

45W/90W/180W DMX/DALI Full-Colour Dimmable LED Drivers

Input characteristics

Input voltage DC	12-32V
Input current	POWERdrive 45D: 2.2A max POWERdrive 90D: 4.62A max POWERdrive 180D: 6.16A max

Output characteristics

LED output power	POWERdrive 45D: 45W max POWERdrive 90D: 90W max POWERdrive 180D: 180W max
LED output current range	POWERdrive 45D: 200 - 500mA (settable per output) POWERdrive 90D: 200-1,050mA (settable per output) POWERdrive 180D: 200-1,400mA (settable per output)
LED output current resolution	50mA
LED output current tolerance	+/- 5%
LED outputs	4 (UL Class 2)
LED output voltage range	11-31V (Vsup - 1V)
Control channels	4

Control characteristics

Dimming protocol	DMX and DALI
Dimming range	100%-0% (HydraDrive)
Dimming curve	linear, logarithmic, square
Driver configuration	via 3-button user interface on driver

Product offering



POWERdrive 45D

P/N: PWR045D2

POWERdrive DC, 45W, DMX/DALI/EXT, 4 control channels, constant current, 4x LED outputs, plastic long

POWERdrive 90D

P/N: PWR090D2

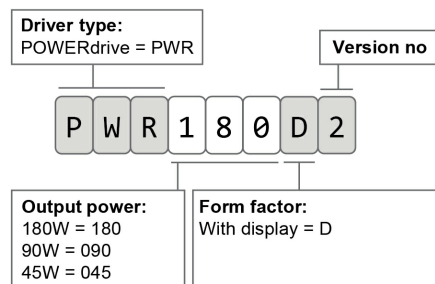
POWERdrive DC, 90W, DMX/DALI/EXT, 4 control channels, constant current, 4x LED outputs, plastic long

POWERdrive 180D

P/N: PWR180D2

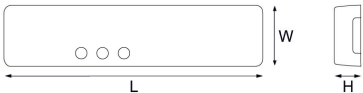
POWERdrive DC, 180W, DMX/DALI/EXT, 4 control channels, constant current, 4x LED outputs, plastic long

Order number configuration



Dimensions, weight and packaging

POWERdrive DC	
LxWxH	193x50x23mm / 7.6x1.97x0.91in
Weight	191 g / 6.7 oz
Drivers per carton	12 pcs



Standards and certifications

Standards compliance	
EN	61347-1/-2-13, 62386-101/-102/-207
RoHS	RoHS2

Certifications



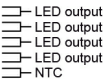
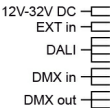
UL	Recognized Component for US and Canada (file no. E333135), according to UL1310 and UL8750. US/Canada: Class 2 output.
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Wiring Specifications

Wire type	VDC: AWG 26-20, 0.14-0.5 mm ² EXT in, DALI, DMX: AWG 24-20, 0.25-0.5 mm ²
	LED, NTC: AWG 20-16, 0.5-1.5 mm ² solid or stranded copper
Wire strip length	VDC: 11 mm / 0.43 in
	All other connectors: 9 mm / 0.35 in

Wiring diagrams

POWERdrive 45D, 90D, 180D

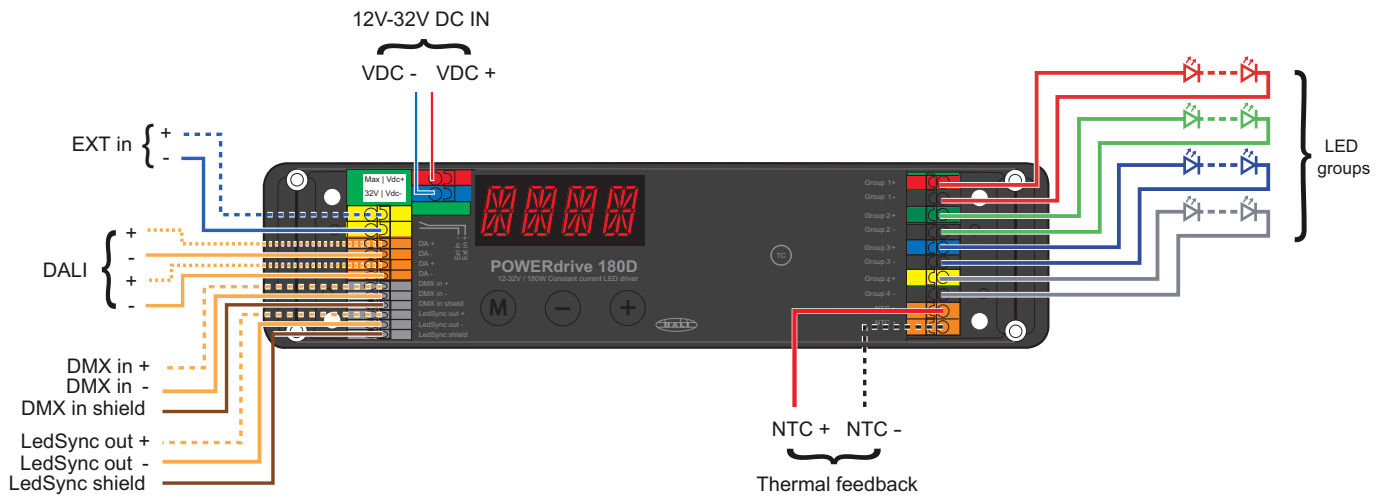


Thermal protection

External NTC thermistor	throttling @ 70 °C / 158 °F (settable)
External thermistor value	10kΩ
Recommended thermistors	NCP18XH103FO3RB / Murata B57703M103G / Epcos 238164073103 / Vishay BC Components

Thermal specification

Ta operating range	-20 °C ... +50 °C / -4 °F ... +122 °F
Tc max	65 °C / 149 °F



CAUTION: The device may only be connected and installed by a qualified electrician. All applicable regulations, legislation and building codes must be observed. Incorrect installation of the device can cause irreparable damage to the device and the connected LEDs.

12V - 32V 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 can connect an external control device (0-10V control device, 10kΩ potentiometer or show selection switch) to the driver by connecting the device's positive lead to the EXT in+ connector and its negative lead to the EXT in- connector. Configure the driver for use with an external control device over the 3-button user interface.

DALI

Use these connectors to connect the driver to a DALI network. Always combine a DA+ and DA- connector for either data input or data output.

DMX in/LedSync out

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 out, connect the network cable's data+, data- and shielding wire to the LedSync out+, LedSync out- 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.

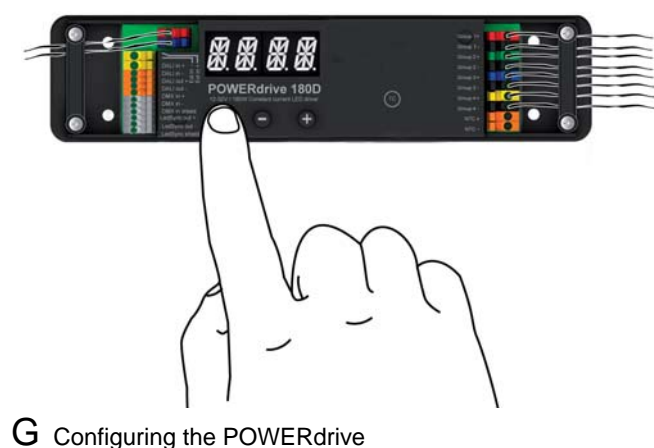
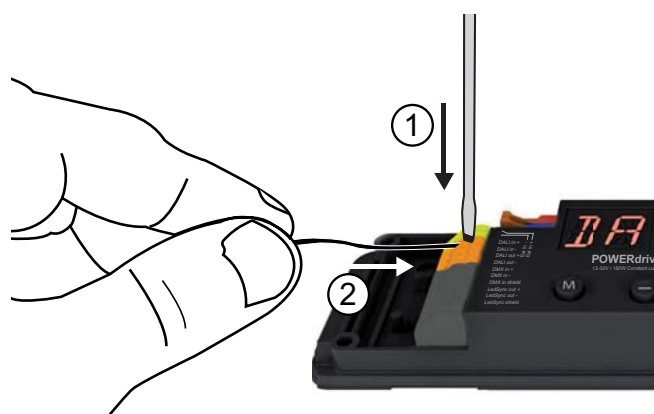
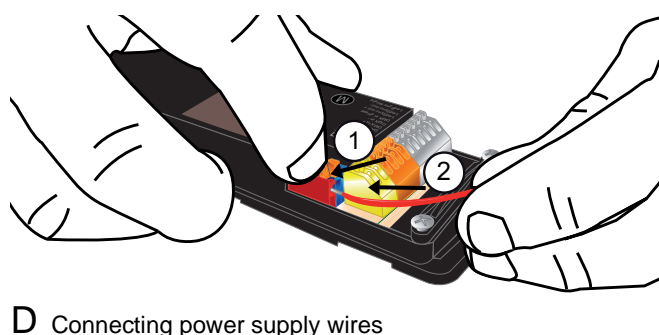
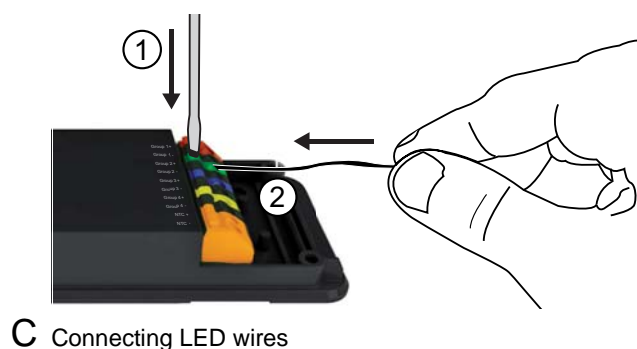
Thermal feedback

Connect a negative temperature coefficient (NTC) thermistor to the NTC+ and NTC- connector to receive feedback on LED engine temperature.

When the LED engine temperature exceeds the limit that you have set over the 3-button user interface, the driver will throttle the LEDs, resulting in a graceful decrease of light output until normal operating temperatures are reached.

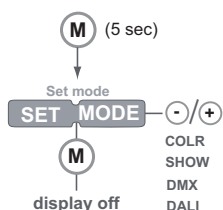
Colour
is our nature

Connecting and configuring the POWERdrive 45D/90D/180D

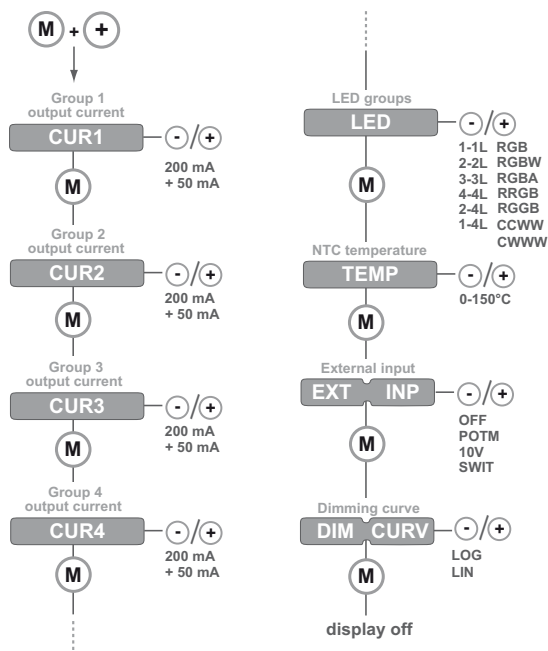


Manual configuration

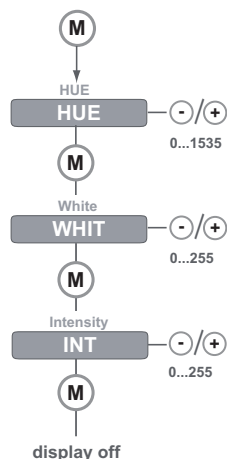
1. Select mode of operation:



2. Set LED current and LED groups:

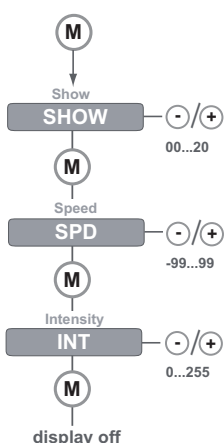


3. Standalone operation - Colour*-



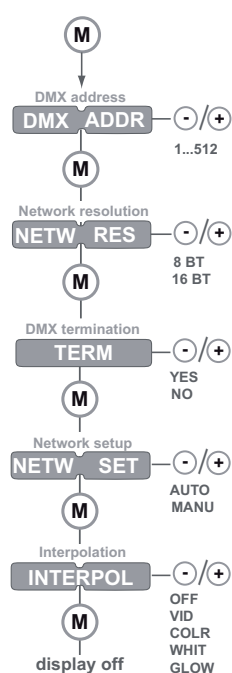
or

Standalone operation - Show -



or

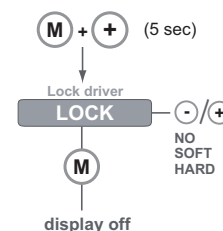
Networked operation - DMX or DALI -



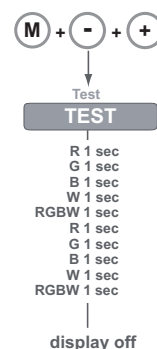
* The colour menu depends on the LED group settings you have selected in step 2.

Other features

Locking the configuration



Visual test run



Reset to factory defaults

