## 0/1-10V LED Dimming Driver

## Model No.: LV-L

0-10V or 1-10V signal input/PWM Constant voltage output/Four PWM frequencies/Logarithmic or liner dimming/Push Dim

## Features

- 1 channel 0/1-10V LED dimming driver with push-dim function.
- 1 channel 0/1-10V input, 1 channel PWM constant voltage output.
- Logarithmic or linear dimming curve selectable.
- PWM frequency $500 \mathrm{~Hz}, 2 \mathrm{kHz}, 8 \mathrm{kHz}$ or 16 kHz selectable.
- Compatible with active or passive 0-10V, 1-10V dimmer, can solve the fluorescent lamp dimming system compatible with LED lighting
- PWM frequency $500 \mathrm{~Hz}, 2 \mathrm{kHz}, 8 \mathrm{kHz}$ or 16 kHz selectable
- Over-heat / Over-load / Short circuit protection, recover automatically.



## Technical Parameters

| Input and Output |  | Safety and EMC |  | Dimming data |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Input voltage | 12-48VDC | EMC standard (EMC) | ETSI EN 301 489-1 V2.2.3 | Input signal | 0/1-10V + Push Dim |
| Output voltage | 12-48VDC |  | ETSI EN 301 489-17 V3.2.4 | Dimming gray scale | 4096 (2^12) levels |
| Output current | $\begin{aligned} & \text { 15A@12/24V } \\ & \text { 10A@36/48V } \end{aligned}$ | Safety standard(LVD) | EN 62368-1:2020+A11:2020 | Dimming range | 0-100\% |
|  |  | Radio Equipment(RED) | ETSI EN 300328 V2.2.2 | Dimming curve | Logarithmic or linear |
| Output power | 180W@12V 360W@24V 360W@36V 480W@48V | Certification | CE, EMC, LVD, RED | PWM Frequency | $500 \mathrm{~Hz}, 2 \mathrm{kHz}, 8 \mathrm{kHz}, 16 \mathrm{kHz}$ |
|  |  | Package |  | Environment |  |
|  |  | Size | L178x W $150 \times \mathrm{H} 38 \mathrm{~mm}$ | Operation temperature | Ta: $-30^{\circ} \mathrm{C} \sim+55^{\circ} \mathrm{C}$ |
| Output type | Constant voltage | Gross weight | 0.124 kg | Case temperature (Max.) | Ta: $+85^{\circ} \mathrm{C}$ |
| Warranty |  |  |  | IP rating | IP20 |
| Warranty | 5 years |  |  |  |  |

Mechanical Structures and Installations


## Wiring Diagram



## Note:

- The 0/1-10V input is operable via commercially available simple rotary wall switchs designed for 0/1-10V dimming equipment or from decicated system central dimming controllers
- Compliant with 0-10V, 1-10V, 10 V PWM, $\mathrm{RX}(4$ in 1).
- We recommend the number of LED drivers connected to $0 / 1-10 \mathrm{~V}$ dimmer does not exceed 50 pieces, the maximum length of the wires from dimmer to LED driver should be no more than 50 meters.
- If the LED driver be used with Push-Dim interface prior to using the $0 / 1-10 \mathrm{~V}$ interface, the $0 / 1-10 \mathrm{~V}$ signal should change over $10 \%$ to return $0 / 1-10 \mathrm{~V}$ control.


## Push Dim Function

The provided Push-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switchs.

- Short press:

Turn on or off light.

- Long press (1-6s):

Press and hold to step-less dimming,
With every other long press, the light level goes to the opposite direction.

- Dimming memory:

Light returns to the previous dimming level when switched off and on again, even at power failure.

## - Synchronization:

If more than one controller are connected to the same push switch, do a long press for more than 10s, then the system is synchronized and all lights in the group dim up to $100 \%$.
This means there is no need for any additional synchrony wire in larger installations.
We recommend the number of controllers connected to a push switch does not exceed 50 pieces,
The maximum length of the wires from push to controller should be no more than 50 meters.

## PWM frequency setting



We can select four PWM frequency: $500 \mathrm{~Hz}, 2 \mathrm{KHz}, 8 \mathrm{KHz}, 16 \mathrm{KHz}$.
Higher PWM frequency, will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).

## Dimming curve setting

## Linear dimming curve



Logarithmic dimming curve


## Malfunctions Analysis \& Troubleshooting

| Malfunctions | Causes | Troubleshooting |
| :--- | :--- | :--- |
| No light | 1. No power. | 1. Check the power. |
|  | 2. Wrong connection or insecure. | 2. Check the connection. |
| Uneven intensity | 1. Output cable is too long. | 1. Reduce cable or loop supply. |
|  | 2. Wire diameter is too small. | 2. Change wider wire. |
| rear, with voltage drop | 3. Overload beyond power supply capability. | 3. Replace higher power supply. |
|  | 4. Overload beyond controller capability. | 4. Add power repeater. |

## Installation Precautions

1. The products shall not be stacked, the distance should be $\geq 20 \mathrm{~cm}$, so as not to affect lifespan of the products due to poor heat dissipation.
2. The product shall not be installed close to the switching power supply with an interval of $\geq 20 \mathrm{~cm}$ to avoid the radiation interference of the switching power supply.
