

Description

The GL-EXP-DIM-DALI, GL-EXP-DIMU-DALI, GL-EXP-DIMFDB-DALI, GL-EXP-DIMFLV-DALI, and GL-EXP-SW-DALI are independent Crestron Green Light® expansion modules that are controlled by DALI® and provide one channel of control for a variety of lighting loads. A single module supports 120 volt or 277 volt loads up to 16 amps.

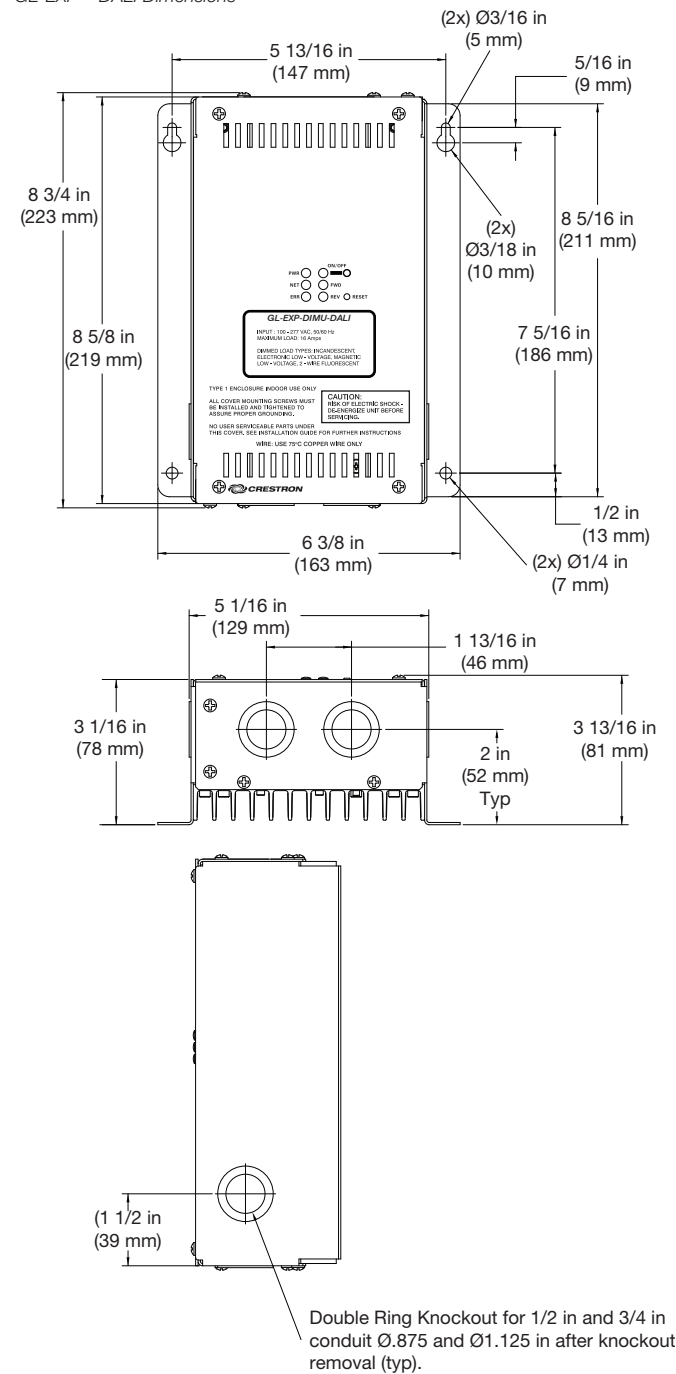
The Crestron® GL-EXP-DIM-DALI, GL-EXP-DIMU-DALI, GL-EXP-DIMFDB-DALI, GL-EXP-DIMFLV-DALI, and GL-EXP-SW-DALI share common features and functions and will be referred to as "GL-EXP-*"-DALI" except where noted.

The specifications for the GL-EXP-*"-DALI are listed below.

Specifications

SPECIFICATION	DETAILS
Load Ratings	
Channels	1
Load Rating	16 A
Dimmed Load Types	<p>GL-EXP-DIM-DALI: Incandescent, magnetic low-voltage, 2-wire dimmable fluorescent</p> <p>GL-EXP-DIMU-DALI: Incandescent, electronic low-voltage, magnetic low-voltage, 2-wire fluorescent</p> <p>GL-EXP-DIMFDB-DALI: 3-wire fluorescent</p> <p>GL-EXP-DIMFLV-DALI: 0-10 V fluorescent, 0-10 V LED</p>
Switched Load Types	<p>GL-EXP-SW-DALI: Incandescent, magnetic low-voltage, electronic low-voltage, HID, fluorescent ballast</p>
Input Voltage	100 to 277 Vac, 50/60 Hz
Indicators	
PWR	Green LED indicates line power is applied to the LINE terminal.
ON/OFF	Red LED indicates power is applied to the load.
NET	Yellow LED indicates network communication.
ERR	Red LED blinks to indicate an error condition. Refer to "Error States" for additional information.
FWD (GL-EXP-DIMU-DALI Only)	Red LED shows that the unit is operating in forward-phase mode.
REV (GL-EXP-DIMU-DALI Only)	Red LED shows that the unit is operating in reverse-phase mode.
Controls	
ON/OFF	Pushbutton toggles power to the load. Press and hold the pushbutton to dim the load up and down (dimming models only).
RESET	Pushbutton initiates hardware reset.
Environmental	
Temperature	32° to 104° F (0° to 40° C)
Humidity	10% to 90% RH (non-condensing)
Weight	3.4 lb (1.6 kg)

The dimensions for the GL-EXP-*"-DALI are shown in the following illustrations.
 GL-EXP-*"-DALI Dimensions



Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates.



Installation

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

NOTES: Observe the following points:

- This product must be installed and used in accordance with the appropriate electrical codes and regulations.
- This product must be installed by a licensed electrician.
- Use 75°C copper wire or better.

NOTE: Before using the GL-EXP-*"-DALI, ensure the device is using the latest firmware. Check for the latest firmware for the GL-EXP-*"-DALI at www.crestron.com/firmware. Firmware is loaded onto the device using Crestron Toolbox™.

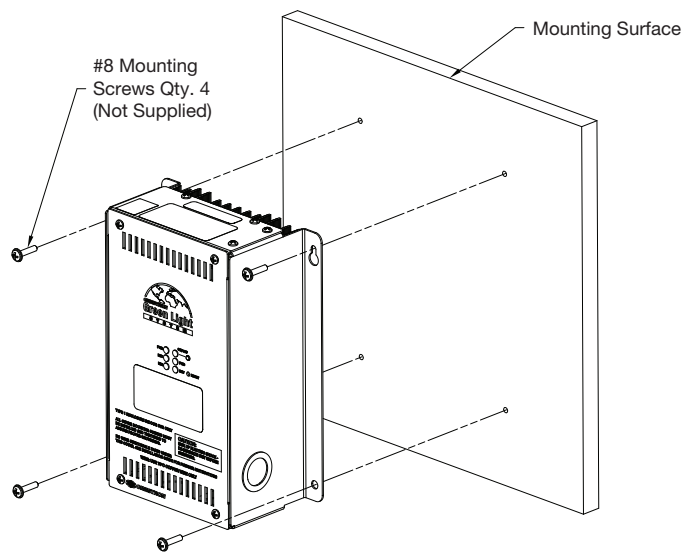
Preparing and Connecting DALI and 0-10V Ports

Strip the ends of the wires approximately 7/16 in (11 mm). Use care to avoid nicking the conductors. Tighten the connector to 5 in-lb (0.5 to 0.6 N-m). The wire gauge should be 14 to 26 AWG.

Installation

The GL-EXP-*"-DALI is mounted to any vertical surface using four screws. The screws must be appropriate for the mounting surface.

Installing the GL-EXP-*"-DALI Module



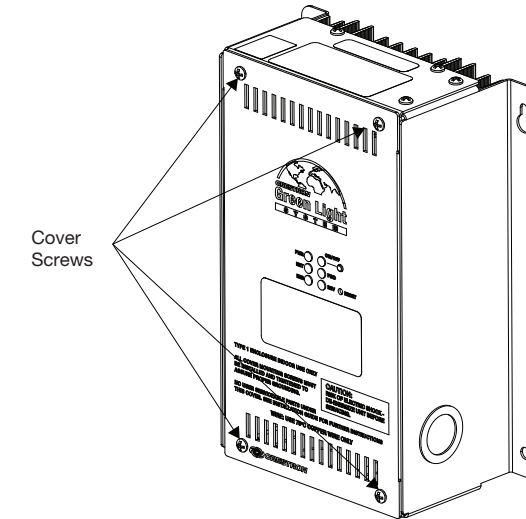
NOTE: To prevent potential heat damage to the drywall, do not mount the GL-EXP-*"-DALI directly onto drywall. Mount the GL-EXP-*"-DALI to a piece of plywood that is at least 1/2 in (13 mm), and then mount the GL-EXP-*"-DALI and plywood to the drywall.

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

Wiring Diagrams

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.

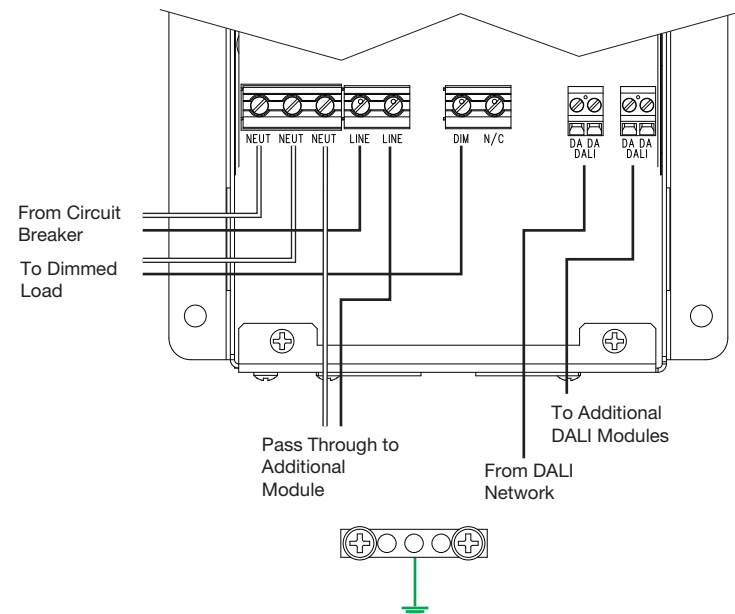
- Use a #2 Phillips screwdriver to remove the cover screws and remove the cover.
Remove Cover Screws



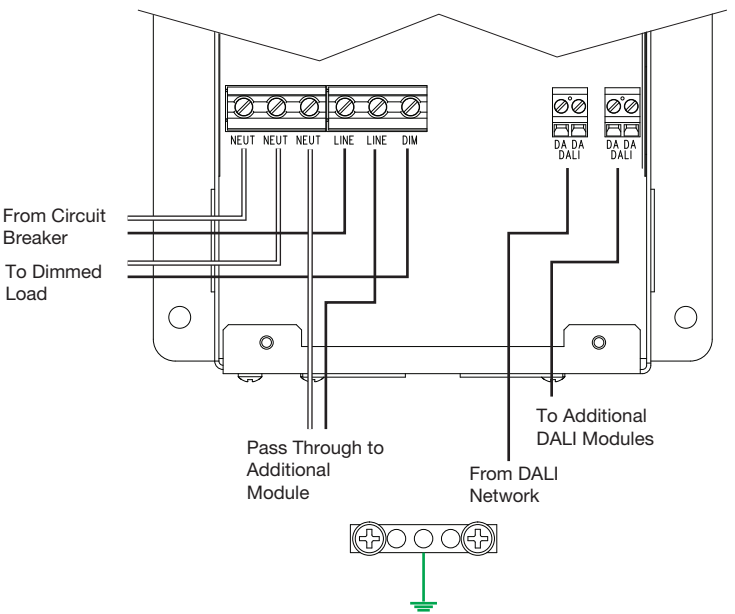
- Wired the device as shown below. An additional **LINE**, **NEUT**, and **GND** connection is supplied for power to pass through. Keep the following in mind while wiring:

- Wires should be 10 to 24 AWG.
- Wires should be stripped to 5/16 in (8 mm).
- Tighten the terminal screws to 4.5 in-lbs (0.5 Nm).

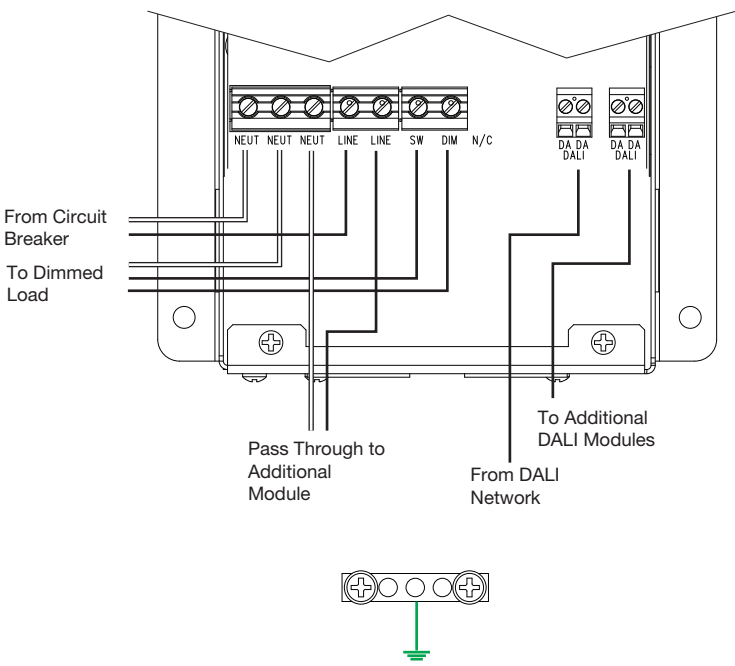
Wire the GL-EXP-DIM-DALI



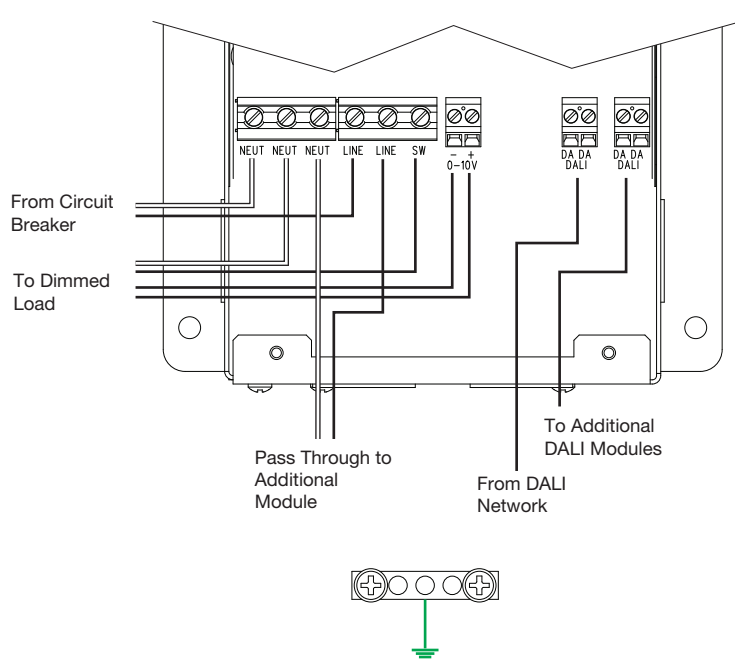
Wire the GL-EXP-DIMU-DALI



Wire the GL-EXP-DIMFDB-DALI

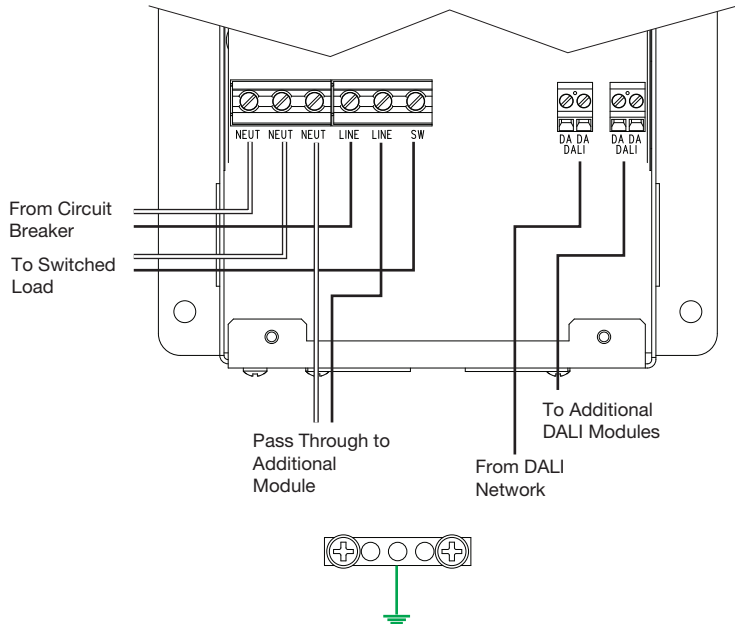


Wire the GL-EXP-DIMFLV-DALI



NOTE: When wiring the GL-EXP-DIMFLV-DALI, the 0-10V control wires from the + and - terminals can be wired as Class 1 or Class 2. The unit ships with a barrier to the right of the 0-10V terminal block for Class 1 wiring. If using Class 2 wiring, move this barrier to the left of the 0-10V terminal block.

Wire the GL-EXP-SW-DALI



3. Replace the cover and cover screws.
4. Apply power to the module. The power indicator LED lights indicating that power is supplied to the module.

Dimming Mode

(GL-EXP-DIMU-DALI Only)
 The GL-EXP-DIMU-DALI is capable of automatically detecting the attached load type and setting itself for Forward Phase (leading edge) or Reverse Phase (trailing edge) dimming mode accordingly. In addition, the unit can be forced to perform forward or reverse phase dimming by overriding the automatic detection.

Disabling the Autodetect mode should not be necessary and is not recommended unless suggested by a Crestron technical support representative.

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

WARNING: Incorrectly setting these switches to force the wrong mode can cause damage to the dimmer and lighting fixture.

The dimming mode can be changed by adjusting the SW3 and SW4 DIP switches as detailed below.

SW3	SW4	DIMMING MODE	LOAD TYPES
Off	Off	Autodetect (Default, recommended)	All
On	Off	Forward Phase	Magnetic low voltage, NCC, 2-wire dimmable fluorescent
Off	On	Reverse Phase	Incandescent, Electronic Low Voltage

Zero-Cross Mode

(GL-EXP-DIM-DALI, GL-EXP-DIMU-DALI, and GL-EXP-DIMFDB-DALI Only)

The GL-EXP-DIM-DALI, GL-EXP-DIMU-DALI, and GL-EXP-DIMFDB-DALI ship with SW1 set to OFF. The devices should generally be left in this state. To deal with certain unusual line conditions, Crestron Technical Support may recommend setting this switch to ON for Filtered Zero-Cross mode.

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

The zero-cross mode is set using the SW1 DIP switch. Refer to the following table when setting the zero-cross detection mode.

Switch Settings for the SW1 DIP Switch

SW1	DESCRIPTION
Off	Simple zero-cross mode.
On	Filtered zero-cross mode.

Error States

The ERR LED blinks a specific pattern to indicate an error. The blink patterns are described in the table below as, for example, 1-1 or 2-1. A 1-2 blink pattern means that the LED blinks one time, pauses for one second, blinks two times, pauses for five seconds, and then repeats until the error is corrected.

LED BLINK PATTERN	ERROR STATE
1-1	The slave processor is in bootloader.
1-2	The slave processor is unresponsive.
1-3	The slave processor firmware update failed.
2-1	There is an over current error.
2-2	A FET is shorted.
2-3	An over temperature error exists.
2-4	An over-voltage error exists.
3-1	A zero-cross sync error exists.

This product is Listed to applicable UL Standards and requirements by 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 two 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 A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Industry Canada (IC) Compliance Statement

CAN ICES-3(A)/NMB-3(A)

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

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

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Specifications subject to change without notice.