CLT-2DIMFLV8/CLX-2DIMFLV8
Terminal Block and Module
Installation Guide

Description

The Crestron® 2-Feed, 8-Dimmer Terminal Block (CLT-2DIMFLV8 and CLT-2DIMFLV8-277) and Module (CLX-2DIMFLV8 and CLX-2DIMFLV8-277) are all considered single entities. The CLT-2DIMFLV8 and the CLX-2DIMFLV8 must be used together. The CLT-2DIMFLV8-277 and CLX-2DIMFLV8-277 also must be used together. They ship separately to permit termination of the field wiring to the terminal block (CLT) prior to installation of the module (CLX). The terminal block is designed to terminate the circuit feed (LINE and NEUTRAL) and distribute the controlled circuit (LOAD) to the fixtures. The module connects to the terminal block and performs dimming control of fluorescent ballasts or LED drivers.

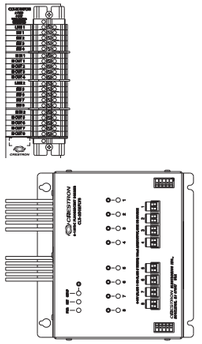
The maximum load is 16 A per channel; the maximum load is 32 A total for the CLX-2DIMFLV8 and the CLX-2DIMFLV8-277. The CLX-2DIMFLV8 and CLX-2DIMFLV8-277 accept two 16 A feeds that can be different phases.

There are LEDs on the module to indicate communication to a Cresnet® network, input power to the module, and output power to the load.

The CLT terminals and CLX modules are shown in the following illustrations.

NOTE: The CLT-2DIMFLV8 and CLX-2DIMFLV8 are functionally identical. The CLT-2DIMFLV8-277 and CLX-2DIMFLV8-277 are also functionally identical. For simplicity, the terms CLT-2DIMFLV8 and CLX-2DIMFLV8 are used except where noted.

CLX-2DIMFLV8 Terminal Block with Left-Side CLX-2DIMFLV8 Label



Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.

CLT-2DIMFLV8 CLX-2DIMFLV8

Specifications

The specifications for the CLT-2DIMFLV8 and CLX-2DIMFLV8 are listed below

SPECIFICATION	DETAILS
Load Ratings	
Dimmer Channels	8
Per Channel	16 A
Per Group	Channels 1–4: 16 A Channels 5–8: 16 A
Module Total	32 A
0-10 Vdc Output	100 mA Max per output, sink or source
Load Types	
Dimmed Load Types	0-10 V fluorescent ballast or LED driver (4-wire)
Switched Load Types	LED, incandescent, fluorescent, MLV, ELV, HID
Power Requirements	
CLX-2DIMFLV8	120 Vac, 50/60 Hz; requires one or two single-phase feeds (may be same or different phases)
CLX-2DIMFLV8-277	277 Vac, 50/60 Hz; requires one or two single-phase feeds (may be same or different phases)
Environmental	
Temperature	32° to 104 °F (0° to 40 °C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	45 Btu/h

Important Safeguards

When using electrical equipment, basic safety precautions should always be followed including the following:

Read and follow all safety instructions.

- 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.
- All servicing should be performed by qualified service personnel.
- If any Emergency Circuits are fed or controlled from this panel, it must be located electrically where fed from a UPS, generator, or other guaranteed source of power during emergency and power outage situations.

Save these instructions.

Installation

A licensed electrician must mount the terminal block and module into a Crestron Automation Enclosure in accordance with all national and local codes.

CAUTION: This equipment is for indoor use only and needs to be air cooled. Mount in a well-ventilated area. The ambient temperature must be 32° to 104 °F (0° to 40 °C). The relative humidity must be 0% to 90% (noncondensing).

NOTE: The 0–10 V control wires to driver attach directly to the module using 2-pin pluggable connectors. The 0–10 V should be kept clear of the ac wiring.

NOTE: The 0–10 V wiring can be run as Class 1 or Class 2.

NOTE: For 2-feed systems, the two input lines can be different phases.

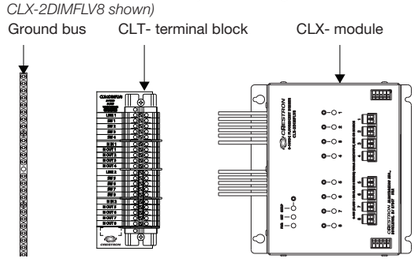
NOTE: When connecting to an arc fault breaker, ensure the load does not exceed 1,000 watts total. Crestron certified breakers have a 2,000-watt limit.

NOTE: Before using the CLX-2DIMFLV8, ensure the device is using the latest firmware. Check for the latest firmware for the CLX-2DIMFLV8 at www.crestron.com/firmware. Load the firmware onto the device using Crestron Toolbox™ software.

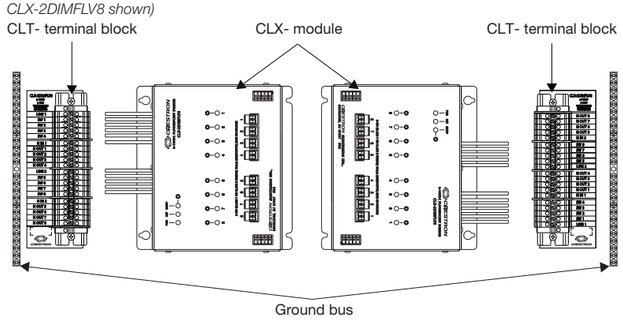
Install terminal blocks along the left side of single-wide enclosures and along the outside edges (left and right sides) of double-wide enclosures. Install modules along the right side of single-wide enclosures and side-by-side in the center of double-wide enclosures. When installing modules and terminal blocks in a double-wide enclosure, be sure to invert the units on the right side so that they can be properly wired. Refer to the illustrations that follow when considering the location of terminal blocks and modules within an enclosure.

NOTE: Modules and terminal blocks must be installed into the lowest available spaces and continue toward the top of the enclosure.

Terminal Block and Module Layout for a Single-Wide Enclosure (CLT-2DIMFLV8 and CLX-2DIMFLV8 shown)



Terminal Block and Module Layout for a Double-Wide Enclosure (CLT-2DIMFLV8 and CLX-2DIMFLV8 shown)



NOTE: Unless otherwise indicated, the lighting system specified in this guide is modular, requiring assembly in the field by a licensed electrician in accordance with all national and local codes.

If an assembled UL® Listed panel is required, Crestron offers this service through its UL Listed panel shop. This includes complete in-factory system configuration and assembly by Crestron for an additional fee.

Terminal Block Installation and Field Wiring

Terminal block installation requires installation of the supplied adhesive label and the terminal block. The adhesive label provides the labeling for each terminal in the terminal block and is designed to accommodate installation into the left or right side of a cabinet. Refer to the illustrations that follow for details.

WARNING: The CLX-2DIMFLV8 may be powered from multiple circuit breakers.

NOTE: Both left-side and right-side adhesive wiring labels are provided. The left-side labels are used in both single- and double-wide enclosures. The right-side labels are used only in double-wide enclosures.

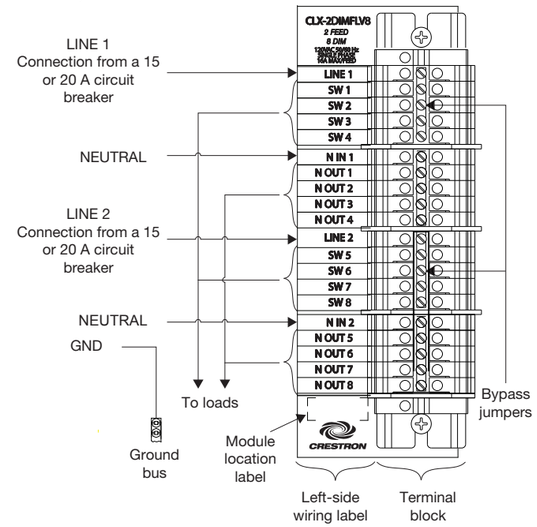
1. Remove the backing from the left- or right-side adhesive wiring label.
2. Apply the adhesive label by aligning the holes in the label with the holes on the Crestron Automation Enclosure where the terminal block is to be mounted. The wiring label lies beneath the terminal block.
3. Use the two supplied self-tapping Phillips pan head screws (8B x 1/4-inch length) to secure the terminal block to the Crestron Automation Enclosure.

   CAUTION: Bypass jumpers are provided to allow testing of circuits and to protect the module during installation. When properly secured by five screws, each of the two jumpers on the black and red sections of the terminal block shorts the line in to dim out so that the circuit is energized. Do not remove any bypass jumpers until all feed and load wiring has been completed, the circuit has been tested for electrical faults, and the module has been installed. Refer to "Module Installation and Wiring" for details.

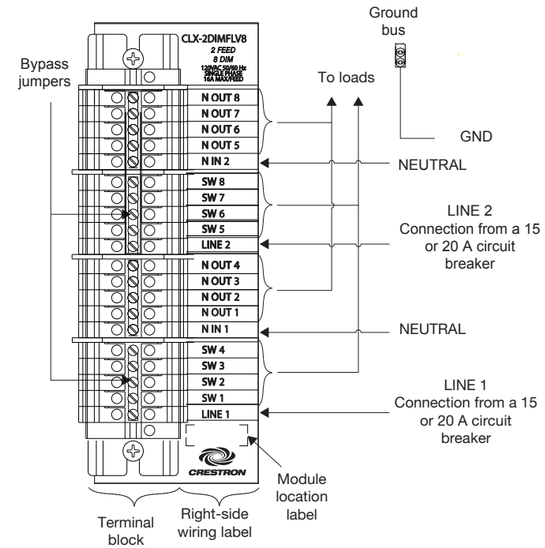
   Furthermore, the two jumpers on the white sections of the terminal block tie the neutral ins to the neutral outs. Never remove these jumpers.

   NOTE: Use copper conductors only, rated 75 °C or greater.
4. Turn off the circuit breakers.
5. Connect the circuit feed (line and neutral) and controlled circuit (load) wires to the terminal block per the markings provided on the wiring label. Terminal blocks accept one 14–10 AWG wire. Strip the wires to 1/2 inch (13 millimeters). Tighten the terminal blocks to 9 in-lb.
6. Grounding terminal blocks are available in the cabinet for termination of ground wires. Tighten to 35 in-lb (14–10 AWG), 40 in-lb (8 AWG), or 45 in-lb (6–4 AWG).
7. Test each circuit for electrical faults by turning on each of the circuit breakers and checking that the breakers do not trip and that power is delivered to the proper loads.

Wiring the Terminal Block to the Feed and Load(s) (Single-Wide and Left-Side Double-Wide Enclosures)



Wiring the Terminal Block to the Feed and Load(s) (Right-Side Double-Wide Enclosures)



Module Installation and Wiring

CAUTION: The module contains electrostatic sensitive devices (ESDs); the unit must be handled from the metal chassis. Do not touch the PC board or components.

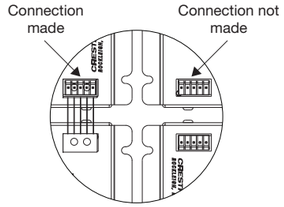
NOTE: Install the modules after the enclosure has been completely wired. Refer to "Terminal Block Installation and Field Wiring" for details.

Install and wire the module.

1. Use the four supplied self-tapping Phillips pan head screws (8B x 1/4-inch length) to secure the module to the enclosure.
2. Connect the wires from the module to the terminal block. Each wire exits the module directly in line with, and is the same color as, the terminal to which it should be connected. Wires are prestripped to 1/2 inch (13 millimeters). Tighten to 9 in-lb.
3. If the module is being installed above another module within the enclosure, attach the supplied module interconnect cable between the two modules. The illustration that follows shows the area within a double-wide enclosure where the corners of four modules meet.

   NOTE: One wire on the module interconnect cable may be a different color from the rest. The color has no bearing on its orientation during installation.

Using Module Interconnect Cable to Wire One Module to Another

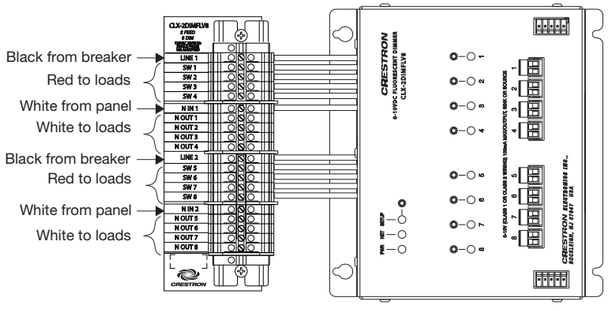


4. Turn on the circuit breakers and verify that the green PWR LED on the module lights, the breakers do not trip, and power is delivered to the loads.
5. Turn off the circuit breakers.

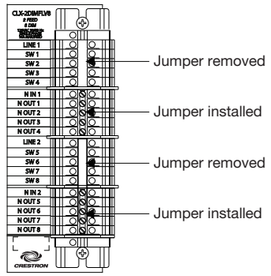
   NOTE: Before removing the bypass jumpers, make sure to properly connect and program the control system that provides functionality to the system.

6. Remove the bypass jumpers on the black and red sections of the terminal block. The jumpers on the white sections of the terminal block must remain installed.

Wiring the Terminal Block to the Module (Single-Wide and Left-Side Double-Wide Enclosures)



Removing the Line Jumpers after Testing (Single-Wide and Left-Side Double-Wide Enclosures and Right-Side Mounted CLT-2DIMFLV8 Shown)



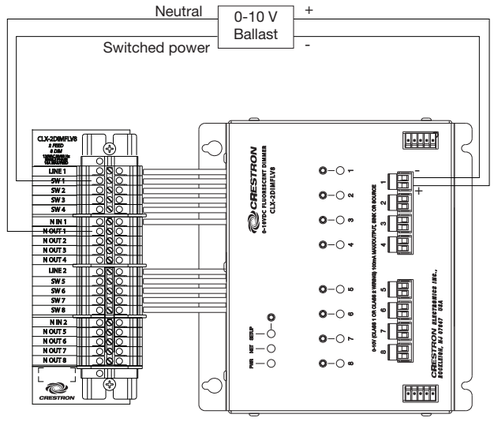
7. Turn on the circuit breakers.

   NOTE: Power must be supplied to LINE 1 for the module to communicate with the control system or for any of the circuits to operate.

8. If the program is not yet running, test the loads using Local mode.

Wire the Ballast

Make the neutral, switched power, +, and - connections to the ballast.



Local Control

NOTE: Before using the CLX-2DIMFLV8, ensure the device is using the latest firmware. Check for the latest firmware for the CLX-2DIMFLV8 at www.crestron.com/firmware. Load the firmware onto the device using Crestron Toolbox software.

Use the individual output controls to test the functionality of each output. Press the button above the 1–8 LEDs to turn the load on (100%) and off. Press and hold the button to cycle-dim the load. The LED lights red to indicate that the load is on.

When TSID is active, press the SETUP button to identify the device.

The POWER LED lights to indicate that the device is receiving power.

The NET LED lights to indicate that the device has been polled over Cresnet within the last 2 seconds.

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

CLT-2DIMFLV8 and CLX-2DIMFLV8 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
The connected loads are not on. No LEDs are lit on the module.	LINE1 breaker is off.	Check the breaker.
	The internal fuse for LINE 1 may have blown due to a short circuit on a switched output.	Find and correct the short.
		Contact Crestron customer support.
The loads connected to channels 5-8 do not turn on.	LINE 2 breaker is off	Check the breaker.
	The internal fuse for LINE 2 may have blown due to a short circuit on a switched output.	Find and correct the short.
		Contact Crestron customer support.
The loads on a specific channel stay at a dim level.	The 0-10 V wiring to the ballast or driver may be shorted.	Check the wiring.
	The 0-10 V wiring may be reversed.	Check the wiring.
	Two or more 0-10 V wires may be shorted to ground.	Unplug the 0-10 V connections to identify the faulty wire run.
		Check the wiring.
The SETUP LED flashes error code 2-1 (2 flashes, pause, 1 flash, long pause, then repeat).	One or more 0-10 V outputs are shorted	Unplug the 0-10 V connections to identify the faulty wire run.
		Check the wiring.

Perform the following basic steps to troubleshoot 0–10 V driver or ballast issues.

- Apply bypass jumpers so that all fixtures are energized.
- Disconnect the purple and gray wires (0–10 V control) from the module. The fixtures should go to full brightness. If fixtures do not go to full brightness, then one of the following has occurred:
  - There is a short in the wiring (purple to gray).
  - A ballast or driver has the purple and gray wires reversed.
  - One or more purple and one or more gray wires are shorted to ground.
  - There is a faulty driver or ballast.
- Create a short by connecting the purple and gray wires. The fixtures should go to their minimum brightness. If a fixture does not dim down, then one of the following has occurred:
  - There is a break in the gray or purple control wires.
  - There is a faulty driver or ballast.

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