



VDL RENA ELECTRONICA

90519043

Bits2Power® 3 CHANNEL PWM DRIVER

Product description

- 3 Channel PWM driver
- 12 / 24 / 36V version
- 0 – 100% dimming
- Thermal protection
- 3 Year Warranty
- CE certified
- IP67

Applied Standards

EN55022
EN55024



Technical notes

Dimensions	156x38x25mm
Weight	220 gr.
Housing	Polycarbonate
Color	White (RAL9003)

Electrical Characteristics

Input voltage range ①	12 ... 48Vdc
Efficiency	92%
Output voltage range	see technical details
Output current max	2,1A
Output power max	see technical details
Output dimming range④	0 – 100%

Ordering data

Type	Article number
3-channel 12V	90519043-48D12210W67
3-channel 24V	90519043-48D24210W67
3-channel 36V	90519043-48D36210W67

Protections

Undervoltage lockout	@ Vin < 20Vdc
Short circuit protection	Output current limit
Reversed polarity	Positive ⇔ Negative
Reversed connection	Input ⇔ Output
Overheating protection	70°C Output derating

Connections

Input voltage	Positive	Orange	AWG20, 250mm
	Negative	Black	AWG20, 250mm
LEDS ⑥	Positive	Red	AWG20, 250mm
	Negative	Black	AWG20, 250mm

① Tolerance of 5%
② Nominal output voltage is # of LEDS x LED forward voltage

③ Tolerances of 5% and for each circuit

④ Percentage of output voltage

⑤ To be determined

⑥ Common Positive system



Technical details

Model	90519043-48D12210W67	90519043-48D24210W67	90519043-48D36210W67
Output	Number of channels	3	3
	DC voltage Range	12 V	24 V
	Rated channel current	2,1 A	2,1 A
	Maximum power	25 ^⑦ W	50 ^⑦ W
	Voltage tolerance	±5 %	±5 %
Input	PWM frequency	920 Hz	920 Hz
	DC voltage Range	24 ... 48 V	48 V
	Efficiency(full load)	92 %	92 %
	Standby Power	1,5 mW	1,5 mW

All Models

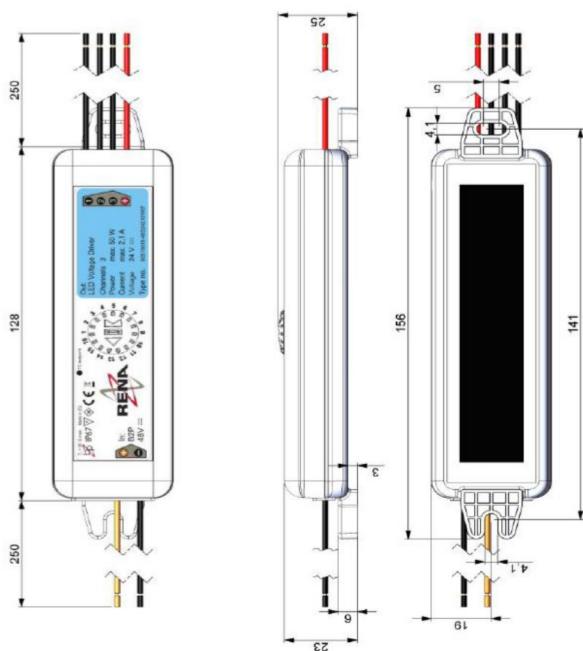
Protection	Short Circuit	Recovers automatically after removing short
	Over Current	Input protected by unrecoverable fuse
	Over Voltage	Input protected by TVS diode
	Over Temperature	70°C (Output derating)
Safety & EMC	Withstand Voltage	I/P-O/P: 0,5kV
	Isolation Resistance	I/P-FC: >100MΩ / 500VDC / 25°C / 70% RH
	EMI	EN55022 (CISPR22)
	EMS IMMUNITY	EN55024, EN61000-4-2, 3, 4, 5, 6, 11

^⑦ Maximum total input power is limited to 75 W. Output power will be derated for each separate channel when this limit is exceeded.

Mechanical Dimensions

Overall dimensions

L = 156 x W = 38 mm
Height = 25 mm



Thermal Characteristics

The LED driver must operate under proper environmental conditions and the operating ambient air temperature must NOT exceed the maximum given temperature.

For an optimal lifetime performance the LED driver must be placed in an environment where a sufficient heat transport is guaranteed. The heat transport is done by natural convection. It's not recommended to expose the module to direct sunlight or any other heat source.

Environmental characteristics

Storage temperature	-20 – +70°C
Operating temperature	-20 – +50°C
Operating humidity	10-95% RH
IP classification	IP67

Tc point

For an optimal lifetime performance the Tc point of the device must never exceed [⑤] degrees Celsius.

The maximum value must be determined under operating conditions in a thermally stable state and under worst-case conditions for the current application

Installation and Safety Information

Installation must be carried out under observation of the relevant regulations and standards. The following advice must be followed:

- See PDC600 controller manual for system installation details.
- The device contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken.
- Use wire size of minimum AWG 20 for connecting the B2P device.
- Please ensure the correct polarity of the leads.
- For outdoor or damp locations, be aware of the IP classification.

All above specifications must be met in order to qualify for the 3 year warranty.

Packaging

Box size (mm)	288x207x66 mm
Quantity each Box	12
Quantity each layer	12
Layer each box	1
Weight each box (kg)	2,1 kg