GL-EXP-DIMU-DALI

Crestron Green Light® Universal Dimmer Expansion Module, DALI®

> *Single-channel universal lighting dimmer*
> *DALI® system interface*
> *Supports dimmable LED, incandescent, electronic low-voltage, magnetic low-voltage, neon/cold cathode, and 2-wire fluorescent lighting loads*
> *Rated 16 Amps at 100-277 Volts AC*
> *Auto load type detection*
> *Forward and reverse phase modes*
> *Zero-cross filter technology for reduced lamp flicker*
> *Extreme stability under noisy power line conditions*
> *Built-in air gap relay*
> *UL® 924 listed for emergency lighting control*
> *Surface mountable NEMA Type 1 enclosure*
> *Mounts on a wall panel or above a suspended ceiling*
> *UL 2043 listed for installation in an environmental air handling space*

The Crestron Green Light® GL-EXP Series delivers a family of professional lighting control modules for Cresnet® or DALI® based lighting systems. Designed for easy installation on a wall or above a suspended ceiling, these modules offer a perfect solution for adding extra lighting zones to any system without requiring an additional lighting cabinet.

The GL-EXP-DIMU-DALI is a single-channel universal dimmer expansion module designed to control a wide range of dimmable lighting load types including electronic and magnetic low-voltage, LED, incandescent, neon/cold cathode, and 2-wire fluorescent. Utilizing proprietary zero-cross filter technology, the GL-EXP-DIMU-DALI compensates for line voltage and frequency fluctuations, providing superior immunity to power line noise and a dramatic reduction in lamp flicker.
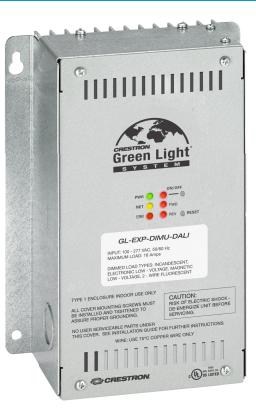
Auto-Detecting Universal Dimming

Under normal operation, the GL-EXP-DIMU-DALI detects the connected load type and selects the appropriate operating mode automatically. Reverse phase (trailing edge) mode supports incandescent and electronic low-voltage load types, while forward phase (leading edge) mode handles magnetic low-voltage, neon, and other inductive load types. Center phase mode is also available, combining reverse and forward phase load control to address special cases. The operative mode is indicated by two LEDs located on the front panel.

DALI® Communications

The GL-EXP-DIMU-DALI communicates using the DALI (Digital Addressable Lighting Interface) standard, which enables interoperability with other DALI compliant lighting control products from Crestron and other manufacturers. Interfacing a network of DALI dimmers and other devices with a Crestron lighting control system is facilitated using the DIN-DALI-2 (sold separately).

Emergency Lighting Control

The GL-EXP-DIMU-DALI is UL® 924 listed for use in controlling an emergency lighting load. In the event of a power failure indicated by a loss of DALI network communication (system failure), the GL-EXP-DIMU-DALI turns on the lighting load if it is off (assuming line power is supplied by a backup power source). The system failure dimming level can be preset to any value when commissioning the lighting system, so even if the load is already on prior to a power failure, it will change to the preset level when a system failure is detected.

Plenum Rated NEMA Enclosure

The GL-EXP-DIMU-DALI is designed to be mounted to a vertical surface and is UL 2043 compliant to allow for installation in an environmental air-handling space above a suspended ceiling. Conduit knockouts are provided on the bottom and lower sides of the unit. All connections are made via screw terminals behind the front cover.

SPECIFICATIONS

Load Control

Dimmer Channels: 1
Load Rating: 16 Amps
Line Voltage: 100-277 Volts AC, 50/60 Hz
Dimmable Load Types: Incandescent, LED, electronic low-voltage, magnetic low-voltage, neon/cold cathode, 2-wire fluorescent

Communications

DALI: DALI control gear, IEC 62386 compliant

Connections

NEUT: (3) Captive screw terminals;
Neutral connections for feed and load;
24 to 10 AWG (0.25 to 4.0 mm²) wire size

LINE: (2) Captive screw terminals;
Line power feed input and pass-through;
24 to 10 AWG (0.25 to 4.0 mm²) wire size

DIM: (1) Captive screw terminal;
Dimmed load output;
24 to 10 AWG (0.25 to 4.0 mm²) wire size

DALI: (2) Sets of (2) captive screw terminals;
DALI control gear interface ports;
26 to 14 AWG (0.14 to 1.5 mm²) wire size;
For use with Class 2 wiring only

Ground: (1) 3-terminal grounding block

Controls & Indicators

PWR: (1) Green LED, indicates line power is applied to either LINE terminal
NET: (1) Yellow LED, indicates DALI network communication
ERR: (1) Red LED, indicates a variety of error conditions via blinking patterns (refer to the installation guide)
ON/OFF: (1) Pushbutton and (1) red LED, pushbutton toggles the load output on and off (press and hold to cycle the dimming level up and down), LED indicates the load output is energized
FWD: (1) Red LED, indicates forward phase mode (or center phase mode if REV indicator is also on)
REV: (1) Red LED, indicates reverse phase mode (or center phase mode if FWD indicator is also on)
RESET: (1) Pushbutton, initiates hardware reset
SW1: (1) Two-position slide switch (behind front cover), enables/disables the zero-cross detection filter (disabled by default)
SW2: (1) Two-position slide switch (behind front cover), not used
SW3, SW4: (2) Two-position slide switches (behind front cover); selects auto detect (default), forward phase, reverse phase, or center phase dimming mode

Environmental

Temperature: 32° to 104° F (0° to 40° C)
Humidity: 10% to 90% RH (non-condensing)

Construction

Enclosure: NEMA Type 1, galvanized steel with gray matte powder coated removable front cover panel, extruded aluminum heat sink on rear, (2) integral mounting flanges, (4) 1/2" or 3/4" conduit knockouts on bottom and lower left & right sides
Mounting: Surface mount, must be oriented upright and mounted to a vertical surface with 6 inches (153 mm) minimum spacing above and below for proper ventilation and heat dissipation

Dimensions

Height: 8.78 in (223 mm)
Width: 6.39 in (163 mm)
Depth: 3.16 in (81 mm)

Weight

3.43 lb (1.56 kg)

Compliance

C(UL)US, UL 924, UL 2043, IEC 62386, FCC Part 15 Class A commercial use

MODELS & ACCESSORIES

Available Models

GL-EXP-DIMU-DALI: Crestron Green Light® Universal Dimmer Expansion Module, DALI®

Available Accessories

DIN-DALI-2: DIN Rail 2-Channel DALI® Interface

Notes:

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.
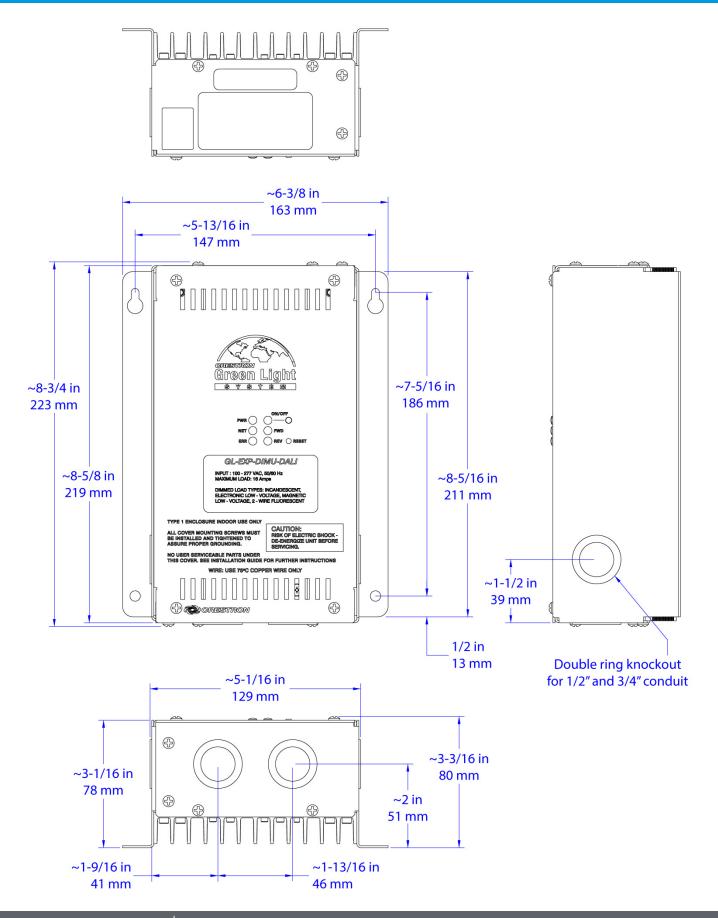
The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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

~6-3/8 in
163 mm

~5-13/16 in
147 mm

~8-3/4 in
223 mm

~8-5/8 in
219 mm

~7-5/16 in
186 mm

~8-5/16 in
211 mm

~1-1/2 in
39 mm

1/2 in
13 mm

CRESTRON
Green Light
S Y S T E M

PWR   ON/OFF
NET   FWD
ERR   REV   RESET

GL-EXP-DIMU-DALI

INPUT : 100 - 277 VAC, 50/60 Hz
MAXIMUM LOAD: 16 Amps

DIMMED LOAD TYPES: INCANDESCENT,
ELECTRONIC LOW - VOLTAGE, MAGNETIC
LOW - VOLTAGE, 2 - WIRE FLUORESCENT

TYPE 1 ENCLOSURE INDOOR USE ONLY

ALL COVER MOUNTING SCREWS MUST
BE INSTALLED AND TIGHTENED TO
ASSURE PROPER GROUNDING.

NO USER SERVICEABLE PARTS UNDER
THIS COVER. SEE INSTALLATION GUIDE FOR FURTHER INSTRUCTIONS

WIRE: USE 75°C COPPER WIRE ONLY

CAUTION:
RISK OF ELECTRIC SHOCK -
DE-ENERGIZE UNIT BEFORE
SERVICING.

CRESTRON

Double ring knockout
for 1/2" and 3/4" conduit

~5-1/16 in
129 mm

~3-1/16 in
78 mm

~3-3/16 in
80 mm

~2 in
51 mm

~1-9/16 in
41 mm

~1-13/16 in
46 mm