4/6/24 A Full-Colour Dimmable LED Driver

LINEARdrive DC is a constant voltage LED driver with multiple LED outputs that are controlled over four channels. It is targeted at larger networked and smaller standalone installations that require dimmable, low-power full-colour static or dynamic LED lighting. LINEARdrive DC is DMX/RDM and LedSync compatible.

Applications

- Entertainment lighting
- Full-colour architectural lighting
- Signage/advertising lighting
- Cove lighting
- Decorative lighting
- Dynamic colour panel lighting

Features & benefits

Input

- Voltage: 12 – 28 VDC
- Current, max: 6 A, irrespective of PSU voltage

Output

- Voltage: 5 V, 12 V or 24 V
- Max load per output:

<table>
<thead>
<tr>
<th>LINEARdrive 180D</th>
<th>RGBW @ 24 V</th>
<th>RGB @ 24 V</th>
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<tbody>
<tr>
<td>1.5 A</td>
<td>2 A</td>
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General

- USITT DMX512A/RDM (ANSI E1.20) and LedSync compatible
- HydraDrive: 15-bit resolution
- Dimming control: smooth dimming from 100 % to 0.1 %, gamma-corrected curve
- Intuitive 3-button user interface for on-the-fly configuration
- Interface for external control device: 10 kΩ potentiometer, 0 – 10 V source or momentary switch
Datasheet LINEARdrive 180D

Dimensions, weight, packaging

LINEARdrive 180D
• Weight: 120 g, 4.2 oz

Connections

Connectors LINEARdrive 180D
• VDC: + and -
• DMX in: +, - and shield
• LedSync thru: +, - and shield
• Ext in: + and -
• LED outputs: 4 outputs with common +

Wiring
• Cross section: 0.5 – 1.5 mm², AWG 20 – 16
• Strip length: 9 mm/0.35 in.

Other information

Certifications
• CE
• IEC 61347, EN 55015, IEC 61003, EN 61547
• UL: UL Recognized Component (file no. E333135)

Environmental ratings
• Ta range: -20°C...50°C/-4°F...122°F
• Tc max: 65°C/149°F
• For use in dry locations

Control compatibility
• DMX512 A and RDM explore & address (ANSI E1.20) control gear
• Standard 0 – 10 V switch controls
12 V – 28 V DC IN
To connect the driver to a DC power supply unit (PSU), connect the PSU’s positive voltage supply wire to the VDC+ connector and the PSU’s negative voltage supply wire to the VDC- connector.

EXT in
You have the possibility to connect an external control device (0 – 10 V control device, 10 kΩ potentiometer or show selection switch) to the driver’s Ext in+ and Ext in- connector. Configure the driver for use with an external control device over the 3-button user interface.

DMX in/LedSync thru
Use these connectors when the driver is used in a DMX network.
For DMX in, connect the network cable’s data+, data- and shielding wire (the orange/white, orange and brown wire in a CAT5 cable) to the DMX in+, DMX in- and DMX in shield connector respectively.
For LedSync thru, connect the network cable’s data+, data- and shielding wire (the orange/white, orange and brown wire in a CAT5 cable) to the LedSync thru+, LedSync thru- and LedSync shield connector respectively.

LED groups
Indicates the location of the connectors for your LED groups. R(ed) represents channel 1, G(reen) represents channel 2, B(lue) represents channel 3 and W(hite) represents channel 4. The default group color allocation can be changed over the 3-button user interface.
Connecting an RGB LED strip
Maximum current per output at 12 V: 2 A
Maximum current per output at 24 V: 2 A

Configuration of the LED groups:
Press M and + simultaneously, in the LED menu choose RGB and save this setting by pressing M.

Connecting an RGB strip and a white LED strip
Maximum current per output at 12 V: 1.5 A
Maximum current per output at 24 V: 1.5 A

Configuration of the LED groups:
Press M and + simultaneously, in the LED menu choose RGBW and save this setting by pressing M.

Connecting warm white and cool white LED strips
Maximum current per output at 12 V: 1.5 A
Maximum current per output at 24 V: 1.5 A

Configuration of the LED groups:
Press M and + simultaneously, in the LED menu choose 4 – 4 L and save this setting by pressing M.

Connecting four white or self-colored LED strips
Maximum current per output at 12 V: 1.5 A
Maximum current per output at 24 V: 1.5 A

Configuration of the LED groups:
Press M and + simultaneously, in the LED menu choose 1 – 4 L and save this setting by pressing M.
1. Select mode of operation

![Diagram](image1.png)

2. Set LED groups

![Diagram](image2.png)

3. Standalone operation or Networked operation

- Colour*

![Diagram](image3.png)

* The colour menu depends on the LED group settings you have selected in step 2.