

LEDVD5CH20A-V1

Compensation of voltage drop

Voltage driver for LED strips for compensated voltage drop in cables (without userinterface circuit board)



DATA SHEET

- Custom embedded Software possible
- Adequate EMC design that enables correct and interference-free operation
- CE mark is attached to the PCB
- RoHS directive 2002/95/EC
- EMC Directive 2014/30/EC

The power supply

The total requested flow from the diet can be with all five channels at full load up to 100 Amps. If the power wires between power supply and voltage driver no more than 1 to 1.5 meters, it is sufficient 2x 10mm², 16mm² is recommended for longer lengths.

PWM

For each channel the PWM dimming value can be set separately. The dimming value is stored in an EEPROM and the stored values are directly used when turning on the voltage driver.

Channel setup

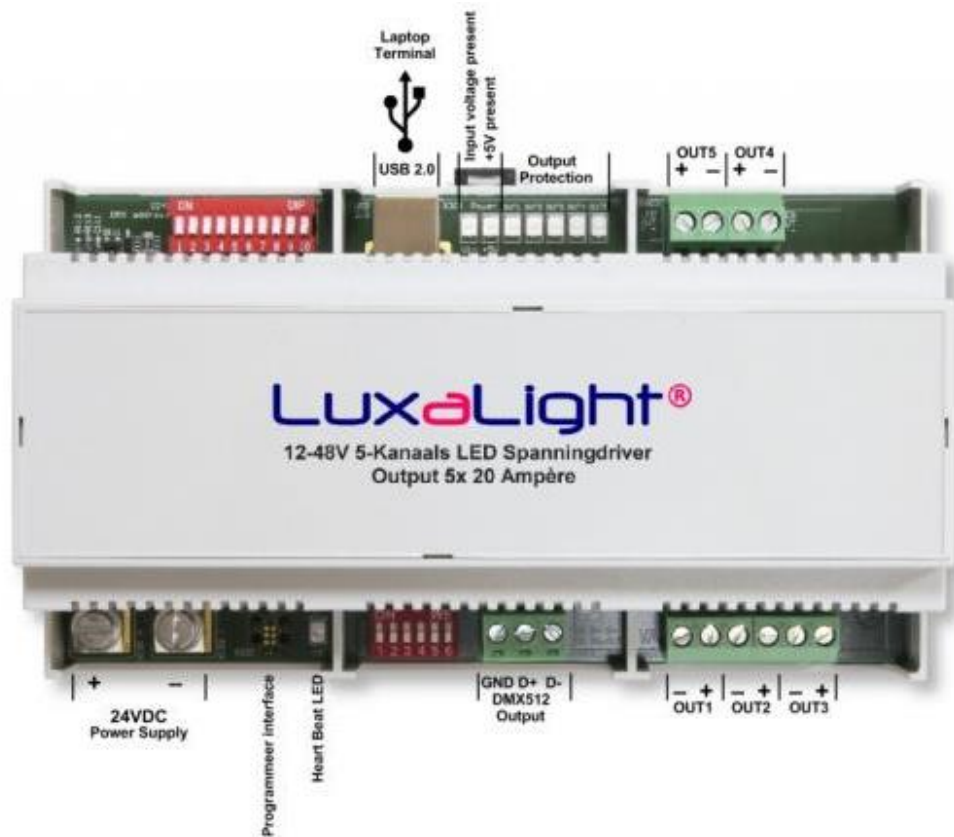
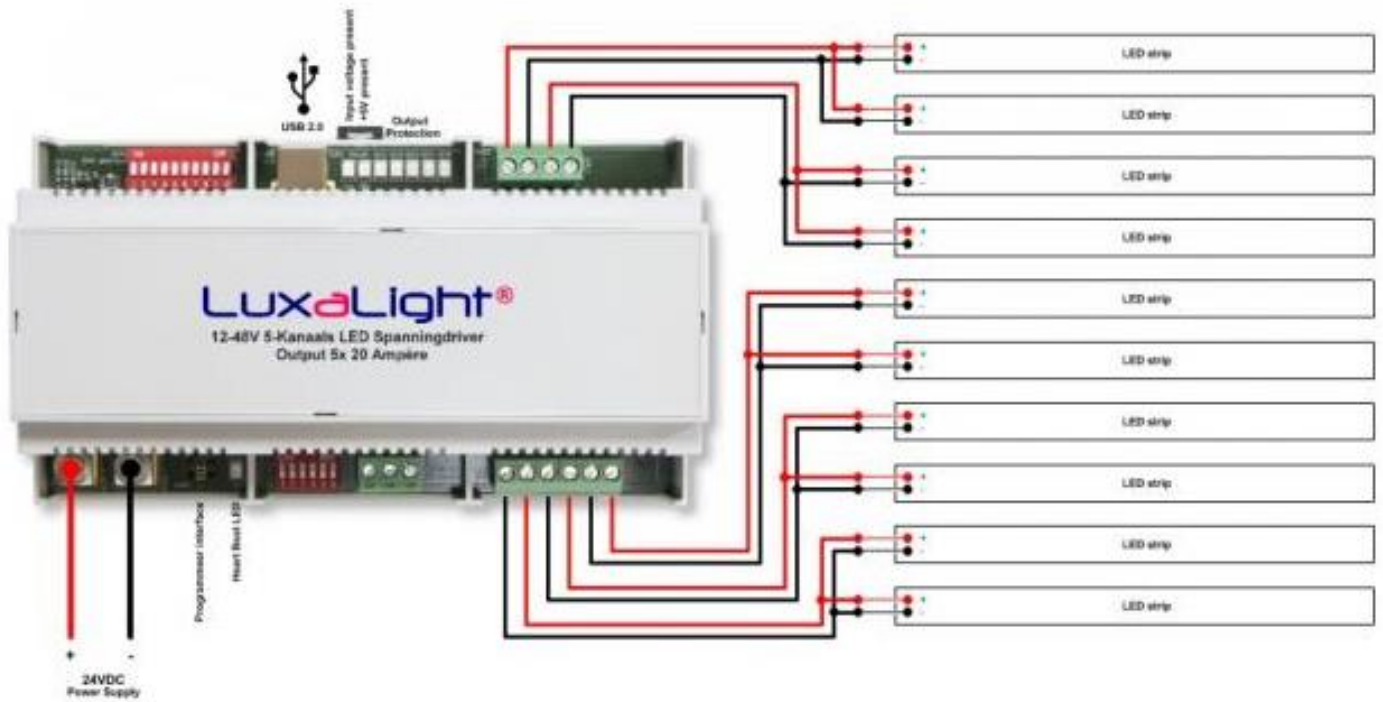
Each of these five channels (voltage outputs) can be adjusted in luminous intensity level in 256 steps in which a value of 0 corresponds to complete dark and a value of 255 to full brightness. And so, the value of 127 corresponds to half the brightness at 50%.

LED indicators

The green LED's at the top indicate that the supply voltage on the print is present. The green flashing LED at the bottom indicates the "heart beat" of the controller as a sign that it is working properly. There are also some red LEDs OUT 1 t / m OUT5, which light up as soon as a voltage output is overloaded. Above a certain value is, moreover, the overloaded channel turned off by software.

Custom made options

The LuxaLight voltage driver provides the proprietary software options for customer-specific applications, such as connecting a light sensor. The hardware of the voltage driver offers this possibility, but an additional light sensor has to be made and should also be made an extentions in the software here. Customization options will be included in the offer.





Specifications



<i>Input voltage</i>	12 - 48V
<i>Maximal input current</i>	100A (sum of the output currents)
<i>Standby current</i>	18mA (outputs fully dimmed)
<i>Own power consumption</i>	5W at 2400W load
<i>Efficiency</i>	Approx. 99.8%
<i>Output current per channel</i>	20 Ampère up to 24 Volt
<i>Output power</i>	12V – 5x 240 Watt = 1200 Watt (20A/channel) 24V – 5x 480 Watt = 2400 Watt (20A/channel) 36V – 5x 540 Watt = 2700 Watt (15A/channel) 48V – 5x 576 Watt = 2880 Watt (12A/channel)
<i>Overvoltage protection</i>	Yes, up to 60 Volts
<i>Short circuit protection</i>	Yes
<i>PWM frequency</i>	250 Hz
<i>No. of brightness steps per channel</i>	256 (8-bit)
<i>Color resolution</i>	8-bit (16.7 million colors, true-color)
<i>Outputs are EMC filtered</i>	Yes
<i>Temperature range</i>	-20°C - 40 °C
<i>Housing, b x h x d</i>	Din rail housing, 159mm x 90mm x 58mm
<i>IP- class</i>	IP20
<i>Cooling</i>	On circuit board, with coolfan on fan controller

Compliant

Meets standards:

- CE mark is attached to the PCB
- RoHS Directive 2002/95/EC
- EMC Directive 2014/30/EC