L input
- Digital display
- Setting key
- GND
- 1CH 0/1-10V out +
- 2CH 0/1-10V out +
- 3CH 0/1-10V out +
- Installation rack
- 4CH 0/1-10V out +
- GND
- DC input -
- DC input +

170mm
50mm
23mm

## Wiring Diagram



DMX Master

AC100-240V

AC100-240V — 0-10V Dimmable Driver — Single color LED strip

AC100-240V — 0-10V Dimmable Driver — Single color LED strip

**Note:**

1. User can connect AC100-240V power or DC12-24V power adapter as power input.
2. We recommend the number of LED drivers connected to 0/1-10V dimmer (each channel) does not exceed 20 pieces,
   The maximum length of the wires from dimmer to LED driver should be no more than 30 meters.

## Operation

### System parameter setting

- Long press M and ◀ key for 2s, prepare for setup system parameter:
  decode mode, 0/1-10V output, output brightness curve, default output level, automatic blank screen. short press M key to switch five item.
- Decode mode: short press ◀ or ▶ key to switch one-channel decode("d-1"), two-channel decode("d-2") or four-channel decode("d-4").
  When set as 1 channel decode, the decoder occupy only 1 DMX address, and four channel output the same brightness of this DMX address.
- 0/1-10V output: short press ◀ or ▶ key to switch 0-10V("0-0") or 1-10V("1-0").
- Output brightness curve: short press ◀ or ▶ key to switch linear curve("C-L") or logarithmic curve("C-E").
- Default output level: set output level when no DMX input signal. short press ◀ or ▶ key to switch maintain DMX output("d- -")
  or output default level ("d00" to "dFF", 0-100%), long press ◀ or ▶ key to change output default level.
- Automatic blank screen: short press ◀ or ▶ key to switch enable ("bon") or disable("boF")automatic blank screen.
- Long press M key for 2s or timeout 10s, quit system parameter setting.

Note: In addition to manual button settings, the above system parameters can also be configured via the RDM function.

### DMX mode

- Short press M key, when display 001~512, enter DMX mode.
- Press ◀ or ▶ key to change DMX decode address(001~512), long press for fast adjustment.
- If there is a DMX signal input, will enter DMX mode automatically.
- DMX Dimming: Each **BL-01** DMX decoder occupy 4 DMX address when connecting the DMX console.
  For example, the defaulted start address is 1, their corresponding relationship in the form:

DMX mode
(001~512)

| DMX Console | DMX Decoder Output |
|-------------|--------------------|
| CH1 0-255 | CH1 0-10V |
| CH2 0-255 | CH2 0-10V |
| CH3 0-255 | CH3 0-10V |
| CH4 0-255 | CH4 0-10V |

### Stand-alone RGB/RGBW mode

- Short press M key, when display P01~P24, enter stand-alone RGB/RGBW mode.
- Press ◀ or ▶ key to change dynamic mode number(P01~P24).
- Each mode can adjust speed and brightness.
  Long press M key for 2s, prepare for setup mode speed, brightness, W channel brightness.
  Short press M key to switch three item.
  Press ◀ or ▶ key to setup value of each item.
  Mode speed:1-10 level speed(S-1, S-9, S-F).
  Mode brightness:1-10 level brightness(b-1, b-9, b-F).
  W channel brightness: 0-255 level brightness(400-4FF).
  Long press M key for 2s, or timeout 10s, quit setting.
- Enter stand-alone RGB/RGBW mode only when DMX signal is disconnected or lost.

Stand-alone RGB/RGBW mode
(P01~P24)

Speed
(8 level)

Brightness
(10 level,100%)

### RGB change mode list

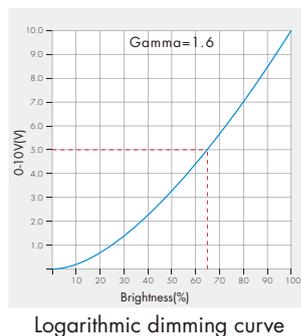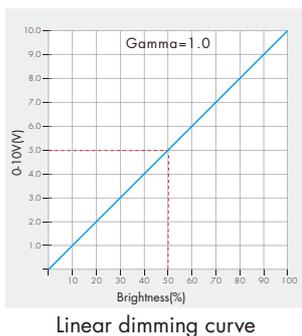| No. | Name | No. | Name | No. | Name |
|-----|------|-----|------|-----|------|
| P01 | Static red | P09 | 7 color jump | P17 | Blue purple smooth |
| P02 | Static green | P10 | Red fade in and out | P18 | Blue white smooth |
| P03 | Static blue | P11 | Green fade in and out | P19 | RGB+W smooth |
| P04 | Static yellow | P12 | Blue fade in and out | P20 | RGBW smooth |
| P05 | Static cyan | P13 | White fade in and out | P21 | RGBY smooth |
| P06 | Static purple | P14 | RGBW fade in and out | P22 | Yellow cyan purple smooth |
| P07 | Static white | P15 | Red yellow smooth | P23 | RGB smooth |
| P08 | RGB jump | P16 | Green cyan smooth | P24 | 6 color smooth |

### Stand-alone dimmer mode

- Short press M key, when display L-1~L-8, enter stand-alone dimmer mode.
- Press ◀ or ▶ key to change dimmer mode number(L-1~L-8).
- Each dimmer mode can adjust each channel brightness independently.
  Long press M key for 2s, prepare for setup four channel brightness.
  Short press M key to switch four channel(100~1FF, 200~2FF, 300~3FF, 400~4FF).
  Press ◀ or ▶ key to setup brightness value of each channel.
  Long press M key for 2s, or timeout 10s, quit setting.
- Enter stand-alone dimmer mode only when DMX signal is disconnected or lost.

Stand-alone dimmer mode
(L-1~L-8)

### Restore factory default parameter

- Long press ◀ and ▶ key for 2s, restore factory default parameter, display"RES".
- Factory default parameter: DMX decode mode, DMX decode start address is 1, four channel decode, 0-10V output, linear dimming curve,
  output 100% level when no DMX input, RGB mode number is 1, dimmer mode number is 1, disable automatic blank screen.

## Dimming Curve Setting

Gamma=1.0

Linear dimming curve

Gamma=1.6

Logarithmic dimming curve

## Malfunctions Analysis & Troubleshooting

| Malfunctions | Causes | Troubleshooting |
|--------------|--------|-----------------|
| No light | 1.No power.<br>2.Wrong connection or insecure. | 1.Check the power.<br>2.Check the connection. |
| Wrong color | 1.Wrong connection of 0-10V output wires.<br>2.DMX decode address error. | 1.Reconnect 0-10V output wires.<br>2.Set corrrect decode address. |