

IMPORTANT SAFEGUARDS READ AND FOLLOW ALL SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

- **CAUTION** - This equipment has more than one power supply connection point. To reduce the risk of electric shock, disconnect both the branch circuit-breakers or fuses and emergency power supplies before servicing.
- **CAUTION** – Risk of Electric shock hazard. The controller uses high voltage and should only be installed by qualified personnel in accordance with National Electrical Code and any local regulations.
- **CAUTION** - To avoid electrical overload, total connected load should not exceed output rating.
- This product is suitable for use in dry locations where the ambient temperature is -5°C to $+50^{\circ}\text{C}$ (23°F to 122°F).
- Do not use outdoors.
- Do not mount near gas or electric heaters
- Equipment should be mounted in locations and at heights where it will not be subjected to

tampering by unauthorized personnel.

- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than its intended use.
- Servicing should be performed by qualified service personnel.
- Pollution Degree:2



Overview

This guide covers the Tri-Zone Dimming Controller, model ELED3-BU 120-277 and ELED3H-AU 240-347. Both models are equipped with a 902 MHz radio. The box contents includes the controller and installation guide. A programming guide with detailed features of the controller is available for download on www.echoflexsolutions.com.

The controller includes Simple Tap™ technology which allows installers and facility operators to manage configuration settings without any tools.

See wiring diagrams on page 4 for detailed output load ratings



Scan QR code for link to programming guide

Preparing To Install The Controller

The controller should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel. The controller is mounted using the conduit nipple for mounting the controller to electrical junction boxes or panels. You will require hand tools and supplies (not provided) to install the controller.

- Screwdrivers, pliers, wire cutters, wire insulation stripping tool
- Appropriately sized wire nuts
- Small cable ties

Installing the Controller

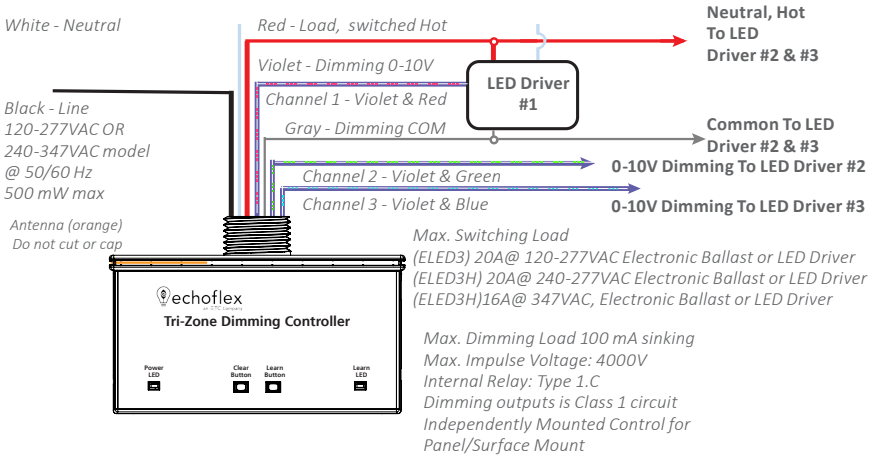
For best results mount the controller on the outside of the electrical box either directly at the electrical load or before the load in the circuit.

Review these instructions completely before installing the controller.

1. Locate the circuit breaker panel and terminate power to the circuit.
2. Remove all face plates and other hardware from the junction box so you can access the high voltage wires.
3. Mount the controller to the exterior of the junction box or panel with the ½" threaded nipple.
4. Refer to the wiring diagram to connect the controller to line power, neutral and load wires. Use wire nuts on all connections and individually cap any bare wires (except orange antenna wire).
5. Connect the gray and purple wires to the drivers' or ballasts' dimming interface. Ch 1 - Violet and Red, Ch 2 - Violet and Blue, CH 3 Violet and Green
6. Replace the electrical box faceplate.

7. Restore power to the circuit.
8. If the controller was pre-commissioned you can use one of the pre-linked devices to test the controller operation. If the controller was not pre-commissioned by the factory, refer to the section of this guide titled Linking the First Switch. Use this switch to verify the controller functionality.

Wiring Diagram



Note: Always follow applicable NEC and local electrical code requirements when installing and powering the controller.



Note: The Micro USB port is for factory use only. Do not attach cables or accessories to this port

The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition. Do not use this equipment for other than its intended use. Do not use outdoors.

Electrical Terminations

Use only UL approved wiring when making connections to the controller, see table below.

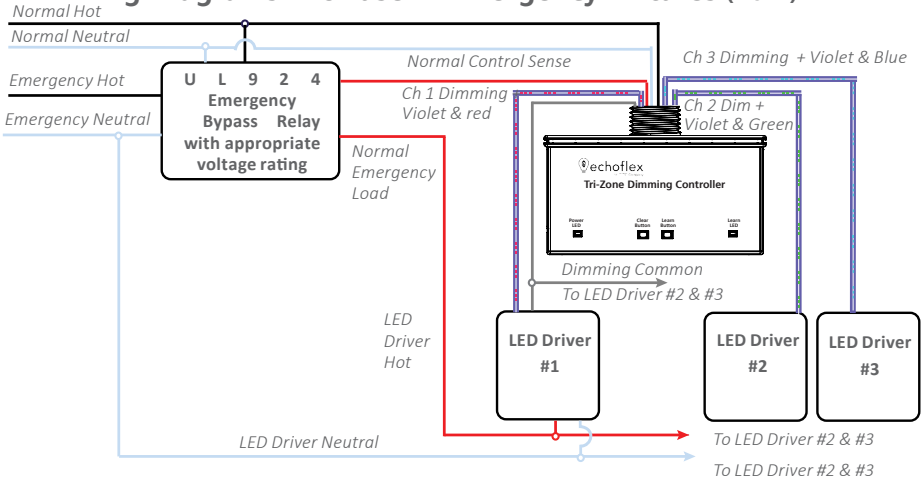
Controller's Wire Details

Connection	Color	Specification
Load	Red	14AWG 600V
Neutral	White	14AWG 600V
Line	Black	14AWG 600V
Dimming 0-10V	Violet /Stripe	18AWG 600V
Dimming GND	Gray	18AWG 600V

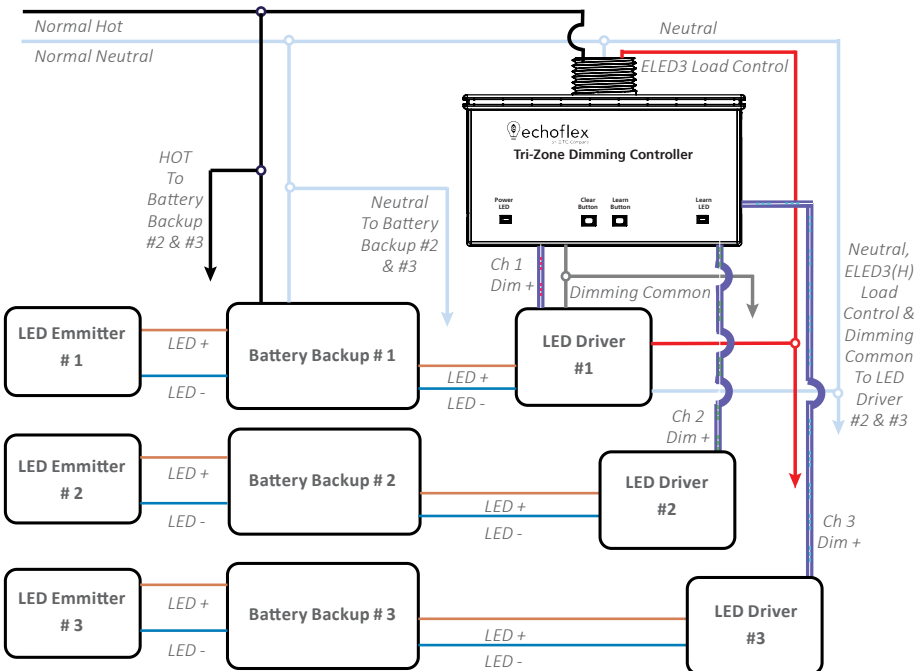
The controller has an external orange antenna wire. Do not cut, cap or connect this wire.

Power to the controller is connected between the White (Neutral) and the Black Line power: ELED3 (120-277VAC) OR ELED3H (240-347VAC). The Class 1 power limited dimming lines (purple and gray wires) can be used to provide 0-10V control of a dimming ballast or LED driver (one per channel).

Wiring Diagrams - For use in Emergency Fixtures (1 of 2)



Wiring Diagrams - For use in Emergency Fixtures (2 of 2)



Linking the First Switch

Use this method to link the first switch, this method will link the switch to all three channels. Use the learn button to link additional devices.

1. If the controller already has a sensor linked, press the TEACH button on the linked sensor and proceed to step 2 within 60 seconds.
2. Click the wireless switch paddle ON three times, OFF three times and ON three times sequentially within 5 seconds. The relay will toggle and the red POWER LED will begin a repeating blinking pattern to indicate the linked switch, see the section on LED blink codes.

LEARN button

The LEARN button is used to link switches or sensors to the controller, the Learn LED and Power LED are tricolor and indicate which channel is in Learn mode. In Channel 1 learn mode the learn LED will be red and the power LED will be toggling red. In Channel 2 learn mode the learn LED will be green and the power LED will be toggling green. In Channel 3 learn mode the learn LED will be blue and the power LED will be toggling blue.

1. Press the button marked LEARN for a half second. In link mode the LEARN LED will stay ON and the POWER LED will toggle every two seconds. The LEDs will be a color that correlates to the channel ((Red=CH1; Green=Ch2; Blue=CH3)
2. When linking a wall switch, press the switch paddle ON three times. If linking a sensor, press the sensor's TEACH or LINK button, refer to the sensor's documentation. Occupancy sensors will be linked to all channels regardless of which channel's link mode the controller is in. Photo sensors can only be linked while in channel 1 learn mode or channel 2 learn mode. Photo sensors will be linked to both channels 1 and 2 regardless of which of these learn modes the controller is in. The POWER LED will remain lit for four seconds while it links the new device. It will resume toggling allowing you to link another device up to a total of twenty devices.
3. To exit link mode, press and release the LEARN button on the controller.



Note: Linking a switch or sensor that is already linked to a channel, will remove or unlink it from the channel.



Note: Link mode will time out after no activity in thirty seconds.

CLEAR button

Using the CLEAR button can reload the controller to the factory pre-commissioned settings with linked devices OR it can load the factory default parameters and remove all linked devices.

- To return the controller to the factory pre-commissioned state, press the CLEAR button until the red POWER and green LEARN LEDs start blinking, approximately 5 seconds. Release the button and the red POWER LED will begin blinking indicating the factory commissioned pre-linked devices.
- To completely clear the controller returning it to factory default settings removing all linked devices, press the CLEAR button until the red POWER and green LEARN LEDs come on solid, about 15 seconds, then release. The POWER LED will stay ON solid indicating the factory default state.

LED Blink Codes and Operation

The tables below describe the LED activity and associated mode of the controller.

If the controller was factory pre-commissioned, upon power up it will immediately begin blinking the red POWER LED based on the type and count of linked devices. The type is indicated by long blinks followed by short blinks counting the number of devices linked. This pattern will repeat after a short pause.

The table below describes the number of LED blinks for each device type.

POWER LED Blink Codes

Channel 1 links appear in red. Channel 2 links appear in green. Channel 3 links appear in blue.

factory default (links only)	ON Solid
switches	1 long blink followed by short blinks counting switches
occupancy sensors	2 long blinks followed by short blinks counting sensors (linked to all channels regardless of link channel)
photo sensor	3 long blinks followed by a short blinks counting sensors (Only CH 1 & CH 2 - Linked to both CH1 & CH 2)
central command	4 long blinks followed by short blinks counting devices
demand response	5 long blinks followed by short blinks counting devices

Operating Mode and LED Activity

Mode	LEARN LED Red-CH1; Green-CH2; Blue-CH3	POWER LED Red-CH1; Green-CH2; Blue-CH3	Relay/Light
link mode	ON	toggle	toggle
storing ID	ON	ON 4 seconds	ON 4 seconds
clearing ID	ON	OFF 4 seconds	OFF 4 seconds
factory default	Off (flash on power up)	ON solid	ON

Listings & Regulatory Statements

UL Listed Component

Certified UL Standard 924

Certified UL Standard 60730

Certified CAN/CSA Std E60730

UL 2043 Plenum rated

California Energy Commission Title 24 - CEC

Washington State Energy Code - WSEC

ANSI / ASHRAE / IES Standard 90.1

International Energy Conservation Code - IECC

New York City Energy Conservation Code - NYCECC

FCC Part 15.231

Contains FCC ID: SZV-STM300U

IC RSS-210FCC Part 15.231

Contains FCC ID: SZV-STM300U



The enclosed device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (i.) this device may not cause harmful interference and
- (ii.) this device must accept any interference received, including interference that may cause undesired operation.

Copyright © 2019-2020 Echoflex Solutions, Inc.

Product information and specifications subject to change without notice.



Echoflex Solutions

38924 Queens Way, Unit #1, Squamish, BC, V8B 0K8, Canada ■ +1 778-733-0111
 echoflexsolutions.com ■ 8DC-5808-2.1 ■ Document Part # 8189M21-5808-1 Rev E ■ 12/20