LDT-DMX-4CC-150-500

Four-Channel DMX/RDM Constant-Current Driver, 150-500 mA

A four-channel DMX/RDM constant-current decoder in the 150-500 mA hardware range. Each LED string needs the selected rated current and a forward voltage within the published buck-output range.

Supply voltage	12-48 VDC
LED output	4-channel buck constant-current
LED output voltage	3-45 VDC per channel
Maximum output current	150-500 mA per channel; selectable setpoints
Current selections	150, 200, 250, 300, 350, 400, 450 or 500 mA
Maximum output power	4 x (0.45-22.5) W
Control inputs	DMX512 / RDM + local display/buttons; no RF
DMX decode modes	1, 2 or 4 DMX channels; 8- or 16-bit
PWM frequency	250 / 500 / 1000 / 2000 / 4000 / 8000 / 16000 Hz
Dimming curve	Linear or logarithmic
Protection	Reverse polarity and short circuit
Operating temperature	-30 to +55 °C
Maximum case temperature	+85 °C
IP rating	IP20
Body dimensions	170 x 50 x 23 mm

The 150-500 mA and 350-1200 mA versions are separate hardware models. Their common reference illustrates both; this page identifies only the selected current range.

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

CC driver / CC driver

4 Channel Constant Current DMX512 & RDM Decoder



CC driver



CC driver

FC CE RoHS

Features

- DC to DC constant current output, multiple output current settings.
- 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.
- 1/2/4 DMX channel output selectable.
- 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 RGB/RGBW mode and 4 channel dimmer mode selectable, which be controlled by buttons with built-in programs, instead of DMX signal.

Technical Parameters

Input and Output	
Input voltage	12-48VDC
Output voltage	4x(3-45)VDC
Output current	4CH,150-500mA or 350-1200mA/CH
Output power	4 x (0.45-22.5)W (150-500mA) 4 x (1.05-54)W (350-1200mA)
Output type	Constant current

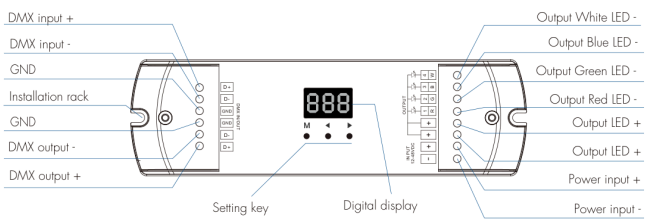
Warranty and Protection	
Warranty	5 years
Protection	Reverse Polarity, Short circuit
Environment	
Operation temperature	Ta: -30˚C ~ +55˚C
Case temperature (Max.)	Tc: +85 ˚C
IP rating	IP20

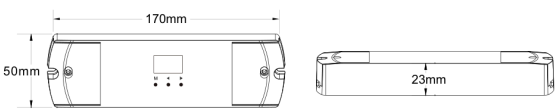
Safety and EMC	
EMC standard	EN IEC 55015/ EN IEC 61547 ETSI EN 301 489-1/-3
Safety standard Radio equipment	EN 61347-1/-2 ETSI EN 300 440
Certification	CE RoHS FCC
Package	
Size	L175 x W54 x H27mm
Gross weight	0.174kg

LED Current Selection

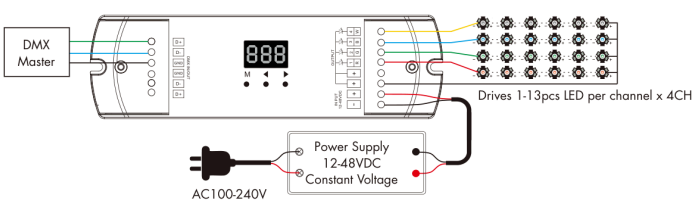
(150-500mA)	Output Current	150mA	200mA	250mA	300mA	350mA	400mA	450mA	500mA
	Output Voltage	3-45V	3-45V	3-45V	3-45V	3-45V	3-45V	3-45V	3-45V
	Output Power/CH	0.45-6.75W	0.6-9W	0.75-11.25W	0.9-13.5W	1.05-15.75W	1.2-18W	1.35-20.25W	1.5-22.5W
(350-1200mA)	Output Current	350mA	500mA	600mA	700mA	800mA	900mA	1050mA	1200mA
	Output Voltage	3-45V	3-45V	3-45V	3-45V	3-45V	3-45V	3-45V	3-45V
	Output Power/CH	1.05-15.75W	1.5-22.5W	1.8-27W	2.1-31.5W	2.4-36W	2.7-40.5W	3.15-47.25W	3.6-54W

Mechanical Structures and Installations





Wiring Diagram



Note:
1. The LED quantity at each channel can be different, the decoder could auto check and output a proper voltage to each channel according to its LED quantities.
2. The decoder works on buck mode, the voltage of power supply should be greater than the total voltage of the seried LEDs.

Operation

System parameter setting

- Long press M and ◀ key in the same time for 2s, 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 six item.
- 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 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").
- Output brightness curve: short press ◀ or ▶ key to switch linear curve("C-L") or logarithmic curve("C-E").
- 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.

Output current setting

- Please select the correct current firstly when the LED load is disconnected.
- Long press M and ▶ key in the same time for 2s, prepare for setup output current.
- **For CC driver: short press □ or □ key to switch 150mA("C15"), 200mA("C20"), 250mA("C25"), 300mA("C30"),** 350mA("C35"), 400mA("C40") , 450mA("C45") or 500mA("C50").
- **For CC driver: short press □ or □ key to switch 350mA("C35"), 500mA("C50"), 600mA("C60"), 700mA("C70"),** 800mA("C80"), 900mA("C90") , 1050mA("CA5") or 1200mA("CC0").
- Press M key or timeout 10s, quit output current 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 CC driver DMX decoder occupy 4 DMX address** 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)

Stand-alone RGB/RGBW mode

- Enter stand-alone RGB/RGBW mode only when DMX signal is disconnected or lost.
- Short press M key, when display P01~P30, enter stand-alone RGB/RGBW mode.
- Press ◀ or ▶ key to change dynamic mode number(P01~P30).
- Each mode can adjust speed and brightness. Long press M key for 2s, prepare for setup mode speed, brightness, W channel brightness. Short press M key to switch three 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). W channel brightness: 0-255 level brightness(400-4FF). Long press M key for 2s, or timeout 10s, quit setting.



Stand-alone RGB/RGBW mode (P01~P30)



Speed (8 level)



Brightness (10 level,100%)

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 each channel brightness independently. Long press M key for 2s, prepare for setup four channel brightness. Short press M key to switch four channel(100~1FF, 200~2FF, 300~3FF, 400~4FF). Press ◀ or ▶ key to setup brightness value of each channel. Long press M key for 2s, or timeout 10s, quit setting.



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

Restore factory default parameter

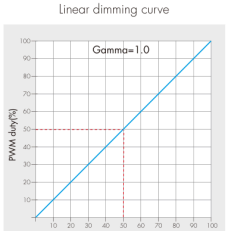
- Long press ◀ and ▶ key for 2s, restore factory default parameter, display "RES".
- Factory default parameter: DMX decode mode, DMX decode start address is 1, four channel decode, 8 bit grey level, 4000Hz PWM frequence output, 350mA or 700mA output current, logarithmic brightness curve, output 100% level when no DMX input, RGB mode number is 1, dimmer mode number is 1, disable automatic blank screen.

RGB Change Mode List

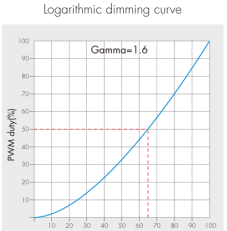
No.	Name	No.	Name	No.	Name
P01	Static red	P11	Green strobe	P21	Red yellow smooth
P02	Static green	P12	Blue strobe	P22	Green cyan smooth
P03	Static blue	P13	White strobe	P23	Blue purple smooth
P04	Static yellow	P14	RGB strobe	P24	Blue white smooth
P05	Static cyan	P15	7 color strobe	P25	RGB+W smooth
P06	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

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. Wrong connection of R/G/B/W wires. 2. DMX decode address error.	1. Reconnect R/G/B/W wires. 2. Set corrrect decode address.