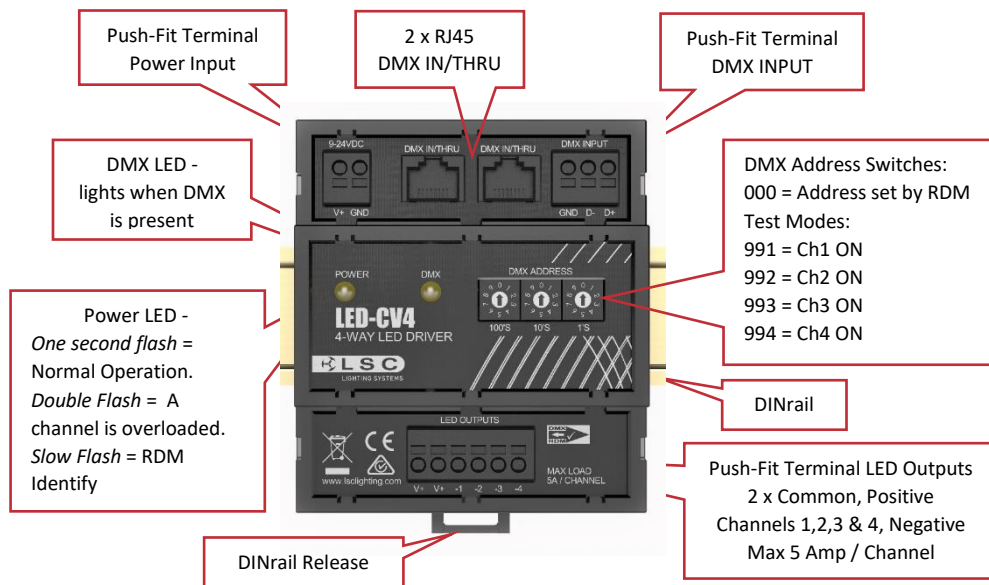


LED-CV4 4 Channel DMX/RDM LED Dimmer/Driver



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LED-CV4 DINrail-Mount Constant Voltage 4-Channel LED Dimmer/Driver Quick Start Guide

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1.1 LED-CV4

The LED-CV4 is a DINrail-mount, constant voltage, 4 channel LED dimmer/driver controlled by DMX and RDM with a maximum load of 5 Amps per channel. Each output is independently monitored for load and automatically shut down in the event of an overload.

1.2 INSTALLATION

1. Mount the LED-CV4 on a standard TS35 DINrail.
2. Connect a suitable power supply to the 9-24V DC push-fit terminals observing the correct polarity. The voltage of the external power supply must match the specified voltage of the LEDs connected to the outputs, usually 12V or 24V. The external power supply must be capable of supplying at least 20 Amps (4 x 5 Amps per channel). LSC recommends that you choose a power supply that can deliver a current 50% higher than the maximum to prolong the life of the power supply.
3. Connect the DMX512 input. The two DMX IN/THRU RJ45 sockets and the DMX INPUT push-fit terminals are all internally connected in parallel. This allows you to loop the DMX signal to other devices. Only one looped DMX output connection is allowed. If you need multiple DMX feeds, use a DMX splitter such as LSC's MDR-DIN. If using RJ45 plugs, use one DMX IN/THRU socket as the input and the other as the loop output. If using the push-fit terminals, connect the input and output cables to the same terminals. If this LED-CV4 is the last device at the end of the DMX512 line, connect a 120 ohm resistor across the DMX INPUT connector push-fit terminals or across pins 1 and 2 of the DMX IN/THRU RJ45 socket.
4. Connect the LEDs to the LED OUTPUTS push-fit terminals. There are four negative terminals (-1, -2, -3 and -4), one for each of the four output channels and two positive terminals (V+ and V-) to be shared amongst the four output channels.

1.3 TEST MODE

The four LED OUTPUTS can be manually switched ON for testing purposes (without DMX connected) by setting the DMX Address switches as follows:

| DMX Address Setting | Channel Number ON |
|---------------------|-------------------|
| 991 | 1 |
| 992 | 2 |
| 993 | 3 |
| 994 | 4 |

1.4 OPERATION

- The POWER LED flashes once per second (heart-beat) when power is present.
It double flashes if any of the outputs are overloaded.
It slow flashes when an RDM Identify request is received.
- Set the DMX Address:
The DMX address can be manually set using the three rotary switches on the front of the unit. For example, in 8-bit mode (default), if the address switches are set to 030, Output 1 responds to the DMX address 30, Output 2 responds to address 31, Output 3 to address 32 and Output 4 to address 33.
The DMX Address can also be remotely set the via RDM. Set the switches on the front to address 000 and use your RDM controller to set the address. See section 1.9.
When using RDM it is also possible to individually set each output to any DMX address.
- Connect a DMX controller.
The DMX512 data LED lights when DMX data is present.
- The intensity of each output channel can now be controlled by your DMX controller.

1.5 OVERLOAD RESET

The maximum current for each output channel is 5 Amps. If any output channel is overloaded it will automatically switch off and the POWER LED on the front will double flash. The overload is also reported over RDM. See section 1.9. To restore the output to normal operation reduce the load or remove the short circuit then either set the DMX level for the overloaded channel to zero then back to the required level or use RDM to reset the channel. You can also use RDM to set a lower overload current level per channel if you require.

1.6 DMX CABLES

Only use specific DMX data cable. The data cable must conform to the EIA485 cable requirements by providing the following specifications:

- Low capacitance
- One or more twisted pairs
- Foil and braid shielded
- Impedance of 85-150 ohms, nominally 120 ohms
- 22AWG gauge for continuous lengths over 300 metres

If you want to make your own cables LSC recommends using Beldon 9842 (or equivalent). Never use audio cable.

The end of the DMX line must be terminated (120 Ω) to prevent the signal reflecting back up the line and causing possible errors.

1.7 PUSH-FIT TERMINALS

The following cables are suitable for use with the push-fit terminals:

- 2.5mm² stranded wire
- 4mm² solid wire

Stripping length is 8mm.

Insert a small screwdriver into the slot adjacent to the cable hole. This releases the spring inside the connector. Insert the cable into the round hole then remove the screwdriver.

Solid wires or wires fitted with ferrules can often be pushed directly into the connector without the use of the screwdriver. When connecting multiple cables to a single terminal the wires must be twisted together to ensure a good connection to both legs. Non-insulated bootlace ferrules can also be used for stranded cables. Ferrules are not recommended for solid cables. Insulated bootlace ferrules can also be used allowing stranded cables to be easily inserted without the need of a tool to actuate the spring release. The maximum ferrule outer diameter is 4mm.

1.8 RJ45 DMX CONNECTOR PIN-OUTS

| RJ45 8-Pin Connector | Function |
|----------------------|---------------|
| Pin 1 | DMX +ve |
| Pin 2 | DMX -ve |
| Pin 3 | Not Connected |
| Pin 4 | Not Connected |
| Pin 5 | Not Connected |
| Pin 6 | Not Connected |
| Pin 7 | Common |
| Pin 8 | Common |

1.9 RDM CONTROL

Advanced functions including software updates can be accessed by RDM (Remote Device Management). This is fully described in the LED-CV4 User Manual, which can be downloaded from Iscontrol.com or by scanning this QR code. When this QR code is scanned with a QR reader app on a smart phone it will automatically download the manual. Visit the iOS or Android App store to download a suitable QR reader app.



QR code

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