



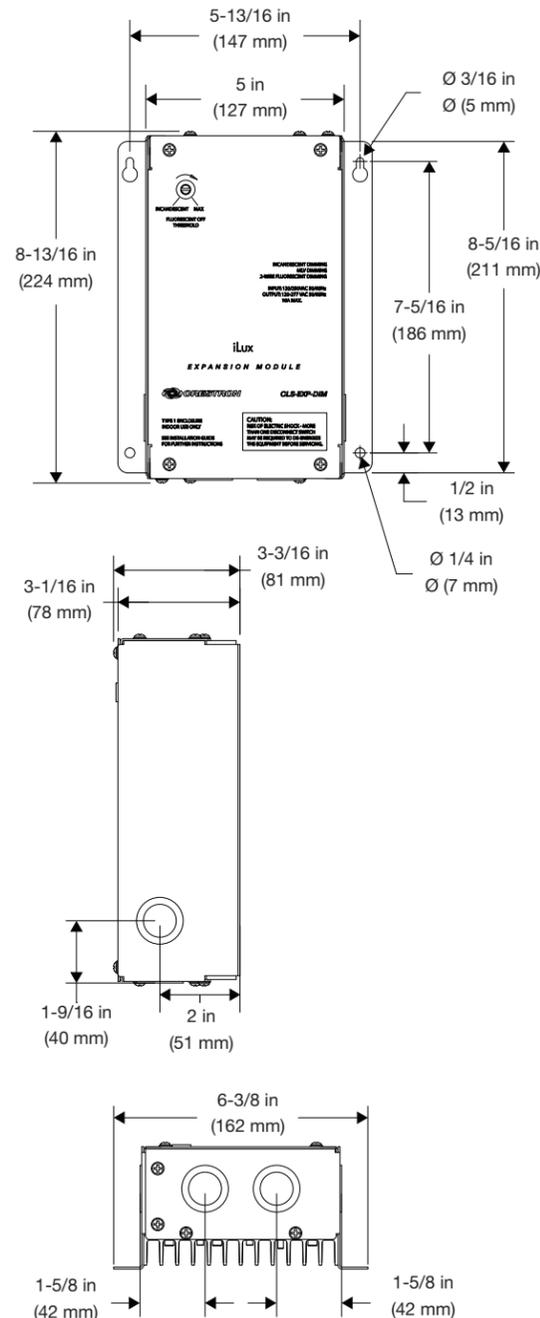
Description

The CLS-EXP-DIM enables the expansion of the Crestron® iLux integrated lighting system and other Crestron lighting dimmers to support 120-, 230-, and 277-volt loads up to 16 amps. It allows any output channel of a compatible dimmer to dim a fully loaded circuit of incandescent, magnetic low-voltage, 2-wire dimmable fluorescent, or neon/cold cathode lighting. It is also compatible with CLW-Series in-wall dimmers (CLW-Series devices require a dedicated neutral) and most CLX-Series lighting control modules (CLX-Series devices must be controlled by forward-phase dimmer modules; they are not compatible with CLX(I)-1DELV4).

The CLS-EXP-DIM is designed for mounting to a vertical surface and can be installed in a space used for environmental air as defined in NEC® Article 300.22(C). Conduit knockouts are provided on the bottom and lower sides. All connections are made via screw terminals behind the front cover.

SPECIFICATION	DETAILS
Load Ratings	
Dimmer Channels	1
Load Rating	16 A
Minimum Load	
120 Vac	15 W
230 Vac	25 W
277 Vac	30 W
Load Types	LED, incandescent, neon/cold cathode, magnetic low voltage, 2-wire dimmable fluorescent (Mark 10® Powerline lighting ballast or equivalent)
Maximum Modules per Dimmer Output	5
Input Voltages	
Line Power	120 to 277 Vac, 50/60 Hz
Control Input	120 or 230 Vac, 50/60 Hz, phase independent of line power and load, presents 25 W load to the controlling device
Electric 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, (4) 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 (noncondensing)
Heat Dissipation	140 Btu/h at maximum load, 16 A
Dimensions	
Height	8-13/16 in (224 mm)
Width	6-3/8 in (163 mm)
Depth	3-3/16 in (81 mm)
Weight	3.34 lbs (1.52 kg)

NOTE: For a list of compatible LED ballasts (in PDF format), visit www.crestron.com/lightingcompatibility.



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.



Installation

WARNING: To avoid fire, shock, or death, turn off the power at the circuit breaker or fuse and test that the power is off before wiring!

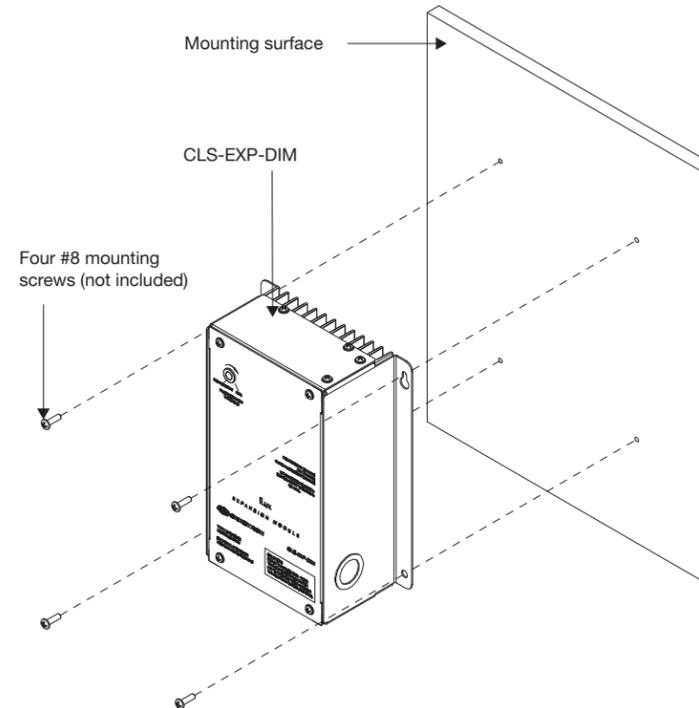
NOTES: Observe the following points:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician should install this product.
- Use 75 °C copper wire only.

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

The CLS-EXP-DIM can be installed vertically either on a wall or in a space used for environmental air as defined in NEC Article 300.22(C). Refer to the following diagram when installing a CLS EXP DIM module.

Module Installation



Ensure proper ventilation.

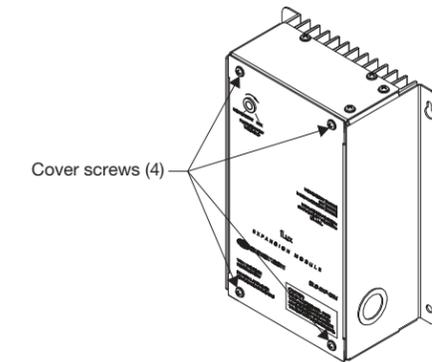
- Install the device vertically on a vertical surface.
- **NOTE:** To prevent potential heat damage to drywall, do not mount the CLS-EXP-DIM directly onto drywall. Mount a piece of 1/2 in (13 mm) thick (or thicker) plywood between the CLS-EXP-DIM and the drywall.
- Install the device with 6 in (152 mm) of clearance from the top and bottom of the device.

Wiring

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 and then remove the cover.

Removing Cover Screws and Cover



2. Depending on the module's application, select the appropriate configuration from one of the following wiring diagrams and connect the CLS-C6. The following wiring guidelines should be considered when wiring the device:

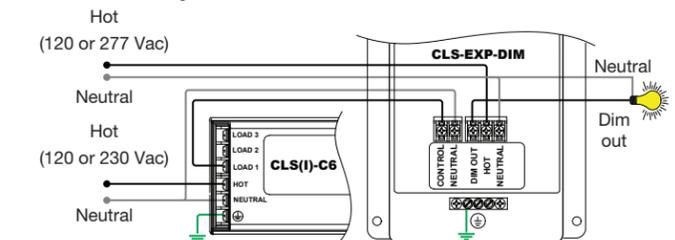
- Strip the wires to 7/16 in (11 mm).
- Tighten the terminal screws to 7 in-lbs (0.79 Nm).

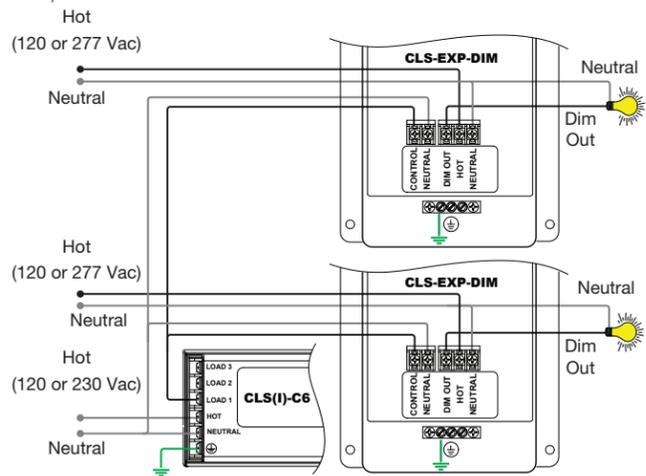
NOTE: Dimmers controlling one or more CLS-EXP-DIM modules must not be wired to control any other type of load.

NOTE: While these diagrams show a CLS-C6 as the controlling source, other Crestron products such as CLW-Series wall dimmers and CLX-Series dimming modules can be used as well. Please refer to the specific dimmer's installation guide for detailed information.

NOTE: When using a CLW-Series wall dimmer, make sure to wire the wall dimmer with a dedicated neutral wire.

CLS-EXP-DIM Wiring with Dual Feeds





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.

Set the Minimum Dimming Level

Certain types of loads can flicker when the loads are dimmed too low. Adjust the **FLUORESCENT OFF THRESHOLD** to prevent the CLS-EXP-DIM from attempting to dim the load below a certain level.

NOTE: Some fluorescent ballasts may require that voltage levels be maintained above a specified minimum level to prevent premature lamp failure. Be sure to set the minimum dim level so that the minimum voltage is met at all times when the load is on. Please consult the ballast manufacturer's documentation for details.

Adjust the dimming level.

1. Remove the cap from the **FLUORESCENT OFF THRESHOLD** adjustment from the inside of the cover. It may be necessary to remove the cover from the CLS-EXP-DIM to remove the cap. Refer to "Wiring."
2. Using a flat-head screwdriver, turn the **FLUORESCENT OFF THRESHOLD** adjustment counterclockwise until it stops.
3. Set the CLS-C6 so that the light output is on but is below the desired minimum level.
4. Turn the **FLUORESCENT OFF THRESHOLD** adjustment clockwise until the light output is at the desired minimum level.
5. Replace the cap and the cover.

Troubleshooting

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

Trouble	Possible Cause(s)	Corrective Action
The load does not turn on.	The controller is not working.	Ensure the controller is powered on and is a compatible dimmer.
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 the dimmer is compatible with the CLS-EXP-DIM. Verify that the controlling channel has not been programmed as non-dim.
	The Fluorescent Off Threshold has been set too high.	Refer to "Set the Minimum Dimming Level."
The lights do not dim properly.	An incompatible dimmer is being used.	Use a compatible dimmer.
The lights are noisy when dimmed.	An unsupported load type is present.	Change the load type or use the CLS-EXP-DIMU.
	A large incandescent load is present.	Some incandescent loads can make noise when dimmed due to the size of the filament. Try a different lamp manufacturer.
The lights flicker at certain dimming levels.	Some types of loads cannot be dimmed below a certain level.	Refer to "Set the Minimum Dimming Level."
The lights cannot be dimmed below a certain level.	The Fluorescent Off Threshold has been set too high.	Refer to "Set the Minimum Dimming Level."

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.

These devices have been additionally evaluated to UL 2043, The Standard for Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces.



As of the date of manufacture, the product 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.

The product warranty can be found at www.crestron.com/warranty.

The specific patents that cover Crestron products are listed at patents.crestron.com.

Certain Crestron products contain open source software. For specific information, please visit www.crestron.com/opensource.

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Specifications subject to change without notice.