# LCDMXSD-D4-P

## Constant Voltage 4 Channel DMX Decoder IP20



## Features

- In compliance with DMX512 standard protocols
- Digital numeric display, start address can be set by using the buttons on the decoder
- Selectable 1/2/4 DMX channel output
- Selectable 16bit (65536 levels) /8bit (256 levels) grey level
- Selectable PWM frequency 250/500/1000/2000/4000/8000/1600HZ
- Selectable Logarithmic or linear dimming curve
- Over-heat / short circuit protection
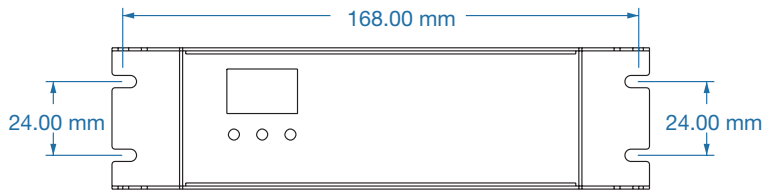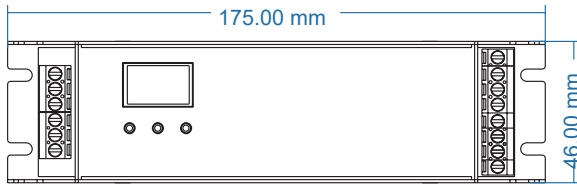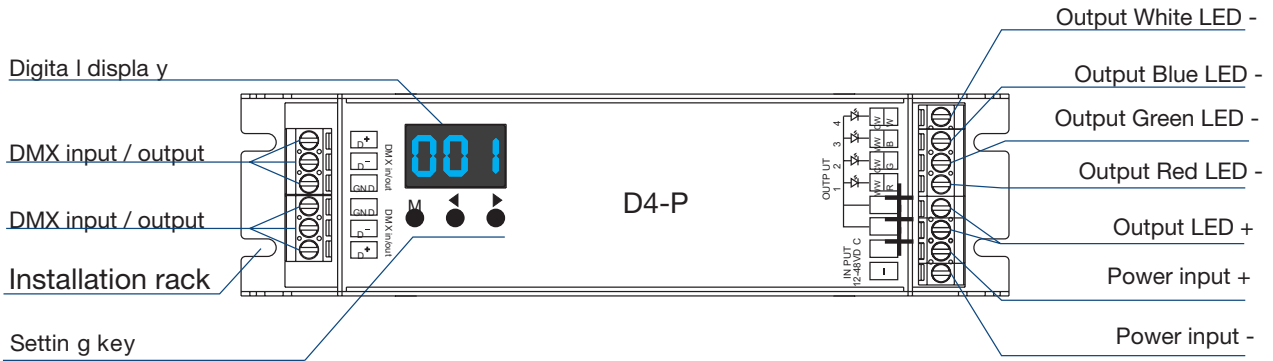
## Technical Parameters

| Input and Output | |
|---|---|
| Input voltage | 12-48VDC |
| Input current | 32.5A |
| Output voltage | 4 x (12-48) VDC |
| Output current | 4x8A@12/24V 4x6A@36/48V |
| Output power | 4 x 96W @ 12V 4x192W @24V 4 x 216W @ 36V 4x288W @48V |
| Output type | Constant voltage |

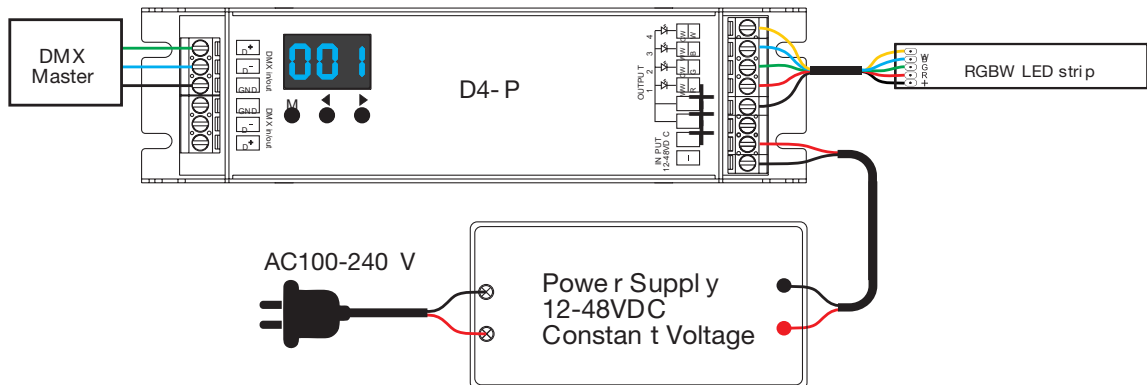| Warranty and Protection | |
|---|---|
| Warranty | 5 years |

| Safety and EMC | |
|---|---|
| EMC standard (EMC) | ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4 |
| Safety standard (LVD) | EN 62368-1 :2020+A11 :2020 |
| Certification | CE,EMC,LVD |

| Environment | |
|---|---|
| Operation temperature | Ta:-30°C`~ +55°C |
| Max case temperature | Tc:+75°C |
| IP rating | IP20 |

## Mechanical Structures & Installations

Digital display

DMX input / output

DMX input / output

Installation rack

Setting key

Output White LED -

Output Blue LED -

Output Green LED -

Output Red LED -

Output LED +

Power input +

Power input -

D4-P

175.00 mm

46.00 mm

32.00 mm

168.00 mm

24.00 mm

24.00 mm

## Wiring Diagram

DMX Master

D4-P

RGBW LED strip

AC100-240 V

Power Supply
12-48VDC
Constant Voltage

## Note

- A DMX signal amplifier is needed if more than 32 decoders are connected, or using an extended signal line. Signal amplification should not be more than 5 times continuously
- If the recoil effect occurs because of a longer signal line or bad line quality, try and connect 0.25W 90-120Ω terminal resistor at the end of each DMX signal line

## Operation

### System parameter setting

- Long press M and ◄ key in the same time for 2 seconds, prepare for setup system parameter: decode mode, grey level, output PWM frequence, output brightness curve, default output level, automatic blank screen. Short press M key to switch through six options

- Decode mode: short press ◄ or ► key to switch 1/2/4 channel decode mode("d-1","d-2" or "d-4"). When set as 1 channel decode, the decoder occupy only 1 DMX address, and four channel output are the same brightness of this DMX address

- Grey level: short press ◄ or ►key to switch 8bit("b08") or 16 bit("b16"). Choose 16 bit if the DMX master support 16 bit

- Output PWM frequency: short press ◄ or ►key to switch 250Hz("F02"), 500Hz("F05"), 1000Hz("F10"), 2000Hz("F20"), 4000Hz("F40"), 8000Hz("F80") or 16000Hz("F16"). Higher PWM frequency, will cause a lower output current, higher power noise, but is more suitable for camera (No flickering with video)

- Output brightness curve: short press ◄ or ► key to switch linear curve ("C-L") or logarithmic curve("C-E")

- Default output level: press◄ or ►key to change default 0-100% level ("d00" to "dFF" ) when no DMX input signal

- Automatic blank screen: short press ◄ or ►key to switch enable ("bon") or disable("boF") automatic blank screen

- Long press M key for 2 seconds or timeout 10 seconds, to quit system parameter setting

### DMX mode

- Short press M key, when it displays 001~512, enter DMX mode

- Press ◄ or ► key to change DMX decode start address (001~512), long press for fast adjustment

- If there is a DMX signal input, it will enter DMX mode automatically

- DMX dimming: Each D4-P DMX decoder occupies 4 DMX addresses 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 PWM 0-100% (LED R) |
| CH2 0-255 | CH2 PWM 0-100% (LED G) |
| CH3 0-255 | CH3 PWM 0-100% (LED B) |
| CH4 0-255 | CH4 PWM 0-100% (LED W) |

### Self-test mode

- Enter self-test mode only when DMX signal is disconnected or lost

- Short press M key, when it displays L-1~L-5, enter self-test mode

- Press ◄ or ►key to change mode number (L-1L-5)

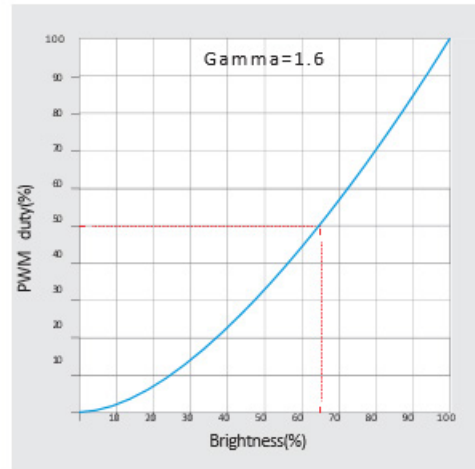- Self-test mode includes all four channels to light up separately or synchronously

Self-test mode
(L-1~L-5)

# Dimming curve setting

Linear dimming curve


Gamma=1.0
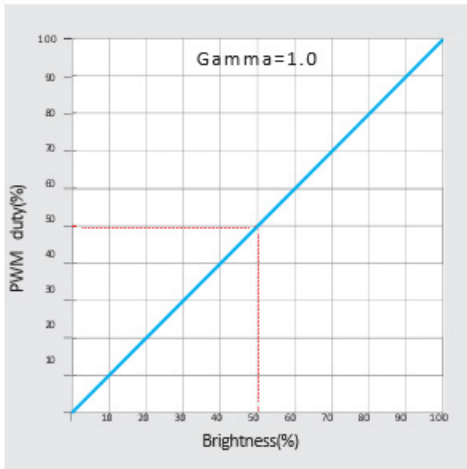
Logarithmic dimming curve


Gamma=1.6

# 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 colour | 1. Wrong connection of R/G/B/W wires<br>2. DMX decode address error | 1. Reconnect R/G/B/W wires<br>2. Set correct decode address |
| Uneven intensity between front and rear, with voltage drop | 1. Output cable is too long<br>2. Wire diameter is too small<br>3. Overload beyond power supply capability<br>4. Overload beyond controller capability | 1. Reduce cable or loop supply<br>2. Change to a wider wire<br>3. Replace with a higher power supply<br>4. Add a data repeater |