

Installation Instructions

E333135 Class P

ECOdrive, SOLOdrive and DUALdrive
30W /B and /S

1. Safety instructions

Before installing or performing routine maintenance upon this equipment, follow the general precautions listed in this section.

The product should only be installed and connected by a qualified, licensed electrician. Maintenance should be performed by qualified persons familiar with the product's construction and operation, as well as any hazards involved.

Do not install damaged product! This product has been properly packed so that no parts should have been damaged during transit. Inspect to confirm.



DANGER: RISK OF ELECTRIC SHOCK

- Disconnect or turn off power before installation or maintenance.
- Verify that supply voltage is correct by comparing it with the product information.
- Make all electrical and grounded connections in accordance with all applicable local code requirements.
- All wiring connections should be capped with UL approved recognized wire connectors.
- All unused connector openings must be capped.



WARNING: RISK OF BURN OR FIRE

- Do not exceed maximum wattage, ratings, or published operating conditions of product.
- Do not overload.
- Follow all manufacturer's warnings, recommendations and restrictions to ensure proper operation of product.



CAUTION: RISK OF DAMAGE DUE TO ESD (ELECTROSTATIC DISCHARGE)

- ESD can damage product(s). Personal grounding equipment must be worn during all installation of the unit.
- Do not touch individual electrical components as this can cause ESD and affect product performance.



CAUTION: RISK OF PRODUCT DAMAGE

- Do not stretch or use cable sets that are too short or are of insufficient length.
- Do not tamper with contacts.
- Do not modify the product.
- Do not change or alter internal wiring or installation circuitry.
- Do not use product for anything other than its intended use.



CAUTION: CONDITIONS

- Use only within an enclosure.
 - For use in damp and dry locations.
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2. Models and specifications

The 30W /B and /S LED driver product families consist of multiple driver configurations, which have been listed in Table 1.

2.1 Electrical ratings

Table 1 – Electrical specifications

Model	Input ratings (AC)			Output ratings (DC)					
	Voltage (Vac)	Frequency (Hz)	Max current (A)	Group 1		Group 2		Max power (W)	Control
				Max voltage (V)	Current (A)	Max voltage (V)	Current (A)		
EC30B-M1Z0A	120-277	50/60	0.35	42	0.15-1.4	-	-	30	0-10V
EC30B-M1Z0D	120-277	50/60	0.35	42	0.15-1.4	-	-	30	DALI
EC30B-M1M0Z	120-277	50/60	0.35	42	0.15-1.4	24*	0.1*	30	LEDcode
EC30S-M1Z0A	120-277	50/60	0.35	42	0.15-1.4	-	-	30	0-10V
EC30S-M1Z0D	120-277	50/60	0.35	42	0.15-1.4	-	-	30	DALI
EC30S-M1M0Z	120-277	50/60	0.35	42	0.15-1.4	24*	0.1*	30	LEDcode
SL30B-M1Z0A	120-277	50/60	0.35	42	0.15-1.4	-	-	30	0-10V
SL30B-M1Z0D	120-277	50/60	0.35	42	0.15-1.4	-	-	30	DALI
SL30B-M1M0Z	120-277	50/60	0.35	42	0.15-1.4	24*	0.1*	30	LEDcode
SL30S-M1Z0A	120-277	50/60	0.35	42	0.15-1.4	-	-	30	0-10V
SL30S-M1Z0D	120-277	50/60	0.35	42	0.15-1.4	-	-	30	DALI
SL30S-M1M0Z	120-277	50/60	0.35	42	0.15-1.4	24*	0.1*	30	LEDcode
SL30B-M2Z0A	120-277	50/60	0.35	42	0.15-1.4	42	0.15-1.4	30	0-10V
SL30B-M2Z0D	120-277	50/60	0.35	42	0.15-1.4	42	0.15-1.4	30	DALI
SL30S-M2Z0A	120-277	50/60	0.35	42	0.15-1.4	42	0.15-1.4	30	0-10V
SL30S-M2Z0D	120-277	50/60	0.35	42	0.15-1.4	42	0.15-1.4	30	DALI
DL30B-M2Z0D	120-277	50/60	0.35	42	0.15-1.4	42	0.15-1.4	30	DALI
DL30S-M2Z0D	120-277	50/60	0.35	42	0.15-1.4	42	0.15-1.4	30	DALI

* = voltage source (AUX)

2.2 Temperature ratings

For all models, the ambient temperature range is -20 °C to 50 °C.

2.3 Mechanical dimensions

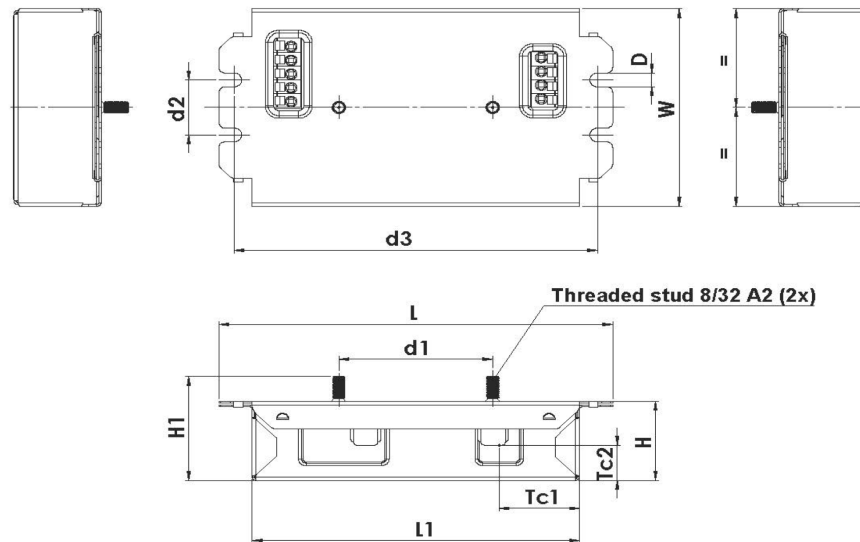


Figure 1 – Mechanical drawing

Table 2 – Mechanical dimensions

	Length (mm)	Width (mm)	Height (mm)	Height incl PEM inserts
Nominal	174.4	71.9	29.4	35.1
Deviation	1.2	1.2	0.5	



Your LED driver's web page features a STEP and/or IGS file of the driver for design-in purposes.

3. Installation

3.1 Tools for installation

- Wrench tool for 8/32" nuts
- Phillips screw driver 0.3 x 1.8 mm

3.2 Additional material

- 8/32" nut x2 for fixation

3.3 Mounting the LED driver

1. Remove knock-outs on junction box to feed a driver to fixture as shown in Figure X.
2. Attach the bottom feed driver to the junction box and tighten the nuts as shown in Figure X.

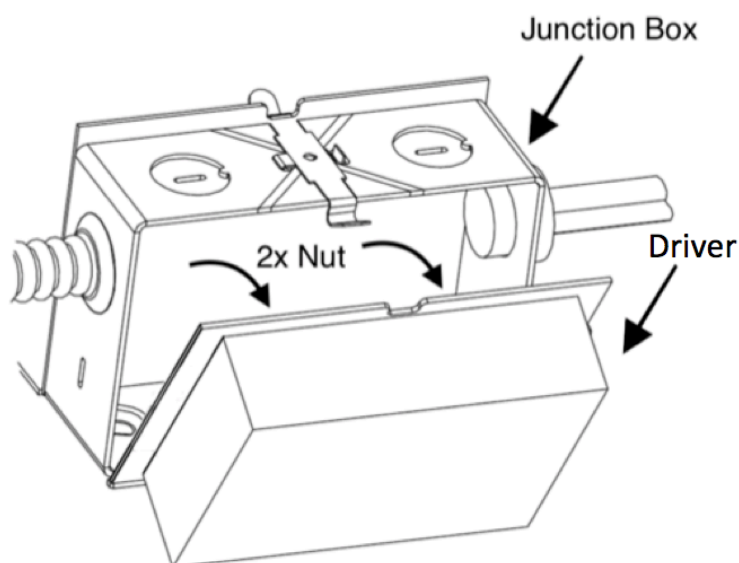


Figure 2 – Mounting the LED driver

3.4 Wiring the LED driver

3.4.1 Mains

The LED driver has been designed for use with universal mains voltage input of 120-277V AC, 50-60Hz.

3.4.2 0-10V

Connect your 0-10V control device to the '0-10V+' and '0-10V-' connector on the LED driver.

3.4.3 DALI

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

3.4.4 LEDcode/NTC

All 30W /B and /S drivers are programmable using the TOOLbox pro and FluxTool software.

The LEDcode input can be used for thermal measurement. For extensive thermal management purposes, you can use an NTC thermistor. This sensor can be fastened on or near the LED engine, and its wires connected to the LEDcode/NTC connectors.



Figure 3 - Examples of NTC thermistors

The NTC thermistor feeds the temperature values that it detects to the LED driver. Whenever these values exceed the predefined NTC temperature limit, the LED driver will gradually decrease the light output until normal operating temperatures are reached.

You can connect a 47kOhm NTC thermistor to the LEDcode/NTC interface for this closed loop thermal control. Recommended NTC thermistors include:

- Vishay 238164063472 (leaded)
- Vishay NTCASCWE3473J (screw)

3.4.5 Fixed AUX

The ECOdrive and SOLOdrive 30B-M1M0Z and 30S-M1M0Z feature a fixed AUX, which can be used to power a peripheral device. The fixed AUX can deliver up to 100mA to a load with a voltage between 4V and 24V.

3.4.6 General wiring specifications

Wire type	AWG20 – AWG16, 0.5-1.5mm ²
Wire core type	Solid copper
Wire strip length	9mm

The maximum length of LED wiring is 36m / 118ft from LED output to LED load when using 16 AWG type wires. Refer to the table below for the maximum LED wiring length for other wire types:

AWG value	20	19	18	17	16
Distance (m)	14	18	22	28	36
Distance (ft)	46	59	72	92	118

Please observe a voltage drop over long wire lengths: the longer the wire length between LED output and LED load, the lower the forward voltage is that is available per LED output.

3.4.7 Connections



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

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.

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

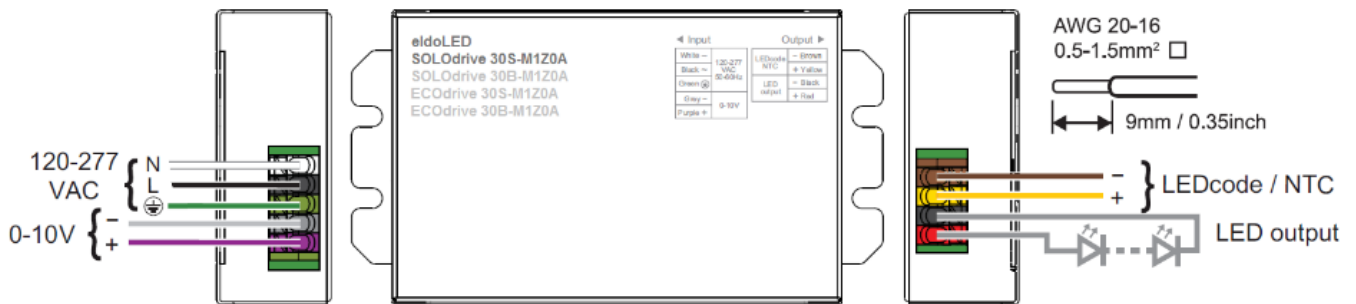


Figure 4 - ECOdrive 30B-M1Z0A, ECOdrive 30S-M1Z0A, SOLOdrive 30B-M1Z0A, SOLOdrive 30S-M1Z0A

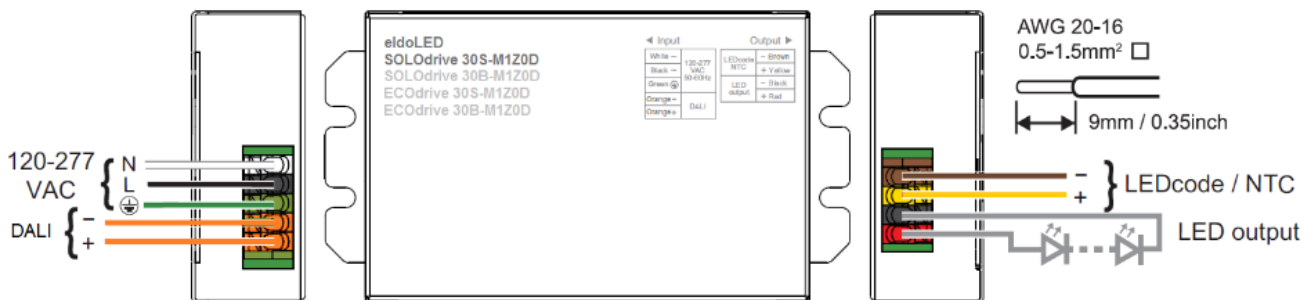


Figure 5 - ECOdrive 30B-M1Z0D, ECOdrive 30S-M1Z0D, SOLOdrive 30B-M1Z0D, SOLOdrive 30S-M1Z0D

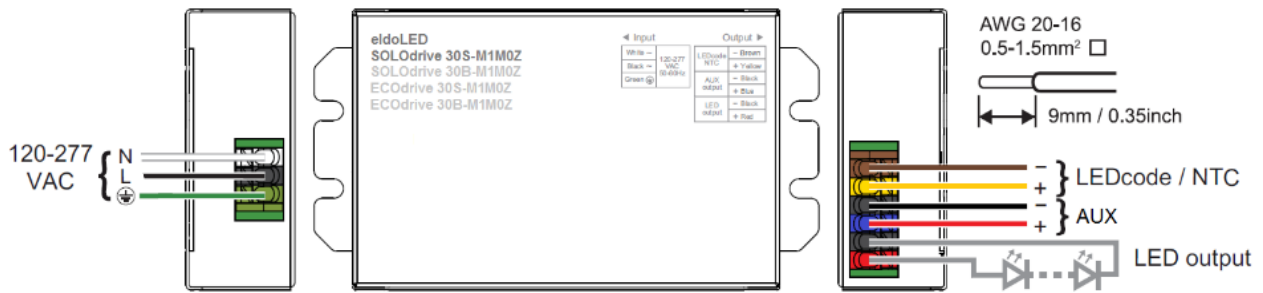


Figure 6 - SOLOdrive 30B-M1M0Z, SOLOdrive 30S-M1M0Z

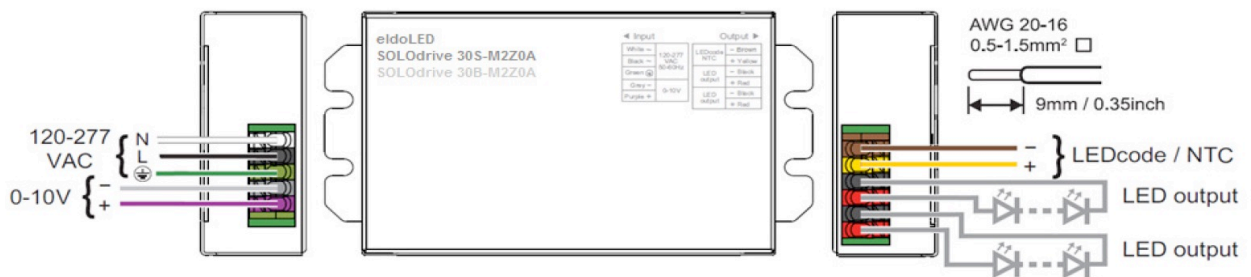


Figure 7 - SOLOdrive 30B-M2Z0A, SOLOdrive 30S-M2Z0A

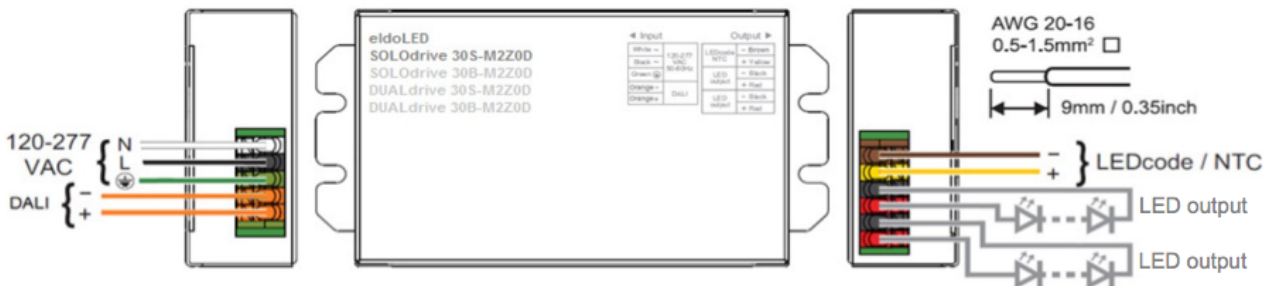


Figure 8 - SOLOdrive 30B-M2Z0D, SOLOdrive 30S-M2Z0D, DUALdrive 30B-M2Z0D, DUALdrive 30S-M2Z0D

4. Configuring the LED driver

The LED driver is delivered as a configured device, but can be reconfigured. To (re)configure the LED driver, use the following hardware and software tools :

- Programming hardware: TOOLbox pro
<https://www.eldoled.com/led-drivers/tooling/programming-hardware/>
- Software: FluxTool
<https://www.eldoled.com/led-drivers/tooling/programming-software/fluxtool/>

5. Troubleshooting

The maximum length of LED wiring is 100m / 328ft from LED output to LED load when using 16 AWG type wires. Refer to the table below for the maximum LED wiring length for other wire types:



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

Failure description	Troubleshooting action
No light	<ul style="list-style-type: none"> • Check mains voltage • Check wire connections: <ul style="list-style-type: none"> ○ Mains line wires ○ LED output wires • LED output polarity • Control lines shorted (0-10V)
No dimming	<ul style="list-style-type: none"> • Check the control lines connection • If the dimming device is powered by a FIXED AUX voltage, check the voltage
Flashing	<ul style="list-style-type: none"> • Check mains voltage • Check LED string length (output voltage greater than 42V)
Low light output	<ul style="list-style-type: none"> • LEDcode output short
Output current limited	<ul style="list-style-type: none"> • Output power exceeds 30W

Europe, Rest of World
eldoLED B.V.
Science Park Eindhoven 5125
5692 ED Son
The Netherlands

E: info@eldoled.com
W: www.eldoled.com

North America
eldoLED America
One Lithonia Way
Conyers, GA 30012
USA

E: info@eldoled.com
W www.eldoled.com