

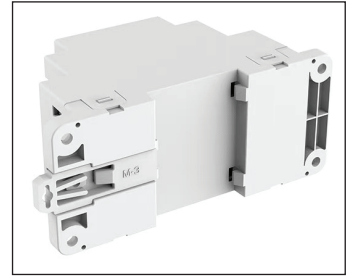
# 4-CHANNEL DMX512 TO 0-10V/1-10V DECODER

## DESCRIPTION:

This 4-channel DMX512 decoder is designed to connect DMX lighting control systems with compatible 0-10V or 1-10V dimmable LED drivers. With RDM support, stand-alone operation, selectable dimming behavior, and a clear digital display, it provides flexible control for professional LED lighting installations. Its DIN-rail design makes it easy to install inside control panels and electrical enclosures.

## FEATURES:

- Converts DMX control signals for compatible analog dimming drivers
- Allows remote DMX address adjustment through RDM.
- Provides flexible control for single-color, RGB, and RGBW lighting
- Allows stand-alone operation when a DMX signal is not available
- Includes built-in lighting programs for dynamic effects
- Offers adjustable dimming response for different lighting needs
- Features a digital display for easy setup and address selection
- Designed for clean DIN-rail installation
- Supports independent channel brightness adjustment
- Includes automatic display blanking option
- Built with reverse-polarity protection

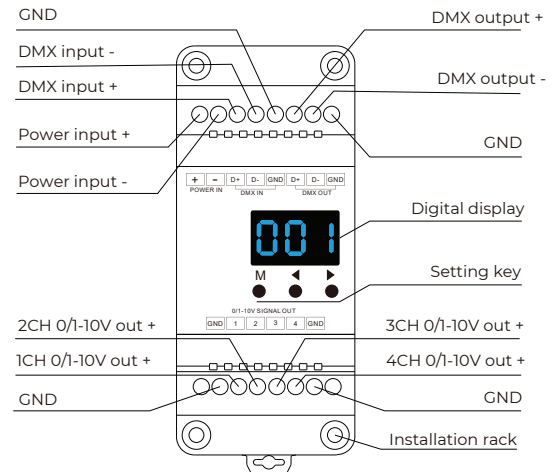
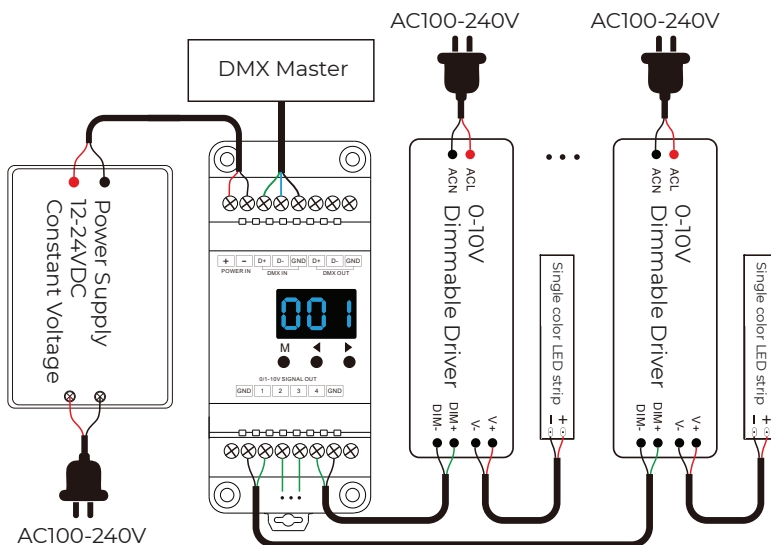


## APPLICATIONS:

- DMX512 lighting control systems
- Compatible 0-10V and 1-10V dimmable LED driver systems
- RGB and RGBW lighting control
- Multi-channel LED dimming applications
- Control panels and DIN-rail enclosures
- Stand-alone RGB/RGBW and 4-channel dimming control

## MECHANICAL STRUCTURE & INSTALLATION:

## WIRING DIAGRAM:

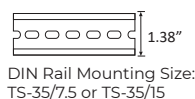
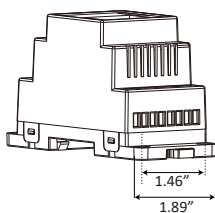
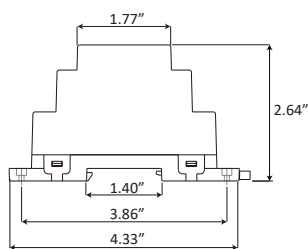


**Note:** Recommended maximum: 5 LED drivers per 0/1-10V output. The wire length from the decoder to the LED driver should not exceed 49.2 ft.

## TECHNICAL SPECIFICATIONS:

|                               |                                                                        |
|-------------------------------|------------------------------------------------------------------------|
| Input Voltage                 | 12-24 VDC                                                              |
| Input Signal                  | DMX512                                                                 |
| Output Signal                 | 0/1-10V analog                                                         |
| Output Channels               | 4 channels                                                             |
| Output Current                | 20 mA per channel                                                      |
| DMX Decode Mode               | 1-channel, 2-channel, or 4-channel selectable                          |
| Output Type                   | 0-10V or 1-10V selectable                                              |
| PWM Frequency                 | 500 Hz or 2 kHz selectable                                             |
| Dimming Curve                 | Linear or logarithmic selectable                                       |
| Display                       | Digital numeric display                                                |
| Stand-Alone RGB/RGBW Programs | P01-P24                                                                |
| Stand-Alone Dimmer Modes      | L-1 to L-8                                                             |
| Operating Temperature         | -22°F to 131°F                                                         |
| Maximum Case Temperature      | 149°F                                                                  |
| IP Rating                     | IP20                                                                   |
| Mounting                      | DIN rail                                                               |
| Protection                    | Reverse polarity                                                       |
| Warranty                      | 5 years                                                                |
| EMC Standard                  | EN55032:2015, EN61000-3-2:2014, EN61000-3-2:2013, EN55024:2010/A1:2015 |
| Safety Standard               | EN61347-1:2015, EN61347-2-11:2015                                      |

## DIMENSIONS:



## OPERATION:

### SYSTEM PARAMETER SETTINGS:

- Press and hold the M and ◀ buttons for 2 seconds to enter the system parameter setup menu. Available settings include decode mode, 0/1-10V output, PWM frequency, brightness curve, and automatic blank screen. Short press the M button to switch between each setting.
- Decode Mode: Short press ◀ or ▶ to select one-channel decode d-1, two-channel decode d-2, or four-channel decode d-4. When set to one-channel decode, the decoder uses only one DMX address, and all four channels output the same brightness level from that address.
- 0/1-10V Output: Short press ◀ or ▶ to select 0-10V 0-0 or 1-10V 1-0.
- PWM Frequency: Short press ◀ or ▶ to select 500 Hz F-L or 2 kHz F-H.
- Brightness Curve: Short press ◀ or ▶ to select linear curve C-L or logarithmic curve C-E.
- Automatic Blank Screen: Short press ◀ or ▶ to enable bon or disable boF for the automatic blank screen function.
- Press and hold the M button for 2 seconds, or wait 10 seconds, to exit the system parameter setup menu.

## DMX MODE:

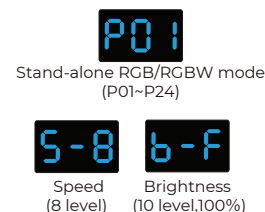
- Short press the M button until the display shows 001-999 to enter DMX mode.
- Press ◀ or ▶ to adjust the DMX start address from 001-999. Press and hold either button for faster adjustment.
- When a DMX signal is detected, the decoder will automatically enter DMX mode.
- DMX Dimming: In 4-channel decode mode, the decoder uses four DMX addresses when connected to a DMX console. For example, if the start address is set to 001, the four output channels correspond to DMX addresses 001, 002, 003, and 004.



| 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 the M button until the display shows P01-P24 to enter Stand-Alone RGB/RGBW mode.
- Press ◀ or ▶ to select the desired dynamic mode from P01-P24.
- Each mode allows adjustment of speed, brightness, and W channel brightness.
- Press and hold the M button for 2 seconds to enter the adjustment settings.
- Short press the M button to switch between speed, brightness, and W channel brightness.
- Press ◀ or ▶ to adjust each value:
- Mode Speed: 1-10 levels S-1 to S-F
- Mode Brightness: 1-10 levels b-1 to b-F
- W Channel Brightness: Adjustable from 0-255; display range: 400-4FF.
- Press and hold the M button for 2 seconds, or wait 10 seconds, to exit the setting mode.
- Stand-Alone RGB/RGBW mode is available only when the DMX signal is disconnected or lost.

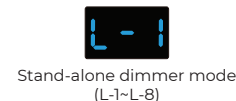


## RGB CHANGE MODE LIST:

| 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 the M button until the display shows L-1 to L-8 to enter Stand-Alone Dimmer Mode.
- Press ◀ or ▶ to select the desired dimmer mode from L-1 to L-8.
- Each dimmer mode allows independent brightness adjustment for each channel.
- Press and hold the M button for 2 seconds to enter the four-channel brightness setting.
- Short press the M button to switch between channels: 100-1FF, 200-2FF, 300-3FF, and 400-4FF.
- Press ◀ or ▶ to adjust the brightness value for each channel.
- Press and hold the M button for 2 seconds, or wait 10 seconds, to exit the setting mode.
- Stand-Alone Dimmer Mode is available only when the DMX signal is disconnected or lost.

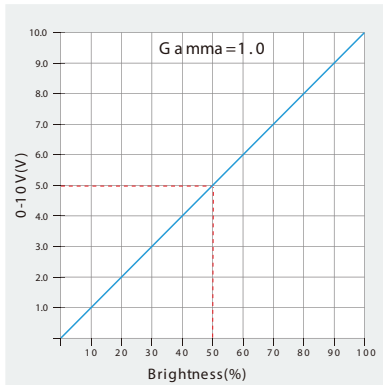


## RESTORE FACTORY DEFAULT PARAMETERS:

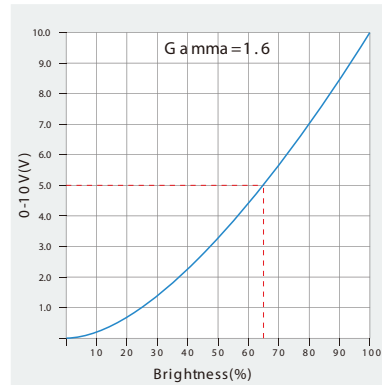
- Press and hold ◀ + ▶ for 2 seconds to restore the factory default settings. The display will show RES.
- Factory default settings include: DMX operating mode, DMX start address 1, four-channel decode mode, 0-10V output, low PWM frequency setting, linear brightness curve, RGB mode 1, dimmer mode 1, and automatic blank screen disabled.

## DIMMING CURVE SETTING:

Linear dimming curve



Logarithmic dimming curve



## MALFUNCTION ANALYSIS & TROUBLESHOOTING:

| Issue                  | Possible Cause                         | Corrective Action                           |
|------------------------|----------------------------------------|---------------------------------------------|
| No light output        | No power supply                        | Check the power supply.                     |
| No light output        | Incorrect or loose connection          | Check and secure all connections.           |
| Incorrect color output | Incorrect 0-10V output wire connection | Reconnect the 0-10V output wires correctly. |
| Incorrect color output | DMX decode address error               | Set the correct DMX decode address.         |

Notes: