CLS-EXP-DIMFLV

Functional Summary

The CLS-EXP-DIMFLV enables the expansion of Crestron® 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 non-dimmable loads including LED, incandescent, MLV, ELV, HID, fluorescent ballasts, and motors. A single model 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[1] in-wall dimmers and select CLX-Series lighting control modules.[2] The metal enclosure is designed for mounting to a vertical surface[3] 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.

CLS-EXP-DIMFLV Physical View

1. CLW-Series device must have a dedicated neutral.
2. Compatible only with forward-phase dimming modules.
3. Must be oriented upright, mounted to a vertical surface, with 6 inches (153 mm) minimum spacing above and below for proper ventilation and heat dissipation.

Specifications

CLS-EXP-DIMFLV Specifications

SPECIFICATION	DETAILS
Load Ratings	
Dimmer Channels	1
Load Ratings	
Lamp	16 amps @ 120–277 volts (70 mA max current sink for 0-10 Vdc ballasts)
Motor	1/2 HP @ 120 volts; 1 HP @ 230/277 volts
Minimum Load	
at 120 volts	15 watts
at 230 volts	25 watts
at 277 volts	30 watts
Load Types	
Dimmable Load	0-10 Vdc dimmable fluorescent ballasts, Advance Mark 7 or other compliant with specifications for control by dc voltage per ANSI C82.11:2002 and IEC60929:2006
Switch Load	LED, incandescent, fluorescent, magnetic low voltage, electronic low voltage, neon/cold cathode, high-intensity discharge (HID), motors
Input Voltages	
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
Electrical Terminals	Captive screw type; Accommodates two 22-12 AWG (0.34-4.0 mm^2) wires
Enclosure	Surface mount module with (2) integral mounting flanges, galvanized steel with gray matte powder coat front panel, extruded aluminum heat sink, 1/2 in (13 mm) and 3/4 in (20 mm) conduit knockouts provided on bottom and lower left and right sides
Environmental	
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (non-condensing)
Maximum Heat Dissipation	70 Btu/h at maximum load, 16 amps
Dimensions	
Height	8.82 in (224 mm)
Width	6.39 in (163 mm)
Depth	3.18 in (81 mm)
Weight	3.3 lbs (1.5 kg)
Maximum Expansion Modules per Controller Output	5

Crestron Electronics, Inc.
15 Volvo Drive Rockleigh, NJ 07647
Tel: 888.CRESTRON
Fax: 201.767.7576
www.crestron.com

Installation Guide – DOC. 6680B
(2020652)
06.14

Regulatory Compliance

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

As of the date of manufacture, the CLS-EXP-DIMFLV has been tested and found to comply with specifications for CE marking.

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.

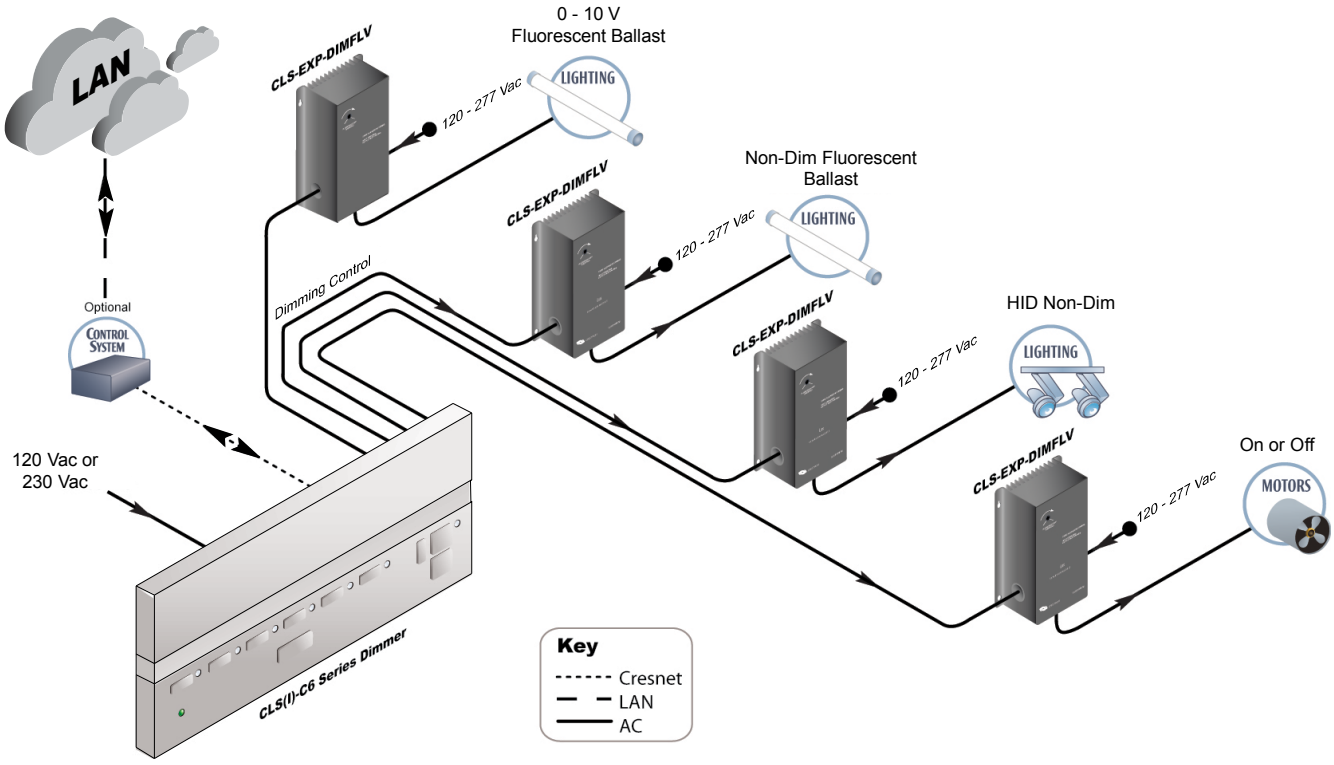
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate 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

Application

The following diagram shows several CLS-EXP-DIMFLV modules in a typical application.

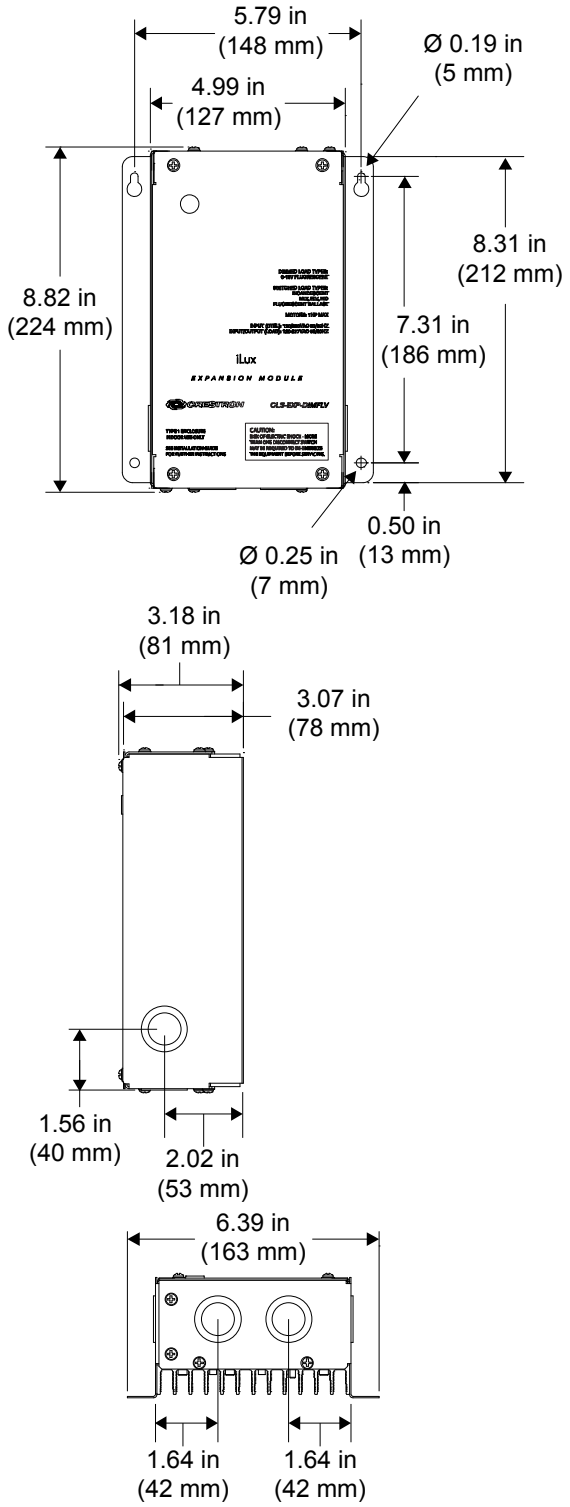
CLS-EXP-DIMFLV Modules in a Lighting Application



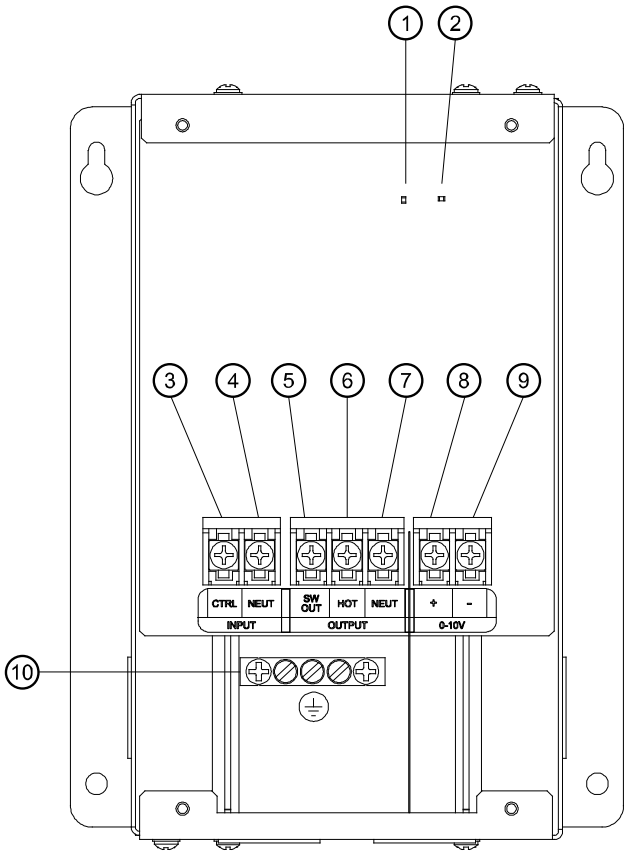
Physical Description

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

CLS- EXP-DIMFLV Overall Dimensions



CLS-EXP-DIMFLV (Cover Removed)



Connectors and Indicators

#	CONNECTORS AND INDICATORS	DESCRIPTION
1	STATUS	(1) Red LED behind front panel, illuminates when load output is on
2	POWER	(1) Green LED behind front panel, indicates line power is applied to the HOT terminal

(Continued on following page)

Connectors and Indicators (Continued)

#	CONNECTORS AND INDICATORS	DESCRIPTION
3	INPUT–CTRL	(1) Captive screw terminal,[1] control input from CLS(I)-C6 Series, CLW-DIM Series,[2] CLX(I)-DIM Series, GLX-DIM6, GLXX-2DIM8, DIN-1DIM4, or DIN-1DIMU4 dimmers **NOTE**: Presents a 25 watt 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.
4	INPUT–NEUT	(1) Captive screw terminal,[1] neutral connection for control input
5	OUTPUT–SW OUT	(1) Captive screw terminal,[1] switched load output
6	OUTPUT–HOT	(1) Captive screw terminal,[1] line power input
7	OUTPUT–NEUT	(1) Captive screw terminal,[1] neutral connection for line power input and load
8	0-10V–(+)	(1) Captive screw terminal,[1] dimming control output; Class 1 or Class 2 wiring allowed; Control Voltage: 0-10 Vdc, 70 mA
9	0-10V–(-)	(1) Captive screw terminal,[1] dimming control output; Class 1 or Class 2 wiring allowed; Control Voltage: 0-10 Vdc, 70 mA
10	GROUND	(1) 3-terminal chassis ground bus bar

1. Captive screw terminals accept up to two 22 to 12 AWG (0.34 to 4 mm^2) wires per terminal.
2. CLW-Series device must have a dedicated neutral.

Setup

Important Notes

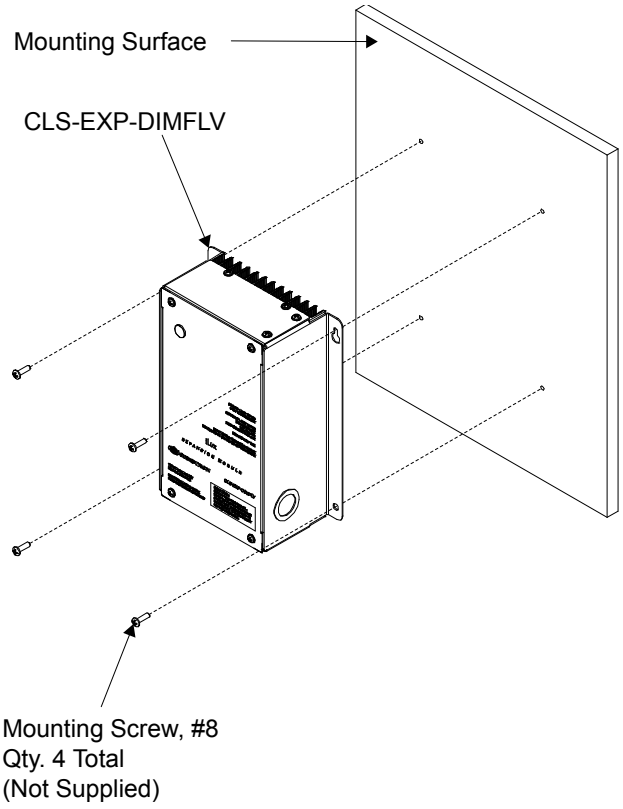
Read before installation.

- Install in accordance with all local and national electrical codes.
- Use 75°C copper wire only.

Installation

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

Module Installation



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.

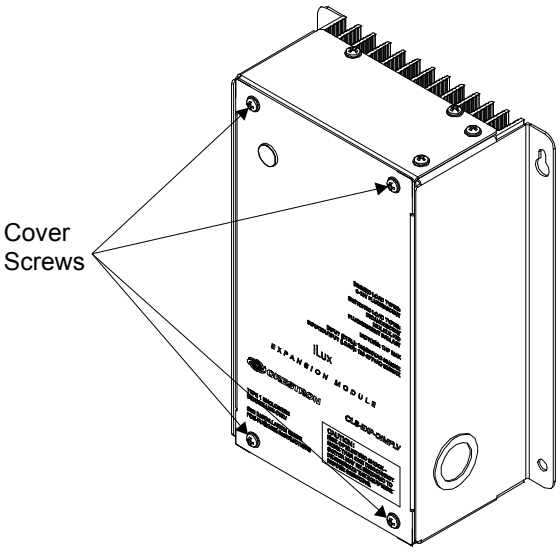
NOTE: To ensure proper ventilation, the device must be installed vertically on a vertical surface. Install device with 6 inches (153 mm) of clearance from the top and bottom of the device.

Hardware Hookup

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

1. Use a #2 Phillips screwdriver to remove the cover screws as shown in the following diagram and remove the cover.

Remove Cover Screws



2. Depending on the module's application, select the appropriate configuration from one of the wiring diagrams in the next column and connect the CLS-C6 and load(s) as shown.

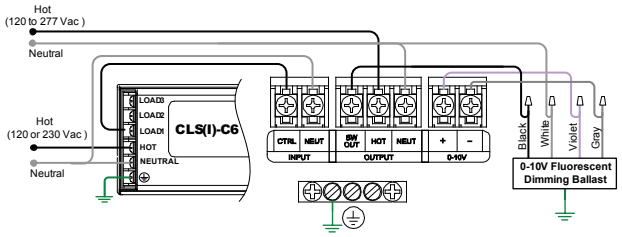
   - Wires should be stripped to 7/16 in (12 mm).
   - Tighten terminal screws to 7 in-lbs (0.79 Nm).
   - When wiring a 0-10 V fluorescent dimmer, the + and – terminals can be wired as Class 1 or Class 2. If wired as Class 1, the barrier between the NEUT and + terminals can be removed.

NOTE: Dimmer channels controlling one or more CLS-EXP-DIMFLV modules must not be wired to control any other type of load.

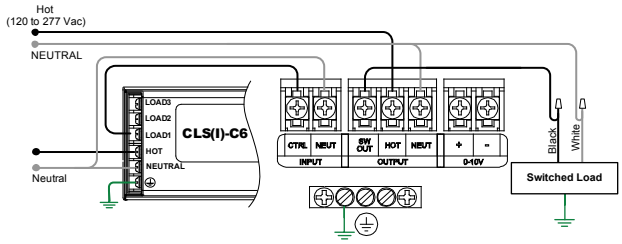
NOTE: While these diagrams show a CLS-C6 as the controlling source, other Crestron products such as CLW-Series wall dimmers (Cresnet® and infiNET™) and CLX-Series dimming modules can be used as well. Refer to "Specifications" on page 1 for details.

NOTE: When using a CLW-Series wall dimmer, the wall dimmer must be wired with a dedicated neutral wire.

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



CLS-EXP-DIMFLV Wiring for Switching Application



3. 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.
4. Replace the cover and cover screws.

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
Load does not turn on.	The controlling dimmer or switch is not working.	Make sure the controller is powered on and is one of the compatible dimmers listed in "Specifications" on page 1.
	No power is applied to the **HOT** terminal.	Check circuit breaker. Check that green power LED on inside of unit is lit.
Load turns on and off but does not dim.	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 "Specifications" on page 1).
		Verify that the controlling channel has not been programmed as non-dim.
Lights do not dim properly.	An incompatible dimmer is being used.	Make sure that the dimmer is one of those listed in "Specifications" on page 1.

Further Inquiries

To locate specific information or resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876] or, for assistance within a particular geographic region, refer to the listing of Crestron worldwide offices at www.crestron.com/offices.

To post a question about Crestron products, log onto Crestron's Online Help at www.crestron.com/onlinehelp. First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the CLS-EXP-DIMFLV, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from Crestron. To obtain warranty service for Crestron products, contact an authorized Crestron dealer. Only authorized Crestron dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange or service with a Crestron Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to Crestron, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. Crestron reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by Crestron, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

Crestron Limited Warranty

Crestron Electronics, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from Crestron, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touch screen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from Crestron or an authorized Crestron dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

Crestron shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Crestron be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. Crestron is not liable for any claim made by a third party or made by the purchaser for a third party.

Crestron shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, Crestron makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.