

Zurik® Universal Dimmable LED Driver

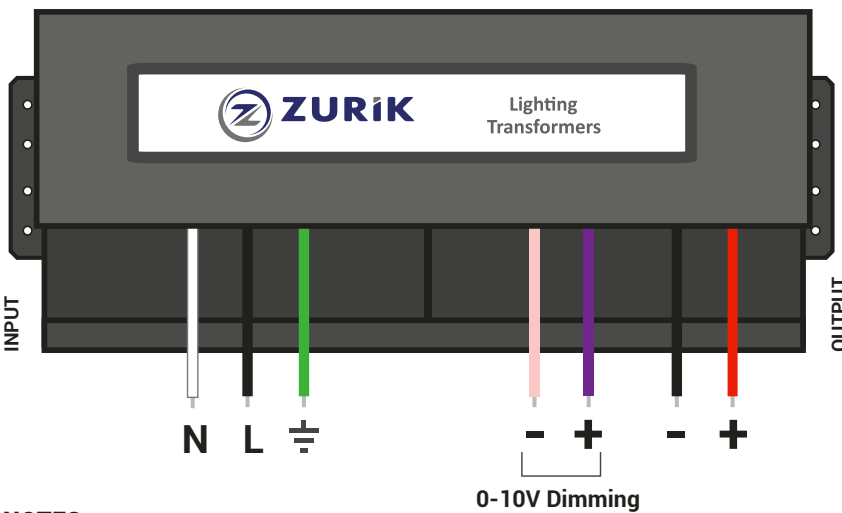
Datasheet

UL & cUL Listed, Type HL Rated. FCC

Introduction

The Zurik® Universal Dimmable LED Driver enables universal dimming across a variety of dimming technologies and protocols in its use with single channel LED products. This unit will perform flawlessly in conjunction with your MLV, ELV, TRIAC, 0/1-10V, 10V PWM, or potentiometer dimmer. This constant voltage driver has a high power factor up to 0.99. Features like its universal input, high power efficiency, compatibility with a wide range of dimmers for flicker-free lighting, and quiet operation make the Zurik® Universal Dimmable LED Driver the professional's choice when it comes to flawless dimming.

Universal Dimming: TRIAC, MLV, ELV, 0/1-10V, Potentiometer, 10V PWM Dimming



INPUT		
Color	Symbol	Type
Green	\equiv	Ground
Black	L	Line
White	N	Neutral

OUTPUT		
Color	Symbol	Type
Red	+	Positive
Black	-	Negative

DIM		
Color	Symbol	Type
Purple	+	Positive
Pink/Gray	-	Negative

NOTES:

*Due to new NEMA regulations this product is transitioning from gray and purple wires over to pink and purple wires. Your product may have either of these color combinations during this time

*Keep in mind that some Zurik® Universal Drivers have multiple outputs. They will have up to 5 pairs of positive (Red) and negative (Black) wires on the output side.

Phase Dimming:

This driver works with MLV (forward phase/leading edge), ELV (reverse phase/trailing edge) and TRIAC dimmers with a dimming range capable of 0-100%

0-10V Dimming:

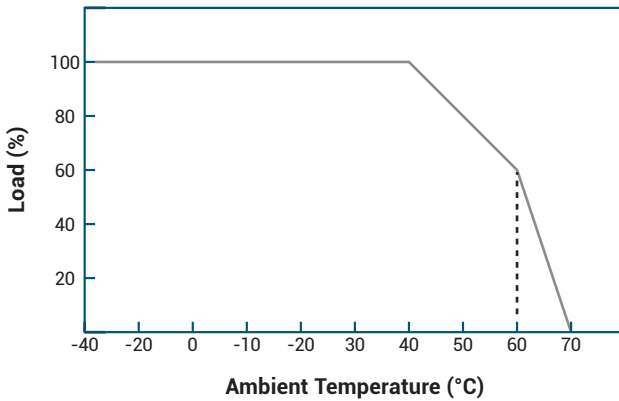
This driver works with 0-10V, 1-10V, Potentiometer, 10V PWM dimmers with a dimming range of 0-100%

Safety and Warnings

- Install in accordance with the National Electric Code (NEC) Article 450 and local regulations.
- This product should be installed and serviced by a qualified electrician.
- Install in a well-ventilated area free from explosive gases and vapors.
- Do not reverse the line voltage polarity upon installation. This will damage the driver.
- Risk of electric shock: When used outdoors, install only on a circuit protected by a Class A GFCI.
- Risk of fire: Special rated wire required for installations inside walls and building structures.
- Only use with compatible dimmable LED fixtures.
- Dimmer switches have minimum load requirements. Review the specifications of the compatible dimmer.

Caution: Do not wire multiple taps together if you wish to remain Class 2 compliant. The multitap versions of this driver should be treated as multiple independent drivers inside of one unit.

☑ Derating Curve



- If the ambient temperature is under 40°C (104°F), the driver can be powered to 100% of its load.
- If the ambient temperature is over 40°C (104°F), the load on the driver should be reduced in order to extend its useful life. Derate according to the Derating Curve above.

To extend the lifespan of the drivers, please refer to the Derating Curve and derate according to the temperature.

☑ Specifications

12V, 24V, 48V

Voltage Tolerance	±0.5V
Voltage Regulation	±0.5%
Dimming Range	0-100%
Deration Recommendation	80%
Minimum Load	10%
Frequency Range	47-63 Hz
THD (Typ.)	<20%
Leakage Current	<0.5mA
EMC Emission	FCC Part 15 B
Short Circuit Protection	Shuts down output voltage, repowers on to recover after faulty condition is removed
Overload Protection	≤120% hiccup mode; recovers automatically after faulty condition is removed
Overheat Protection	100°C±10°C shuts down output voltage, automatically recovers after cooling.
Working Temperature	-40°C to ~60°C (-40°F to ~140°F)
Working Humidity	20~90% RH, non-condensing
Storage Temperature	-40°C to~80°C (-40°F to~176°F)
Temp. Coefficient	±0.03%/°C(0~50°C)
Vibration	10~500Hz, 5G 10 min/1 cycle, period for 60 min each along X, Y, Z axes
Certifications	UL Listed, cUL Listed, RoHS, Conforms to FCC, Conforms to CAN/GSA-C22.2 NO.250.13, SELV
Safety Standards	UL8750+UL1310
Withstand Voltage	Input-Output: 1.88KVAC
Isolation Resistance	Input-Output: 100MΩ/500VDC/25°C/70%RH
Ingress Protection	IP66
Warranty	7 years

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12V

	ZRK-UNV-30W-12VDC	ZRK-UNV-60W-12VDC	ZRK-UNV-120W-12VDC	ZRK-UNV-200W-12VDC
Input Voltage	100-277V	100-277V	100-277V	110-277V
Rated Current	2.5A	5A	10A	16.67A
Rated Power	30W	60W	120W	200W
Load Regulation	±1%	±1%	±2%	±2%
Class 2 Rating	Yes	Yes	No	No
Efficiency (Typ.)	Up to 80%	Up to 85%	Up to 84%	Up to 88%
AC Current (Max.)	0.5A@100VAC	0.5A@100VAC	1.7A@100VAC	2.3A@100VAC
Weight	2.09 lbs (0.95 kgs)	1.85 lbs (0.84 kgs)	3.02 lbs (1.37 kgs)	4.17 lbs (1.89 kgs)
Inrush Current (Typ.)	7A, 50%, 420us @120VAC 12A, 50%, 480us @277VAC	14A, 50%, 780us @120VAC 15A, 50%, 660us @277VAC	20A, 50%, 1.6ms @120VAC 25A, 50%, 1.2ms @277VAC	15A, 50%, 1.4ms @120VAC 30A, 50%, 1.4ms @277VAC
Power Factor	0.99@120VAC 0.98@277VAC	0.98@120VAC 0.95@277VAC	0.99@120VAC 0.96@277VAC	0.98@120VAC 0.97@277VAC
Dimensions	L: 6 1/2" x W: 3 3/4" x H: 1 5/8" (16.5 cm x 9.5 cm x 4 cm)	L: 7 1/2" x W: 3 3/4" x H: 1 5/8" (18.8 cm x 9.5 cm x 4.0 cm)	L: 8 3/4" x W: 3 3/4" x H: 1 5/8" (22 cm x 9.5 cm x 4.0 cm)	L: 10 1/4" x W: 4 1/4" x H: 1 7/8" (26 cm x 10.5 cm x 4.5 cm)

12V

	ZRK-UNV-300W-12VDC	ZRK-UNV-C180W-12VDC	ZRK-UNV-C300W-12VDC
Input Voltage	110-277V	100-277V	100-277V
Rated Current	25A	3 x 5A	5 x 5A
Rated Power	300W	180W	300W
Load Regulation	±2%	±1%	±1%
Class 2 Rating	No	Yes	Yes
Efficiency (Typ.)	Up to 92%	Up to 89%	Up to 91%
AC Current (Max.)	3.4A@100VAC	2.2A@100VAC	3.6A@100VAC
Weight	4.85 lbs (2.2 kgs)	4.85 lbs (2.2 kgs)	5.51 lbs (2.5 kgs)
Power Factor	0.99@120VAC 0.97@277VAC	0.98@120VAC 0.95@277VAC	0.99@120VAC 0.95@277VAC
Inrush Current	20A, 50%, 1.9ms @120VAC 35A, 50%, 1.9ms @277VAC	19A, 50%, 1.3ms @120VAC 38A, 50%, 960us @277VAC	43A, 50%, 1ms @277VAC 35A, 50%, 960us @120VAC
Dimensions	L: 11" x W: 4 3/8" x H: 1 7/8" (27.8 cm x 11 cm x 4.5 cm)	L: 11" x W: 4 3/8" x H: 1 7/8" (27.8 cm x 11 cm x 4.5 cm)	L: 11 7/8" x W: 4 3/8" x H: 1 7/8" (30.1 cm x 11 cm x 4.5 cm)

Caution: Do not wire multiple taps together if you wish to remain Class 2 compliant. The multitap versions of this driver should be treated as multiple independent drivers inside of one unit.

24V

	ZRK-UNV-30W-24VDC	ZRK-UNV-60W-24VDC	ZRK-UNV-96W-24VDC	ZRK-UNV-120W-24VDC
Input Voltage	100-277V	100-277V	100-277V	100-277V
Rated Current	1.25A	2.5A	4A	5A
Rated Power	30W	60W	96W	120W
Class 2 Rating	Yes	Yes	Yes	No
Efficiency (Typ.)	Up to 80%	Up to 85%	Up to 86%	Up to 84%
AC Current (Max.)	0.5A@100VAC	0.5A@100VAC	1.3A@100VAC	1.7A@100VAC
Weight	2.09 lbs (0.95 kgs)	1.85 lbs (0.84 kgs)	3.02 lbs (1.37 kgs)	3.02 lbs (1.37 kgs)
Power Factor	0.99@120VAC 0.95@277VAC	0.98@120VAC 0.95@277VAC	0.98@120VAC 0.95@277VAC	0.98@120VAC 0.95@277VAC
Inrush Current	7A, 50%, 420us @120VAC 12A, 50%, 480us @277VAC	14A, 50%, 780us @120VAC 15A, 50%, 660us @277VAC	20A, 50%, 1.6ms	20A, 50%, 1.6ms @120VAC 25A, 50%, 1.2ms @277VAC
Dimensions	L: 6 1/2" x W: 3 3/4" x H: 1 5/8" (16.5 cm x 9.5 cm x 4 cm)	L: 7 1/2" x W: 3 3/4" x H: 1 5/8" (18.8 cm x 9.5 cm x 4.0 cm)	L: 8 3/4" x W: 3 3/4" x H: 1 5/8" (22 cm x 9.5 cm x 4.0 cm)	L: 8 3/4" x W: 3 3/4" x H: 1 5/8" (22 cm x 9.5 cm x 4.0 cm)
Load Regulation	±1%			

24V

	ZRK-UNV-200W-24VDC	ZRK-UNV-300W-24VDC	ZRK-UNV-C192W-24VDC	ZRK-UNV-C384W-24VDC
Input Voltage	110-277V	110-277V	100-277V	100-277V
Rated Current	8.33A	12.5A	2 x 4A	4 x 4A
Rated Power	200W	300W	192W	384W
Class 2 Rating	No	No	Yes	Yes
Efficiency (Typ.)	Up to 88%	Up to 92%	Up to 89%	Up to 91%
AC Current (Max.)	2.3A@100VAC	3.4A@100VAC	2.3A@100VAC	4.6A@100VAC
Weight	4.17 lbs (1.89 kgs)	4.85 lbs (2.2 kgs)	5.07 lbs (2.3 kgs)	5.73 lbs (2.6 kgs)
Power Factor	0.98@120VAC 0.95@277VAC	0.99@120VAC 0.95@277VAC	0.99@120VAC 0.94@277VAC	0.98@120VAC 0.96@277VAC
Inrush Current	15A, 50%, 1.4ms @120VAC 30A, 50%, 1.4ms @277VAC	20A, 50%, 1.9ms @120VAC 35A, 50%, 1.9ms @277VAC	19A, 50%, 1.3ms @120VAC 38A, 50%, 960us @277VAC	22.8A, 50%, 960us @120VAC
Dimensions	L: 10 1/4" x W: 4 1/4" x H: 1 7/8" (26 cm x 10.5 cm x 4.5 cm)	L: 11" x W: 4 3/8" x H: 1 7/8" (27.8 cm x 11 cm x 4.5 cm)	L: 11" x W: 4' 3/8" x H: 1' 7/8" (27.8 cm x 11 cm x 4.5 cm)	L: 12' 7/8" x W: 5' 5/8" x H: 2" (32.5 cm x 14 cm x 4.8 cm)
Load Regulation	±1%			

48V

	ZRK-UNV-C192W-48VDC	ZRK-UNV-C288W-48VDC
Input Voltage	100-277V	100-277V
Rated Current	2A x 2	2A x 3
Rated Power	96W x 2	96W x 3
Efficiency (Typ.)	Up to 89%	Up to 91%
AC Current (Max.)	3.5A@100VAC	2.4A@100VAC
Weight	4.85 lbs (2.2 kgs)	5.07 lbs (2.3 kgs)
Power Factor	0.99@120VAC 0.94@277VAC	0.99@120VAC 0.94@277VAC
Inrush Current	19A, 50%, 1.3ms @120VAC 38A, 50%, 960us @277VAC	35A, 50%, 960us @120VAC 43A, 50%, 1ms @277VAC
Dimensions	L: 11" x W: 4 3/8" x H: 1 7/8" (27.8 cm x 11 cm x 4.5 cm)	L: 11 7/8" x W: 4 3/8" x H: 1 7/8" (30.1 cm x 11 cm x 4.5 cm)
Load Regulation	±1%	

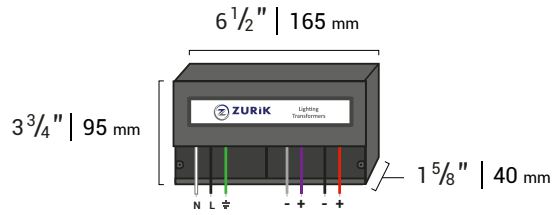
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Dimensions

01.

SKU

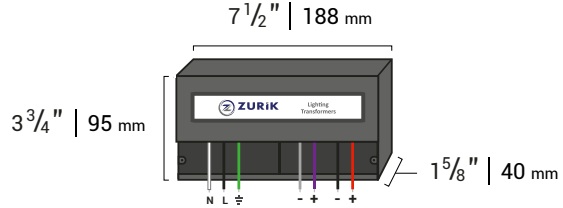
ZRK-UNV-30W-12VDC
ZRK-UNV-30W-24VDC



02.

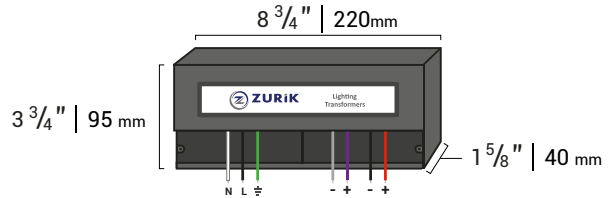
SKU

ZRK-UNV-60W-12VDC
ZRK-UNV-60W-24VDC



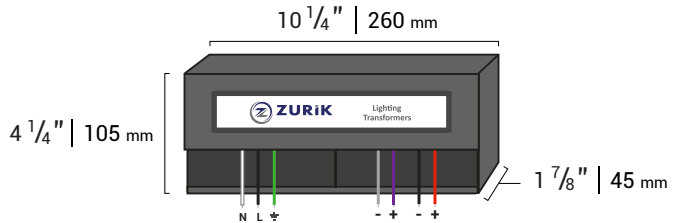
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ZRK-UNV-96W-24VDC
ZRK-UNV-120W-12VDC
ZRK-UNV-120W-24VDC



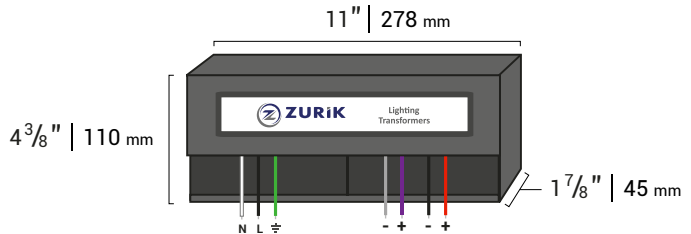
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ZRK-UNV-200W-12VDC
ZRK-UNV-200W-24VDC



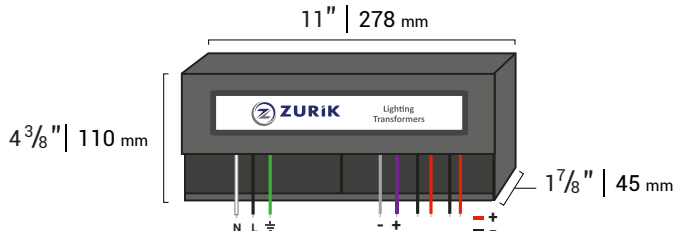
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ZRK-UNV-300W-12VDC
ZRK-UNV-300W-24VDC



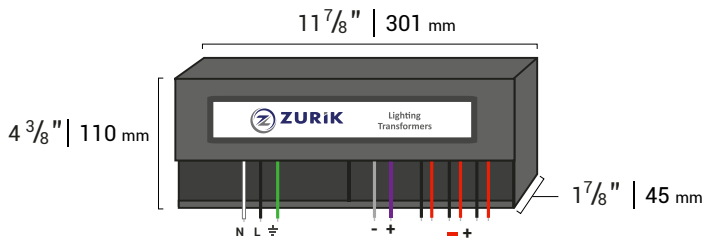
06.

ZRK-UNV-C192W-48VDC



07.

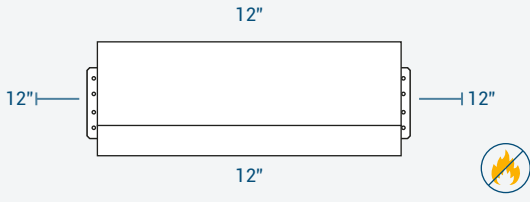
ZRK-UNV-C288W-48VDC



Installation

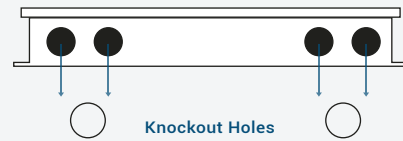
- Shut off power at the main breaker before attempting installation. Test to make sure the power is off with a multimeter.
- Use only correctly-sized UL Listed wire nuts and clamp accessories with this Zurik® Driver.
- All direct wire connections to the Zurik® Driver must be secured inside the junction box. Make sure ALL connections are tight.
- For easy reference, some wire connections are depicted in the diagrams outside the junction box.
- Once installation is complete and connections are covered, turn on the power at the main breaker.
- If you experience any issues at all with your test setup, please be sure to contact us at After Sales Support.

1. Mounting the Zurik® Universal Driver



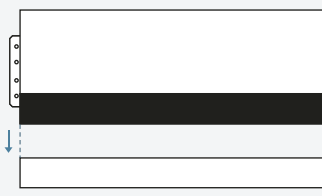
It can be mounted in any orientation, the chosen location must be able to support the weight of the power supply with 12" of clearance for proper ventilation. Never mount it next to objects radiating heat.

2. Using the Knockout Holes (optional)



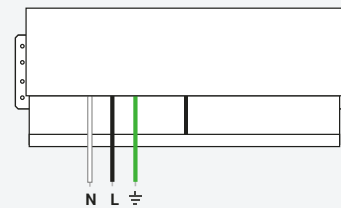
Remove wiring knockouts as needed and install 3/8" Romex connectors or bushings to reduce strain on wires. One set of knockout holes is reserved for input voltage while the second set is reserved for output voltage.

3. Remove Covers



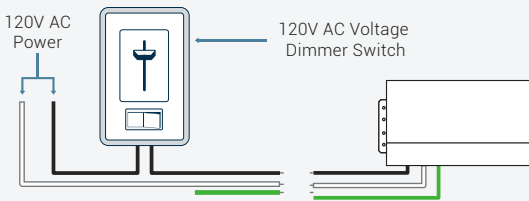
Lift the cover plate at the top of the power supply. This will expose the Input and Output wires.

4. Connect Power Wires



Loosen the Input Power L and N wires and attach the AC Live and Neutral wires respectively. If you are installing this with TRIAC/Phase Cut dimming, follow Wiring Diagram #1, and if you are using 0/1-10V dimming, please follow Wiring Diagram #2 (See page 7).

5. Using a Dimmer



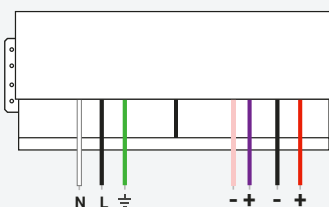
When using a 3-pole TRIAC dimmer as a single pole make sure to cap the additional line and connect the rest of the wiring as recommended by the dimmer instructions. Find our list of compatible dimmers below.

6. Identify the Channels on the Strip



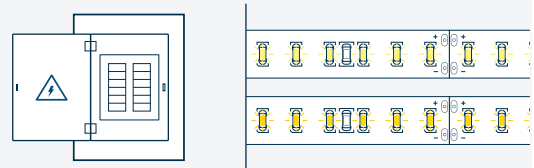
Look at your LED strips carefully and identify the positive (+) and negative (-) channels.

7. Connect LED Wires



Connect wires on the driver to the respective wires on the LED light using an appropriate connector. Cap off the 0-10V dimming wires when not in use.

8. Turn Power On

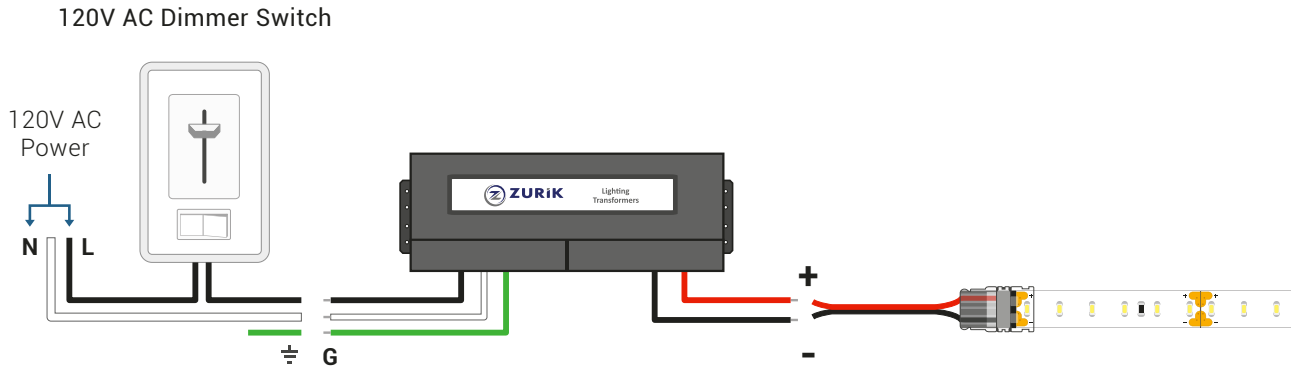


Turn the main breaker for the AC line back on to power your non-dimmable power supplies. The LED strip should turn on.

Wiring Diagrams

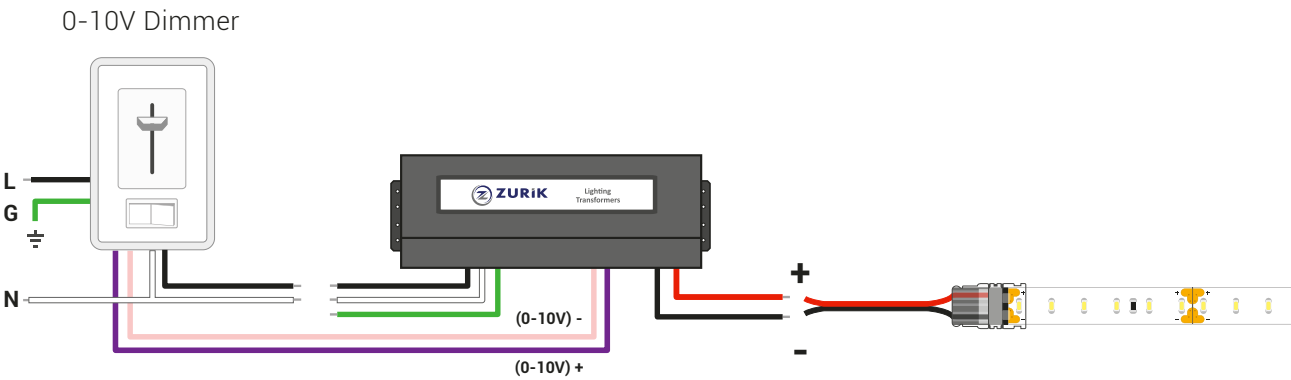
01.

Connection Using TRIAC/Phase Cut Dimming



02.

Connection Using 0-10V/1-10V Dimming



*Cap any wires not in use.

Troubleshooting

If the driver is humming, lights are not turning on or are flickering:

- Check that this driver is not overloaded or overheated. The automatic breaker will trip and recover once the external cause has been corrected.
- Make sure the polarity of the AC line wires match the polarity of the channels on the Power Input Terminal.
- If the driver is powered, check the polarity on the Power Output Terminal. Make sure you have matched the markings on the LED strip to the channels on the driver.
- Check that your dimmer is on the compatible dimmer list.
- Make sure all the connections (solderless connectors, solder joints, terminal blocks, and spliced wires) are secure and making correct contact.
- Make sure the power requirements are being met, 100-277VAC input and 12-24VDC output (depending on the driver), check these with a multimeter.
- If the driver isn't providing the adequate voltage, make sure the properly sized gauge wire is installed by factoring voltage drop and amperage rating. If the voltage at the end of the wire is 10.5V or less for a 12V unit and less than 21V for a 24V unit, we recommend installing a heavier gauge wire between the driver and the LED load.
- Check that the wire connections are accurate by referring to the wiring diagrams provided.
- Check that your installation has not tripped the circuit breaker at the main service panel of the building. If this occurred reset the breaker. If it trips again, it is possible that there is an electrical short/defective component or a connection issue on the AC side of the driver.

Warranty Information

Limited Warranty: This product has a 7 year limited warranty from the date of shipment. This warranty only includes the main product outlined in this specification sheet and does not include the additional accessories that are used as a reference. Complete warranty details for fixtures and additional accessories are available at <https://www.flexfireleds.com/warranties/> within the Policies section. For warranty related questions please contact the product support team at (support@flexfireleds.com).

Consumer's Acknowledgment

Flexfire LEDs, Inc. stands behind its products when they are used properly and according to our specifications. When you purchase our products, you are agreeing to the terms and conditions outlined in our warranty section. We try our best to make recommendations, but the burden of proper installation, design, and maintenance relies on the purchaser.

This limited warranty does not include product failures that are the result of:

Not using a voltage regulated power supply to connect the LED product or controls; Connecting LED products to the wrong output voltage; Improper connection of power supplies, LED products, or controls; Connecting LED products or controls directly to any AC power source if they are stated for DC only input; Connecting power supplies backwards to an AC power source; Products used in an inappropriate location or in environmental conditions (temperature, humidity, moisture, etc.) outside the normal specified range; Water damage to products not specifically sold as waterproof products; Electrical power surges and spikes; Damage from hail, flooding, tornado, fire, wind, earthquake, lightning, electrical storm, or any other natural disasters or "force majeure" incidences; Damage caused by a vehicle or other accident; Damage caused when transporting the item; Damage to any products that were modified by the user, used for purposes other than as intended or directed, or connected to LED systems or components not purchased from Flexfire LEDs; Products that have been subjected to misuse, mishandling, misapplication or accident. Products used in connection with any components, devices or systems other than those explicitly approved as compatible with Company's products and listed on Company's website. Excessive wear and tear and/or physical or accidental abuse, loss, or theft. Improper repairs or warranty services performed by someone other than Flexfire LEDs will void this warranty.