

4 Channel Constant Voltage DMX512 & RDM LED Decoder

SKU: A-D4-DMXD

4 Channel constant voltage DMX512 & RDM LED decoder with standalone functionality, six PWM frequency selections, linear or logarithmic dimming, numeric display and 5-year warranty in a DIN rail mount form factor.

Features

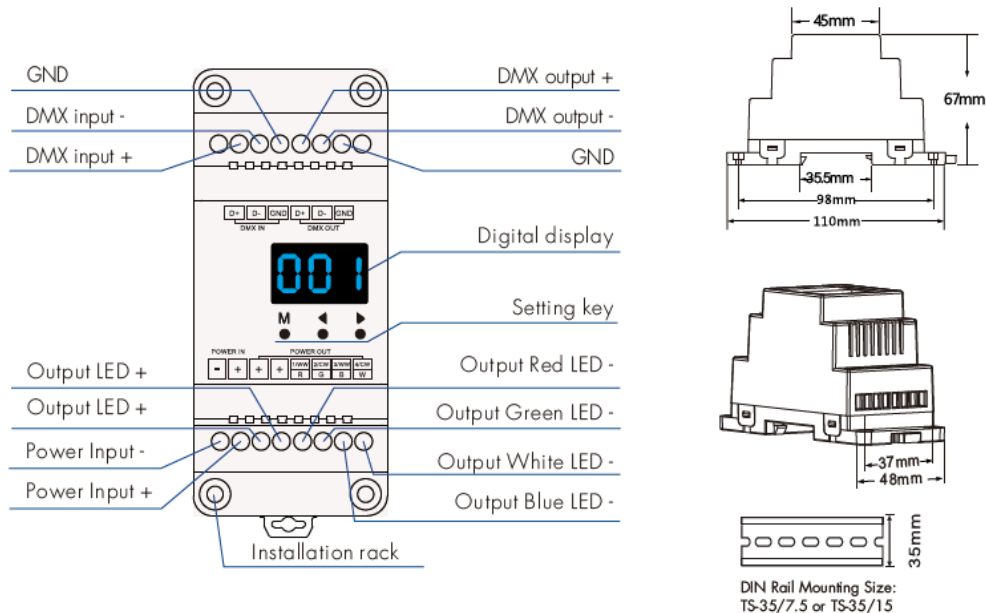
- Fully compliant with the DMX512 standard protocol.
- No DIP switches! Use the integrated buttons and digital display to configure the DMX address.
- Supports RDM functionality for those DMX masters or controllers that take advantage of this enhanced protocol.
- 16 bit (65536 levels) or standard 8 bit (256) level selection.
- PWM dimming frequency selection: 500 / 1000 / 2000 / 4000 / 8000 / 16000 Hz options for reduced power noise and LED flickering.
- Logarithmic or linear dimming curve selectable.
- Over-heat (95°C), over-load and short circuit protection with automatic recovery.
- Automatic DMX signal detection helps to know if there are line issues.
- Default Output Level setting allows you to set the light level if the DMX signal is lost.
- CE, EMC, and LVD certified.
- 5 year warranty



CE RoHS  LVD

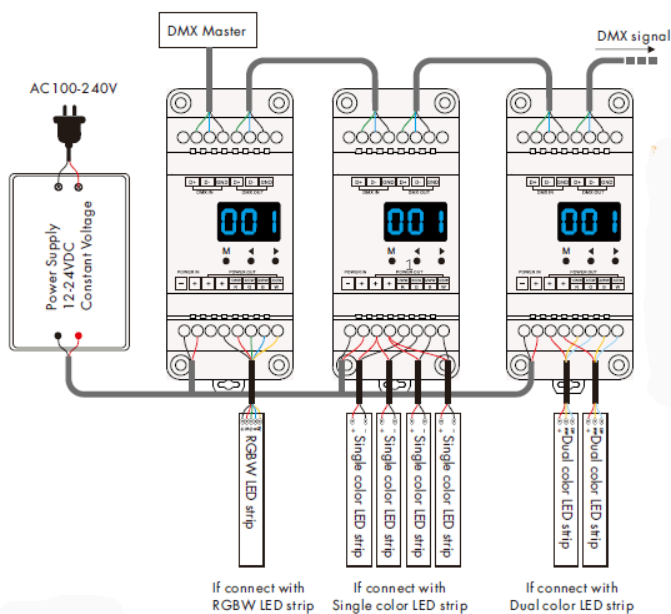
Input and Output		Safety and EMC		Environment	
Input voltage	12-24VDC	EMC standard (EMC)	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4	Operation temp.	Ta: -30° C ~ +55° C
Input current	20.5A			Max case temp.	Tc: +75° C
Output voltage	4 x (12-24)VDC	Safety standard (LVD)	EN 62368-1:2020+A11:2020		
Output current	4CH,5A/CH	Certification	CE,EMC,LVD		
Output power	4 x (60-120V)	Warranty			
Output type	Constant voltage	Warranty	5 years		
		Package		Size	L120 x W78 x H55mm
				Gross weight	0.162kg

Mechanical Structures and Installations





Wiring Diagram



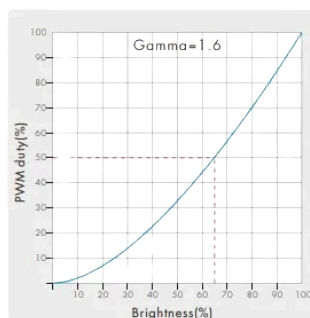
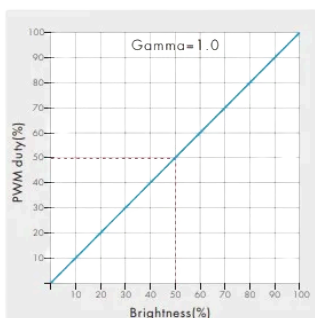
Note

- A DMX signal amp is typically required if more than 10-15 decoders are connected. This is especially true if the distance between the decoders is very long (250 ft+).
- If there appears to be signal loss, you can try connecting a 0.25 watt 90-120 Ohm terminal resistor at the end of the DMX signal line.
- If the display reads 1OL, 2OL, 3OL, or 4OL, that indicates an overload alarm (wattage too high) on a particular channel.
- If the display reads OHA, that indicates an overheating alarm.
- Alarms should clear automatically if the problem is resolved (may take up to 30 seconds).

Operation Settings

- Long press the M and < key at the same time for 2 seconds. Short press M key to switch between settings:
 - Decode Mode
 - Short press the < or > key to switch between 1/2/4 channel decode mode (d-1, d-2, or d-4). When set as 1 channel mode, the decoder will only occupy a single DMX address and dim all the outputs at the same level. The same is true for 2 channel mode where channels 1/3 and 2/4 will dim together.
- Grey Level
 - Short press the < or > key to switch between 8bit (b08) or 16 bit (b16).
- Output PWM frequency
 - Short press the < or > key to switch between 250Hz (F02), 500Hz (F05), 1000Hz (F10), 2000Hz (F20), 4000Hz (F40), 8000Hz (F80), or 16000Hz (F16).
 - The higher the PWM frequency, the lower the output current however it's useful to eliminate power noise and reduce visible flickering.
- Output brightness curve
 - Short press the < or > key to switch between Linear Curve (C-L) or logarithmic curve (C-E)
- Default output level
 - Short press the < or > key to change the default 0-100% level (d00 to dFF) when no DMX signal input is detected.
- Automatic blank screen
 - Short press the < or > to enable (bon) or disable (bof) the automatic blank screen.
- To exit the menu, long press the M key for 2 seconds or wait 10 seconds with no button presses.

Dimming Curve Setting





DMX Decoder Mode

- Short press the M key to switch between DMX decoder mode and RGB controller mode.
- Press the < or > key to adjust the value.
- Long press MODE and > for 2 seconds to start the quick self-test feature.
- Long press the < and > key for 2 seconds to restore the unit to factory defaults.



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)

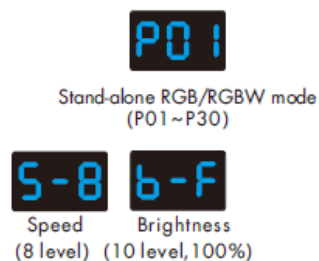
Self-Test Mode

- The decoder will enter self-test mode only when DMX signal is disconnected or lost.
- Short press the M key, when the display shows L-1~L-5 it will allow you test each output number.
- Press the ◀ or ▶ key to switch between L-1 thru L-5.



Stand-alone RGB/RGBW Mode

- The decoder will only enter stand-alone RGB/RGBW mode only when DMX signal is disconnected or lost.
- Short press the M key, when it displays P01~P30, it is now in stand-alone RGB/RGBW mode.
- Press the ◀ or ▶ key to change dynamic mode numbers (P01~P30).
- Each mode can adjust speed and brightness.
 - Long press M key for 2s to enter setup mode and change settings.
 - Short press M key to switch between speed, brightness and white channel brightness.
 - Press the ◀ or ▶ key to modify the value of each item.
 - Speed: 1-10 levels (S-1, S-9, S-F).
 - Brightness: 1-10 level brightness (b-1, b-9, b-F).
 - White channel brightness: 0-255 level brightness (400-4FF).
 - Long press the M key for 2s to quit, otherwise it will timeout automatically after 10 second.



Factory Default

- Long press the ◀ and ▶ key for 2s to restore factory defaults (it will display "RES").
- Factory defaults are: DMX decode mode, start address is 1, four channel decode, 8 bit, 2000Hz PWM frequency output, logarithmic brightness curve, output 100% level when no DMX input is detected, RGB mode number is 1, dimmer mode number is 1, & disable automatic blank screen.

RGB Effect Mode List

No.	Name	No.	Name	No.	Name
P01	Static red	P11	Green strobe	P21	Red yellow smooth
P02	Static green	P12	Blue strobe	P22	Green cyan smooth
P03	Static blue	P13	White strobe	P23	Blue purple smooth
P04	Static yellow	P14	RGB strobe	P24	Blue white smooth
P05	Static cyan	P15	7 color strobe	P25	RGB+W smooth
P06	Static purple	P16	Red fade in and out	P26	RGBW smooth
P07	Static white	P17	Green fade in and out	P27	RGBY smooth
P08	RGB jump	P18	Blue fade in and out	P28	Yellow cyan purple smooth
P09	7 color jump	P19	White fade in and out	P29	RGB smooth
P10	Red strobe	P20	RGBW fade in and out	P30	6 color smooth



Troubleshooting Steps

Issue	Troubleshooting
General tips	<ol style="list-style-type: none">1. 18-gauge wire is recommended for connection to the light fixtures.2. If using our DMX Controller, verify the firmware is up to date.3. Start troubleshooting by disconnecting all but one DMX device and verify you have good control before adding more.4. Connect no more than 32 ft or 10m of LED strip on one line to minimize voltage drop.5. Oversize your power needs by at least 10-15%
Connected LED Lights do not work	<ol style="list-style-type: none">1. Ensure that you are using a matching 12 or 24 volt power supply for your 12 or 24 volt fixtures. The decoder will not convert the voltage.2. Verify you have the proper pinout of the light fixture connected in RGBW order.3. Check the DMX address and make sure it matches your programming or integration.4. Ensure that you have a good DMX signal and that you haven't reversed the Data + and Data - wires.
RJ45 Connector Pinout	<ol style="list-style-type: none">1: Data +2: Data -3-6: Empty7-8: Ground
Wrong colors are being displayed	<ol style="list-style-type: none">1. Verify you are using 8 bit or 16 bit mode in your integration. By default our decoders come in 8 bit mode.2. Make sure you only have one DMX master or controller connected to the bus.3. Check other DMX devices to make sure they are not overlapping total count DMX addresses. EG: A 12 channel decoder uses 12 addresses so if one is set to address 1, it will consume DMX addresses 1-12. The next unit should be set to DMX address 13 or higher.
When connecting multiple decoders, some closest to the DMX Controller stop working.	<ol style="list-style-type: none">1. Try adding a 120 Ohm resistor to the last DMX decoder in the line.2. If connecting 12 or more DMX devices, you may need to add a DMX booster or use the integrated DMX AMP signal booster found on some decoders