LDT-DMX-1CV-15A

Single-Channel DMX/RDM LED Decoder, Voltage-Derated Output

A 1-channel DC-fed DMX/RDM decoder for compatible constant-voltage LED loads. Set the address, channel mapping, bit depth and output parameters on the local display or through supported RDM commissioning.

Supply voltage	12-48 VDC
LED output	1-channel constant-voltage PWM
Maximum output current	15 A at 12/24 V; 10 A at 36/48 V
Rated input current	15.5 A
Maximum output power	180 W at 12 V; 360 W at 24/36 V; 480 W at 48 V
Control inputs	DMX512 / RDM + local display/buttons; no RF
DMX decode modes	1 DMX channel; 8- or 16-bit
Dimming	0-100%; linear or logarithmic curve
PWM frequency	250 / 500 / 1000 / 2000 / 4000 / 8000 / 16000 / 32000 Hz
Standalone operation	Local dimming and documented dynamic modes
Operating temperature	-20 to +55 °C
Maximum case temperature	+75 °C
IP rating	IP20
Body dimensions	170 x 50 x 23 mm

The 15 A rating applies at 12/24 V only. At 36/48 V the limit is 10 A. Higher PWM frequencies can require further current reduction.

The following reference pages include the complete wiring, dimensions, settings and operating instructions. Use the lighting and hardware variant identified above; shared references may illustrate other separate models.

DMX512

1 Channel Constant Voltage DMX512 & RDM Decoder

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 de
  For example, DMX decoder address can be set by DMX master console.
- 16bit (65536 levels) /8bit (256 levels) grey level selectable.
- PWM frequency
  250/500/1000/2000/4000/8000/16000/32000Hz 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 signa
- Over-heat / Over-load / Short circuit protection, recover automatically



CE RoHS

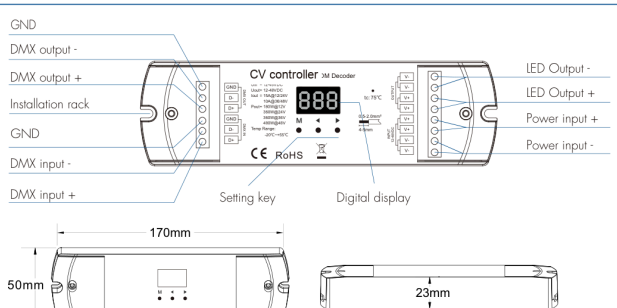
Technical Parameters

Input and Output	
Input voltage	12-48VDC
Input current	15.5A
Output voltage	12-48VDC
Output current	15A@12/24V 10A@36/48V
Output power	180W@12V 360W@24V 360W@36V 480W@48V
Output type	Constant voltage

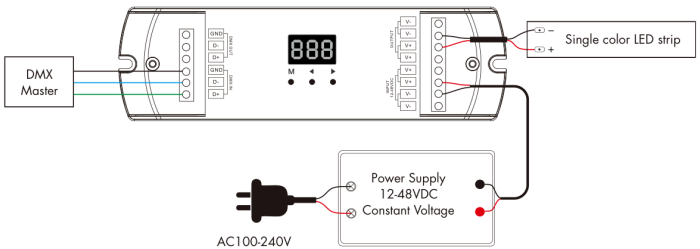
Warranty and Protection	
Warranty	5 years
Protection	Reverse Polarity,Over-heat Over-load ,Short circuit
Environment	
Operation temperature	Ta: -20˚C ~ +55˚C
Case temperature (Max.)	Tc: +75 ˚C
IP rating	IP20

Safety and EMC	
EMC standard	EN IEC 55015/ EN IEC 61547
Safety standard	EN 61347-1/-2 EN 62493
Certification	CE RoHS
Package	
Size	L175 x W54 x H27mm
Gross weight	0.129kg

Technical Parameters



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.

Operation

System parameter setting

- Long press M and ◀ key in the same time for 2s, prepare for setup system parameter: output PWM frequence, 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"), 16000Hz("F16") or 32000Hz("F32").
  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("C-L") or logarithmic curve("C-E").
- 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: set output level when no DMX input signal. short press ◀ or ▶ key to switch maintain DMX output("d- -") or output default level ("d00" to "dFF", 0-100%), long press ◀ or ▶ key to change output default level.
- 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.

Note: In addition to manual button settings, the above system parameters can also be configured via the RDM function.

PWM frequency and output current mapping:

Uin \ Iout PWM	250Hz	500Hz	1KHz	2KHz	4KHz	8KHz	16KHz	32KHz
12/24V	15A	15A	15A	12A	10A	10A	10A	10A
36/48V	10A	10A	10A	8A	6A	6A	6A	6A

DMX mode

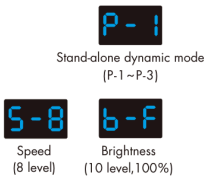
- Short press M key, when display 001~512, enter DMX mode.
- Press ◀ or ▶ key to change DMX decode start address(001~512), long press for fast adjustment.
- If there is a DMX signal input, will enter DMX mode automatically.
- **DMX Dimming: Each CV controller DMX decoder occupy 1 DMX address when connecting 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.
  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.



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

Speed (8 level)

Brightness (10 level,100%)

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.

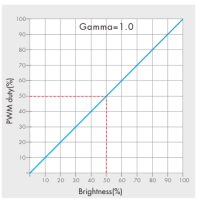


Stand-alone dimmer mode (L-1~L-8)

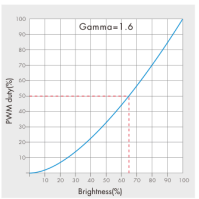
Restore factory default parameter

- Long press ◀ and ▶ key for 2s, restore factory default parameter, display"RES".
- Factory default parameter: DMX decode mode, DMX decode start address is 1, 8 bit grey level, 2000Hz PWM frequence output, logarithmic brightness curve, output 100% level when no DMX input, 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 corrrect 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.