



### Description

The Crestron® CLS-EXP-DIMFLV enables the expansion of iLux® Integrated Lighting System (CLS-C6 Series) and other Crestron lighting dimmers to allow control of 0-10 volt fluorescent dimming ballasts. It can also be used to switch nondimmable loads including LED, incandescent, MLV, ELV, HID, fluorescent ballasts, and motors. The CLS-EXP-DIMFLV supports 120, 230, or 277 volt loads up to 16 amps.

Any output channel of the iLux system can be used to control the CLS-EXP-DIMFLV to dim a fully loaded circuit. It is also compatible with CLW-series in-wall dimmers and select CLX-series lighting control modules. The metal enclosure is designed for mounting to a vertical surface and can be installed in an environmental air-handling space above a suspended ceiling. Conduit knockouts are provided on the bottom and lower sides. All connections are made via screw terminals behind the front cover.

**NOTE:** CLX-series lighting control modules are compatible only with forward-phase dimming modules.

### CLS-EXP-DIMFLV Specifications

Specification	Details
<b>Load Ratings</b>	
Dimmer Channels	1
Lamp Load Rating	16 Amps @ 120 to 277 Volts; 0.5 HP @ 120 Volts, 1 HP @ 230/277 Volts
Motor Load Rating	
Minimum Load	
at 120 volts	15 watts
at 230 volts	25 watts
at 277 volts	30 watts
<b>Load Types</b>	
Dimmable Load	0-10 Volt fluorescent ballast or LED driver (4-wire)
Switch Load	LED, incandescent, fluorescent, magnetic low voltage, electronic low voltage, neon/cold cathode, high-intensity discharge (HID), motors
<b>Input Voltages</b>	
Line Power	120–277 Vac, 50/60 Hz
Control Input	120–230 Vac, 50/60 Hz, phase independent of line power and load; Presents a 25 watt load to the controlling device
<b>Electrical Terminals</b>	Captive screw type; Accommodates two 22–12 AWG (0.34–4.0 mm <sup>2</sup> ) wires
<b>Enclosure</b>	Surface mount module with (2) integral mounting flanges, galvanized steel with gray matte powder coat front panel, extruded aluminum heat sink, (4) 1/2 in (13 mm) and 3/4 in (20 mm) conduit knockouts provided on bottom and lower left and right sides
<b>Environmental</b>	
Temperature	32° to 104 °F (0° to 40 °C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	70 Btu/h at maximum load, 16 amps
<b>Dimensions</b>	
Height	8.82 in (224 mm)
Width	6.39 in (163 mm)
Depth	3.18 in (81 mm)
<b>Weight</b>	3.3 lbs (1.5 kg)
<b>Maximum Expansion Modules per Controller Output</b>	5

### Additional Resources

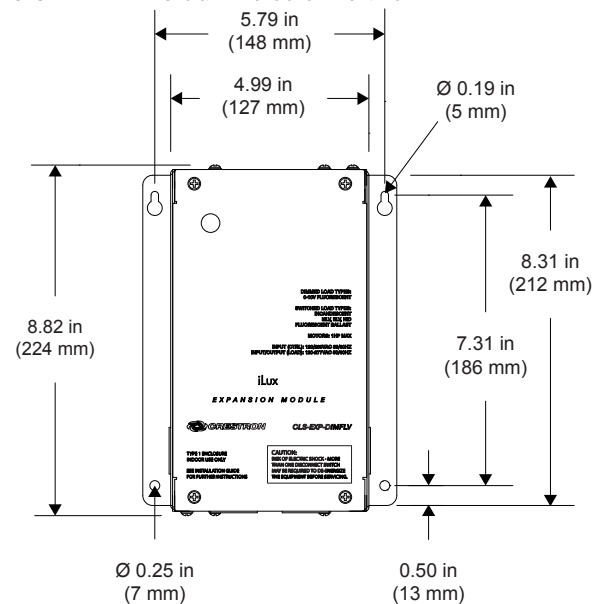
Visit the product page on the Crestron website ([www.crestron.com](http://www.crestron.com)) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.



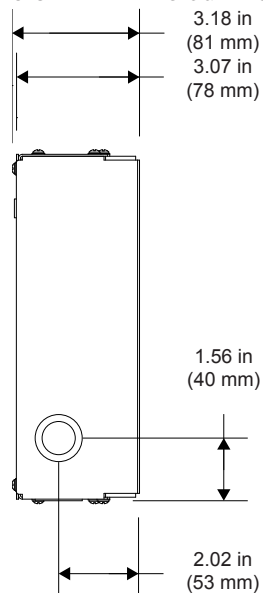
### Physical Description

This section provides information on the connections and indicators available on the CLS-EXP-DIMFLV.

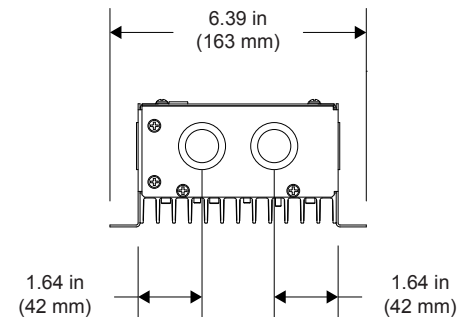
#### CLS-EXP-DIMFLV Overall Dimensions - Front View



#### CLS-EXP-DIMFLV Overall Dimensions - Side View



#### CLS-EXP-DIMFLV Overall Dimensions - Rear View

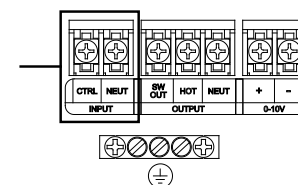


#### CLS-EXP-DIMFLV Hardware Connections

##### INPUT

CTRL: Control input from CLS(I)-C6 Series, CLW-DIM Series, CLX(I)-DIM Series, GLX-DIM6, GLXX-2DIM8, DIN-1DIM4, or DIN1-DIMU4 dimmers

NEUT: Neutral connection for control input

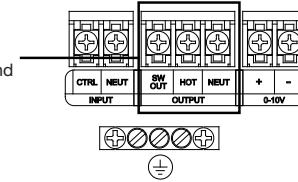


##### OUTPUT

SW OUT: Switched load output

HOT: Line power input

NEUT: Neutral connection for line power input and load



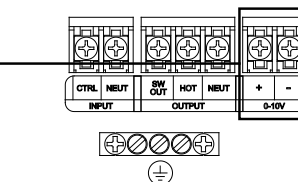
##### 0-10V

+/-:

(2) Captive screw terminals, 1 dimming control output;

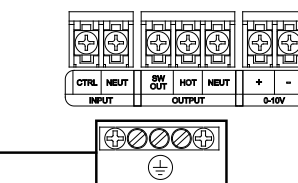
Class 1 or Class 2 wiring allowed;

Control voltage: 0-10 Vdc, 70 mA



##### Ground

(1) 3-terminal chassis ground bus bar



### Installation

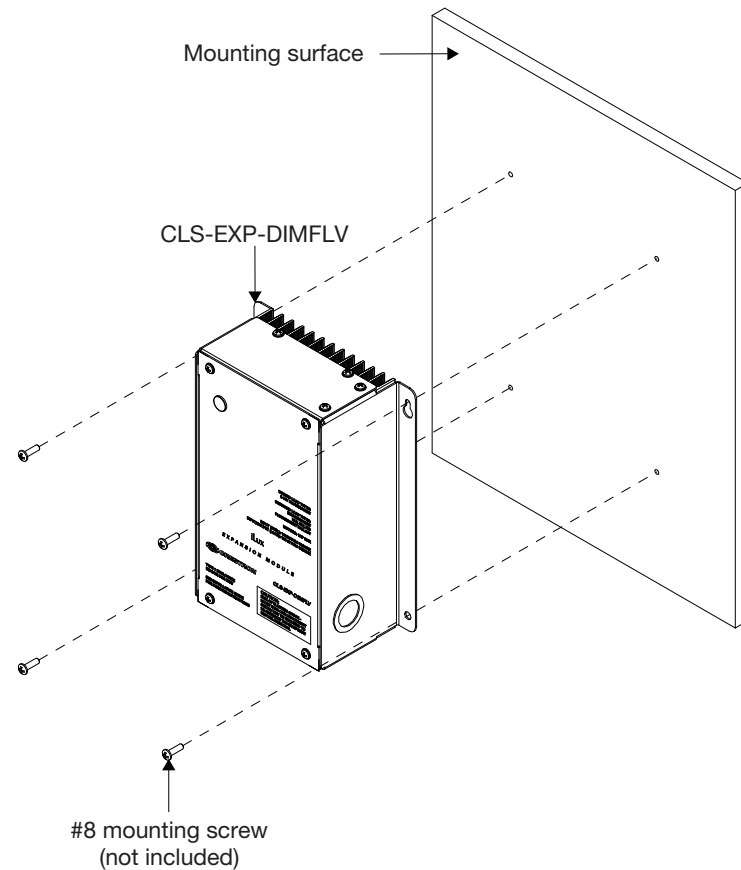
Refer to the following diagram when installing a CLS-EXP-DIMFLV module.

**NOTE:** Install in accordance with all local and national electrical codes.

**NOTE:** To prevent potential heat damage to the drywall, do not mount the CLS-EXP-DIMFLV directly onto drywall. Mount a piece of 1/2 in (13 mm) minimum thick plywood between the CLS-EXP-DIMFLV and the drywall.

**NOTE:** To ensure proper ventilation, the device must be installed vertically on a vertical surface. Install the device with 6 inches (153 mm) of clearance from the top and bottom of the device.

#### Module Installation



## Wiring

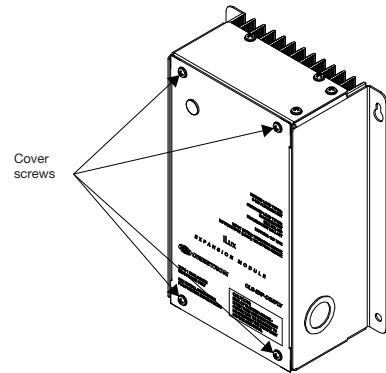
To wire the CLS-EXP-DIMFLV, remove the cover and make the connections.

**WARNING: RISK OF SERIOUS PERSONAL INJURY.** Turn off power at the circuit breaker(s) prior to installation. Installing with the power on can result in serious personal injury and damage to the device.

### Remove the Cover

Use a #2 Phillips screwdriver to remove the cover screws and then the cover.

Remove Cover Screws



## Make the Connections

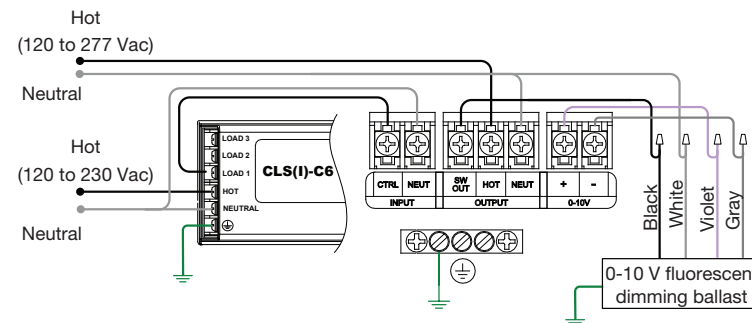
There are seven captive screw terminals on the CLS-EXP-DIMFLV that allow power input, power output, and load control.

**NOTE:** Observe the following points:

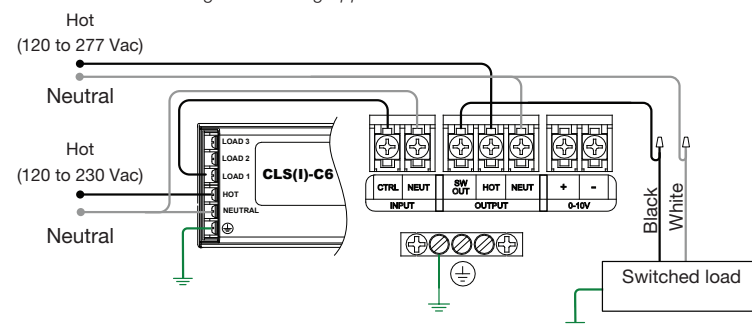
- Strip wires to 7/16 in (12 mm).
- Tighten terminal screws to 7 in-lbs (0.79 Nm).
- Captive screw terminals accept up to two 22 to 12 AWG (0.34 to 4 mm<sup>2</sup>) wires per terminal.
- Dimmer channels controlling one or more CLS-EXP-DIMFLV modules must not be wired to control any other type of load.
- While these diagrams show a CLS-C6 as the controlling source, other Crestron products such as CLW-series wall dimmers (Cresnet® and infiNET™ dimmers) and CLX-series dimming modules can be used as well. Refer to "CLS-EXP-DIMFLV Specifications" on page 1 for details.
- Use a neutral wire for a CLW-Series wall dimmer.
- Use 75°C copper wire only.
- The CLS-EXP-DIMFLV presents a 25 W load to the controlling dimmer. A maximum of five CLS-EXP-DIMFLV modules may be connected to the controlling dimmer, which cannot be wired to control any other loads besides the CLS-EXP-DIMFLV modules.
- Separate Class 1 and Class 2 wires. When wiring a 0-10 V fluorescent dimmer, the + and - make connections using Class 1 or Class 2 wiring. If Class 1 wiring is used, the barrier between the NEUT and + terminals can be removed.

Wire the CLS-EXP-DIMFLV for a 0-10 V dimming or a switching application.

*CLS-EXP-DIMFLV Wiring for 0-10 V Dimming*



*CLS-EXP-DIMFLV Wiring for Switching Application*



After wiring is complete, replace the cover and the cover screws. Apply power to the line or load and turn on the controlling device. The power indicator LED lights indicating that power is supplied to the module.

## Problem Solving

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

*CLS-EXP-DIMFLV Troubleshooting*

Trouble	Possible Cause(s)	Corrective Action
The load does not turn on.	The controlling dimmer or switch is not working.	Make sure that the controller is powered on. Make sure that a compatible dimmer is being used.
	No power is applied to the HOT terminal.	Check the circuit breaker. Check that the green power LED inside the unit is lit.
The load turns on and off but does not dim.	The controlling unit is either not a dimmer or has been set to non-dim.	Verify that dimmer is compatible with the CLS-EXP-DIMFLV. Refer to "CLS-EXP-DIMFLV Specifications" on page 1.
		Verify that the controlling channel has not been programmed as non-dim.
The lights do not dim properly.	An incompatible dimmer is being used.	Make sure that the dimmer is one of those listed in "CLS-EXP-DIMFLV Specifications" on page 1.

This product is Listed to applicable UL® Standards and requirements tested by Underwriters Laboratories Inc.

Ce produit est homologué selon les normes et les exigences UL applicables par Underwriters Laboratories Inc.



### Federal Communications Commission (FCC) Compliance Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

**CAUTION:** Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The product warranty can be found at [www.crestron.com/warranty](http://www.crestron.com/warranty).

The specific patents that cover Crestron products are listed at [patents.crestron.com](http://patents.crestron.com).

Certain Crestron products contain open source software. For specific information, please visit [www.crestron.com/opensource](http://www.crestron.com/opensource).

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Specifications subject to change without notice.