

Zūm® Wired Universal Dimmer Load Controller



- *Zūm® wired single-channel universal lighting dimmer*
- *Supports dimmable LED, incandescent, electronic low-voltage, magnetic low-voltage, neon/cold cathode, and 2-wire fluorescent lighting loads*
- *Zūm Link in-room device daisy chaining*
- *Zero-cross filter technology for reduced lamp flicker*
- *Auto load-type detection*
- *Forward, reverse, and center phase dimming modes*
- *Extreme stability under noisy power line conditions*
- *Built-in air gap relay*
- *Mounts on a wall panel or above a suspended ceiling*
- *Surface mountable NEMA Type 1 enclosure*
- *Meets UL 508 standard for industrial control equipment*
- *Meets CEC Title 24 energy efficiency standards¹*
- *Meets ASHRAE® 90.1 energy efficiency standards²*
- *ICC® International Energy Conservation Code® compliant³*
- *Rated 16 Amps at 100-277VAC*

The ZUMLINK-EXP-16A-DIMU is a single-channel universal dimmer load controller designed to control a wide range of dimmable lighting load types. Using proprietary zero-cross filter technology, the ZUMLINK-EXP-16A-DIMU provides superior immunity to power line noise, resulting in a significant reduction of lamp flicker.

Energy-saving options (sold separately) are available to enable daylighting, occupancy or vacancy sensing, integration, and centralized monitoring and management.

Auto-Detecting Universal Dimming

Under normal operation, the ZUMLINK-EXP-16A-DIMU detects the connected load type and automatically selects the appropriate operating mode. Reverse phase (trailing edge) mode supports incandescent and electronic low-voltage load types, while forward phase (leading edge) mode supports LED, magnetic low-voltage, neon/cold-cathode, and 2-wire fluorescent 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.

Zūm Link Wired Technology

Zūm Link technology enables in-room lighting control through keypads and sensors wired to controllers. Zūm Wired devices connect via CBL-CAT5E-ZUMLINK-P CAT5e cable (sold separately) to RJ-45 ports to provide simple daisy-chaining and lighting control of compatible loads. The Zūm Wired devices work together in a local ecosystem to provide customized solutions using the Zūm app via Bluetooth connectivity.

Energy Efficiency

Occupancy sensor, vacancy sensor, and daylight sensor connectivity enables significant energy savings. To reduce energy usage, lights turn off automatically when the room is vacant and dim gradually depending on the amount of natural daylight in the room.

Plenum Rated NEMA Enclosure

The ZUMLINK-EXP-16A-DIMU is designed to be mounted to a vertical surface and meets the requirements of UL® 2043 for installation in an environmental air-handling space (plenum) 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.

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Specifications

Load Control

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

Communications

Zūm Link	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining
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Controls and Indicators

TEST	(1) Pushbutton and (1) green LED, press and release the button to toggle the load output on and off, press and hold to cycle the dimming level up and down, LED indicates the load output is energized, also used for room setup and factory reset
DIM MODE	(1) Pushbutton (behind cover), press to cycle through dimming modes: auto detect (default), reverse phase, forward phase, or center phase
AUTO	(1) Red LED, indicates auto load type detection is selected and enabled
REV	(1) Red LED, indicates reverse phase mode is enabled (automatically or manually)
FWD	(1) Red LED, indicates forward phase mode is enabled (automatically or manually)
CENTER	(1) Red LED, indicates center phase mode is enabled (manually)
ZEROCROSS FILTER	(1) Pushbutton (behind cover), press to select zero-cross detection mode
BASIC	(1) Green LED (behind cover), indicates when using basic zero-cross detection
FILTER	(1) Green LED (behind cover), indicates when using filtered zero-cross detection (default)
RESET	(1) Pushbutton (behind cover), initiates hardware reset
LINK	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
ERROR	(1) Red LED, indicates a variety of error conditions via blinking patterns

PWR Status	(1) Green LED (behind cover), indicates line power is applied to either LINE terminal
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Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply
NEUT	(3) Captive screw terminals; Neutral connections for feed and load; 24-10 AWG (0.25 to 4.0 mm2) wire size
LINE	(2) Captive screw terminals; Line power feed input and pass-through; 24-10 AWG (0.25 to 4.0 mm2) wire size
LOAD	(1) Captive screw terminal; Dimmed load output; 24-10 AWG (0.25 to 4.0 mm2) wire size
Ground	(1) 3-terminal grounding block

Environmental

Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (noncondensing)

Construction

Housing	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 in. (153 mm) minimum spacing above and below for proper ventilation and heat dissipation

Dimensions

Height	8.80 in. (223 mm)
Width	6.40 in. (162 mm)
Depth	3.17 in. (80 mm)

Weight

3.43 lb (1.56 kg)

Compliance

Regulatory Model: M202108001
IC, FCC Part 15 Class A digital device, UL508

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Model

ZUMLINK-EXP-16A-DIMU

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Available Accessories

For a list of available accessories, visit the [ZUMLINK-EXP-16A-DIMU](#) product page.

Notes:

1. This product is part of a California Energy Commission Title 24 compliant solution. Refer to <https://www.energy.ca.gov/title24/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <https://www.crestron.com/about/partner-info/commercial-lighting-consultants>.
2. This product is part of an ASHRAE 90.1 compliant solution. Refer to <https://www.ashrae.org/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <https://www.crestron.com/about/partner-info/commercial-lighting-consultants>.
3. This product is part of an International Energy Conservation Code compliant solution. Refer to <https://www.iccsafe.org/iecc/> to learn more about designing a fully compliant solution. Additional resources can be accessed via the Crestron Commercial Lighting Consultants Partner Portal at <https://www.crestron.com/about/partner-info/commercial-lighting-consultants>.

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All other languages are a translation of the original document.

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