



**Colour
is our nature**

600W DMX/RDM/DALI/0-10V Full-Colour (RGBW) Dimmable LED Driver POWERdrive

POWERdrive's dynamic response can be tuned to fit any content - from exceptionally smooth fades in architecture to fast-paced video in entertainment. This constant current LED driver is DMX/RDM/DALI/0-10V compatible, and allows you to create your colour or dynamic show without an external controller. Symbiosis ensures the LED driver works seamlessly together with LED modules, controls and intelligent luminaire elements.

Product offering



POWERdrive 600W

Part number P/N	PW6060R1
Product description	POWERdrive AC, 600W, DMX/RDM/DALI/0-10V, 1-32x DMX/RDM, 4x DALI, 1x 0-10V, constant current, 32x 48V outputs, 1U 19" rack
P/N: CK0416S1	Connector kit, LED output, 4-pole, 16 pieces
P/N: CK0211S1	Connector kit, DALI/0-10V/LEDcode, 2-pole, 11 pieces

Programming tools

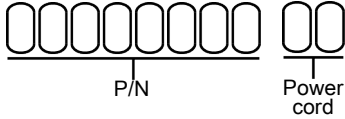
Programming interface	Product display
Installation	<p>The parameters can only be set via the display on the driver, not with eldoLED software tooling. For instructions, please see the Menu Structure Quick Start Guide.</p> <p>Custom settings are possible, please contact your eldoLED sales representative for more information.</p>

Warranty

Warranty period

[General Terms and Conditions](#)

Order number configurator



P/N	LED driver part number.
Power cord	Specify your power cord option based on your region: PW6060R1-EU for an EU power cord PW6060R1-US for a US power cord PW6060R1-UK for a UK power cord PW6060R1-AU for an Australian power cord

Input characteristics

Nominal input voltage range AC	120 - 230V (UL)
Maximum input current	6.3A @ 120V / 60Hz
Input frequency range	50 - 60Hz
Efficiency at full load	91.8%
Power factor at full load	>0.90
THD at full load	<20%
Maximum inrush current	35A @ 120V / 60Hz
Maximum standby power	12.5W @ 100V AC, 12.8W @ 120V AC, 14.4W @ 230V AC

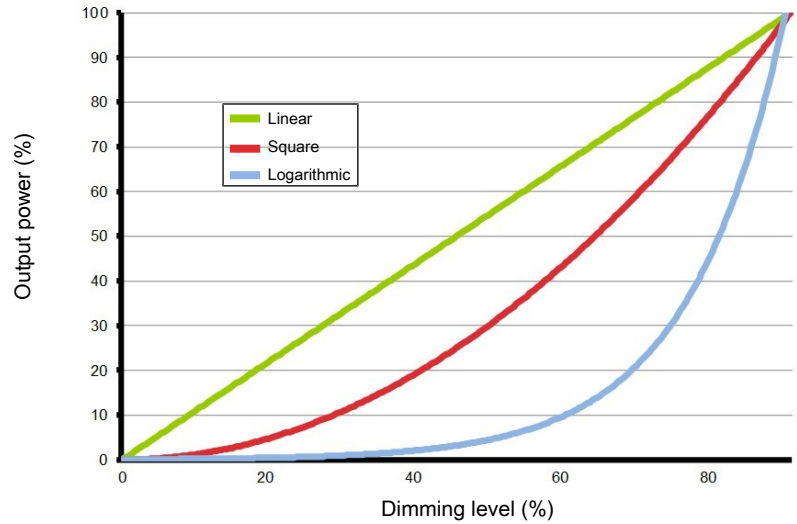
Output characteristics

Maximum LED output power	600W
Number of LED outputs	32
Programmable LED output current range	200 - 1050mA
LED output type	programmable in 50mA steps via display
LED output current tolerance	+/- 10% at programmed LED output current
LED output voltage range	2 - 48V

Control characteristics

Control channels	1-32 (DMX), 1-4 (DALI), 1 (0-10V)
Control protocol	DMX/RDM/DALI/0-10V
Dimming range	100% - 0.1%
Dimming curve options	Logarithmic (default) Linear Square
Dimming method	Hybrid HydraDrive

Dimming curves



Environmental conditions

Operating ambient temperature (Ta) range	-20 °C to +50 °C
Operating ambient temperature (Ta) range - UL Listed	-20 °C to +25 °C
Maximum operating case temperature (Tc max)	85 °C

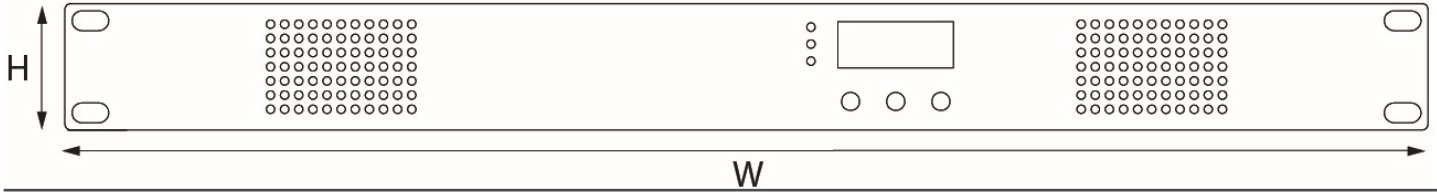
LED driver protection

Thermal	The LED output current is decreased whenever the internal LED driver temperature exceeds factory preset temperature. The LED output current is increased again once the internal LED driver temperature drops below this internal temperature threshold. If the internal LED driver temperature continues to increase, despite a decrease in output current, the LED driver will shut down.
LED output short circuit	The LED output current is cut off whenever the LED driver detects a short-circuit. The LED driver will attempt a restart every 400ms after a short-circuit is detected.
LED output overload	The LED driver decreases the LED output current sequentially, until it reaches its maximum rated power, whenever a load that exceeds the LED driver's maximum rated power is connected to the LED output.
Reverse polarity	The LED driver will not yield any current if the polarity of the load on the LED output is reversed. This situation will not damage the LED driver but may damage the LED load.

LED protection

Thermal protection LED	An external NTC thermistor, which is placed on a PCB near the LEDs, can be connected to the driver via the LEDcode/NTC terminals. The output current to the LEDs is then decreased by 75% whenever the NTC exceeds a maximum allowable temperature, which is specified by the user in the FluxTool software. The default NTC temperature limit is set to 70 °C.
Thermistor value	47kΩ
Suitable thermistors	leaded: Vishay, P/N 238164063473 screw: Vishay, P/N NTCASCWE3473J

LED driver mechanical details

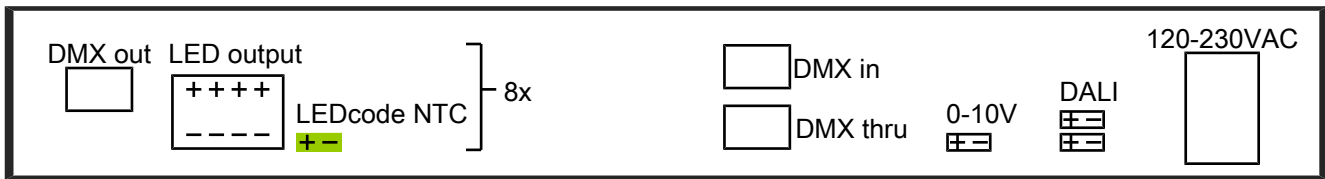


Length (L)	typical: 482.6 mm / 19 in
Width (W)	typical: 325 mm / 12.8 in
Height (H)	typical: 44.5 mm / 1.75 in
Weight	6,300 g

Packaging

Products per box	1 pcs
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Connector layout



Wiring Specifications

Wire Type	AWG 20-16, 0.5-1.5mm ² solid or stranded copper
Wire strip length	9mm / 0.35in
Connector counterparts	LED output connector: Phoenix 1952283 LEDcode connector: Phoenix 1952267 DALI connector: Phoenix 1952267 0-10V connector: Phoenix 1952267 DMX connector: CAT5
	Note: connectors are not included in the standard product. Order connectors using Connector Kit P/Ns on page 1.

Calibrated start-up procedure

For optimized DMX dimming performance.

While switching the mains input voltage, the DMX signal to the LED driver needs to be at 100% (255). Unused or open LED outputs of the driver need to be disabled. This can be achieved by programming the driver with the eldoLED Fluxtool software. In the "Setup – Control menu", select "Group scaling" for each unused or open LED output and change the actual value to '0', and write into the driver. For all LED outputs in use, change the value to '255'.

Standards and compliance

UL Listed	UL 1310 UL 8750
Conducted emissions	EN 55015
Radiated emissions	EN 55015
Radio disturbance characteristics	EN 55022
Surge immunity	EN 61000-4-5
DALI	EN 62386-101/102/207
0-10V	IEC/EN 60929 annex E NOTE: From 0.6V to 10V eldoLED LED drivers comply with IEC/EN 60929 annex E. Below 0.6V eldoLED LED drivers comply with ABL 0-10V Design Spec v1.2 enabling standby mode. For detailed dimming characteristics see 0-10V response chart in Control Characteristics.
DMX	E1.11 – 2008, USITT DMX512-A ANSI E1.20
Restriction of hazardous substances	RoHS3 (Directives 2011/65/EU-2015/863/EU)

Certifications



Safety



Risk of electrical shock. May result in serious injury or death. Disconnect power before servicing or installing.



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

Pay attention when connecting the LEDs: polarity reversal results in no light output and often damages the LEDs.



LED drivers are designed and intended to operate LED loads only. Powering non-LED loads may push the LED driver outside its specified design limits and is, therefore, not covered by any warranty.



eldoLED products are designed to meet the performance specifications as outlined at certain operating conditions in the data sheet. It is the responsibility of the fixture manufacturer to test and validate the design and operation of the system under expected and potential use cases, including faults.



Please observe voltage drop over long cable lengths. Longer cable lengths increase EMI susceptibility.



Product renderings and dimensional drawings are generic for the housing type. Product label, connector type and quantity may vary.

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