

# 1 Channel Constant Voltage DMX512 & RDM Decoder

Model No.: D1-L

RDM/Stand-alone function/Seven PWM frequency/Logarithmic or linear dimming/Numeric display/Multiple protection



## Features

- Comply with the DMX512 standard protocols.
- Digital numeric display, 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.
- 16bit (65536 levels) /8bit (256 levels) grey level selectable.
- PWM frequency 250/500/1000/2000/4000/8000/16000Hz selectable.
- Logarithmic or linear dimming curve selectable.
- Stand-alone dynamic mode and dimmer mode selectable, which be controlled by buttons with built-in programs, instead of DMX signal.
- Over-heat / Overload / Short circuit protection, recover automatically

## Technical Parameters

Input and Output	
Input voltage	12-24VDC
Input current	1.5.5A
Output voltage	12-24VDC
Output current	1CH,15A
Output power	180-360W
Output type	Constant voltage

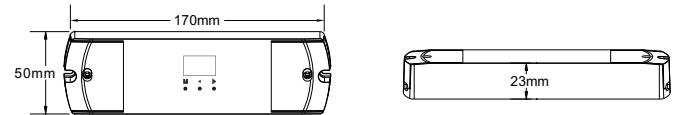
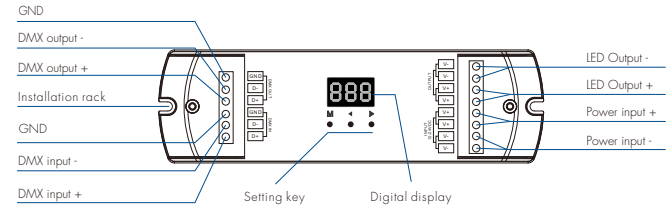
Environment	
Operation temperature	Ta: -30℃ ~ +55℃
Case temperature (Max.)	Tc: +75℃
IP rating	IP20

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

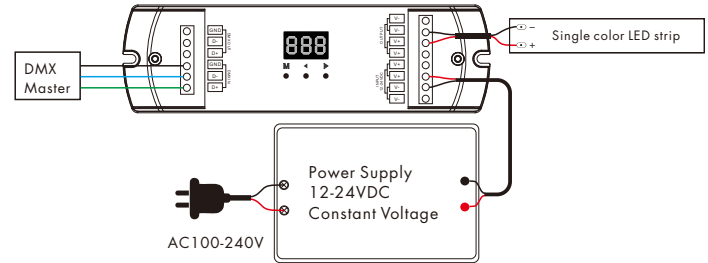
Warranty and Protection	
Warranty	5 years
Protection	Reverse Polarity Over-heat Over-load Short circuit

CE RoHS EMC LVD

## Mechanical Structures and Installations



## Wiring Diagram



### Note:

1. An DMX signal amplifier is needed if more than 32 decoders are connected, or use overlong signal line, signal amplification should not be more than 5 times continuously.
2. If the recoil effect occurs because of longer signal line or bad line quality, please try to connect 0.25W 90-120Ω terminal resistor at the end of each DMX signal line.

### System parameter setting

- Long press M and ◀ key in the same time for 2s, prepare for setup system parameter: output PWM frequency, output brightness curve, grey level, default output level, automatic blank screen. short press M key to switch five item.
- 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 lower output current, higher power noise, but more suitable for camera(No flickers for video).
- Output brightness curve: short press ◀ or ▶ key to switch linear curve("CL") or logarithmic curve("CE").
- Grey level: short press ◀ or ▶ key to switch 8bit("b08") or 16 bit("b16"). choose 16 bit if the DMX master support 16 bit.
- 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 2s or timeout 10s, quit system parameter setting.

### DMX mode

- Short press M key, when display 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, will enter DMX mode automatically.
- DMX Dimming: Each D1-L DMX decoder occupy 1 DMX address when connecting the DMX console.



DMX mode  
(001~512)

### Stand-alone dynamic mode

- Enter stand-alone dynamic mode only when DMX signal is disconnected or lost.
- Short press M key, when display P-1~P-3, enter stand-alone dynamic mode.
- Press ◀ or ▶ key to change dynamic mode number(P-1~P-3).
- Each mode can adjust speed and brightness.  
long press M key for 2s, prepare for setup mode speed and brightness.  
Short press M key to switch two item.



Stand-alone dynamic mode  
(P-1~P-3)



Speed  
(8 level)



Brightness  
(10 level, 100%)

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).  
long press M key for 2s, or timeout 10s, quit setting.

### Dynamic mode list

No.	Name
P-1	white fade in and fade out
P-2	white jump
P-3	white flash

### Stand-alone dimmer mode

- Enter stand-alone dimmer mode only when DMX signal is disconnected or lost.
- 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 brightness independently.  
Long press M key for 2s, prepare for setup brightness(b00~bFF).  
Press ◀ or ▶ key to adjust brightness value.  
Short press M key, or timeout 10s, quit setting.



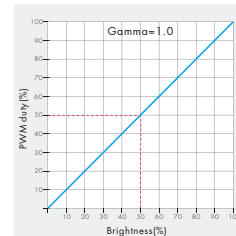
Stand-alone dimmer mode  
(L-1~L-8)

### Restore factory default parameter

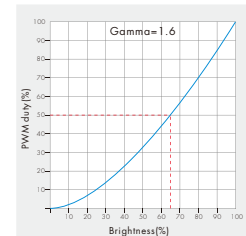
- Long press ◀ and ▶ key for 2s, restore factory default parameter, display"RES".
- Factory default parameter: DMX decode start address is 1, four channel decode, 8 bit grey level, 2000Hz PWM frequency output, logarithmic brightness curve, output 100% level when no DMX input, RGB mode number is 1, dimmer mode number is 1, disable automatic blank screen.

### Dimming curve setting

Linear dimming curve



Logarithmic dimming curve



### Malfunctions analysis & troubleshooting

Malfunctions	Causes	Troubleshooting
No light	1. No power. 2. Wrong connection or insecure.	1. Check the power. 2. Check the connection.
Wrong color	1. DMX decode address error.	1. Set correct decode address.
Uneven intensity between front and rear,with voltage drop	1. Output cable is too long. 2. Wire diameter is too small. 3. Overload beyond power supply capability. 4. Overload beyond controller capability.	1. Reduce cable or loop supply. 2. Change wider wire. 3. Replace higher power supply. 4. Add power repeater.