eldoLED
your product | *our drive*

Datasheet
POWERdrive 45W/90W/180W

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

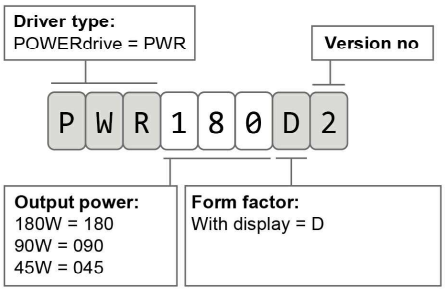
Product offering

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



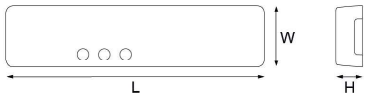
AcuityBrands.

eldoLED
your product | *our drive*

Datasheet
POWERdrive 45W/90W/180W

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

c UL us E333135 CE

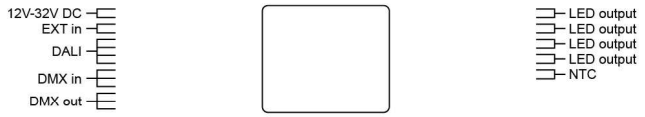
UL	Recognized Component for US and Canada (file no. E333135), according to UL1310 and UL8750. US/Canada: Class 2 output.

Wiring Specifications

Wire type	VDC: AWG 26-20, 0.14-0.5 mm² EXT in, DALI, DMX: AWG 24-20, 0.25-0.5 mm² LED, NTC: AWG 20-16, 0.5-1.5 mm² 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

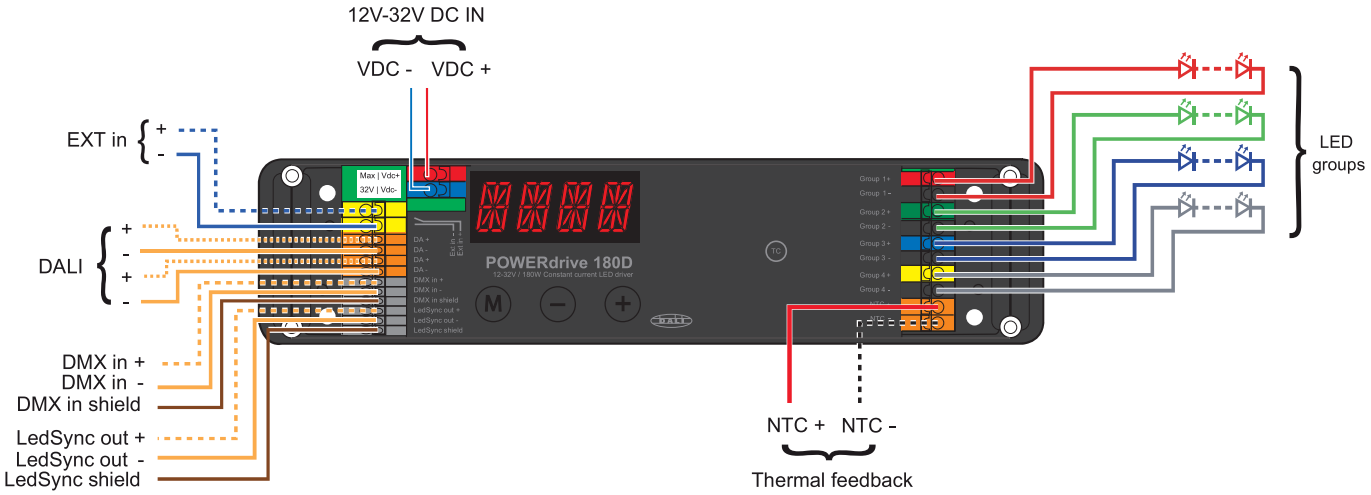
Thermal specification

Ta operating range	-20 ºC ... +50 ºC / -4 ºF ... +122 ºF
Tc max	65 ºC / 149 ºF

Europe, Rest of World eldoLED B.V. Science Park Eindhoven 5125 5692 ED Son The Netherlands T: +31 (0)40 7820400 E: sales@eldoLED.com
North America eldoLED America One Lithonia Way Conyers, GA 30012 USA T: +1 (877) 353 6533 E: nasales@eldoLED.com

eldoLED
your product | *our drive*

Wiring diagram POWERdrive 45D/90D/180D (PWRxxxD1)



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.

eldoLED

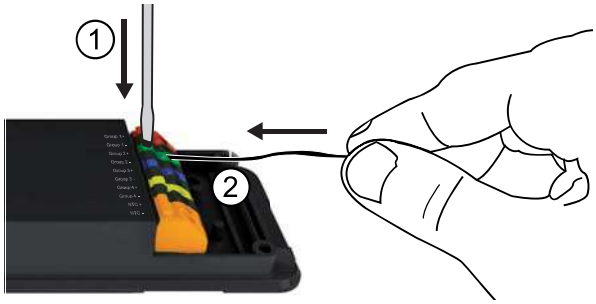
your product | *our drive*

Quick Start Guide POWERdrive 45D/90D/180D (PWRxxxD1)

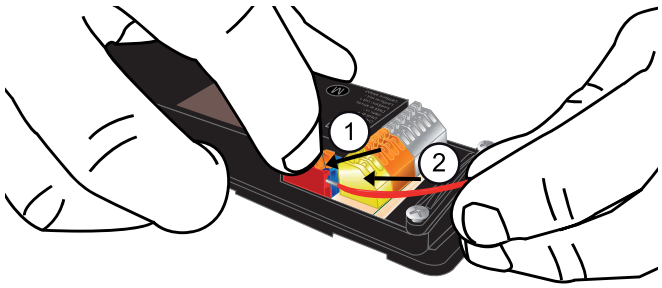
Connecting and configuring the POWERdrive 45D/90D/180D

A Removing the cover

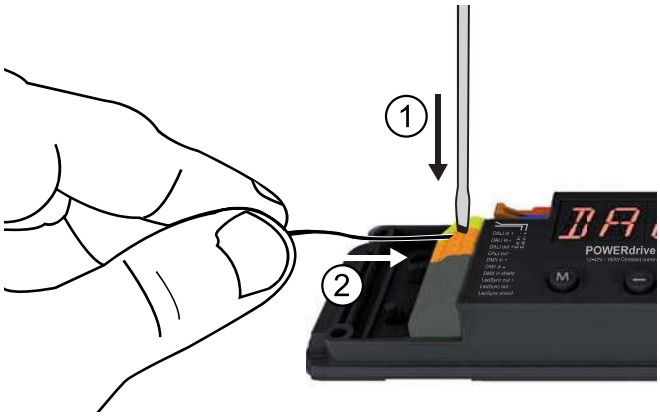
B Removing the strain reliefs



C Connecting LED wires



D Connecting power supply wires



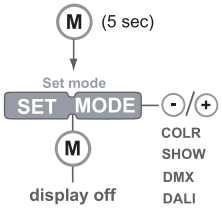
E Optional: Connecting external control device or network cabling

F Fastening the strain reliefs

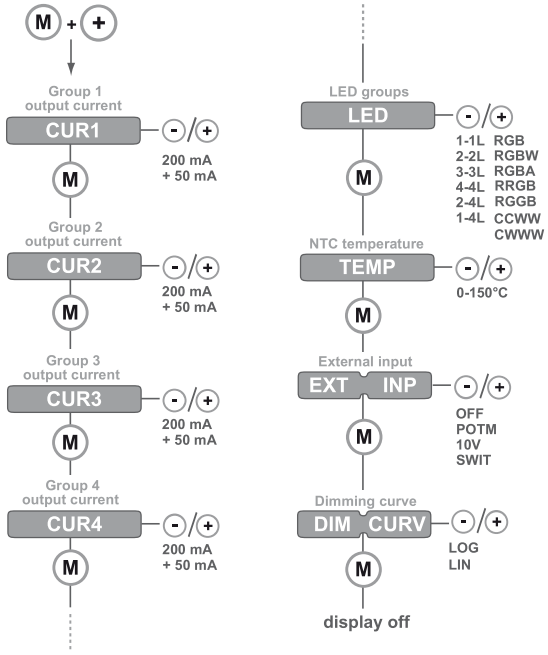
G Configuring the POWERdrive

Manual configuration

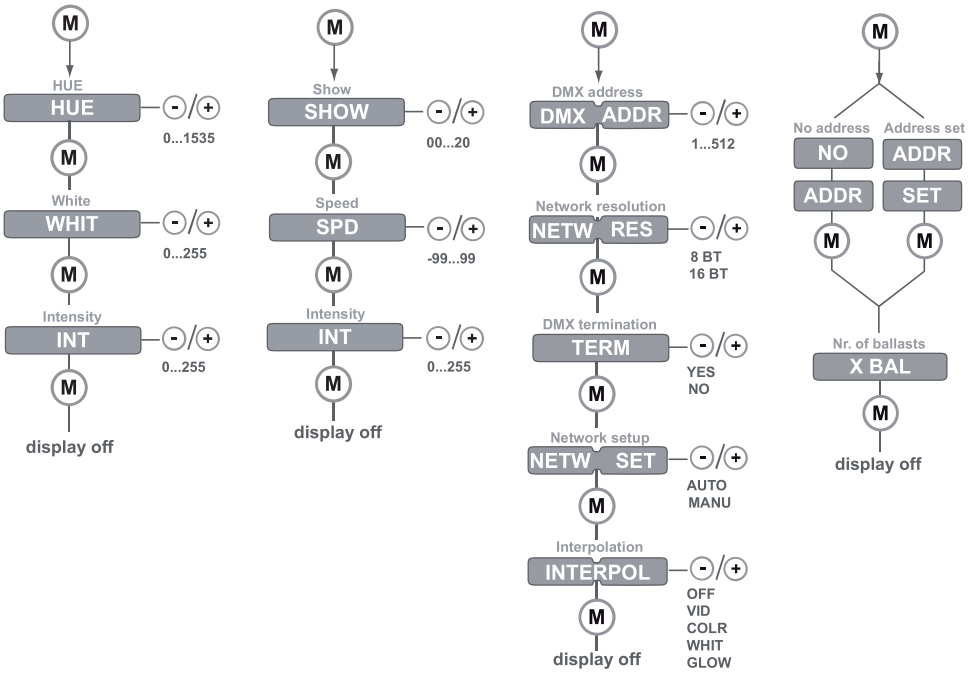
1. Select mode of operation:



2. Set LED current and LED groups:



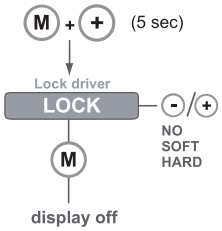
3. Standalone operation - Colour*- *or* Standalone operation - Show - *or* Networked operation - DMX or DALI -



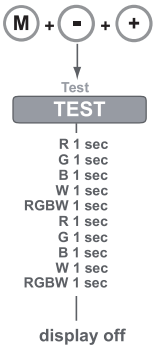
* The colour menu depends on the LED group settings you have selected in step 2.

Other features

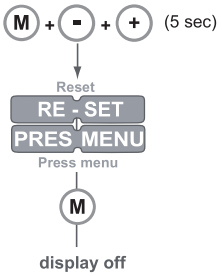
Locking the configuration



Visual test run



Reset to factory defaults



eldoLED Europe bv Luchthavenweg 18a 5657 EB Eindhoven The Netherlands T +31 40 2054050 F +31 40 2054058 info@eldoled.com
eldoLED America, Inc. 1762 Technology Drive # 226 San Jose, CA95110 USA T +1 408 451 9333 F +1 408 451 9335 nasales@eldoled.com