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Product Manual

Crestron Zūm® Lighting Control

Crestron Electronics, Inc.

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Overview

Zūm distributed lighting control system uses industry standards, such as 0-10V, DALI®, DMX and phase control all merged on the Zūm network. This network not only provides communication and lighting control, but also seamlessly integrates with Crestron® Unified Communications systems and third-party occupancy, environmental and acoustical sensors.

All Zūm devices interface with the Zūm app, providing easy set up for room aspects and parameters including presets, lighting levels and optimized sensor settings. Spaces or rooms can be saved and used as templates for use in other spaces, which greatly reduces the time required for system start up.



Load Controllers

Load controllers are available in wired and wireless applications.

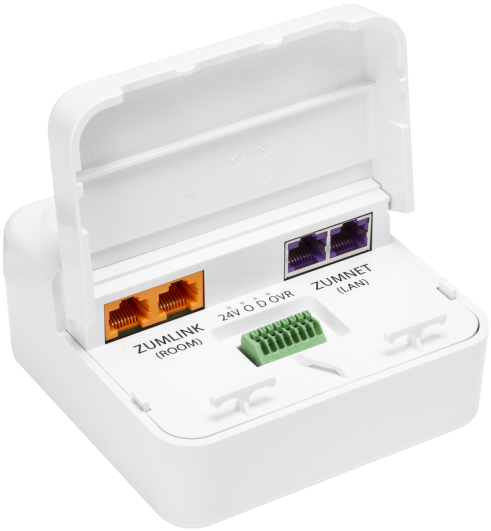
Zūm Wired

Zūm Net and Zūm Link load controllers provide a sophisticated, wired lighting control solution for Zūm® commercial lighting systems. Models are available for both junction box and DIN rail applications. For junction box applications, the load controllers mount directly to a 4 in. square junction box. For DIN rail mounting applications, the load controllers are 3M or 4M wide.

ZUMNET-JBOX-16A-LV, ZUMNET-JBOX-DALI, ZUMNET-DIN-16A-LV, and ZUMNET-DIN-DLI

Zūm Net devices facilitate communications between rooms via CBL-CAT5E-ZUMNET-P cables (sold separately, refer to Cables on page 26) and can be daisy-chained for network expansion. They also connect to Zūm Link devices for in-room communication.

ZUMNET-JBOX-16A-LV and **ZUMNET-JBOX-DALI**



ZUMNET-DIN-16A-LV



ZUMNET-DIN-DLI



ZUMLINK-JBOX-16A-LV, ZUMLINK-JBOX-20A-SW, ZUMLINK-JBOX-20A-PLUG, ZUMLINK-DIN-16A-LV, ZUMLINK-DIN-20A-SW, and ZUMLINK-DIN-20A-PLUG

Zūm Link devices allow for in-room lighting control through compatible keypads and sensors. Using CBL-CAT5E-ZUMLINK-P cables (sold separately, refer to Cables on page 26), the two RJ-45 ports on the device can be connected to a Zūm Net device and allow for in-room device daisy-chaining.

ZUMLINK-JBOX-16A-LV,

ZUMLINK-JBOX-20A-SW,

and ZUMLINK-JBOX-20A-PLUG



ZUMLINK-DIN-16A-LV



ZUMLINK-DIN-20A-SW



ZUMLINK-DIN-20A-PLUG



ZUMLINK-EXP-16A-DIMU and ZUMLINK-DIN-DIMU

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

Energy-saving options, such as Zūm link presence detectors or analog photosensors (sold separately) are available to enable daylighting, occupancy or vacancy sensing, integration, and centralized monitoring and management.

ZUMLINK-EXP-16A-DIMU



ZUMLINK-DIN-DIMU



Zūm Wireless

ZUMMESH-JBOX-5A-LV, ZUMMESH-JBOX-16A-LV, ZUMMESH-JBOX-16A-LV-EM, ZUMMESH-JBOX-20A-PLUG, ZUMMESH-JBOX-20A-SW, and ZUMMESH-JBOX-DALI

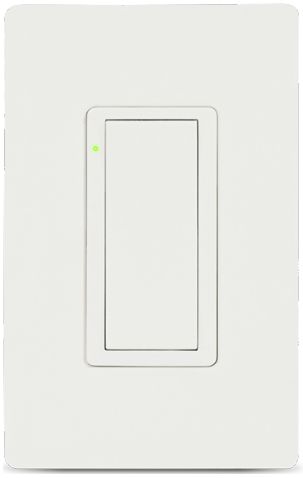
Zūm Mesh Wireless junction box load controllers (ZUMMESH-JBOX series) can provide 20A switching, 5A or 16A 0-10V dimming, and 20A plug load control. Junction box load controllers mount directly to a 4 in. square junction box. Zūm Mesh wireless technology affords easy pair and play integration as part of a complete Zūm commercial lighting system. Energy-saving options are available to enable daylighting, occupancy or vacancy sensing, HVAC system integration, and centralized monitoring and management.



ZUMMESH-5A-LV, ZUMMESH-5A-SW, ZUMMESH-DELV, and ZUMMESH-DIM

The Zūm wireless wall-box dimmers provide control of a single 100–277V or 120–277V lighting load. The ZUMMESH-5A-LV controls 0–10V dimmable LED or fluorescent loads. The ZUMMESH-DIM controls dimmable magnetic low-voltage halogen or LED, incandescent, and tungsten-halogen loads. The ZUMMESH-DELV ELV dimmer controls dimmable electronic low-voltage (halogen or LED), incandescent, tungsten-halogen, electronic CFL, and 2-wire fluorescent loads. They feature a single rocker switch to enable simple on/off switching and dimming adjustment, with the ability to save one preset. The ZUMMESH-5A-SW wireless wall-box switch provides control of a single switched 5A, 100–277V lighting load. It features a single rocker switch to enable simple on/off switching.

Standard gang-box installation allows one or more units to be installed in an electrical box. The wall-box load controllers are available in smooth black, white, almond, gray, or red finishes. Decorator-style faceplates (FP-G series) are sold separately.



ZUMMESH-EXP-16A-DIMU

The Zūm Wireless ZUMMESH-EXP-16A-DIMU is a single-channel universal dimmer module designed to control a wide range of dimmable lighting load types. Utilizing proprietary zero-cross filter technology, the ZUMMESH-EXP-16A-DIMU compensates for line voltage and frequency fluctuations, providing superior immunity to power line noise and a dramatic reduction in lamp flicker.


Zūm
ZUMMESH-EXP-16A-DIMU
CRESTRON

Keypad

Keypads are available in wired and wireless applications.

Zūm Wired

The ZUMLINK-KP keypad provides control of one or more Zūm® wired load controllers (sold separately, refer to Load Controllers on page 12) via CBL-CAT5E-ZUMLINK-P cables (sold separately, refer to Cables on page 26). The ZUMLINK-KP comes preassembled with the white ZUMLINK-BTNR rocker button, which offers on/off switching and dimming adjustment with the ability to save one scene preset. Additional push button configurations are available separately. Refer to Rocker and Button Tree Features on page 59 for details. The push button configurations support the same capabilities as the rocker button but with additional scene presets.

The ZUMLINK-KP mounts to a standard electrical box. Rocker buttons/button trees and bezels are available in almond, black, gray, red, and white. The button trees also have options for blank buttons, standard pad printed labels, or custom engravings. A finished installation requires a decorator-style faceplate (FP-G series, sold separately).



(Faceplate not included)

Zūm Wireless

ZUMMESH-KP

The ZUMMESH-KP Zūm Wireless Keypad provides control of one or more Zūm J-Box Load Controllers (ZUMMESH-JBOX). It is available with either a single rocker switch or four push buttons. The rocker switch version offers simple on/off switching and dimming adjustment with the ability to save one scene preset. The push button version supports the same capabilities with three scene presets. Standard gang-box installation allows one or more units to be installed in a 3-1/2 in. (89 mm) deep electrical box. A

finished installation requires a decorator-style faceplate (sold separately).

ZUMMESH-KP keypads are 100-277VAC line powered. Zūm Mesh wireless technology affords easy "pair and play" setup and integration as part of a complete Zūm commercial room lighting system.

Switch and Button Options

There are two versions of the ZUMMESH-KP:

- ZUMMESH-KP10A – Provides a single rocker switch for on/off switch control with the ability to adjust the dim level up or down by pressing and holding the switch. A single custom scene preset can be created, which is recalled when turning the lights on by pressing the up position on the rocker switch.
- ZUMMESH-KP10B – Provides four push buttons labeled ON, SCENE 2, SCENE 3, and OFF. Three scene presets can be created and recalled with Scene 1 assigned to the ON button. Manual dimming adjustment is achieved by pressing and holding the ON (up) and OFF (down) buttons.



(Faceplate not included)

ZUMMESH-KPBATT

The ZUMMESH-KPBATT Zūm Battery-Powered Wireless Keypad provides control of one or more Zūm J-Box Load Controllers (ZUMMESH-JBOX). It is available with a rocker switch or various combinations of push buttons. The rocker switch version offers simple on/off switching and dimming adjustment, with the ability to save one scene preset. The push button versions support the same capabilities with two or three scene presets. Push button versions may be ordered with standard button labeling or custom button engraving.

All versions of the ZUMMESH-KPBATT can be mounted to a standard electrical box, or they can be attached directly to the wall using screws or two-sided adhesive tape. A finished installation requires a decorator-style faceplate (sold separately).

ZUMMESH-KPBATT keypads are battery powered and completely wireless. They can operate for five years or more on a single lithium battery (included). Zūm Mesh wireless technology affords easy "pair and play" setup and integration as part of a complete Zūm commercial room lighting system.

Switch and Button Options

There are six versions of the ZUMMESH-KPBATT:

- ZUMMESH-KP10ABATT – Provides a single rocker switch for on/off switch control with the ability to adjust the dim level up or down by pressing and holding the switch. A single custom scene preset can be created, which is recalled when turning the lights on by pressing the up position on the rocker switch.
- ZUMMESH-KP10BBATT – Provides four push buttons labeled ON, SCENE 2, SCENE 3, and OFF. Three scene presets can be created and recalled with Scene 1 assigned to the ON button. Manual dimming adjustment is achieved by pressing and holding the ON (up) and OFF (down) buttons.
- ZUMMESH-KP10CBATT – Provides six push buttons similar to the –KP10BBATT version but with separate up and down buttons for dimming level adjustment.
- ZUMMESH-KP10DBATT – Provides six push buttons similar to the –KP10CBATT version but with a SENSOR DISABLE button in place of SCENE 3. Pressing the SENSOR DISABLE button tells the lighting system to temporarily ignore the room's daylight sensor and occupancy or vacancy sensors for a period of one hour. The sensors can be re-enabled manually by pressing and holding the SENSOR DISABLE button.
- ZUMMESH-KP10FBATT ENGRAVED – Provides four buttons with custom engraving. Functionality is identical to the –KP10BBATT version.

ZUMMESH-KP10GBATT ENGRAVED – Provides six buttons with custom engraving. Functionality is identical to the –KP10CBATT version.



(Faceplate not included)

Presence Detectors

STEINEL™ presence detectors with Zūm® Link wired communication are part of a system designed to provide sophisticated lighting control with simple installation. A wired solution for Zūm commercial

lighting systems, the presence detectors communicate via CBL-CAT5E-ZUMLINK-P cable (sold separately, refer to Cables on page 26) which allow for in-room device daisy-chaining to other Zūm Link devices (such as the ZUMLINK-KP keypad or Zūm Link load controllers, refer to Load Controllers on page 12 and Keypad on page 17). The presence detectors are equipped with a daylight sensor and mount directly to the ceiling or via a junction box (not included). The RLY presence detectors also have a three-wire output relay to connect to a relay-input capable device, such as an HVAC call system.

Presence Detector with Daylight Sensing

- ZUMLINK-IR-QUATTRO-DLS with passive infrared technology
- ZUMLINK-DT-QUATTRO-DLS with passive infrared and ultrasonic technology
- ZUMLINK-US-QUATTRO-DLS with ultrasonic technology
- ZUMLINK-IR-QUATTRO-HD-DLS with high-definition, passive infrared technology
- ZUMLINK-US-HALLWAY-DLS with ultrasonic technology and bidirectional detection for hallways
- ZUMLINK-US-ONEWAY-DLS with ultrasonic technology and unidirectional detection for hallways (Discontinued)

Presence Detector with Daylight Sensing and Output Relay

- ZUMLINK-IR-QUATTRO-DLS-RLY with passive infrared technology
- ZUMLINK-DT-QUATTRO-DLS-RLY with passive infrared and ultrasonic technology
- ZUMLINK-US-QUATTRO-DLS-RLY with ultrasonic technology
- ZUMLINK-IR-QUATTRO-HD-DLS-RLY with high-definition, passive infrared technology
- ZUMLINK-US-HALLWAY-DLS-RLY with ultrasonic technology and bidirectional detection for hallways
- ZUMLINK-US-ONEWAY-DLS-RLY with ultrasonic technology and unidirectional detection for hallways (Discontinued)

ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY



ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY



ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY



ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY



ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY



ZUMLINK-US-ONEWAY-DLS and ZUMLINK-US-ONEWAY-DLS-RLY



All Zūm Link Wired Presence Detectors are functionally similar. For simplicity within this guide, the term "presence detectors" is used except where otherwise noted.

Hub

The ZUM-HUB4 enables centralized management for Zūm® commercial lighting systems of up to 1,000 rooms with an Ethernet switch (sold separately) across Zūm wired, Zūm wireless, and external spaces. The device provides a web-based user interface for control. A built-in time clock enables room lighting and occupancy and vacancy sensing automation. The ZUM-HUB4 can also be integrated with other Crestron lighting systems and control systems.

The ZUM-HUB4 is featured in several preassembled lighting control cabinets.

- ZUML-HUB4-GW
  Contains:
  - ZUM-HUB4 and PW-2420RU power pack
  - ZUMNET-GATEWAY: Zūm® Net Wireless Gateway for Zūm Light Control System
  - PW-2407WU: Wall Mount Power Pack, 24VDC, 0.75A, 2.1 mm, Universal
    For use with the ZUMNET-GATEWAY
- ZUML-CENCN-SWPOE-5

  Contains:
  - DIN-CENCN-2-POE: Ethernet to Cresnet® Network Bridge with PoE
  - DIN-PWS60: DIN Rail 60 Watt Cresnet® Power Supply
  - CEN-SWPOE-5AC: 5-Port PoE Network Switch
  - DIN-EN-2X18: Enclosure for DIN Rail Devices, 2 DIN Rails, 18 M Wide
- ZUML-HUB4

  Contains:
  - ZUM-HUB4 and PW-2420RU power pack
  - DIN-EN-3X18: Enclosure for DIN Rail Devices, 3 DIN Rails, 18 M Wide
- ZUML-HUB4-SWPOE-26

  Contains:
  - ZUM-HUB4 and PW-2420RU power pack
  - CEN-SWPOE-26: 26 Port PoE+ Network Switch
  - DIN-EN-3X18: Enclosure for DIN Rail Devices, 3 DIN Rails, 18 M Wide
- ZUML-HUB4-SWPOE-5

  Contains:
  - ZUM-HUB4 and PW-2420RU power pack
  - CEN-SWPOE-5AC: 5-Port PoE Network Switch
  - DIN-EN-3X18: Enclosure for DIN Rail Devices, 3 DIN Rails, 18 M Wide

- ZUML-SWPOE-26

  Contains:

  - CEN-SWPOE-26: 26 Port PoE+ Network Switch
  - DIN-EN-3X18: Enclosure for DIN Rail Devices, 3 DIN Rails, 18 M Wide

ZUM-HUB4



ZUML-HUB4-GW



ZUML-SWPOE-26



ZUML-HUB4-SWPOE-26



ZUML-HUB4-SWPOE-5



ZUML-CENCN-SWPOE-5



ZUML-HUB4



Software

Zūm Wired offers a configuration and a program license for the ZUM-HUB4.

Zūm App

The Crestron Zūm® Lighting Configuration App (CRESTRON-ZUM) enables management of Zūm spaces and devices via a Bluetooth® connection on an Apple® iOS® or Android™ device. Simply pair a mobile device running the app with a ZUMMESH-NETBRIDGE or ZUMLINK-KP to manage Zūm spaces or individual Zūm device settings. Download the Crestron Zūm app from the Google Play™ or Apple App Store® online store.

Custom Program License for the ZUM-HUB4

The SW-HUB4-PROG is a software license that activates the custom program slot on the ZUM-HUB4 control system.

The custom program slot allows a ZUM-HUB4 control system to run a custom program in parallel with the centralized management native to the ZUM-HUB4. Create and update programs that provide custom functionality without affecting the centralized management of the ZUM-HUB4.

To obtain an SW-HUB4-PROG license, complete the Request for SW-HUB4-PROG License form.

For support, contact license@crestron.com.

Accessories

Zūm Wired accessories include a power supply, integration module with a standalone timeclock, cables, custom programming for the ZUM-HUB4, and button trees for keypads.

Zūm Link Power Supplies

The Zūm® Wired power supplies deliver additional Zūm Link power for in-room lighting control. Equipped with four Zūm Link connections, the ZUMLINK-JBOX-PSU and ZUMLINK-DIN-PSU provide power distribution and simple wiring using CBL-CAT5E-ZUMLINK-P cables (sold separately, refer to Cables on page 26) to other Zūm Link devices. The CSA-PWS2S-JBOX-ZUMLINK-CN provides power to shades and connection to a Zūm system.

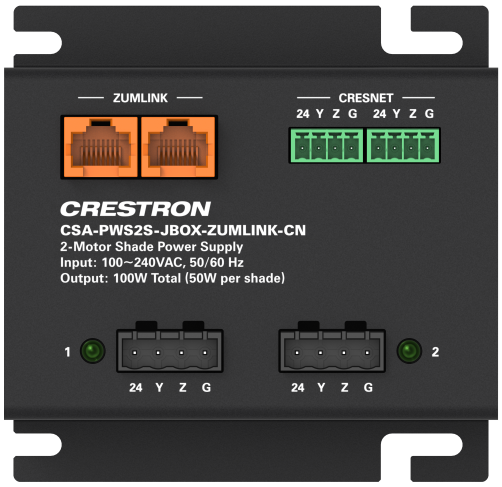
ZUMLINK-JBOX-PSU



ZUMLINK-DIN-PSU



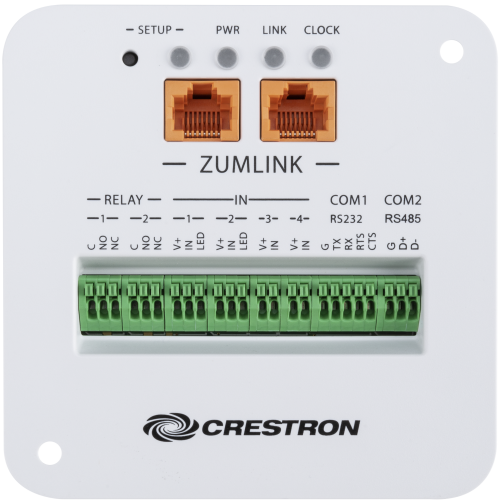
CSA-PWS2S-JBOX-ZUMLINK-CN



Integration Module with Standalone Timeclock

The compact, multi-purpose, standalone integration module and timeclock applies schedules, events, and common integration protocols to a Zūm space without the need for a control system. As a Zūm Wired device, the integration module can be discovered by the Zūm app for easy configuration without custom programming. If needed, the integration module can also connect to a Crestron control system. It supports in-room device daisy chaining to any 24VDC Zūm Link run. The junction box module provides two Zūm Link serial bus RJ-45 ports, an RS-232 port, an RS-485 port, two dry contact closure outputs, two low-voltage inputs, and two low-voltage inputs with LED indicator light support.

ZUMLINK-JBOX-IO



ZUMLINK-DIN-IO



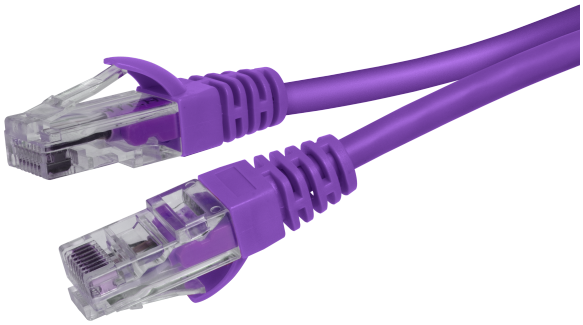
Cables

Zūm Wired cables terminate with RJ-45 connectors for easy wiring. The cables area available in various lengths for both Zūm Link and Zūm Net applications.

Zūm Net Wiring

The CBL-CAT5E-ZUMNET-P CAT5e cable provides a reliable Ethernet connection for Zūm Net devices within a Zūm® Wired commercial lighting system. The CBL-CAT5E-ZUMNET-P wiring is housed in a plenum-rated jacket, and is available in four lengths from 25 ft (8 m) to 500 ft (152 m) to provide maximum flexibility for LAN wiring.

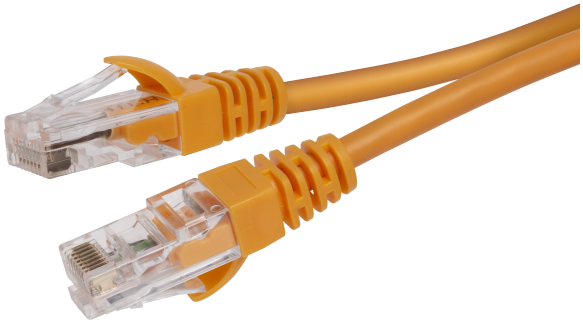
- CBL-CAT5E-ZUMNET-P-25
- CBL-CAT5E-ZUMNET-P-50
- CBL-CAT5E-ZUMNET-P-100



Zūm Link Wiring

The CBL-CAT5E-ZUMLINK-P CAT5e cable provides power and data connections for Zūm Link devices within a Zūm® Wired commercial lighting system. The CBL-CAT5E-ZUMLINK-P wiring is housed in a plenum-rated jacket, and is available in seven lengths from 6 in. (152 mm) to 500 ft (152 m) to provide maximum flexibility for LAN wiring.

- CBL-CAT5E-ZUMLINK-P-0.5
- CBL-CAT5E-ZUMLINK-P-3
- CBL-CAT5E-ZUMLINK-P-6
- CBL-CAT5E-ZUMLINK-P-12
- CBL-CAT5E-ZUMLINK-P-25
- CBL-CAT5E-ZUMLINK-P-50



Adapter Cable

The Zūm® Wired ZUMLINK-CONV-CN adapter cable allows Zūm wired devices with Zūm Link communication to integrate via Cresnet® for legacy controls. The plenum-rated adapter converts a single female RJ-45 Zūm Link port connection to use on the Cresnet network. Cresnet screw terminals provide a contact closure input with the ability to trigger Zūm devices into Emergency Override mode. For flexible in-room wiring, daisy chain Zūm Link with the ZUMLINK-SPLTR-RJ45 RJ-45 splitter to avoid dead ends.



RJ-45 Splitter

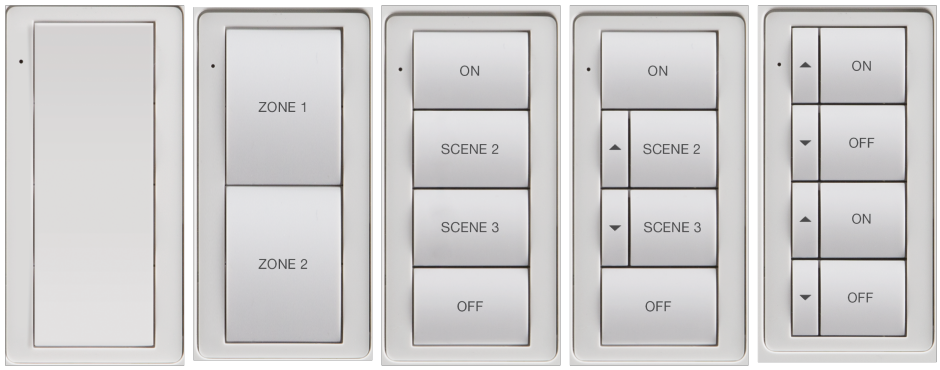
The Zūm® Wired ZUMLINK-SPLTR-RJ45 RJ-45 splitter enables one CBL-CAT5E-ZUMLINK-P cable to output two Zūm Link ports. It is plenum rated and works with Zūm Link devices. For flexible, in-room wiring, use with the ZUMLINK-CONV-CN to daisy chain Zūm Link devices with Cresnet® devices.



Rocker Button and Button Trees

The ZUMLINK-BTN bezel with rocker button or button tree allows for easy customization of a ZUMLINK-KP Zūm® Wired Keypad (sold separately, refer to Keypad on page 17) and is available in almond, black, red, gray, or white. The ZUMLINK-KP comes installed with a white ZUMLINK-BTNR ENGRAVED rocker button, but may be replaced with any of the other ZUMLINK-BTN button trees.

ZUMLINK-BTNR **ZUMLINK-BTN2** **ZUMLINK-BTN4** **ZUMLINK-BTN6** **ZUMLINK-BTN8**



Features

This section provides the following information:

- Load Controller Features
- Keypad Features
- Presence Detector Features
- Hub Features
- Software Features
- Power Supply Features
- Integration Module with Standalone Timeclock Features
- Cable Features
- Cable Accessory Features
- Rocker and Button Tree Features

Load Controller Features

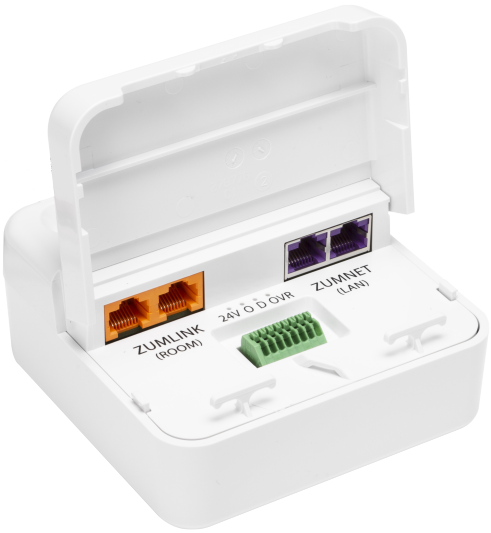
Zūm junction box and surface mount load controllers include:

- ZUMNET-JBOX-16A-LV on page 29
- ZUMNET-JBOX-DALI on page 30
- ZUMLINK-JBOX-16A-LV on page 32
- ZUMLINK-JBOX-20A-PLUG on page 33
- ZUMLINK-JBOX-20A-SW on page 34
- ZUMLINK-EXP-16A-DIMU on page 35

Zūm DIN rail load controllers include:

- ZUMNET-DIN-16A-LV on page 36
- ZUMNET-DIN-DLI on page 37
- ZUMLINK-DIN-16A-LV on page 38
- ZUMLINK-DIN-20A-PLUG on page 39
- ZUMLINK-DIN-20A-SW on page 41
- ZUMLINK-DIN-DIMU on page 42

ZUMNET-JBOX-16A-LV



- Zūm® wired junction box mounted lighting load dimmer
- Dimming control of 0-10V LED drivers or 4-wire fluorescent ballasts
- Integration with Zūm keypads, presence detectors, and daylight sensors (sold separately)
- Ethernet network connection to ZUM-HUB4 control system (sold separately)
- Integrated contact closure input

ZūmNet Wired Technology

In a Zūm network, Zūm Net load controllers facilitate communications between rooms via Ethernet and can be daisy-chained for network expansion. Each device in the chain communicates to a Zūm Hub control system for centralized monitoring, management, and reporting. Zūm Link devices connect to Zūm Net devices to provide in-room lighting control. Zūm Link devices work together in a local ecosystem to provide customized solutions.

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 provide daisy-chaining and lighting control of compatible loads.

Energy Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

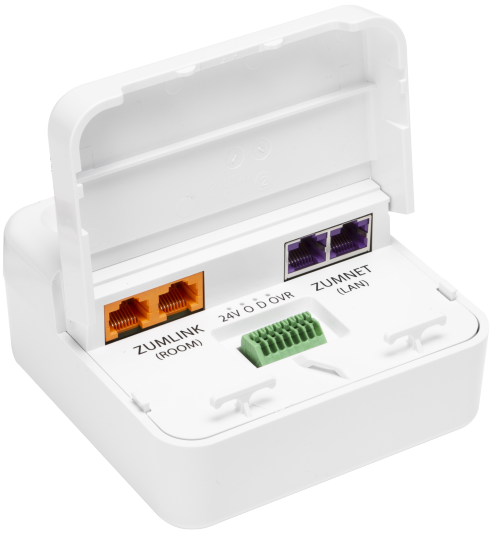
Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable. Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMNET-JBOX-DALI



- Zūm® wired junction box mounted DALI® drivers lighting controller
- Control of DALI compliant dimmable LED or fluorescent loads

- Integration with Zūm keypads, presence detectors, and daylight sensors (sold separately)
- Ethernet network connection to ZUM-HUB4 control system (sold separately)
- Integrated contact closure input
- DALI-2™ certified and IEC 62386 compliant

DALI-2™ Certified and IEC 62386 Compliant

DALI® interface for systems that provides control of one DALI loop. Capable of controlling DT6 and DT8 DALI devices.

Zūm Net Wired Technology

In a Zūm network, Zūm Net load controllers facilitate communications between rooms via Ethernet and can be daisy-chained for network expansion. Each device in the chain communicates to a Zūm Hub control system for centralized monitoring, management, and reporting. Zūm Link devices connect to Zūm Net devices to provide in-room lighting control. Zūm Link devices work together in a local ecosystem to provide customized solutions.

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 provide daisy-chaining and lighting control of compatible loads.

Energy Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable. Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-JBOX-16A-LV



- Zūm® wired junction box mounted lighting load dimmer
- Dimming control of 0-10V LED drivers or 4-wire fluorescent ballasts
- Integration with Zūm keypads, presence detectors, and daylight sensors (sold separately)
- Supports in-room device daisy chaining
- Integrated contact closure input

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 provide daisy-chaining and lighting control of compatible loads.

Energy Management and Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable. Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-JBOX-20A-PLUG



- Zūm® wired junction box mounted lighting load plug load controller
- Integration with Zūm keypads, presence detectors, and daylight sensors (sold separately)
- Zero-cross switching with the ability to switch control of 20A plug loads
- Supports in-room device daisy chaining
- Integrated contact closure input

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 provide daisy-chaining and lighting control of compatible loads.

Energy Management and Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable. Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-JBOX-20A-SW



- Zūm® wired junction box mounted lighting load switch
- Switching control of LED, fluorescent ballast, incandescent, magnetic low-voltage, electronic low-voltage, neon/cold cathode, and high-intensity discharge
- Integration with Zūm keypads, presence detectors, and daylight sensors (sold separately)
- Zero-cross switch control of 20A, 100-277V high inrush lighting loads
- Supports in-room device daisy chaining
- Integrated contact closure input

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 provide daisy-chaining and lighting control of compatible loads.

Energy Management and Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable. Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-EXP-16A-DIMU



Auto-Detecting Universal Dimming

Under normal operation, the universal dimmer 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 provide daisy-chaining and lighting control of compatible loads.

Energy Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

ZUMNET-DIN-16A-LV



- Zūm® wired DIN rail mounted lighting load dimmer
- Dimming control of 0-10V LED drivers or 4-wire fluorescent ballasts
- Integration with Zūm modules, keypads, presence detectors, and daylight sensors (sold separately)
- Ethernet network connection to ZUM-HUB4 control system (sold separately)
- Integrated contact closure input
- 4M wide DIN rail mounting

Zūm Net Wired Technology

In a Zūm network, Zūm Net load controllers facilitate communications between rooms via Ethernet and can be daisy-chained for network expansion. Each device in the chain communicates to a Zūm Hub control system for centralized monitoring, management, and reporting. Zūm Link devices connect to Zūm Net devices to provide in-room lighting control. Zūm Link devices work together in a local ecosystem to provide customized solutions.

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 provide daisy-chaining and lighting control of compatible loads.

Energy Management and Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMNET-DIN-DLI



- Zūm® wired DIN rail mounted DALI® drivers lighting controller
- Control of DALI compliant dimmable LED or fluorescent loads
- Integration with Zūm modules, keypads, presence detectors, and daylight sensors (sold separately)
- Ethernet network connection to ZUM-HUB4 control system (sold separately)
- Integrated contact closure input
- DALI-2™ certified and IEC 62386 compliant
- 4M wide DIN rail mounting

DALI-2™ Certified and IEC 62386 Compliant

DALI® interface for systems that provides control of one DALI loop. Capable of controlling DT6 and DT8 DALI devices.

Zūm Net Wired Technology

In a Zūm network, Zūm Net load controllers facilitate communications between rooms via Ethernet and can be daisy-chained for network expansion. Each device in the chain communicates to a Zūm Hub control system for centralized monitoring, management, and reporting. Zūm Link devices connect to Zūm Net devices to provide in-room lighting control. Zūm Link devices work together in a local ecosystem to provide customized solutions.

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 provide daisy-chaining and lighting control of compatible loads.

Energy Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-DIN-16A-LV



- Zūm® wired DIN rail mounted lighting load dimmer
- Dimming control of 0-10V LED drivers or 4-wire fluorescent ballasts
- Integration with Zūm modules, keypads, presence detectors, and daylight sensors (sold separately)

- Supports in-room device daisy chaining
- Integrated contact closure input
- 3M wide DIN rail mounting

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 provide daisy-chaining and lighting control of compatible loads.

Energy Management and Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-DIN-20A-PLUG



- Zūm® wired DIN rail mounted lighting load plug load controller
- Integration with Zūm modules, keypads, presence detectors, and daylight sensors (sold separately)
- Supports in-room device daisy chaining
- Integrated contact closure input
- 3M wide DIN rail mounting

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 provide daisy-chaining and lighting control of compatible loads.

Energy Management and Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-DIN-20A-SW



- Zūm® wired DIN rail mounted lighting load switch
- Switching control of LED, fluorescent ballast, incandescent, magnetic low-voltage, electronic low-voltage, neon/cold cathode, and high-intensity discharge
- Integration with Zūm modules, keypads, presence detectors, and daylight sensors (sold separately)
- Supports in-room device daisy chaining
- Integrated contact closure input
- 3M wide DIN rail mounting

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 provide daisy-chaining and lighting control of compatible loads.

Energy Management and Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

Override Contact Closure Input

An integrated contact closure provides the means to place all connected Zūm Net and Zūm Link devices into Emergency Override mode.

ZUMLINK-DIN-DIMU



- Zūm® wired DIN rail 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
- DIN rail mounted in a NEMA Type 1 enclosure
- Rated 500 W @ 100–120VAC
- Rated 1000 W @ 220–277VAC
- 3M wide DIN rail mounting

Auto-Detecting Universal Dimming

Under normal operation, the universal dimmer 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 four LEDs on the front of the device: REV, FWD, CENTER, and AUTO.

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 provide daisy-chaining and lighting control of compatible loads.

Energy Efficiency

The load controllers are capable of energy monitoring through custom programming. 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.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

Keypad Features

Product features for the ZUMLINK-KP are provided below.



(Faceplate not included)

- Provides control of one or more Zūm® wired J-Box Load Controllers
- RS485 communications for increased reliability
- Preprogrammed rocker button
- Configurable with two, four, six, or eight engraved or pad printed button trees (ZUMLINK-BTN2, ZUMLINK-BTN4, ZUMLINK-BTN6, ZUMLINK-BTN8, not included)
- Powered by 24V Zūm Link bus
- Two RJ-45 connections for device daisy-chaining
- Standard 3.5 in. (89 mm) deep electrical box installation
- Button tree and bezel available in almond, black, gray, red, and white finish
- Matching decorator-style faceplate required (FP-G Series, not included)

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 provide daisy-chaining and lighting control of compatible loads.

Button Configurations

The keypad is equipped with a single, white rocker button for switching or dimming control and is configurable with four, six, or eight pad printed or engravable button trees (sold separately). Replacement configurations are available in an almond, black, gray, red or white finish.

Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors, refer to Overview on page 11) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable (refer to Cables on page 26). Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller. A finished installation requires a decorator-style faceplate (FP-G Series, sold separately).

Presence Detector Features

Product features for the Zūm Link Presence Detectors are provided below.

ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY



ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY



ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY



ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY



ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY



ZUMLINK-US-ONEWAY-DLS and ZUMLINK-US-ONEWAY-DLS-RLY



- Ceiling-mount presence sensor
- 360 degree coverage pattern
- Fully digital circuitry for low cost and high reliability
- Built-in closed loop daylight sensor
- Control system communications the Zūm® Link network
- Compatible with Zūm wired keypad
- For the -RLY model, additional relays included for input-relay capable devices

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 provide daisy-chaining and lighting control of compatible loads.

Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors, refer to Overview on page 11) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable (refer to Cables on page 26). Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller.

Easy Commissioning

Finish the installation by quickly commissioning the room through the Zūm app. Expedite commissioning by copying a room configuration and sending it to an identical room. Save a room configuration template and share it via the ZUM-HUB4 or the Zūm app. The ZUMLINK-KP Bluetooth® connection is required to configure a Zūm wired space with the Zūm app.

Hub Features

Features for the ZUM-HUB4 are provided below.



- Centralized management for Zūm® commercial lighting systems
- Provides web-based user interface for easy configuration, control, scheduling, and monitoring
- Time clock for room lighting automation and sensing behavior
- Daisy-chain up to 20 Zūm Net load controllers (sold separately) via their built-in Zūm Net ports for room-to-room communication
- Use with an Ethernet switch (sold separately) to support multiple Zūm Net daisy-chains up to 1,000 rooms
- Daisy-chain up to 32 Zūm Link devices (sold separately) via their built-in Zūm Link ports for in-room communication
- BACnet™ communication supports control for up to 9,000 preset BACnet objects
- Dedicated Control Subnet
- Gigabit Ethernet networking
- Enterprise-grade security
- Enables integration with other Crestron lighting systems, control systems, touch screens, shading, HVAC, and more
- Single-space rack-mountable
- Universal 100–240V external power supply

Zūm Net Wired Technology

Zūm Net wired technology offers room-to-room communication. Control a room with one Zūm Net device (ZUMNET-JBOX-DALI, ZUMNET-JBOX-16A-LV, sold separately), and daisy-chain up to 20 Zūm Net devices with CBL-CAT5E-ZUMNET-P cable. For centralized management of a Zūm Wired System, connect the chain directly to a ZUM-HUB4 or multiple chains to an Ethernet switch (sold separately) to support up to 1,000 rooms.

Web-Based Management

The web browser user interface can manage, monitor, and schedule all of the available rooms on the network. Use a laptop computer (not included) to configure devices to work with the ZUM-HUB4. Active lighting scenes, daylight levels, occupancy detection, and scheduled time clock events are displayed. Errors are shown to facilitate troubleshooting.

Time Clock

A built-in time clock enables automated lighting control based on the time of day. Assign a Room Category (such as Office or Hallway) for consistent control and programming across multiple rooms. The clock allows Day Pattern arrangement for each Room Category, with up to 24 Room States

scheduled over a 24 hour period. Different Day Patterns can be defined and assigned to the calendar, which is pre-populated with typical day patterns and a selection of U.S. holidays.

BACnet™ Communications Protocol

Communicate with a Building Management System (BMS) to provide control of fire/life safety, lighting, and other building automation systems. The ZUM-HUB4 supports up to 1,9809,000 preset BACnet objects. BACnet objects beyond the presets require SW-HUB4-PROG for custom configuration.

Crestron XiO Cloud® Service Integration

Use Crestron XiO Cloud functionality for remote commissioning and monitoring of a ZUM-HUB4 control system.

Zūm Wireless Integration

Integration with existing Zūm Wireless installations is achieved with a ZUMNET-GATEWAY (not supplied), which connects to the ZUM-HUB4 via Ethernet.

Zūm System Integration with Other Crestron Control Systems

In addition to managing rooms equipped with Zūm lighting control, the ZUM-HUB4 enables integration with other Crestron systems over an Ethernet connection. Two methods of integration are available:

- **External Rooms**: A virtual room using legacy or conventional Crestron lighting control can be added to the Zūm network to be monitored, controlled, and scheduled.[1,2]
- **Mirrored Rooms**: An external Crestron system controls and monitors a room equipped with a Zūm system. Mirrored rooms allow for room control with a Crestron touch screen or handheld remote, as well as integration with shading, climate control, AV, and other equipment.[1,2]

Notes:

1. SIMPL+® software modules are provided for use in commissioning a Crestron control system to work with the ZUM-HUB4. The software modules run within the control system program and provide virtual connections for all the necessary intersystem control signals. A separate dedicated module is required for each external and mirrored room. Control systems are limited in the number of modules supported, ranging from 0 to 2001000 depending on the model. For further assistance, please contact Crestron Commercial Lighting Support via email at clclighting@crestron.com or by calling 855-644-7643.
2. Other Crestron control systems must be commissioned to provide the control logic required to communicate and operate as part of the Zūm network. Once integrated, each external room effectively becomes a part of the Zūm ecosystem.

Software Features

Refer to the following sections for Zūm app and ZUM-HUB4 custom program license software features.

Zūm App

Features for the Zūm app are provided below.

- Mobile configuration tool for Zūm® wired and wireless commercial lighting systems
- Compatible with iOS® and Android™ operating systems
- Bluetooth® low energy (BLE) communications

Zūm Space Management

Zūm spaces are manageable via the Zūm lighting configuration app. Open the Crestron Zūm app and all nearby Zūm spaces appear. Connect to a Zūm space and easily control and manage the space's name, security settings, and network configuration.

Zūm Device Management

Settings for individual load controllers, sensors, and keypads are modifiable from the Zūm lighting configuration app. Dimming levels, sensor sensitivity, and lighting scenes are all configurable through an intuitive on-screen procedure.

Bluetooth Connectivity

The Zūm lighting configuration app uses Bluetooth to easily pair with a ZUMMESH-NETBRIDGE for wireless installations or ZUMLINK-KP for wired installations. The signal strength between a mobile device and a Zūm device is displayed on the app's home screen for user convenience.

ZUM-HUB4 Custom Program License

- Activates a custom program slot on the ZUM-HUB4
- Run custom programming alongside native ZUM-HUB4 functionality
- Maintain centralized management of the system

Power Supply Features

Product features for the junction box and DIN rail junction box, DIN rail, and shades power supplies are provided below.

ZUMLINK-JBOX-PSU



- Zūm® wired junction box mounted power supply
- Powers Zūm keypads, presence detectors, and daylight sensors (sold separately)
- Flying lead wiring connections
- Knockout mount to a standard 4 in. square junction box

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 provide daisy-chaining and lighting control of compatible loads.

Easy Installation

For flexibility and ease-of-use, install Zūm devices (load controllers, keypads, and presence detectors) and connect them with Zūm Link (CBL-CAT5E-ZUMLINK-P) or Zūm Net (CBL-CAT5E-ZUMNET-P) CAT5e cable. Nonsystem occupancy, vacancy, or daylight sensors may also be installed in a Zūm space wired to the a load controller.

ZUMLINK-DIN-PSU



- Zūm® wired DIN rail mounted power supply
- Powers Zūm modules, keypads, presence detectors, and daylight sensors (sold separately)
- 4M wide DIN rail mounting

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 provide daisy-chaining and lighting control of compatible loads.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

CSA-PWS2S-JBOX-ZUMLINK-CN



- Power supply for up to two Crestron QMT series roller shades or drapery system motors
- Allows external power to pass through two Cresnet or two Zūm Link connections
- Zūm Link ports for commercial lighting applications utilizing custom programming
- 100 W total, 50 W per shade, 24V
- Individual per-motor overcurrent protection
- Miswire protection on power output terminals
- Anodized, black metal housing to blend with open ceilings
- LEDs to indicate power status for each shade

NOTES:

- The CSA-PWS2S-JBOX-ZUMLINK-CN must be installed by a licensed electrician and comply with local building codes.
- Outputs can be used for either shades or additional Cresnet devices. Do not combine shades and Cresnet devices on a single output. Each shade or device must have its own dedicated output.
- To configure shades or order shading parts and accessories, please use the Crestron Design Tool for Crestron Shading Solutions or call 1-855-53-S-H-A-D-E (537-4233) for support.

Digital Quiet Motor Technology

Quiet Motor Technology allows for nearly inaudible operation while providing precise control of shade movement. Digital QMT® shade motors also keep track of the shade's position which allows the shade to be programmatically adjusted to the user's desired position.

Cresnet® Wired Communications (-CN Motors)

Cresnet wired communication provides dependable two-way communication with a control system. The Cresnet bus offers easy wiring and configuration, carrying bidirectional communication and 24VDC power to each device over a simple 4-conductor cable.

Integration Module with Standalone Timeclock Features

Product features for the junction box and DIN rail integration modules are provided below.

ZUMLINK-JBOX-IO



- Zūm® wired junction box mounted multi-purpose integration and timeclock device
- Powered by Zūm link bus
- Provides a standalone astronomical time clock and local time and date settings without a ZUM-HUB4 or control system
- Provides a distributed, room level interface to third-party smart controllers, such as HVAC/VAV systems and shade controllers
- Supports in-room device daisy chaining with other Zūm wired devices
- Cover mount to a standard 4 in. square junction box

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 provide daisy-chaining and lighting control of compatible loads.

Easy Installation

The ZUMLINK-JBOX-IO installs in a standard four-inch square junction box. Depending on the installation requirements of the space, the ZUMLINK-JBOX-IO can be installed with the connections facing out or into the junction box. Connect the ZUMLINK-JBOX-IO to Zūm devices (load controllers, keypads, and sensors) utilizing Zūm Link connections.

Astronomical Time-Clock Control

Enables control of standalone Zūm spaces based on date and time without the need for system networking or a centralized control hub. Configure date and time, schedules, events, and holidays from the Zūm app directly to the space.

ZUMLINK-DIN-IO



- Zūm® wired DIN rail mounted multi-purpose integration and timeclock device
- Powered by Zūm link bus
- Provides a standalone astronomical time clock and local time and date settings without a ZUM-HUB4 or control system
- Provides a distributed, room level interface to third-party smart controllers, such as HVAC/VAV systems and shade controllers
- Supports in-room device daisy chaining with other Zūm wired devices
- 4M wide DIN rail mounting

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 provide daisy-chaining and lighting control of compatible loads.

DIN Rail Mounting

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel.

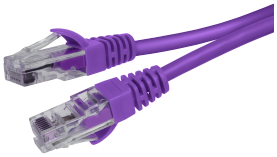
Astronomical Time-Clock Control

Enables control of standalone Zūm spaces based on date and time without the need for system networking or a centralized control hub. Configure date and time, schedules, events, and holidays from the Zūm app directly to the space.

Cable Features

Cables are available for Zūm Net and Zūm Link applications.

- CBL-CAT5E-ZUMNET-P Zūm Link Wiring on page 57
- CBL-CAT5E-ZUMLINK-P Zūm Link Wiring on page 57



CBL-CAT5E-ZUMNET-P



CBL-CAT5E-ZUMLINK-P

CBL-CAT5E-ZUMNET-P Zūm Link Wiring

- Preterminated CAT5e cable for Zūm Net device communications between rooms in a Zūm® Wired system
- RS485 Communications
- Plenum-rated jacket
- RJ-45 connectors with dust cap
- Available in four lengths

CBL-CAT5E-ZUMNET-P cables connect a Zūm Net device to a ZUM-HUB4 control system (refer to Hub on page 21), an Ethernet switch, or to other Zūm Net devices. This enables LAN communications and device daisy-chaining between rooms within a Zūm Wired system.

CBL-CAT5E-ZUMLINK-P Zūm Link Wiring

- Preterminated CAT5e cable for Zūm Link device communications within a Zūm® Wired space
- RS485 Communications
- Plenum-rated jacket
- RJ-45 connectors
- Available in seven lengths

CBL-CAT5E-ZUMLINK-P cables distribute power between Zūm Link devices for in-room device daisy chaining. They provide communications between load controllers, keypads, sensors, and any other devices within a Zūm Wired room as well as transport emergency override capabilities. CBL-CAT5E-ZUMLINK-P cables also distribute power and data between Zūm Net and Zūm Link devices to facilitate network expansion.

Cable Accessory Features

Cables accessories include the ZUMLINK-CONV-CN adapter cable and the ZUMLINK-SPLTR-RJ45 splitter.

- ZUMLINK-CONV-CN on page 58
- ZUMLINK-SPLTR-RJ45 on page 58



ZUMLINK-CONV-CN ZUMLINK-SPLTR-RJ45

ZUMLINK-CONV-CN

- Connects Cresnet devices to the Zūm Link network via a CBL-CAT5E-ZUMLINK-P cable.
- Provides an RJ-45 female port and Cresnet network screw terminals
- Daisy chain Zūm Link devices with the ZUMLINK-SPLTR-RJ45 to avoid dead ends
- Plenum-rated cable

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 provide daisy-chaining and lighting control of compatible loads.

Cresnet Wired Network

The Zūm devices use the dependable Cresnet wired network for communication between devices. The Cresnet bus offers easy wiring and configuration, carrying bidirectional communication and 24VDC power to each device over a simple 4-conductor cable.

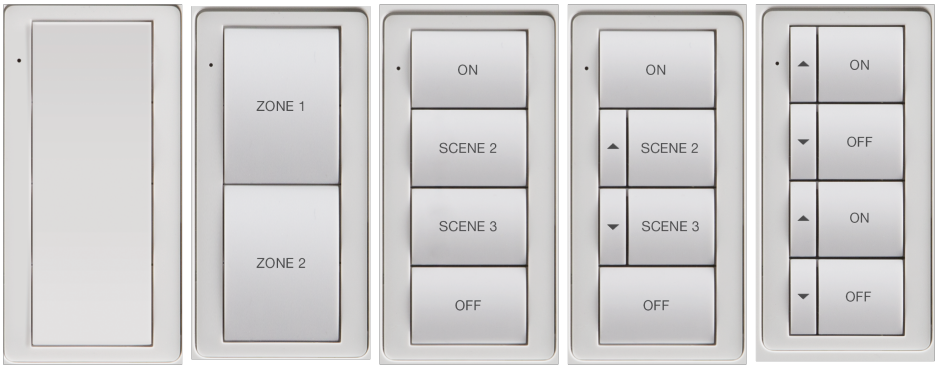
ZUMLINK-SPLTR-RJ45

The Zūm® Wired ZUMLINK-SPLTR-RJ45 RJ-45 splitter enables one CBL-CAT5E-ZUMLINK-P cable to output two Zūm Link ports. It is plenum rated and works with Zūm Link devices. For flexible, in-room wiring, use with the ZUMLINK-CONV-CN to daisy chain Zūm Link devices with Cresnet® devices.

Rocker and Button Tree Features

Product features for the rocker and button tree configurations are provided below.

ZUMLINK-BTNR ZUMLINK-BTN2 ZUMLINK-BTN4 ZUMLINK-BTN6 ZUMLINK-BTN8



- Provides multiple button configurations for ZUMLINK-KP keypads
- Two-piece installation: button tree or rocker with matching bezel
- Easily swap button configurations in the field
- Available as a rocker button or in configurations of two, four, six, or eight button trees
- Pad printed labeling or custom engravings available
- Offered in black, white, almond, gray, or red finishes

Pad Printing

Pad printed button trees allow for convenient preprinted labeling on any ZUMLINK-BTN configuration. Visit the following product pages to view the various button configurations and colors offered for the pad printed models.

- ZUMLINK-BTN2: ZONE 1, ZONE 2
- ZUMLINK-BTN4: ON, SCENE 2, SCENE 3, OFF
- ZUMLINK-BTN6: ON, SCENE 2, SCENE 3, OFF, ∧, ∨
- ZUMLINK-BTN8: ON, OFF, ON, OFF, ∧, ∨, ∧, ∨

Custom Engraving

Crestron Engraver software makes it easy to specify and order button trees with custom engravings for a ZUMLINK-KP Zūm Wired Keypad. Visit the following product pages to view the various button configurations and colors offered for the custom engraved models.

- ZUMLINK-BTN2 ENGRAVED
- ZUMLINK-BTNR ENGRAVED
- ZUMLINK-BTN4 ENGRAVED
- ZUMLINK-BTN6 ENGRAVED
- ZUMLINK-BTN8 ENGRAVED

Blank Buttons

In addition to custom engraving and pad printed buttons, blank buttons are available. Visit the following product pages to view the various button configurations and colors offered.

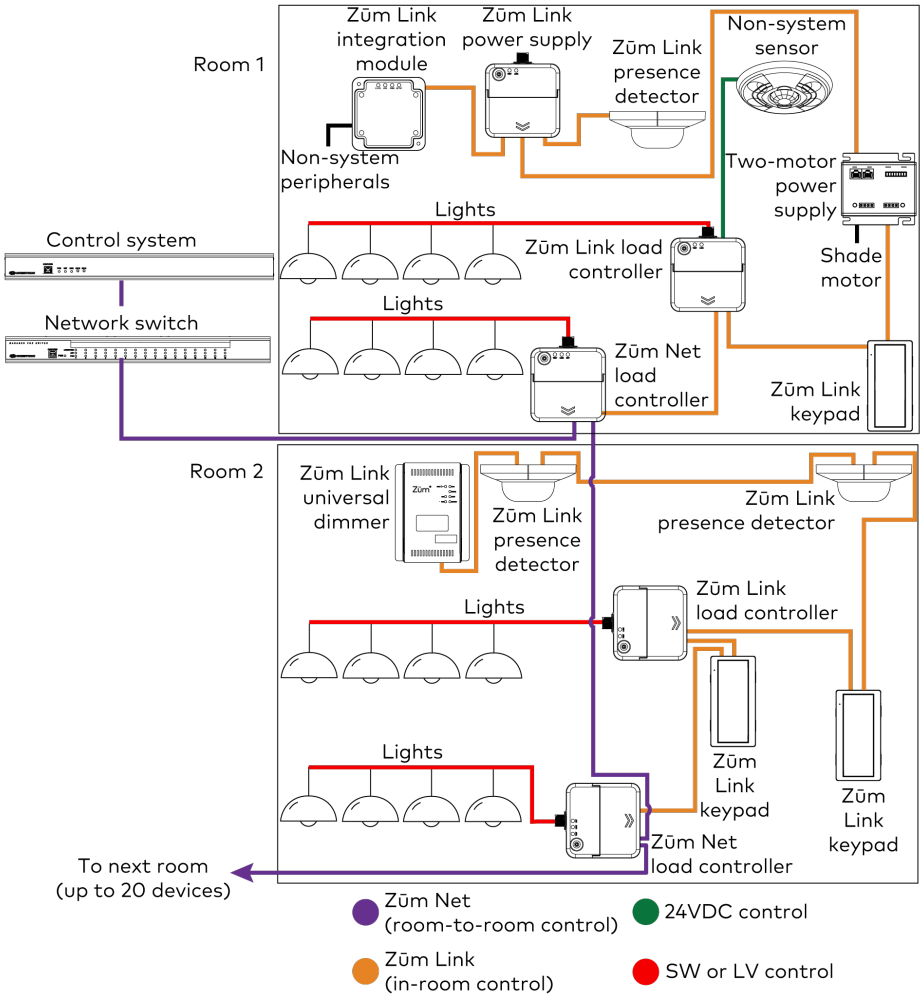
- ZUMLINK-BTN2 BLANK
- ZUMLINK-BTNR BLANK
- ZUMLINK-BTN4 BLANK
- ZUMLINK-BTN6 BLANK
- ZUMLINK-BTN8 BLANK

Application Scenarios

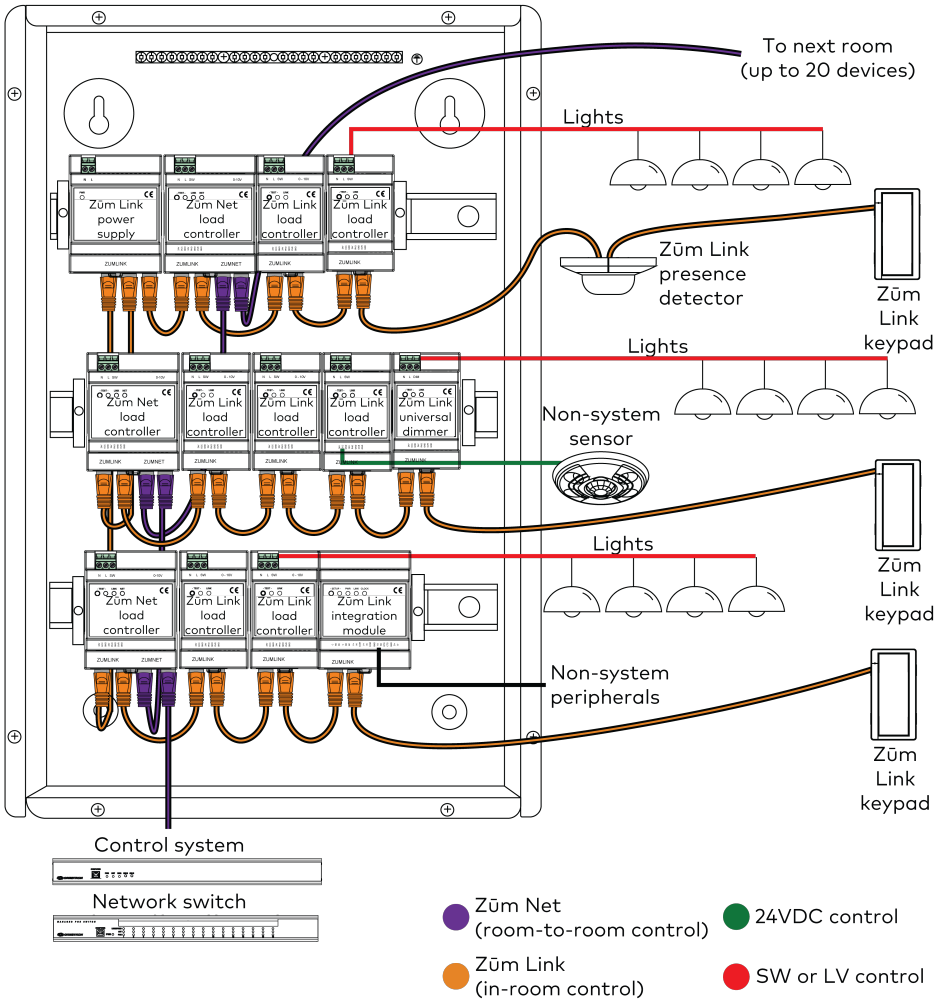
Refer to the following illustrations for common applications. For more scenarios, refer to Typical Zūm Wired Applications on page 475.

Zūm Wired System Diagram

Zūm Wired System Diagram



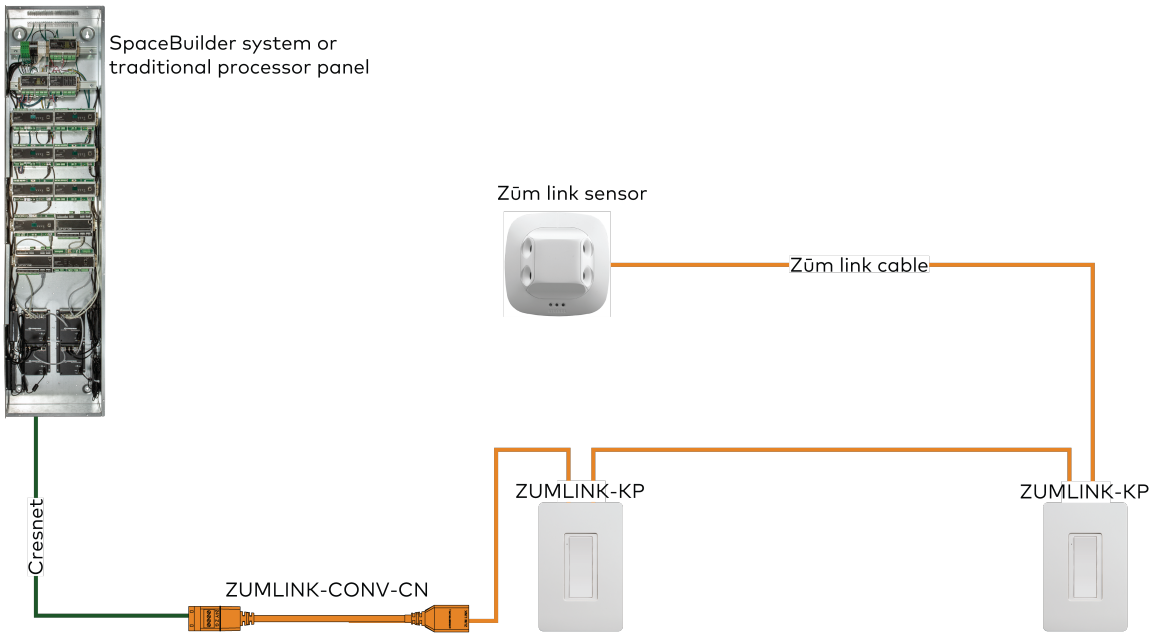
Zūm DIN System Diagram



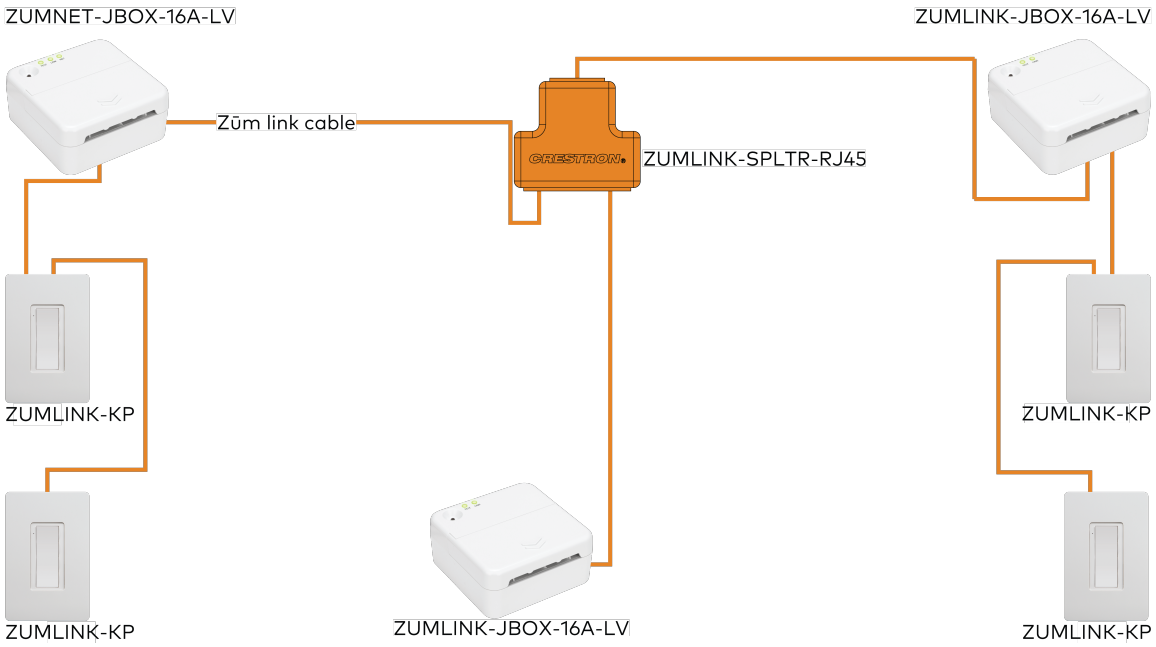
NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

Integrating a Legacy Lighting System into a Zūm System



Using a Zūm Link Splitter (ZUMLINK-SPLTR-RJ45)



Specifications

Refer to the following sections for more information on the specifications for various Zūm Wired devices.

- Load Controller Specifications
- Keypad Specifications
- Presence Detector Specifications
- Hub Specifications
- Zūm App Specifications
- Power Supply Specifications
- Integration Module with Standalone Timeclock Specifications
- Cable Specifications
- Cable Accessory Specifications
- Rocker and Button Tree Specifications

Load Controller Specifications

Zūm junction box and surface mount load controllers include:

- ZUMNET-JBOX-16A-LV Product Specifications on page 65
- ZUMNET-JBOX-DALI Product Specifications on page 68
- ZUMLINK-JBOX-16A-LV Product Specifications on page 71
- ZUMLINK-JBOX-20A-PLUG Product Specifications on page 74
- ZUMLINK-JBOX-20A-SW Product Specifications on page 76
- ZUMLINK-EXP-16A-DIMU Product Specifications on page 78

Zūm DIN rail load controllers include:

- ZUMNET-DIN-16A-LV Product Specifications on page 82
- ZUMNET-DIN-DLI Product Specifications on page 85
- ZUMLINK-DIN-16A-LV Product Specifications on page 88
- ZUMLINK-DIN-20A-PLUG Product Specifications on page 90
- ZUMLINK-DIN-20A-SW Product Specifications on page 93
- ZUMLINK-DIN-DIMU Product Specifications on page 96

ZUMNET-JBOX-16A-LV Product Specifications

Load Control

Dim Load Types	0–10V LED drivers or electronic drivers (4-wire)
Dim Control Output	0–10VDC, 60mA maximum sink or source
Line Voltage	100–277VAC, 50/60 Hz
Load Rating	16A @ 100–277V
Motor Rating	0.5 HP @ 100–277V
Inrush Capability[1]	Unlimited (zero-cross switching)

Wired Communications

ZUMNET (LAN)	(2) RJ-45 ports; Input for control system connection or Zūm Net device; Output for Zūm Net device daisy-chaining
ZUMLINK (ROOM)	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining; 85mA power available for Zūm Link devices, including ZUMLINK-KP keypads; Maximum 750mA pass-through current including any internal power supply

24V, OCC, GND	Occupancy sensor input; 85mA available output current; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
ZUMNET Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
24V	(1) Green LED
O	(1) Red LED
D	(1) Yellow LED
OVR	(1) Green LED

Connections

Black	(1) 14 AWG Class 1 flying lead; Line (AC power input)
White	(1) 14 AWG Class 1 flying lead; Neutral
Red	(1) 14 AWG Class 1 flying lead; Power monitoring, (AC power output)
Purple	(1) 18 AWG Class 1 flying lead, purple, 0-10VDC dimming control output, positive
Pink	(1) 18 AWG Class 1 flying lead; 0-10VDC dimming control output, negative

Environmental

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

Construction

Housing	Plastic, white, UL 94 5VA flame rated
Mounting	Mounts to the side of a 4 in. square junction box via a 1/2 in. conduit knockout; Meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.83 in. (123 mm)
Width	4.25 in. (108 mm)
Depth	2.03 in. (52 mm)

Weight

7 oz (199 g)

Compliance

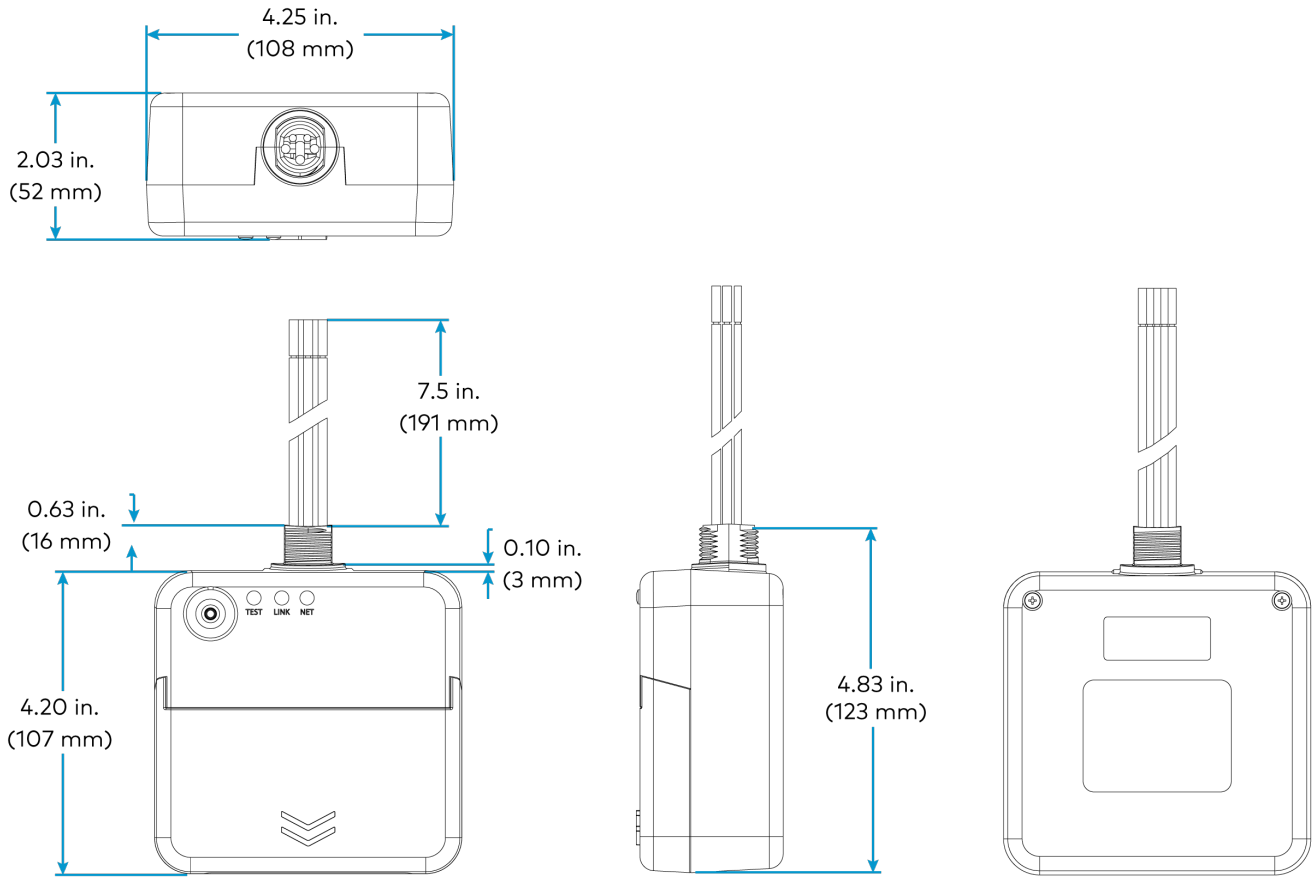
Regulatory Model: M201933001

ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.
ETL Listed for the United States and Canada to UL STD 916 & CSA STD C22.2 No.205.

Notes:

1. This product features zero-cross synchronized switching. This technology allows the product to operate extremely high inrush loads without degrading switch lifetime.

ZUMNET-JBOX-16A-LV Dimension Drawings



ZUMNET-JBOX-DALI Product Specifications

Load Control

DALI Load Types	Control of DALI compliant dimmable LED or fluorescent loads
DALI Groups	16
DALI Drivers	64
DALI Bus Power Supply	Maximum: 0.23A; Guaranteed: 0.17A
Line Voltage	100–277VAC, 50/60 Hz
Load Rating	16A @ 100–277V

Wired Communications

ZUMNET (LAN)	(2) RJ-45 ports; Input for control system connection or Zūm Net device; Output for Zūm Net device daisy-chaining

ZUMLINK (ROOM)	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining; 85mA power available for Zūm Link devices, including ZUMLINK-KP keypads; Maximum 750mA pass-through current including any internal power supply
24V, OCC, GND	Occupancy sensor input; 85mA available output current; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
ZUMNET Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
24V	(1) Green LED
O	(1) Red LED
D	(1) Yellow LED
OVR	(1) Green LED

Connections

Black	(1) 14 AWG Class 1 flying lead; Line (AC power input)
White	(1) 14 AWG Class 1 flying lead; Neutral
Red	(1) 14 AWG Class 1 flying lead; Power monitoring, (AC power output)
Purple	(1) 18 AWG Class 1 flying lead; DALI positive (DA+), low voltage
Gray	DALI negative (DA-), low voltage

Environmental

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

Construction

Housing	Plastic, white, UL 94 5VA flame rated
Mounting	Mounts to the side of a 4 in. square junction box via a 1/2 in. conduit knockout; Meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.83 in. (123 mm)
Width	4.25 in. (108 mm)
Depth	2.03 in. (52 mm)

Weight

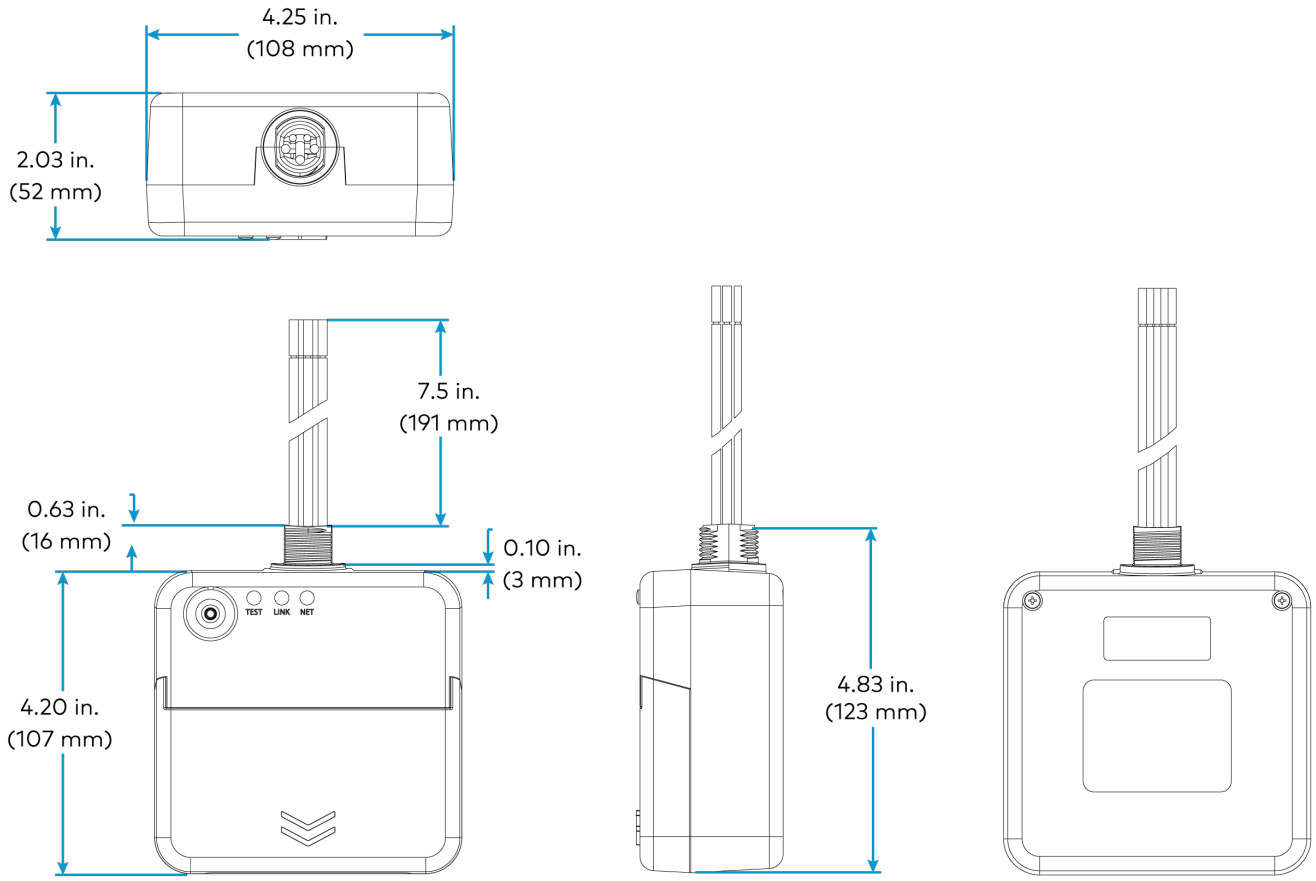
7 oz (199 g)

Compliance

Regulatory Model: M201933003

ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.
ETL Listed for the United States and Canada to UL STD 916 & CSA STD C22.2 No.205.
DALI-2 certified

ZUMNET-JBOX-DALI Dimension Drawings



ZUMLINK-JBOX-16A-LV Product Specifications

Load Control

Dim Load Types	0–10V LED drivers or electronic drivers (4-wire)
Dim Control Output	0–10VDC, 60mA maximum sink or source
Line Voltage	100–277VAC, 50/60 Hz
Load Rating	16A @ 100–277V
Motor Rating	0.5 HP @ 100–277V
Inrush Capability[1]	Unlimited (zero-cross switching)

Wired Communications

ZUMLINK (ROOM)	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining; 85mA power available for Zūm Link devices, including ZUMLINK-KP keypads; Maximum 750mA pass-through current including any internal power supply

24V, OCC, GND	Occupancy sensor input; 85mA available output current; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
24V	(1) Green LED
O	(1) Red LED
D	(1) Yellow LED
OVR	(1) Green LED

Connections

Black	(1) 14 AWG Class 1 flying lead; Line (AC power input)
White	(1) 14 AWG Class 1 flying lead; Neutral
Red	(1) 14 AWG Class 1 flying lead; Power monitoring, (AC power output)
Purple	(1) 18 AWG Class 1 flying lead, purple, 0-10VDC dimming control output, positive
Pink	(1) 18 AWG Class 1 flying lead; 0-10VDC dimming control output, negative

Environmental

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

Construction

Housing	Plastic, white, UL 94 5VA flame rated

Mounting	Mounts to the side of a 4 in. square junction box via a 1/2 in. conduit knockout; Meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.83 in. (123 mm)
Width	4.25 in. (108 mm)
Depth	2.03 in. (52 mm)

Weight

7 oz (199 g)

Compliance

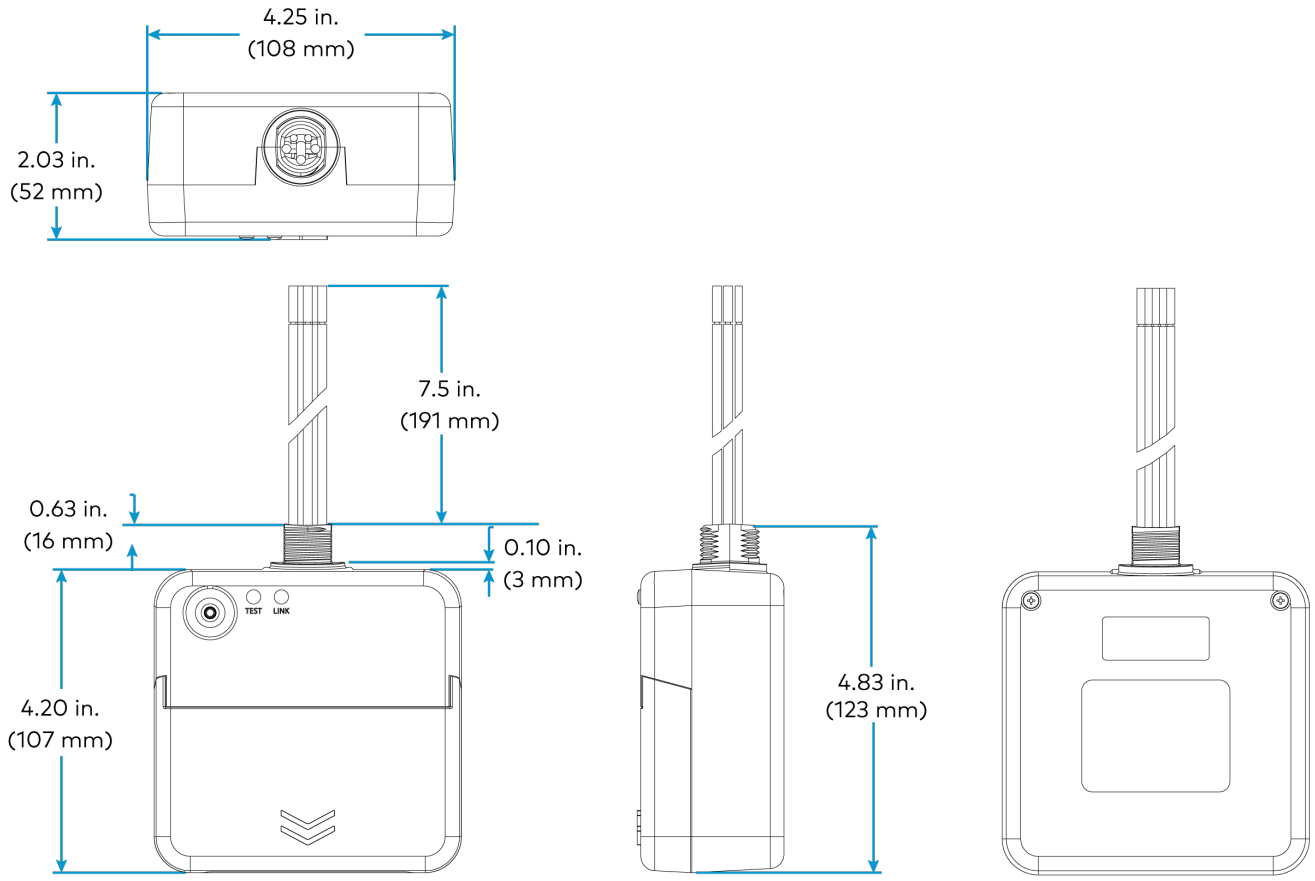
Regulatory Model: M201933001

ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.
ETL Listed for the United States and Canada to UL STD 916 & CSA STD C22.2 No.205.

Notes:

1. This product features zero-cross synchronized switching. This technology allows the product to operate extremely high inrush loads without degrading switch lifetime.

ZUMLINK-JBOX-16A-LV Dimension Drawings



ZUMLINK-JBOX-20A-PLUG Product Specifications

Load Control

Line Voltage	100–277VAC, 50/60 Hz
Load Rating	20A @ 100–277V
Motor Rating	0.5 HP @ 100–277V
Inrush Capability[1]	Unlimited (zero-cross switching)

Wired Communications

ZUMLINK (ROOM)	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining; 85mA power available for Zūm Link devices, including ZUMLINK-KP keypads; Maximum 750mA pass-through current including any internal power supply
24V, OCC, GND	Occupancy sensor input; 85mA available output current; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
24V	(1) Green LED
O	(1) Red LED
D	(1) Yellow LED
OVR	(1) Green LED

Connections

Black	(1) 14 AWG Class 1 flying lead; Line (AC power input)

White	(1) 14 AWG Class 1 flying lead; Neutral
Red	(1) 14 AWG Class 1 flying lead; Power monitoring, (AC power output)

Environmental

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

Construction

Housing	Plastic, white, UL 94 5VA flame rated
Mounting	Mounts to the side of a 4 in. square junction box via a 1/2 in. conduit knockout; Meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.83 in. (123 mm)
Width	4.25 in. (108 mm)
Depth	2.03 in. (52 mm)

Weight

7 oz (199 g)

Compliance

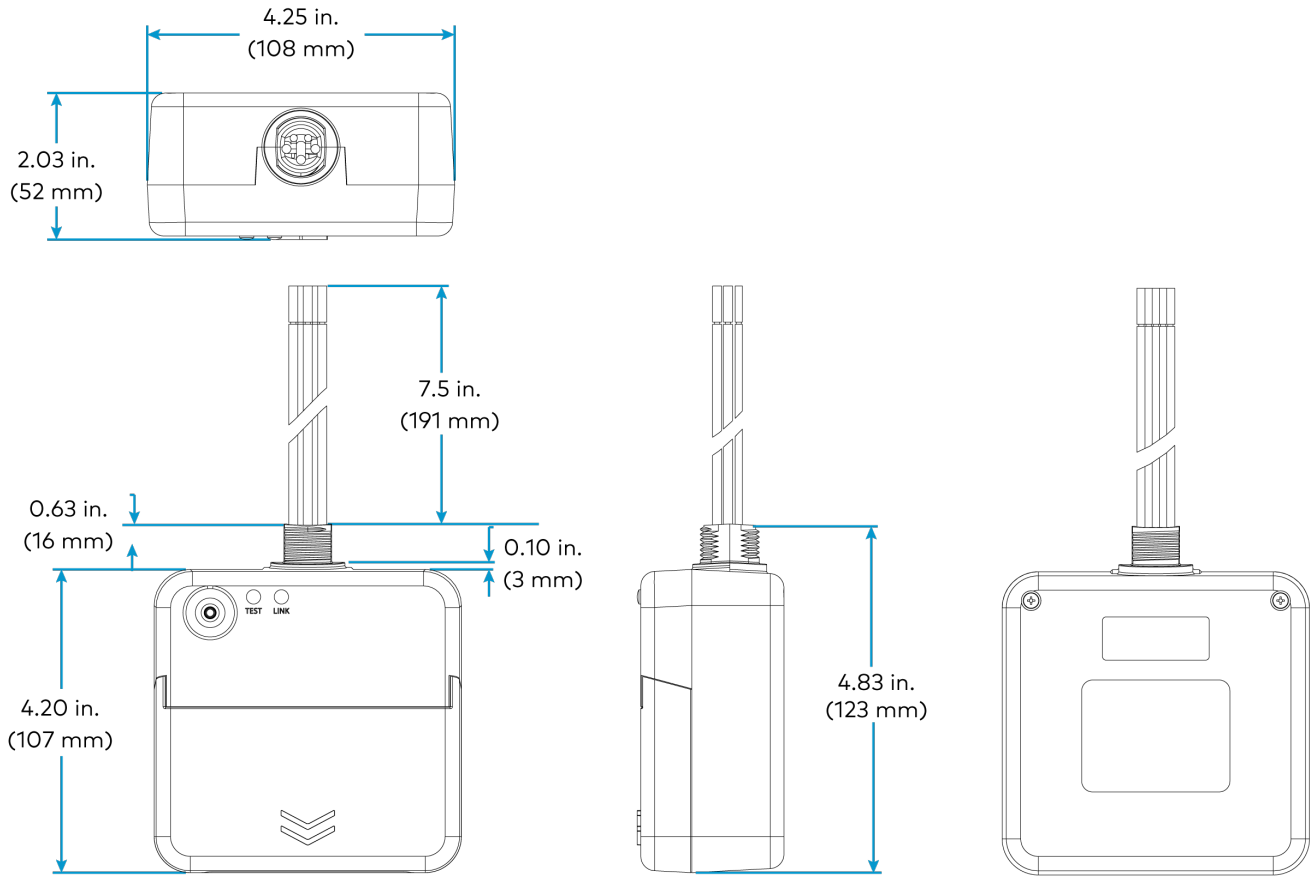
Regulatory Model: M201933002

ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.
ETL Listed for the United States and Canada to UL STD 916 & CSA STD C22.2 No.205.

Notes:

1. Inrush seen by the load controller is the cumulative summation of the per-fixture inrush. For details, contact Crestron's True Blue Technical Support.

ZUMLINK-JBOX-20A-PLUG Dimension Drawings



ZUMLINK-JBOX-20A-SW Product Specifications

Load Control

Line Voltage	100–277VAC, 50/60 Hz
Load Rating	20A @ 100–277V
Motor Rating	0.5 HP @ 100–277V
Inrush Capability[1]	Unlimited (zero-cross switching)

Wired Communications

ZUMLINK (ROOM)	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining; 85mA power available for Zūm Link devices, including ZUMLINK-KP keypads; Maximum 750mA pass-through current including any internal power supply
24V, OCC, GND	Occupancy sensor input; 85mA available output current; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire

24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
24V	(1) Green LED
O	(1) Red LED
D	(1) Yellow LED
OVR	(1) Green LED

Connections

Black	(1) 14 AWG Class 1 flying lead; Line (AC power input)
White	(1) 14 AWG Class 1 flying lead; Neutral
Red	(1) 14 AWG Class 1 flying lead; Power monitoring, (AC power output)

Environmental

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

Construction

Housing	Plastic, white, UL 94 5VA flame rated
Mounting	Mounts to the side of a 4 in. square junction box via a 1/2 in. conduit knockout; Meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.83 in. (123 mm)
Width	4.25 in. (108 mm)
Depth	2.03 in. (52 mm)

Weight

7 oz (199 g)

Compliance

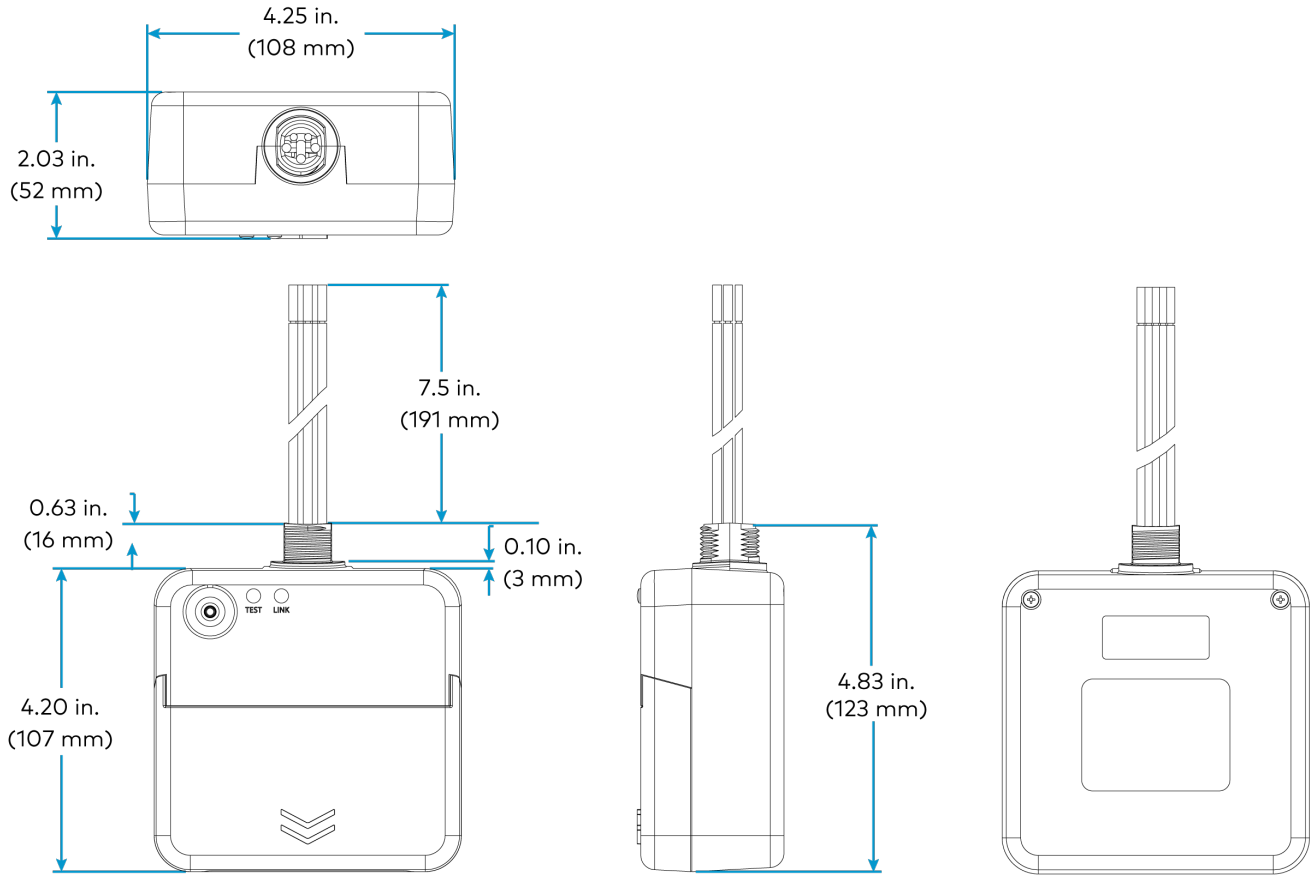
Regulatory Model: M201933002

ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.
ETL Listed for the United States and Canada to UL STD 916 & CSA STD C22.2 No.205.

Notes:

1. This product features zero-cross synchronized switching. This technology allows the product to operate extremely high inrush loads without degrading switch lifetime.

ZUMLINK-JBOX-20A-SW Dimension Drawings



ZUMLINK-EXP-16A-DIMU Product 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

Controls and Indicators

TEST	(1) Push button 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) Push button (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) Push button (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) Push button (behind cover), initiates hardware reset
LINK	(1) bicolor 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

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current
NEUT	(3) Captive screw terminals; Neutral connections for feed and load; 24–10 AWG (0.25 to 4 mm^2) wire size
LINE	(2) Captive screw terminals; Line power feed input and pass-through; 24-10 AWG (0.25 to 4 mm^2) wire size

LOAD	(1) Captive screw terminal; Dimmed load output; 24–10 AWG (0.25 to 4 mm^2) 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 in. or 3/4 in. conduit knockouts on bottom and lower left and 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

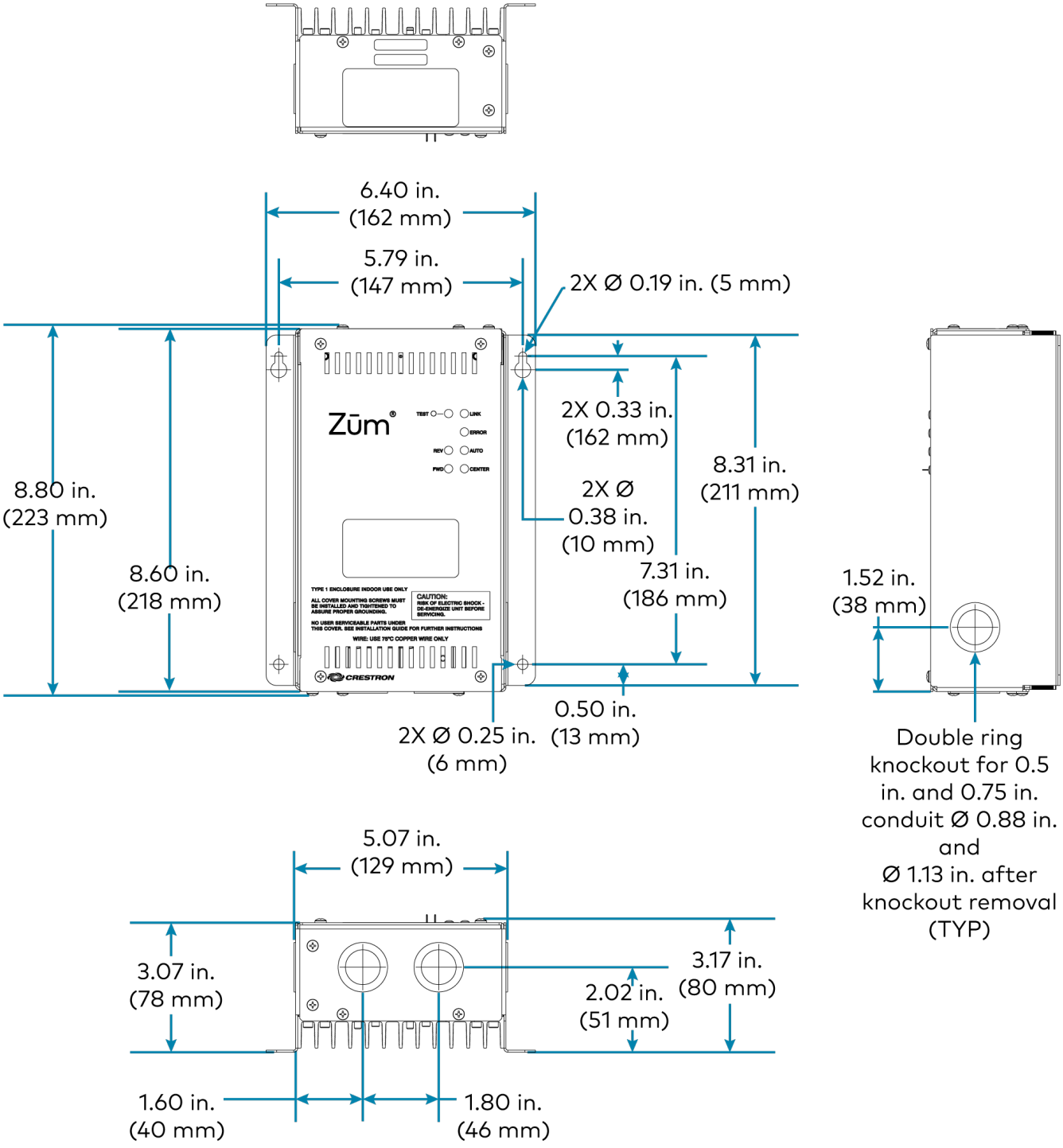
3.43 lb (1.56 kg)

Compliance

Regulatory Model: M202108001

ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.
ETL Listed for the United States and Canada to UL STD 916 & CSA STD C22.2 No.205.

ZUMLINK-EXP-16A-DIMU Dimension Drawings



ZUMNET-DIN-16A-LV Product Specifications

Load Control

Dim Load Types	0–10V LED drivers or electronic drivers (4-wire)
Dim Control Output	0–10VDC, 60mA maximum sink or source
Line Voltage	100–277VAC, 50/60 Hz
Load Rating	16A @ 100–277V
Motor Rating	1 HP @ 100–277V
Inrush Capability[1]	300A-inrush for 16A loads; 375A-inrush for 10A loads
Switch Lifetime	General Rating: 100,000 on/off operations, 16A @ 277VAC; Motor Rating: 100,000 on/off operations, 1HP @ 120/230/277VAC;

Zūm Link Power Bus Requirements

Max Current Consumption	120mA *With 0–10V load (60mA), without sensor terminal.*
Max Allowable Sensor Terminal Current	85mA *Passthrough from Zūm Link bus*

Wired Communications

ZUMNET	(2) RJ-45 ports; Input for control system connection or Zūm Net device; Output for Zūm Net device daisy-chaining
ZUMLINK	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining
24V, OCC, GND	Occupancy sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
ZUMNET Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected

Connections

N, L, SW (Neutral, Line, Switch)	(1) 3-pin terminal block; Each terminal accepts one 12–24 AWG wire
0-10V	(2) 0-10VDC dimming control output; Spring clamp connector; Each terminal accepts one 12–24 AWG solid wire or 14–24 AWG stranded wire

Environmental

Local In-Cabinet Air Temperature	32° to 131°F (0° to 55°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	7 BTU/hr @ 0A; 13 BTU/hr @ 16A

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.79 in. (71 mm)
Depth	2.32 in. (59 mm)

Weight

5 oz (142 g)

Compliance

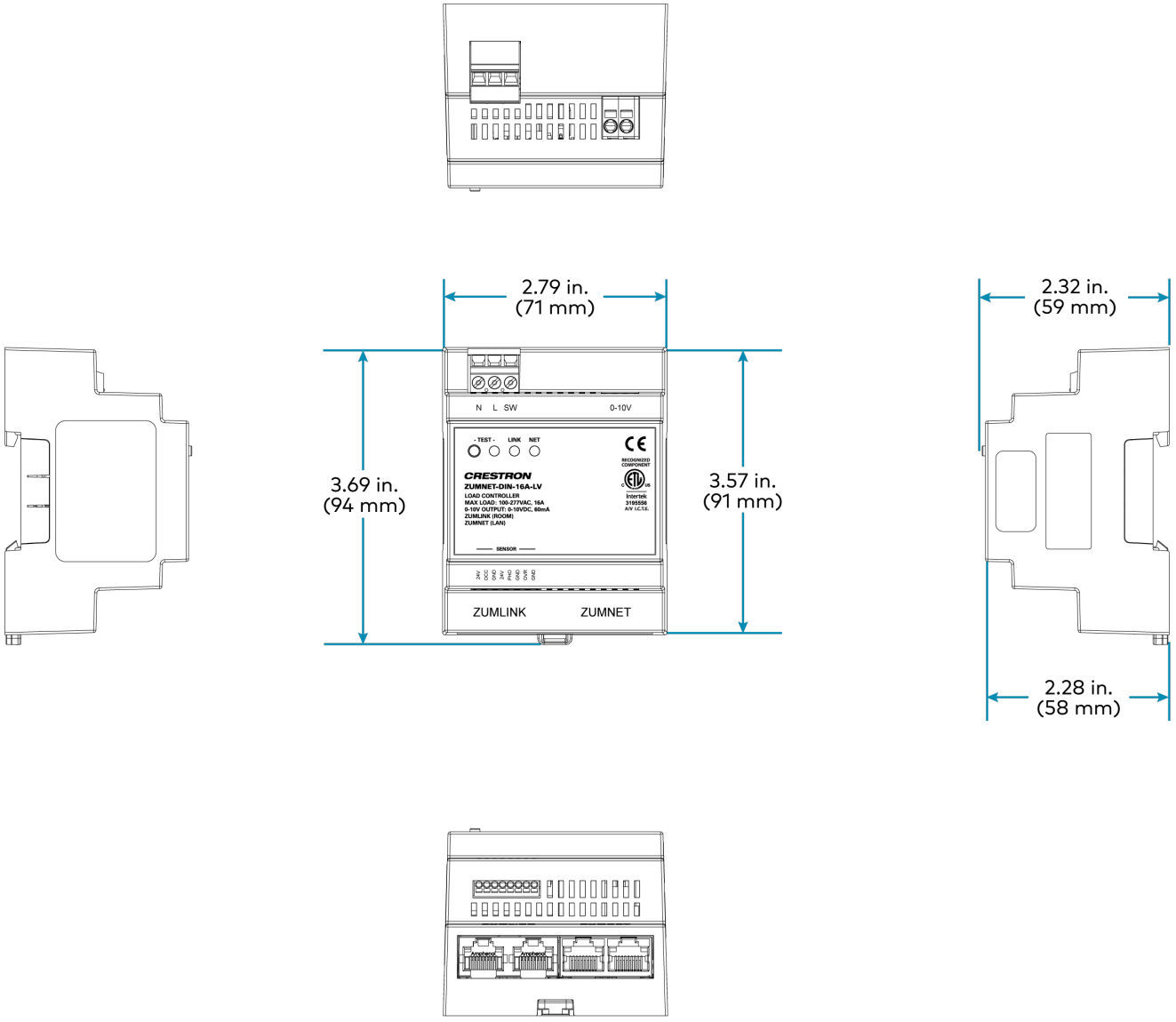
Regulatory Model: M202231001

ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant, IC certified, and compliant with FCC Part 15 Class B requirements.
ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.

Notes:

1. Inrush seen by the load controller is the cumulative summation of the per-fixture inrush. For details, contact Crestron's True Blue Technical Support.

ZUMNET-DIN-16A-LV Dimension Drawings



ZUMNET-DIN-DLI Product Specifications

Load Control

DALI Load Types	Control of DALI compliant dimmable LED loads
DALI Groups	16
DALI Drivers	64
DALI Bus Power Supply	Maximum: 0.23A; Guaranteed: 0.17A
Line Voltage	100–277VAC, 50/60 Hz
Load Rating	16A @ 100–277V

Zūm Link Power Bus Requirements

Max Current Consumption	70mA *With one DALI driver (2mA), without sensor terminal* 190mA *With 64 DALI drivers (128mA), without sensor terminal*
Max Allowable Sensor Terminal Current	85mA *Passthrough from Zūm Link bus*

Wired Communications

ZUMNET	(2) RJ-45 ports; Input for control system connection or Zūm Net device; Output for Zūm Net device daisy-chaining
ZUMLINK	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining
24V, OCC, GND	Occupancy sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
ZUMNET Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected

Connections

N, L, OUT (Neutral, Line, Output)	(1) 3-pin terminal block; Each terminal accepts one 12–24 AWG wire
DA-, DA+	(2) DALI input/output negative (DA-) and positive (DA+) Spring clamp connector Each terminal accepts one 12–24 AWG solid wire or 14–24 AWG stranded wire

Environmental

Local In-Cabinet Air Temperature	32° to 131°F (0° to 55°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	5 BTU/hr @ 2mA DALI Loading, 0A passthrough; 7 BTU/hr @ 128mA DALI Loading, 0A passthrough; 14 BTU/hr @ 128mA DALI Loading, 16A passthrough

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.79 in. (71 mm)
Depth	2.32 in. (59 mm)

Weight

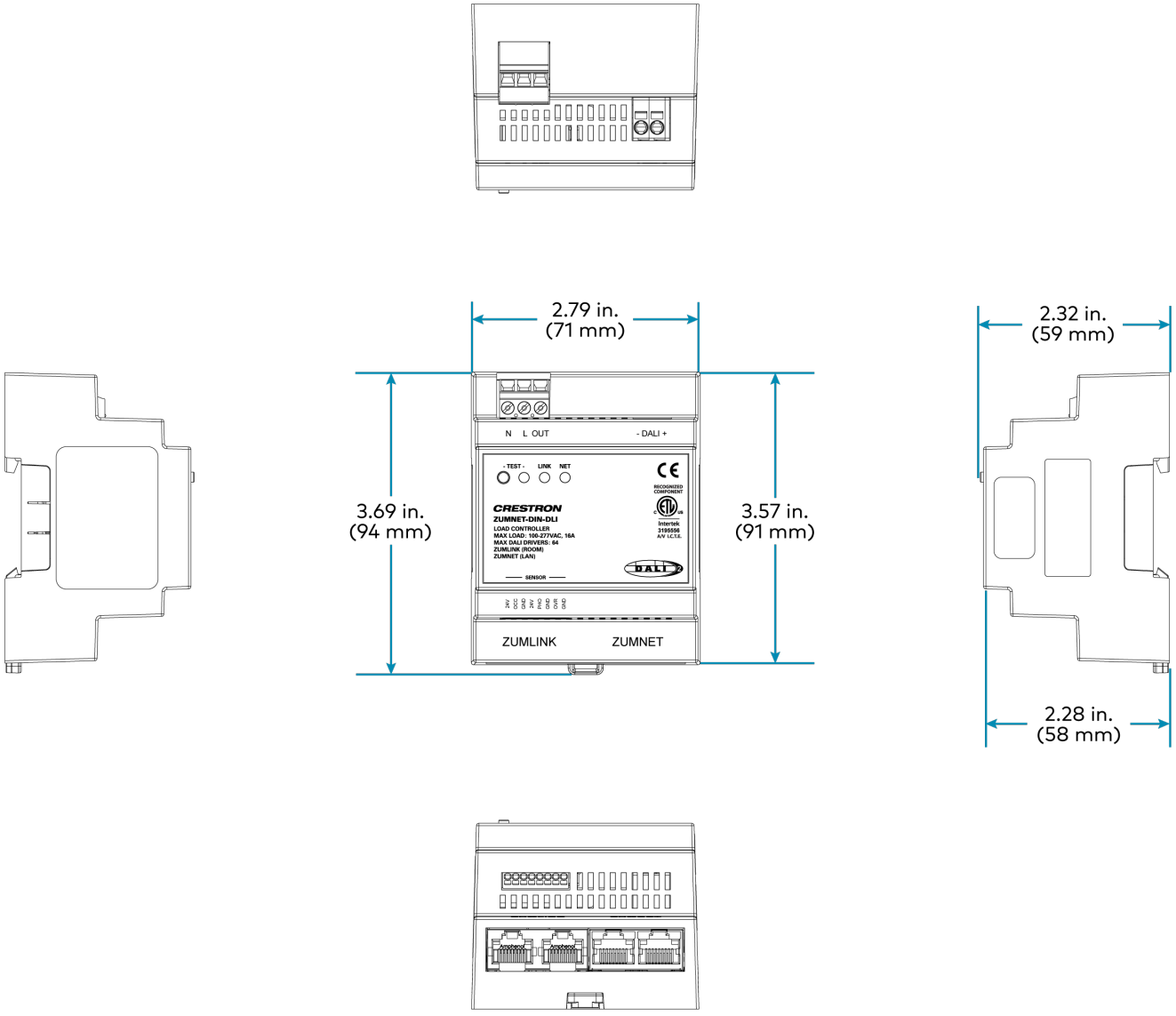
4 oz (133 g)

Compliance

Regulatory Model: M202231001

ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant, IC certified, and compliant with FCC Part 15 Class B requirements.
ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.
DALI-2 certified

ZUMNET-DIN-DLI Dimension Drawings



ZUMLINK-DIN-16A-LV Product Specifications

Load Control

Dim Load Types	0–10V LED drivers or electronic drivers (4-wire)
Dim Control Output	0–10VDC, 60mA maximum sink or source
Line Voltage	100–277VAC, 50/60 Hz
Load Rating	16A @ 100–277V
Motor Rating	1 HP @ 100–277V
Inrush Capability[1]	300A-inrush for 16A loads; 375A-inrush for 10A loads
Switch Lifetime	General Rating: 100,000 on/off operations, 16A @ 277VAC; Motor Rating: 100,000 on/off operations, 1HP @ 120/230/277VAC;

Zūm Link Power Bus Requirements

Max Current Consumption	100mA *With 0–10V load (60mA), without sensor terminal.*
Max Allowable Sensor Terminal Current	85mA *Passthrough from Zūm Link bus*

Wired Communications

ZUMLINK	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining
24V, OCC, GND	Occupancy sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected

ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected

Connections

N, L, SW (Neutral, Line, Switch)	(1) 3-pin terminal block; Each terminal accepts one 12–24 AWG wire
0-10V	(2) 0-10VDC dimming control output; Spring clamp connector; Each terminal accepts one 12–24 AWG solid wire or 14–24 AWG stranded wire

Environmental

Local In-Cabinet Air Temperature	32° to 131°F (0° to 55°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	5 BTU/hr @ 0A; 11 BTU/hr @ 16A

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.08 in. (53 mm)
Depth	2.32 in. (59 mm)

Weight

4 oz (133 g)

Compliance

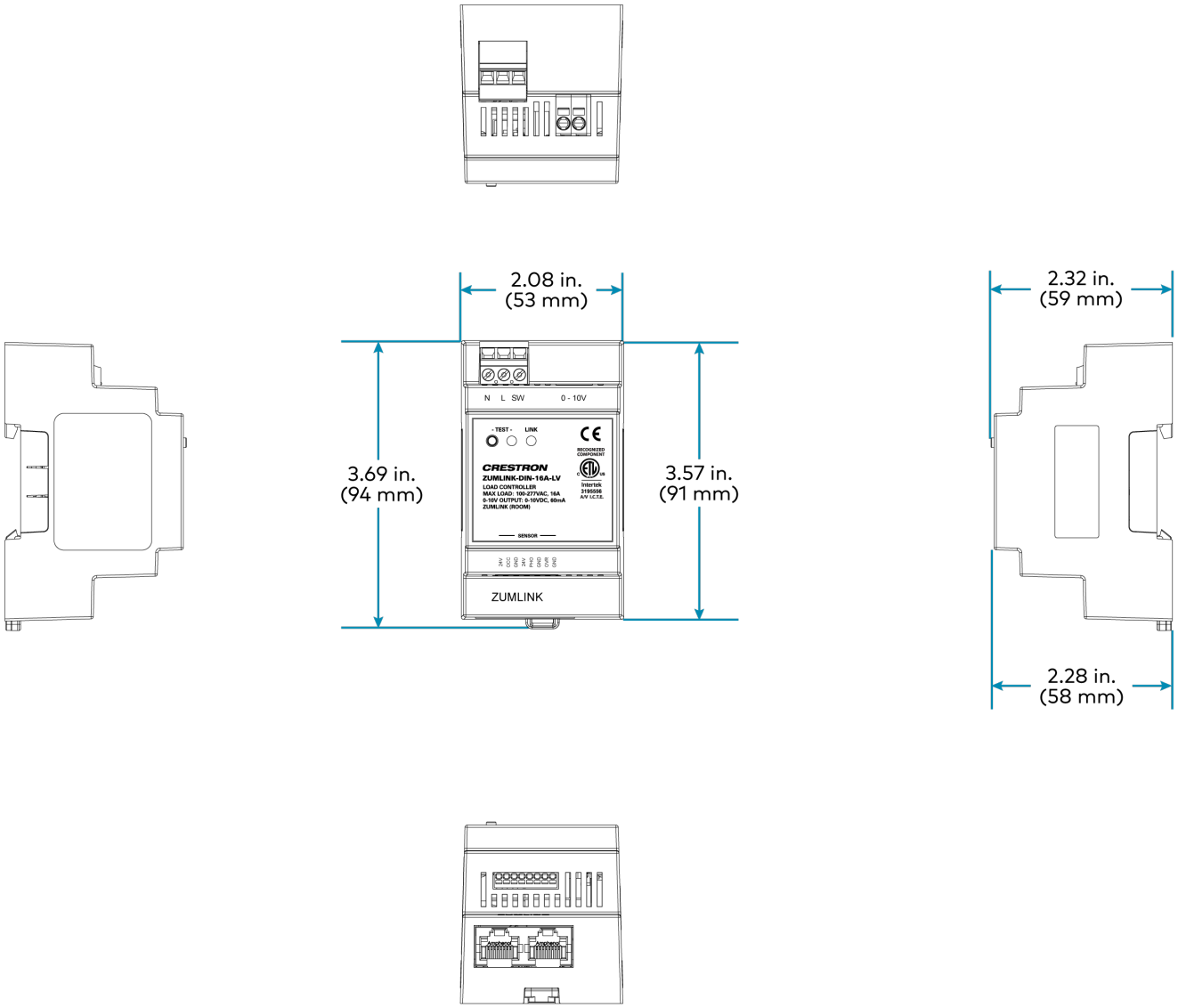
Regulatory Model: M202231002

ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant, IC certified, and compliant with FCC Part 15 Class B requirements.
ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.

Notes:

1. Inrush seen by the load controller is the cumulative summation of the per-fixture inrush. For details, contact Crestron's True Blue Technical Support.

ZUMLINK-DIN-16A-LV Dimension Drawings



ZUMLINK-DIN-20A-PLUG Product Specifications

Load Control

Line Voltage	100–277VAC, 50/60 Hz
Load Rating	20A @ 100–277V
Motor Rating	1 HP @ 100–277V
Inrush Capability[1]	300A-inrush for 20A loads; 375A-inrush for 10A loads

Switch Lifetime	General Rating: 100,000 on/off operations, 16A @ 277VAC; Motor Rating: 100,000 on/off operations, 1HP @ 120/230/277VAC; Resistive Rating: 30,000 on/off operations, 20A @ 277VAC

Zūm Link Power Bus Requirements

Max Current Consumption	50mA *Without sensor terminal.*
Max Allowable Sensor Terminal Current	85mA *Passthrough from Zūm Link bus*

Wired Communications

ZUMLINK	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining
24V, OCC, GND	Occupancy sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected

Connections

N, L, SW (Neutral, Line, Switch)	(1) 3-pin terminal block; Each terminal accepts one 12–24 AWG wire

Environmental

Local In-Cabinet Air Temperature	32° to 122°F (0° to 50°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	4 BTU/hr @ 0A; 14 BTU/hr @ 20A

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.08 in. (53 mm)
Depth	2.32 in. (59 mm)

Weight

4 oz (133 g)

Compliance

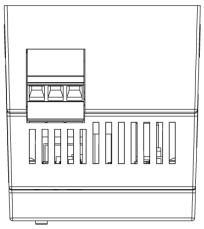
Regulatory Model: M202231002

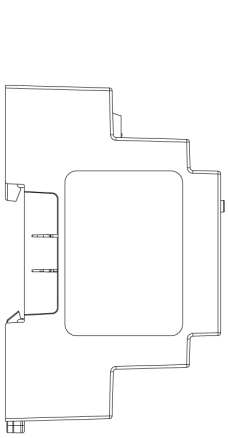
ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant, IC certified, and compliant with FCC Part 15 Class B requirements.
ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.

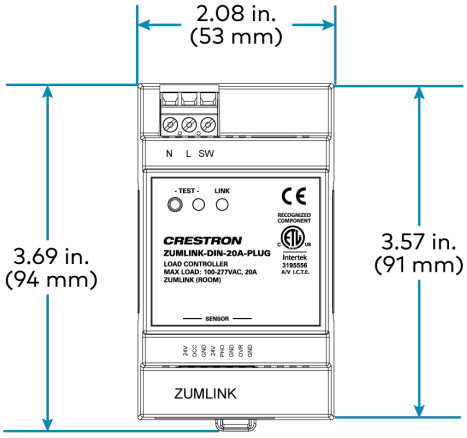
Notes:

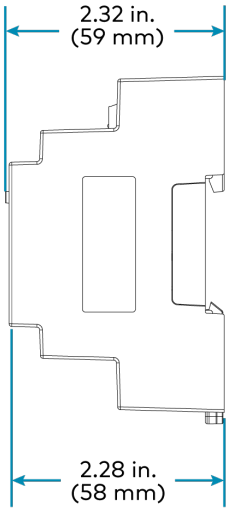
1. Inrush seen by the load controller is the cumulative summation of the per-fixture inrush. For details, contact Crestron's True Blue Technical Support.

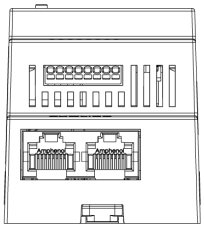
ZUMLINK-DIN-20A-PLUG Dimension Drawings











ZUMLINK-DIN-20A-SW Product Specifications

Load Control

Line Voltage	100–277VAC, 50/60 Hz
Load Rating	20A @ 100–277V
Motor Rating	1 HP @ 100–277V
Inrush Capability[1]	300A-inrush for 20A loads; 375A-inrush for 10A loads

Switch Lifetime	General Rating: 100,000 on/off operations, 16A @ 277VAC; Motor Rating: 100,000 on/off operations, 1HP @ 120/230/277VAC; Resistive Rating: 30,000 on/off operations, 20A @ 277VAC

Zūm Link Power Bus Requirements

Max Current Consumption	50mA *Without sensor terminal.*
Max Allowable Sensor Terminal Current	85mA *Passthrough from Zūm Link bus*

Wired Communications

ZUMLINK	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining
24V, OCC, GND	Occupancy sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG solid wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG solid wire

Controls and Indicators

TEST	(1) Push button and (1) bicolor green/red LED; Push to toggle the switched load output on and off; Press and hold to cycle the dimming level up and down; LED lights green when load is on; LED lights red when a fault is detected
ZUMLINK Status	(1) bi-color green/red LED; LED lights green in normal operation; LED lights red when a fault is detected

Connections

N, L, SW (Neutral, Line, Switch)	(1) 3-pin terminal block; Each terminal accepts one 12–24 AWG wire

Environmental

Local In-Cabinet Air Temperature	32° to 122°F (0° to 50°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	4 BTU/hr @ 0A; 14 BTU/hr @ 20A

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.08 in. (53 mm)
Depth	2.32 in. (59 mm)

Weight

4 oz (133 g)

Compliance

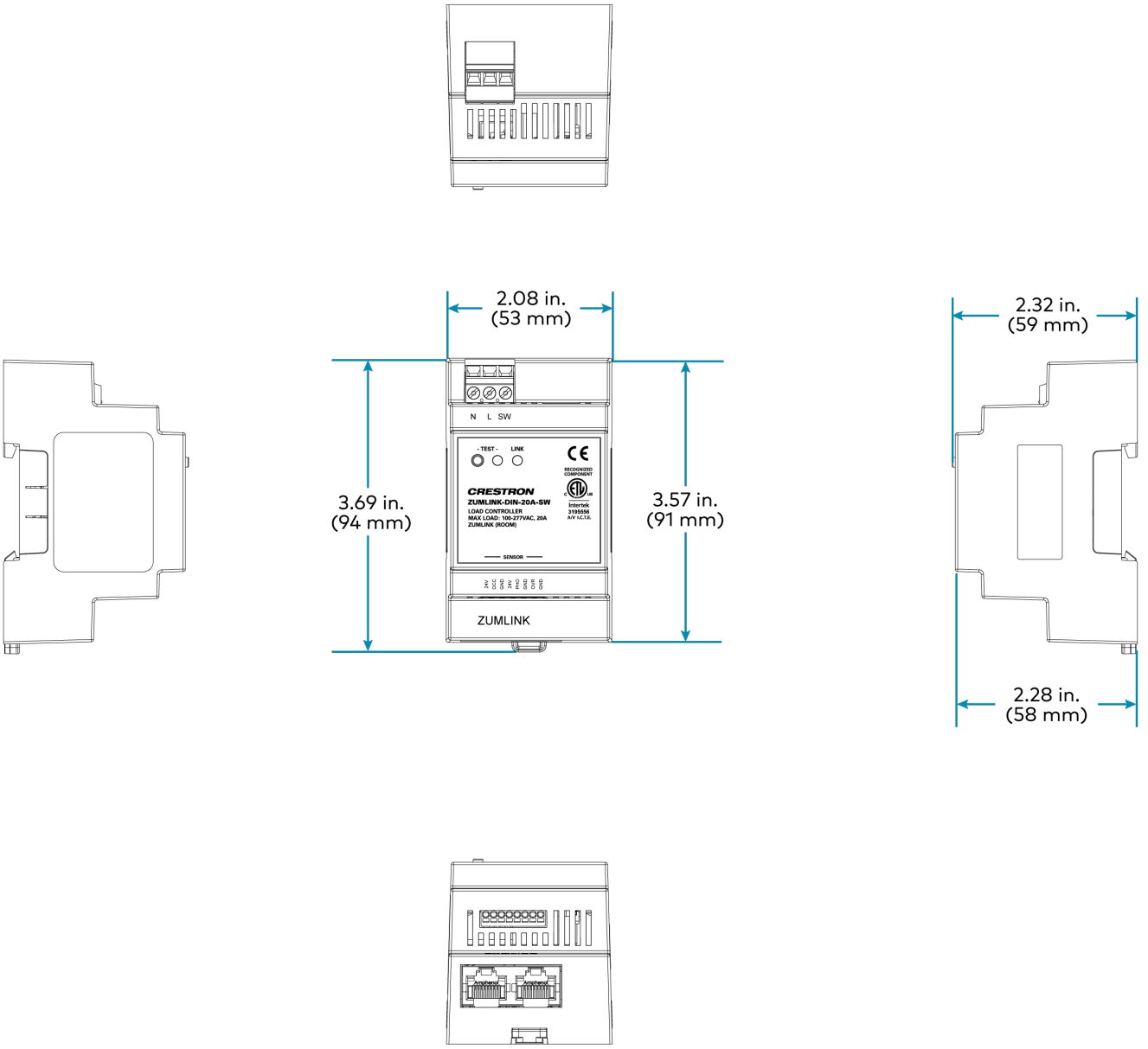
Regulatory Model: M202231002

ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant, IC certified, and compliant with FCC Part 15 Class B requirements.
ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.

Notes:

1. Inrush seen by the load controller is the cumulative summation of the per-fixture inrush. For details, contact Crestron's True Blue Technical Support.

ZUMLINK-DIN-20A-SW Dimension Drawings



ZUMLINK-DIN-DIMU Product Specifications

Load Control

Dimmer Channels	1
Load Rating	500 W or 500VA @ 100–120VAC; 1,000 W or 1,000VA @ 220–277VAC
Line Voltage	100–277VAC, 50/60 Hz

Dimmable Load Types:	Incandescent, LED, electronic low-voltage, magnetic low-voltage, neon/cold cathode, 2-wire fluorescent

Zūm Link Power Bus Requirements

Max Current Consumption	50mA *Without sensor terminal.*
Max Allowable Sensor Terminal Current	85mA *Passthrough from Zūm Link bus*

Communications

Zūm Link	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining
24V, OCC, GND	Occupancy sensor input; Spring clamp connector; Each terminal accepts one 20-24 AWG wire
24V, PHO, GND	Photo sensor input; Spring clamp connector; Each terminal accepts one 20–24 AWG wire
OVR, GND	Override control input; Spring clamp connector: Each terminal accepts one 20–24 AWG wire

Controls and Indicators

TEST	(1) Push button and bicolor green/red LED; LED lights green in normal operation; LED lights red when a fault is detected
DIM MODE	(1) Push button, 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)
LINK	(1) bicolor green/red LED; LED lights green in normal operation; LED lights red when a fault is detected

Connections

N, L, DIM (Neutral, Line, Dimming)	(1) 3-pin terminal block; Each terminal accepts one 12–24 AWG wire

Environmental

Local In-Cabinet Air Temperature	32° to 122°F (0° to 50°C) for Crestron DIN-EN series or similar; Third-party enclosures are supported, Contact Crestron for details.
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	20 BTU/hr

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.08 in. (53 mm)
Depth	2.32 in. (59 mm)

Weight

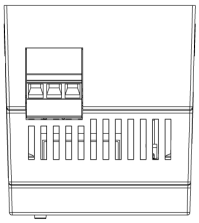
4 oz (133 g)

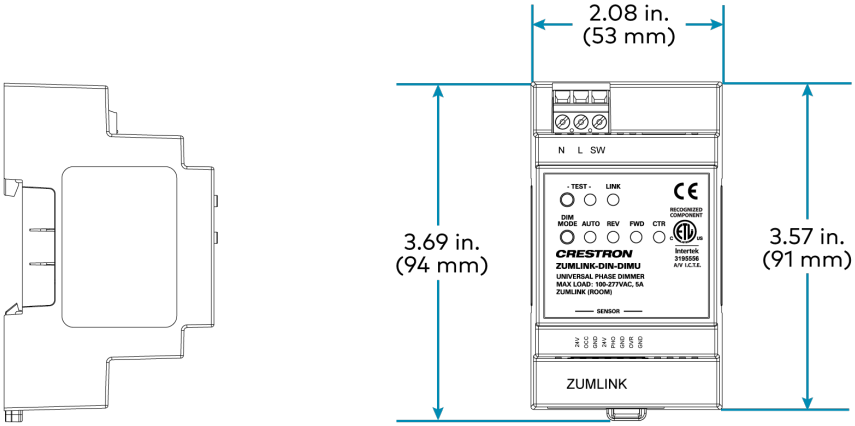
Compliance

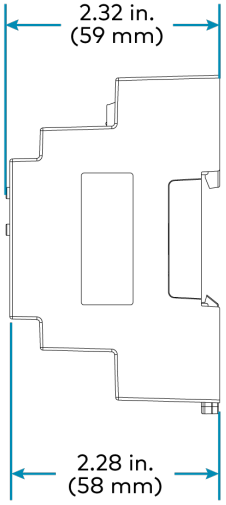
Regulatory Model: M202231003

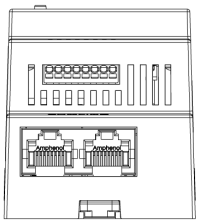
ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant, IC certified, and compliant with FCC Part 15 Class B requirements.
ETL Listed for the United States and Canada to UL STD 924 & CSA STD C22.2 No.141.

ZUMLINK-DIN-DIMU Dimension Drawings









Keypad Specifications

Product specifications for the ZUMLINK-KP are provided below.

Product Specifications

Zūm Link Power Bus Requirements

Zūm Link Power Bus	24 V
Max Current Consumption	5 mA

Communications

Zūm Link	(2) RJ-45 ports; Connects to Zūm Link device for load control; Provides in-room device daisy-chaining
Bluetooth	Bluetooth low energy, Version 4.0; Pairs with a mobile device running the Zūm app

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply

Controls and Indicators

Push button	(1) rocker button preprogrammed; Configurable with combinations of ZUMLINK-BTN2, ZUMLINK-BTN4, ZUMLINK-BTN6, ZUMLINK-BTN8 in pad printed or engraved models, sold separately
LED	(1) Green LED; Indicates On/Off status of connected load Lights briefly to indicate a button press

Environmental

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

Construction

Composition	Plastic housing and front face
Mounting	Mounts in a 1-gang, 3.5 in. (89 mm) deep electrical box (not supplied)
Faceplate	Requires a decorator style faceplate (FP-G Series, not supplied)

Dimensions

Height	4.13 in. (105 mm)
Width	1.50 in. (38 mm)
Depth	1.28 in. (33 mm)

Weight

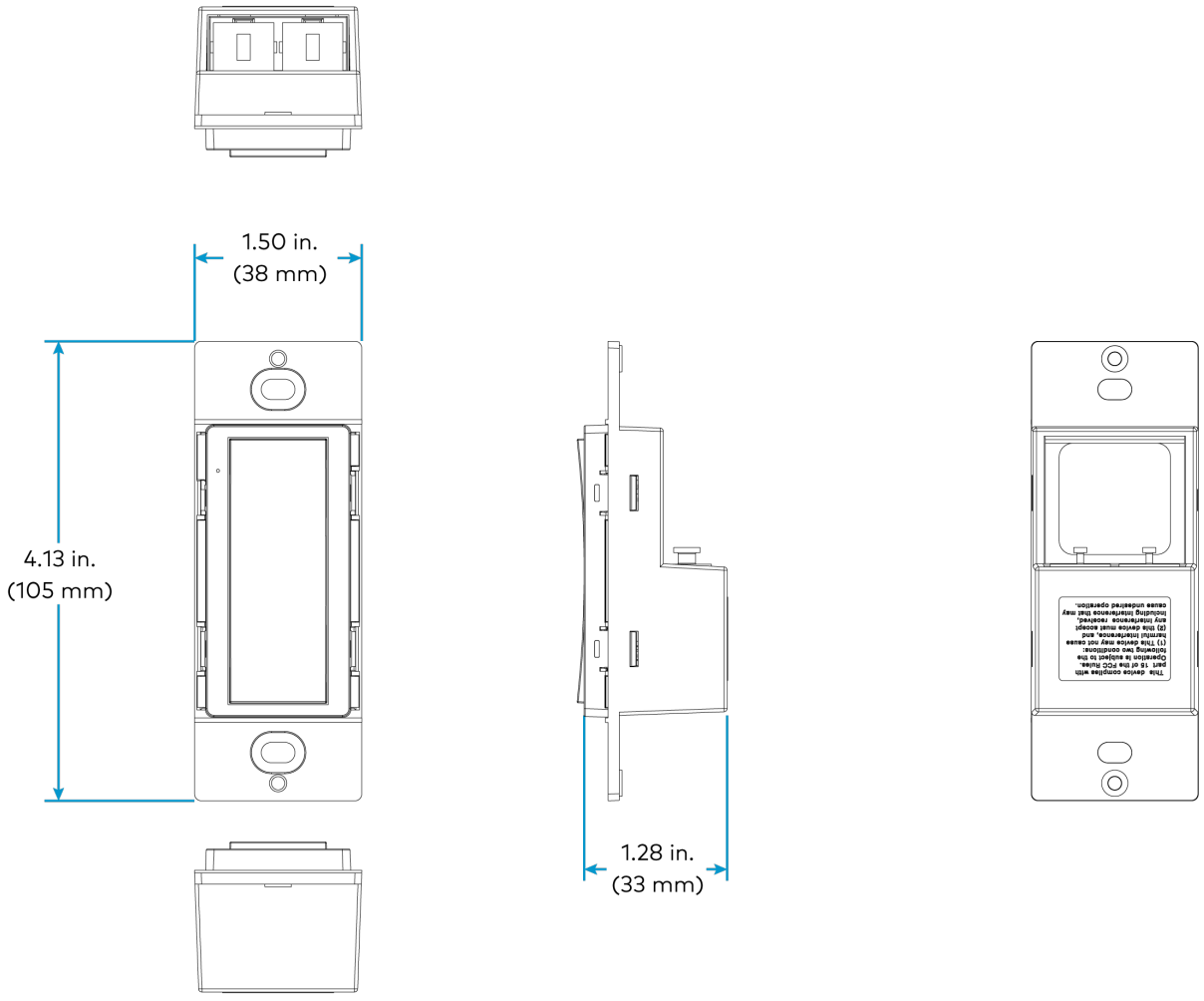
5 oz (142 g)

Compliance

Regulatory Model: M201937001

UL® Listed for US & Canada, IC, FCC Part 15 Class B digital device, UL 916, CSA C22.2 No. 205, CEC Title 24, ASHRAE 90.1, IECC

Dimension Drawings



Presence Detector Specifications

Product specifications for the Zūm Link Presence Detectors are provided below.

- ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY Product Specifications on page 102
- ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY Product Specifications on page 104
- ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY Product Specifications on page 106
- ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY Product Specifications on page 112
- ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY Product Specifications on page 108
- ZUMLINK-US-ONEWAY-DLS and ZUMLINK-US-ONEWAY-DLS-RLY Product Specifications (Discontinued) on page 110

ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY Product Specifications

Load Control

Control Output	1A @ 30VAC/VDC

Zūm Link Power Bus Requirements

Max Current Consumption	17 mA

Passive Infrared (PIR) Detection

Coverage	360° square mechanically scalable detection zones
Sensors	Single infrared pyroelectric detector
Detection Zones	**Presence**: Major motion as described by NEMA WD7; Maximum: 30 x 30 ft (900 sq ft) **Radial**: Motion either directly toward or away from the sensor; Maximum: 30 x 30 ft (900 sq ft) **Tangential**: Motion perpendicular to the sensor; Maximum: 46 x 46 ft (2,116 sq ft)
Light Level Setting	10-1000lux / 1-100 fc

Controls and Indicators

LED	(3) Blue LEDs on the sensor head frontplate Flashes upon start up and when triggered to identify itself

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply
Output Relays	(1) Green: Normally open
(Relay models only)	(1) Blue: Normally closed
	(1) Red: Common

Environmental

Temperature	32° to 104°F (0° to 40°C)
Rating	IP20 rated

Enclosure

Material	Plastic
Mounting	Mount directly in the ceiling, 4 in. square or round junction boxes (not included), or 3 in. mud rings (not included)

Dimensions

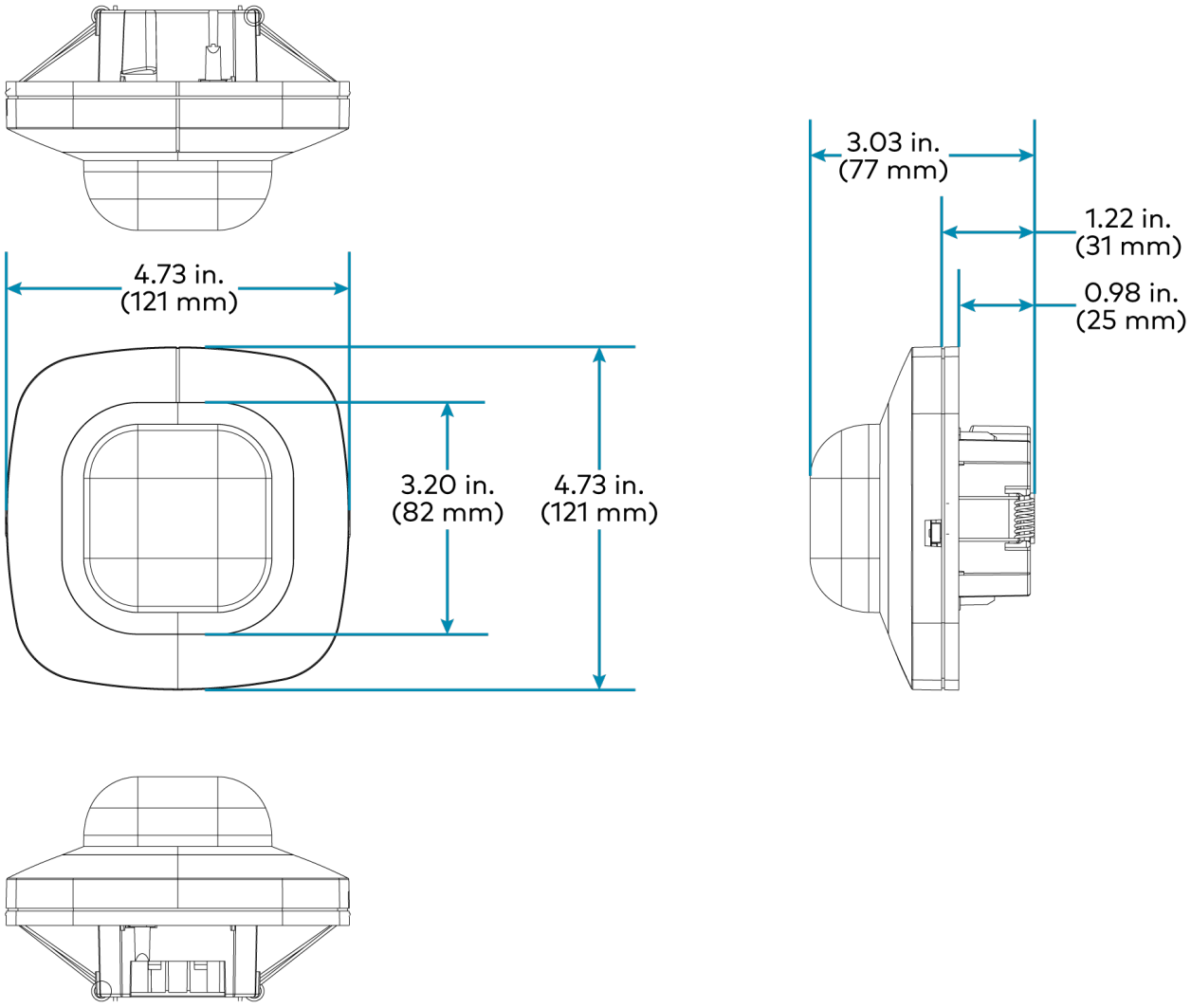
Height	4.73 in. (121 mm)
Width	4.73 in. (121 mm)
Depth	3.03 in. (77 mm)

Compliance

Regulatory Mode: M202111001, M202111002, M202111003, and M202111004

UL® Listed

Dimension Drawings



ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY Product Specifications

Load Control

Control Output	1A @ 30VAC/VDC

Zūm Link Power Bus Requirements

Max Current Consumption	17 mA

High Definition Passive Infrared (PIR) Detection

Coverage	360° square mechanically scalable detection zones
Sensors	4 infrared pyroelectric detectors
Detection Zones	**Presence**: Major motion as described by NEMA WD7; Maximum: 50 x 50 ft (2,500 sq ft)/ 15 x 15. m (225 sq m)
Light Level Setting	10-1000lux / 1-100 fc

Controls and Indicators

LED	(3) Blue LEDs on the sensor head frontplate
	Flashes upon start up and when triggered to identify itself

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply
Output Relays	(1) Green: Normally open
(Relay models only)	(1) Blue: Normally closed
	(1) Red: Common

Environmental

Temperature	32° to 104°F (0° to 40°C)
Rating	IP20 rated

Enclosure

Material	Plastic
Mounting	Mount directly in the ceiling, 4 in. square or round junction boxes (not included), or 3 in. mud rings (not included)

Dimensions

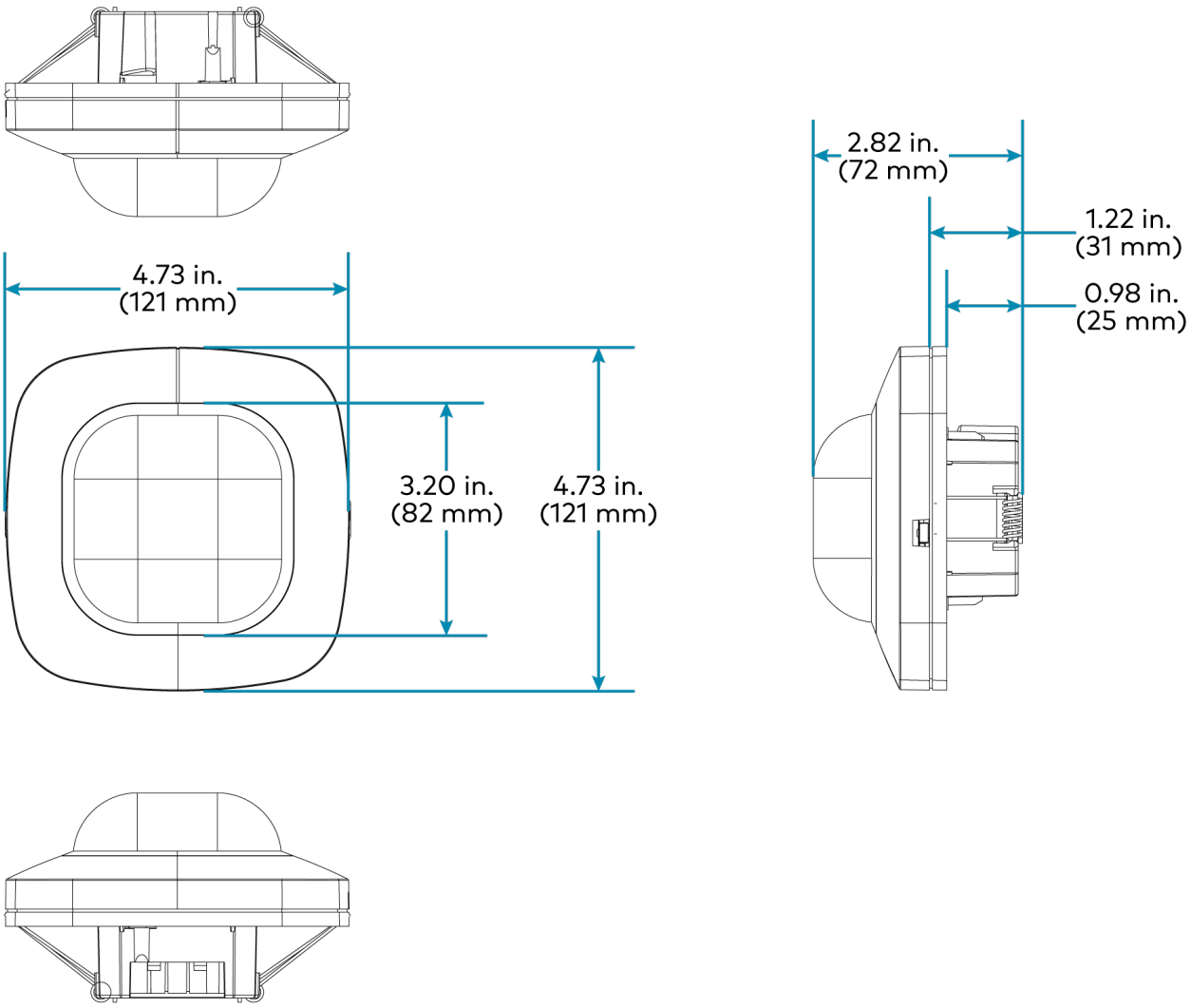
Height	4.73 in. (121 mm)
Width	4.73 in. (121 mm)
Depth	2.82 in. (72 mm)

Compliance

Regulatory Mode: M202111001, M202111002, M202111003, and M202111004

UL® Listed

Dimension Drawings



ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY Product Specifications

Load Control

Control Output	1A @ 30VAC/VDC

Zūm Link Power Bus Requirements

Max Current Consumption	28 mA

Dual Technology Detection

Sensing	Passive Infrared (PIR) and Ultrasonic (40 kHz) detection
Coverage	360°
Sensors	Single infrared pyroelectric detector
Detection Zones	**Presence**: Major motion as described by NEMA WD7; PIR: Maximum: 50 x 40 ft (2,000 sq ft)/ 15 x 12 m (180 sq m); US: Maximum: 40 x 30 fct (1,200 sq ft)/ 12 x 9 m (108 sq m)
Light Level Setting	10-1000lux / 1-100 fc

Controls and Indicators

LED	(3) Blue LEDs on the sensor head frontplate Flashes upon start up and when triggered to identify itself

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply
Output Relays	(1) Green: Normally open
(Relay models only)	(1) Blue: Normally closed (1) Red: Common

Environmental

Temperature	32° to 104°F (0° to 40°C)
Rating	IP20 rated

Enclosure

Material	Plastic
Mounting	Mount directly in the ceiling, 4 in. square or round junction boxes (not included), or 3 in. mud rings (not included)

Dimensions

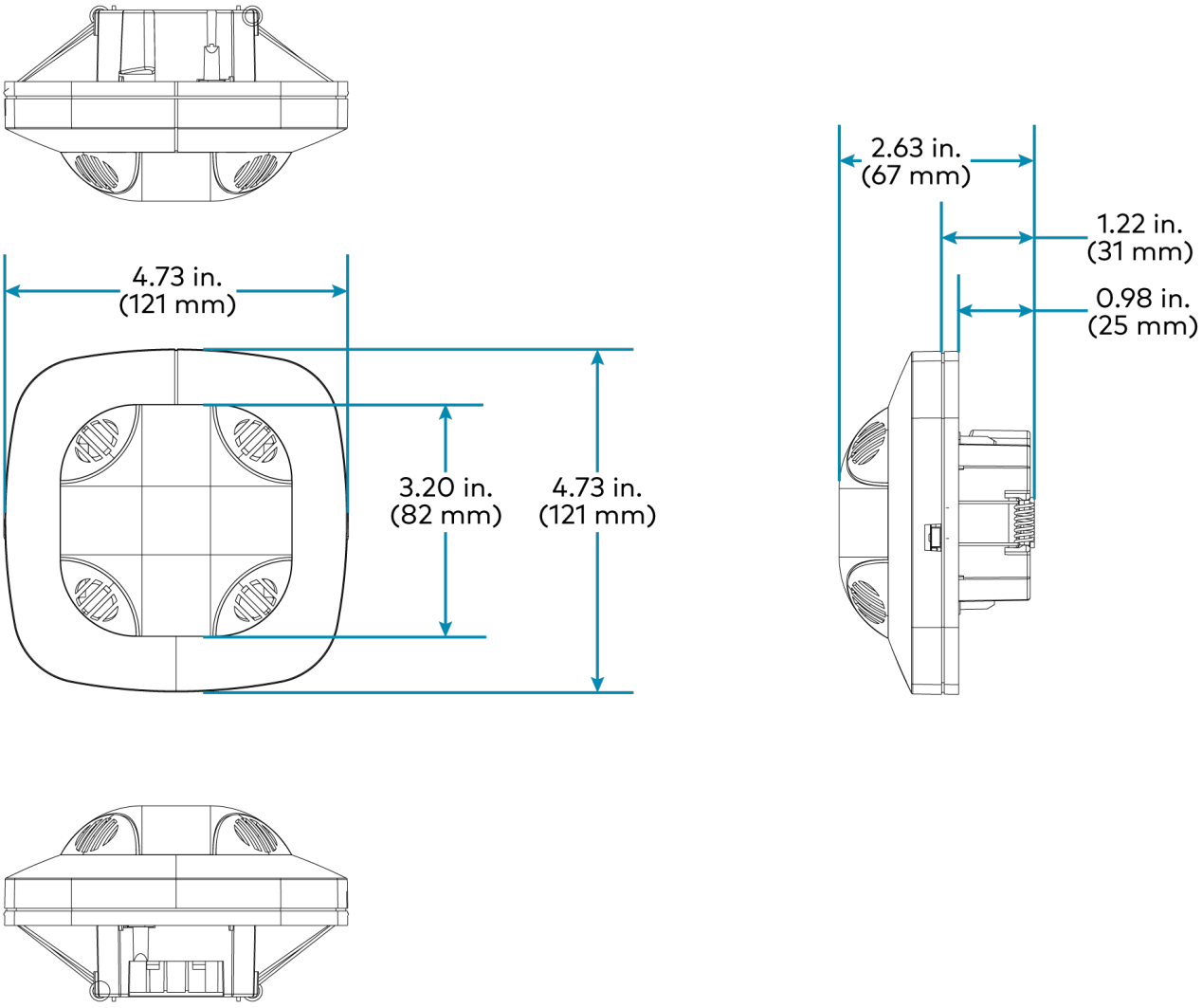
Height	4.73 in. (121 mm)
Width	4.73 in. (121 mm)
Depth	2.63 in. (67 mm)

Compliance

Regulatory Mode: M202111001, M202111002, M202111003, and M202111004

UL® Listed

Dimension Drawings



ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY Product Specifications

Load Control

Control Output	1A @ 30VAC/VDC

Zūm Link Power Bus Requirements

Max Current Consumption	28 mA

Ultrasonic Detection

Sensing	Bidirectional ultrasonic (40 kHz)
Coverage	6.5 x 65 ft linear
Detection Zones	Maximum: 50 x 20 ft (1,000 sq ft)/ 15 x 6 m (90 sq m) Minimum: 40 x 20 ft (800 sq ft)/ 12 x 6 m (72 sq m)
Light Level Setting	10-1000lux / 1-100 fc

Controls and Indicators

LED	(3) Blue LEDs on the sensor head frontplate Flashes upon start up and when triggered to identify itself

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply
Output Relays	(1) Green: Normally open
(Relay models only)	(1) Blue: Normally closed (1) Red: Common

Environmental

Temperature	32° to 104°F (0° to 40°C)
Rating	IP20 rated

Enclosure

Material	Plastic
Mounting	Mount directly in the ceiling, 4 in. square or round junction boxes (not included), or 3 in. mud rings (not included)

Dimensions

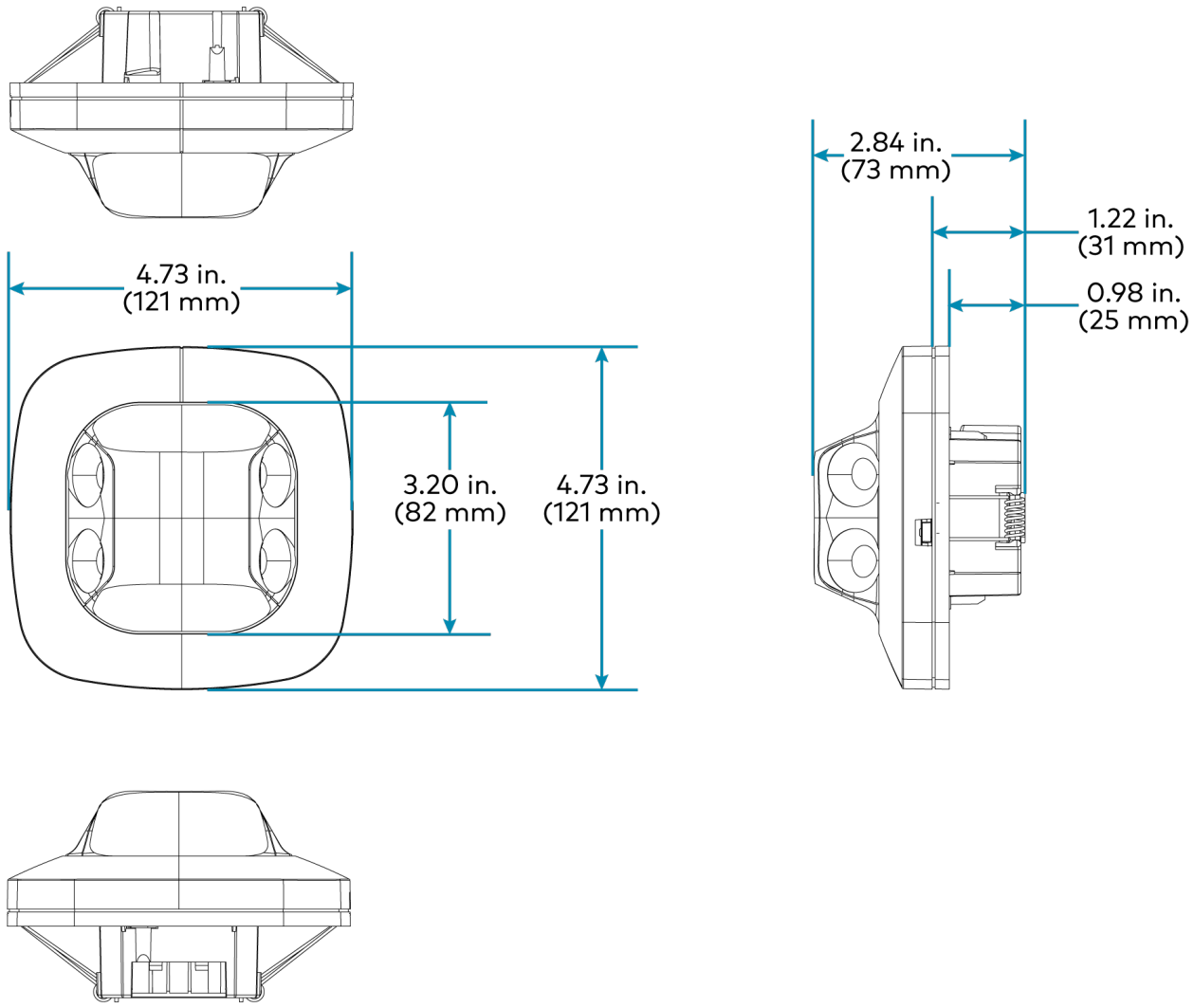
Height	4.73 in. (121 mm)
Width	4.73 in. (121 mm)
Depth	2.84 in. (72 mm)

Compliance

Regulatory Mode: M202111001, M202111002, M202111003, and M202111004

UL® Listed

Dimension Drawings



ZUMLINK-US-ONEWAY-DLS and ZUMLINK-US-ONEWAY-DLS-RLY Product Specifications (Discontinued)

Load Control

Control Output	1A @ 30VAC/VDC

Zūm Link Power Bus Requirements

Max Current Consumption	28 mA

Ultrasonic Detection

Sensing	Unidirectional ultrasonic (40 kHz) occupancy sensor
Coverage	6.5 x 35 ft linear
Detection Zones	Maximum: 35 x 20 ft (700 sq ft)/ 11 x 6 m (66 sq m) Minimum: 25 x 20 ft (50 sq ft)/ 8 x 6 m (48 sq m)
Light Level Setting	10-1000lux / 1-100 fc

Controls and Indicators

LED	(3) Blue LEDs on the sensor head frontplate Flashes upon start up and when triggered to identify itself

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply
Output Relays	(1) Green: Normally open
(Relay models only)	(1) Blue: Normally closed (1) Red: Common

Environmental

Temperature	32° to 104°F (0° to 40°C)
Rating	IP20 rated

Enclosure

Material	Plastic
Mounting	Mount directly in the ceiling, 4 in. square or round junction boxes (not included), or 3 in. mud rings (not included)

Dimensions

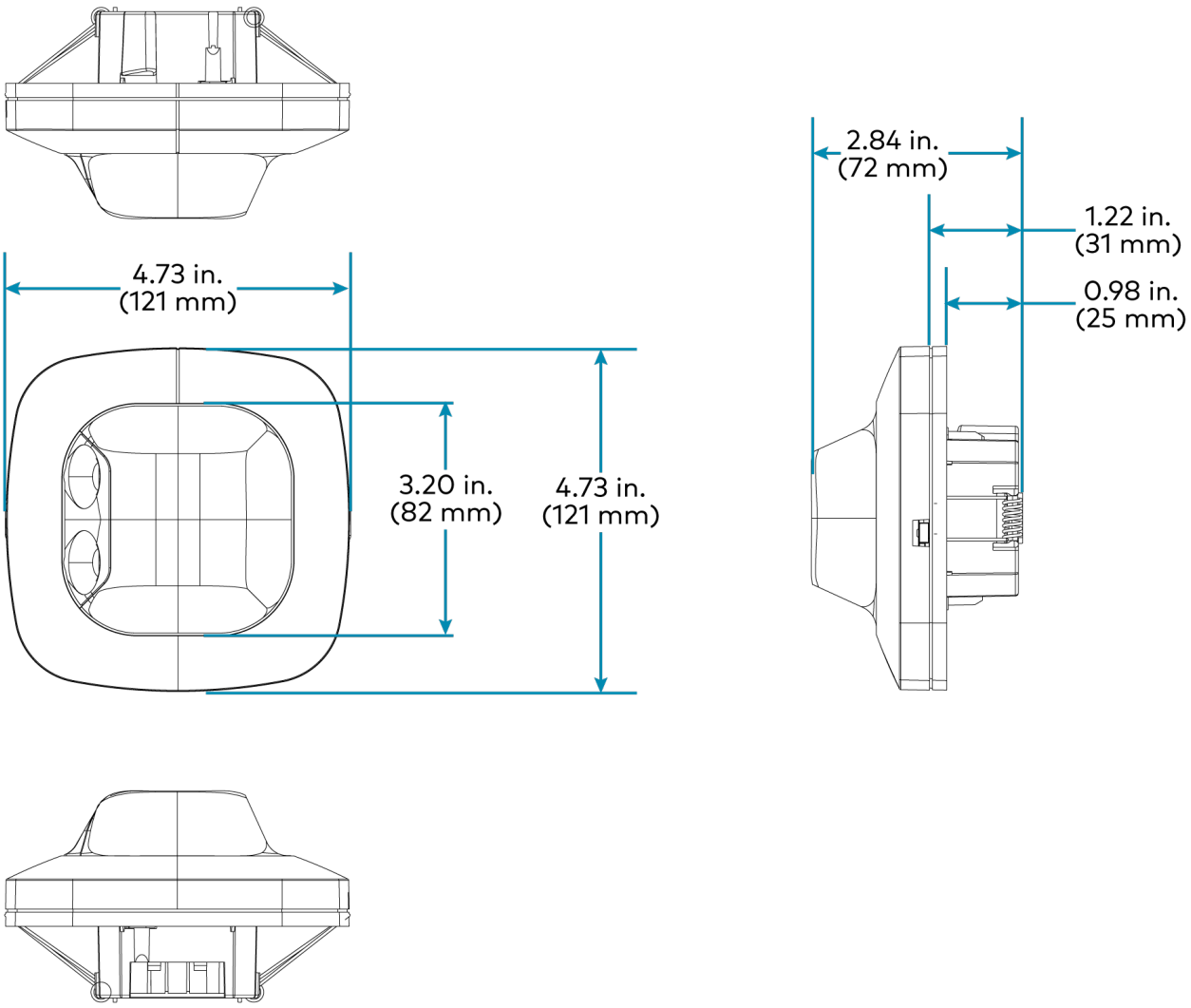
Height	4.73 in. (121 mm)
Width	4.73 in. (121 mm)
Depth	Depth: 2.84 in. (72 mm)

Compliance

Regulatory Mode: M202111001, M202111002, M202111003, and M202111004

UL® Listed

Dimension Drawings



ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY Product Specifications

Load Control

Control Output	1A @ 30VAC/VDC

Zūm Link Power Bus Requirements

Max Current Consumption	28 mA

Ultrasonic Detection

Sensing	Omnidirectional ultrasonic (40 kHz) presence detection
Coverage	360°
Detection Zones	**Presence**: Major motion as described by NEMA WD7; Maximum: 40 x 50 ft (2,000 sq ft)/ 12 x 15 m (180 sq m)
Light Level Setting	10-1000lux / 1-100 fc

Controls and Indicators

LED	(3) Blue LEDs on the sensor head frontplate Flashes upon start up and when triggered to identify itself

Connections

ZUMLINK	(2) RJ-45 orange ports; In-room Zūm Link device daisy-chaining; Maximum 750mA pass-through current including any internal power supply
Output Relays	(1) Green: Normally open
(Relay models only)	(1) Blue: Normally closed (1) Red: Common

Environmental

Temperature	32° to 104°F (0° to 40°C)
Rating	IP20 rated

Enclosure

Material	Plastic
Mounting	Mount directly in the ceiling, 4 in. square or round junction boxes (not included), or 3 in. mud rings (not included)

Dimensions

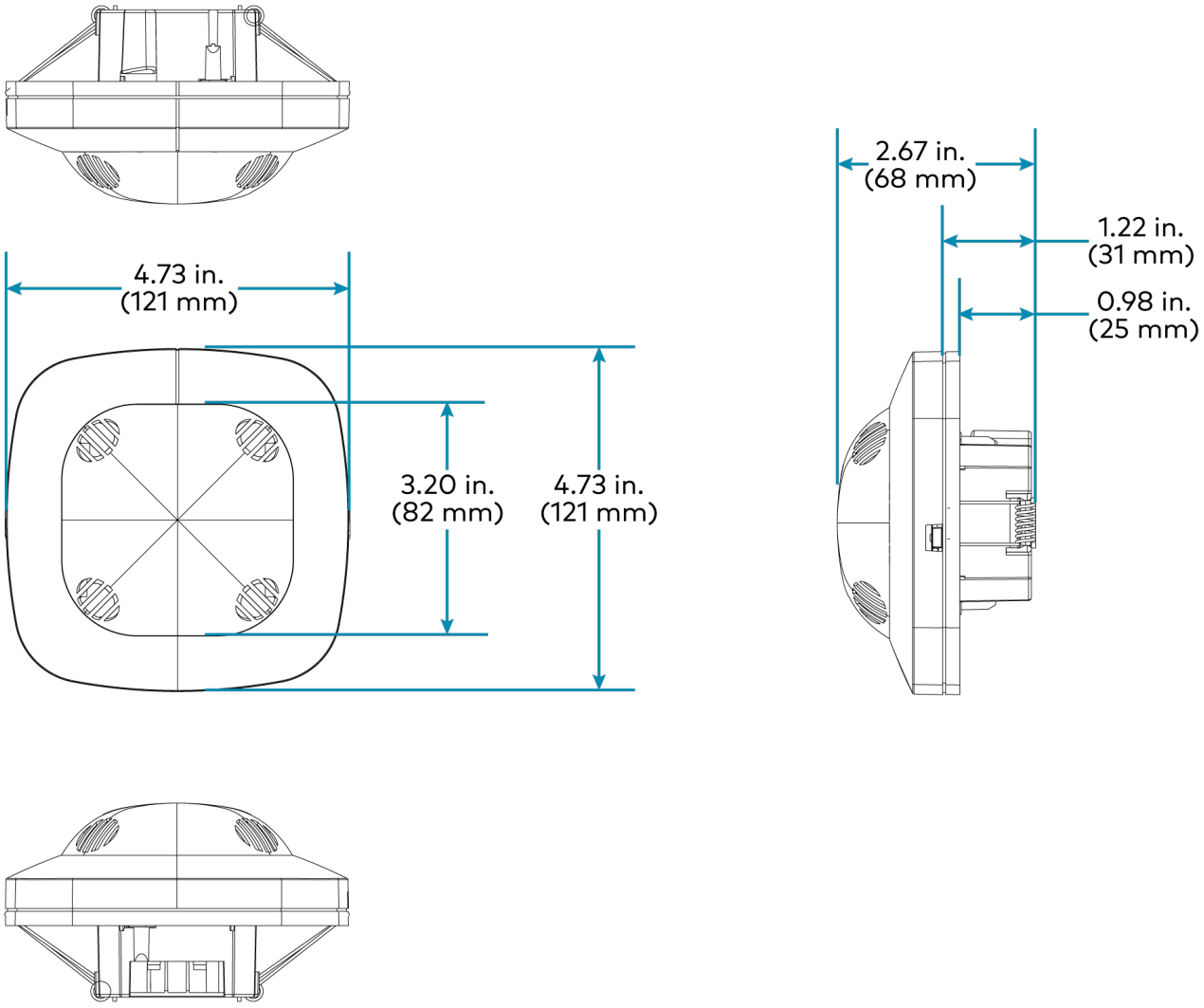
Height	4.73 in. (121 mm)
Width	4.73 in. (121 mm)
Depth	2.67 in. (68 mm)

Compliance

Regulatory Mode: M202111001, M202111002, M202111003, and M202111004

UL® Listed

Dimension Drawings

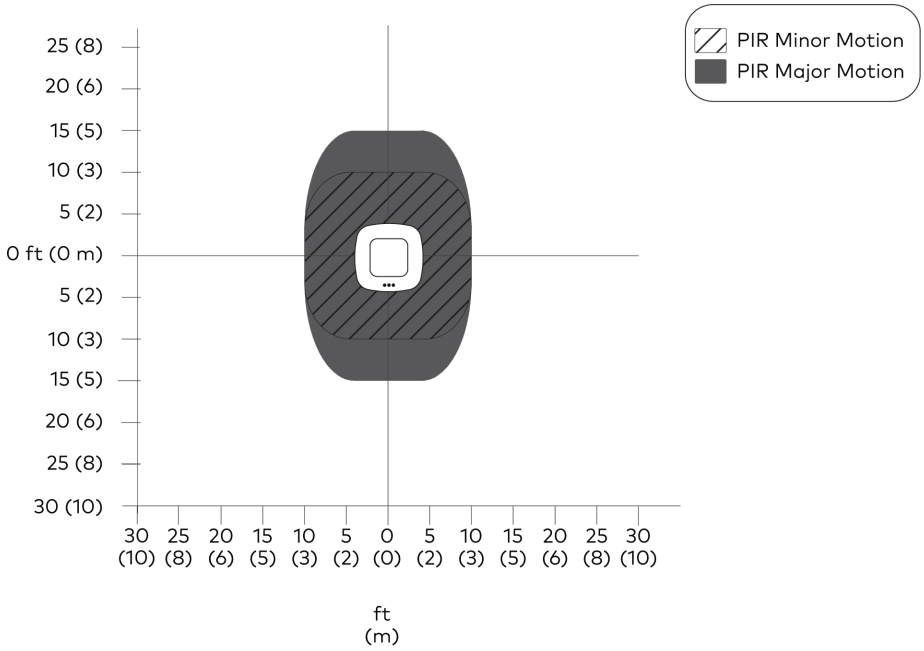


Beam Pattern Coverage

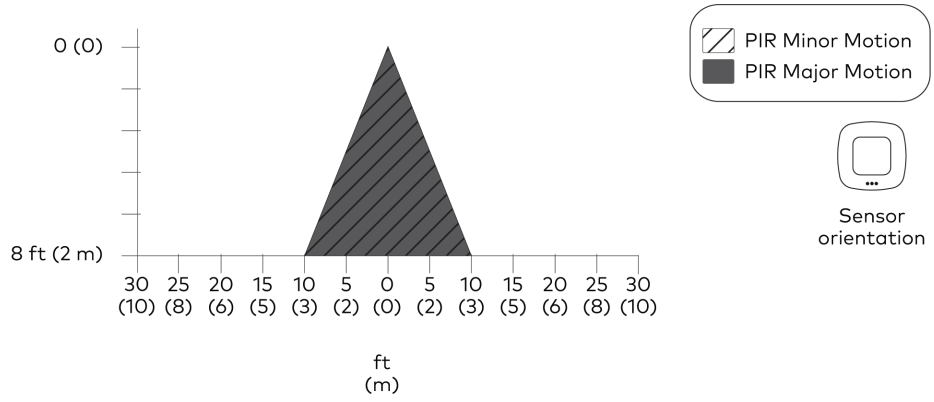
NOTE: Detection along the far edge of the detection range may be inconsistent.

ZUMLINK-IR-QUATTRO-DLS/ ZUMLINK-IR-QUATTRO-DLS-RLY

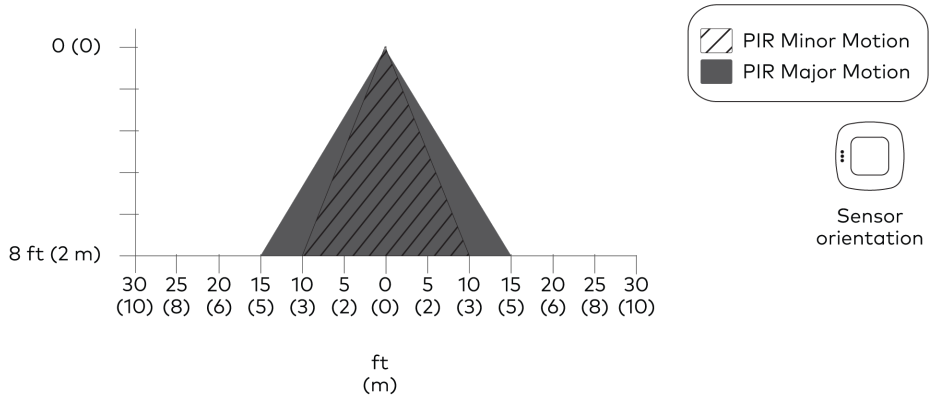
Top View



Side View Sensor Orientation A

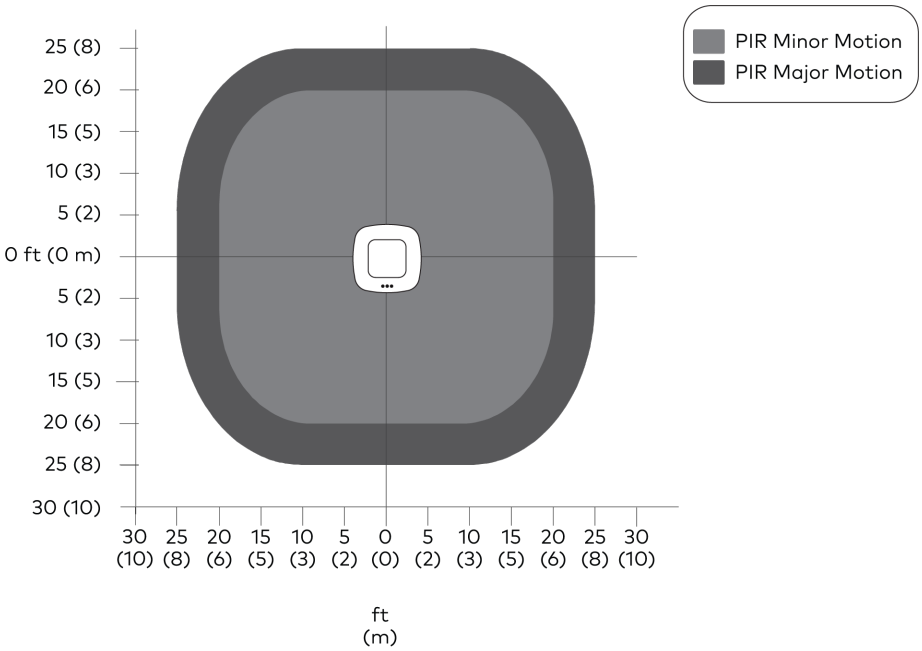


Side View Sensor Orientation B

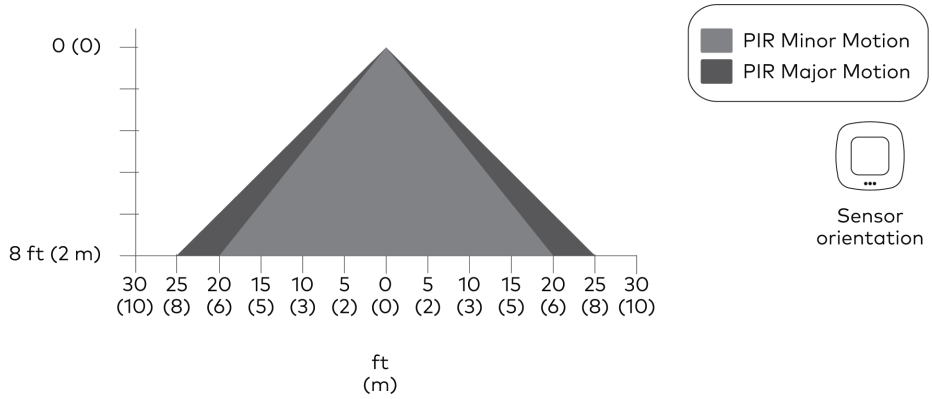


ZUMLINK-IR-QUATTRO-HD-DLS/ ZUMLINK-IR-QUATTRO-HD-DLS-RLY

Top View

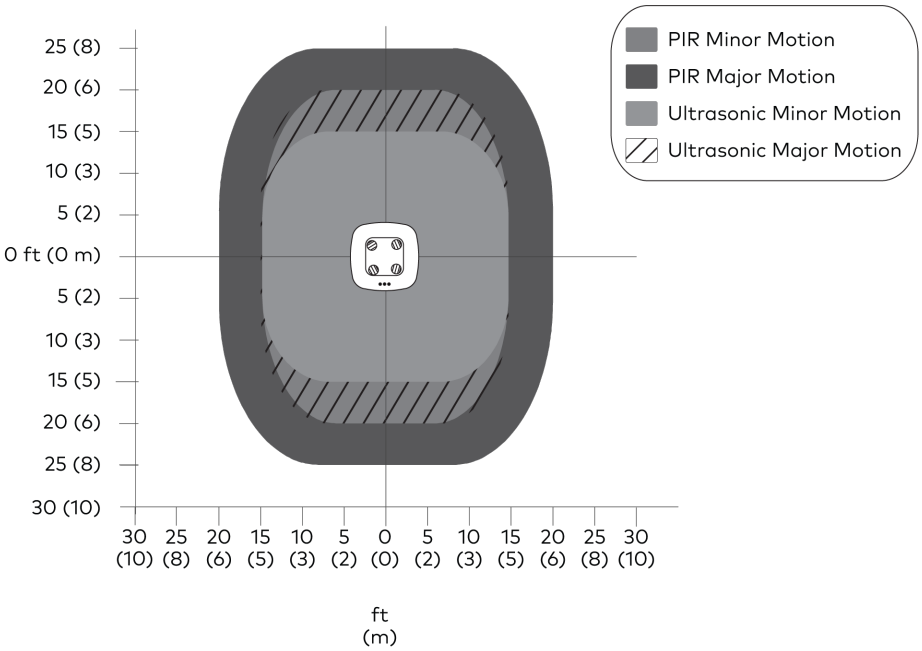


Side View

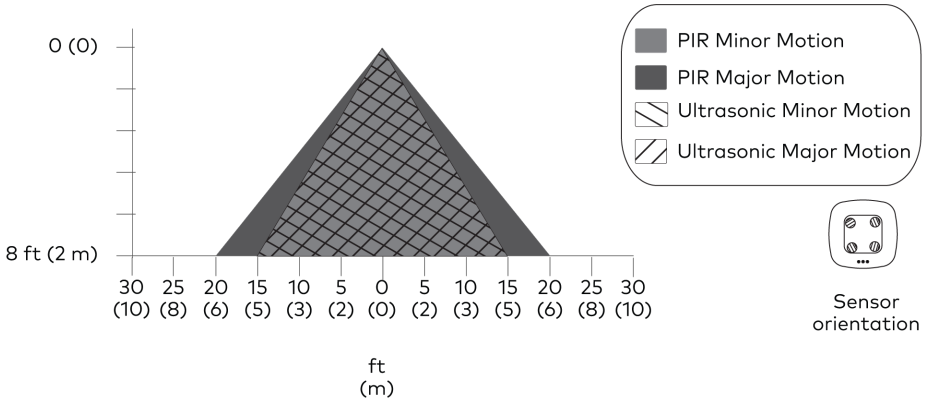


ZUMLINK-DT-QUATTRO-DLS/ ZUMLINK-DT-QUATTRO-DLS-RLY

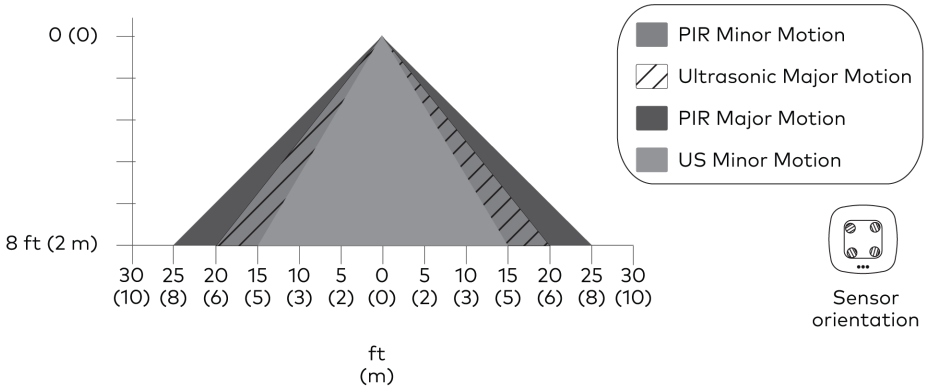
Top View



Side View Sensor Orientation A

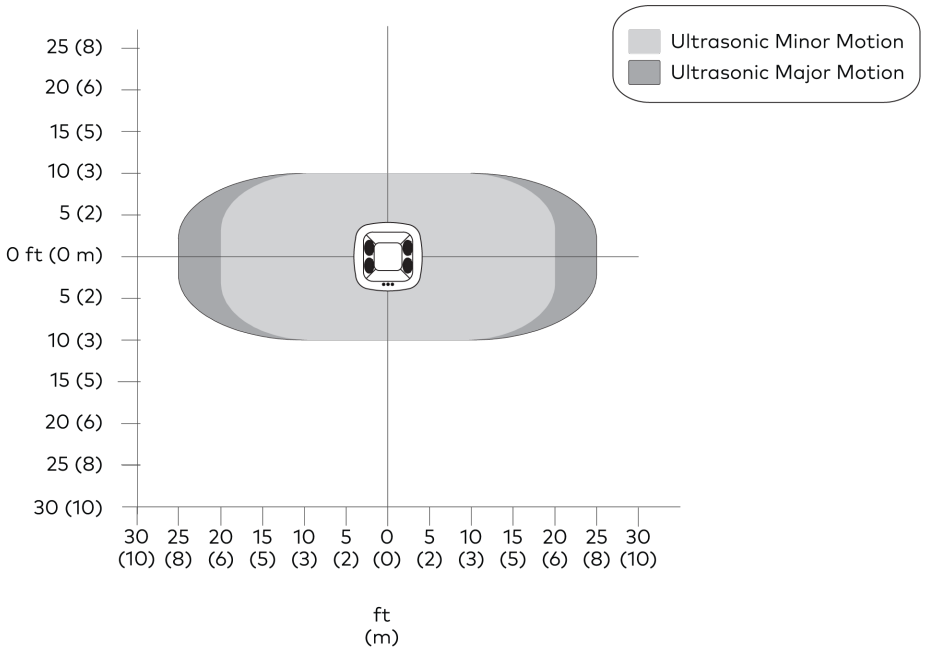


Side View Sensor Orientation B

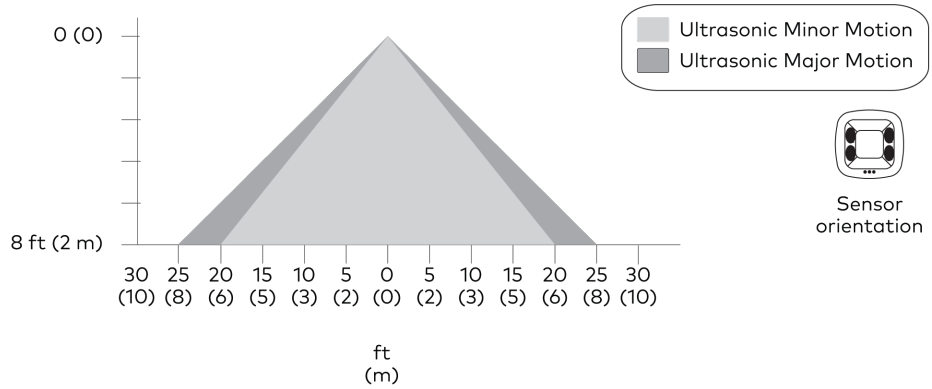


ZUMLINK-US-HALLWAY-DLS/ ZUMLINK-US-HALLWAY-DLS-RLY

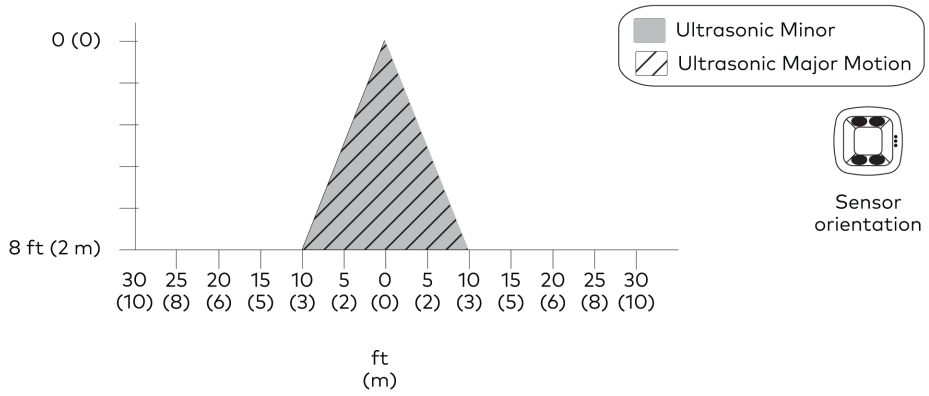
Top View



Side View Sensor Orientation A

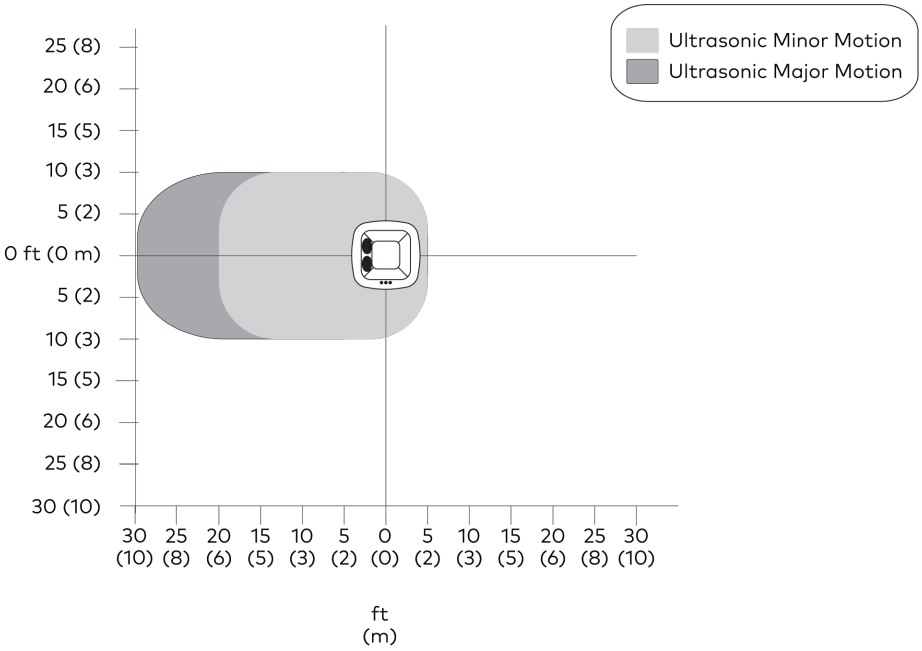


Side View Sensor Orientation B

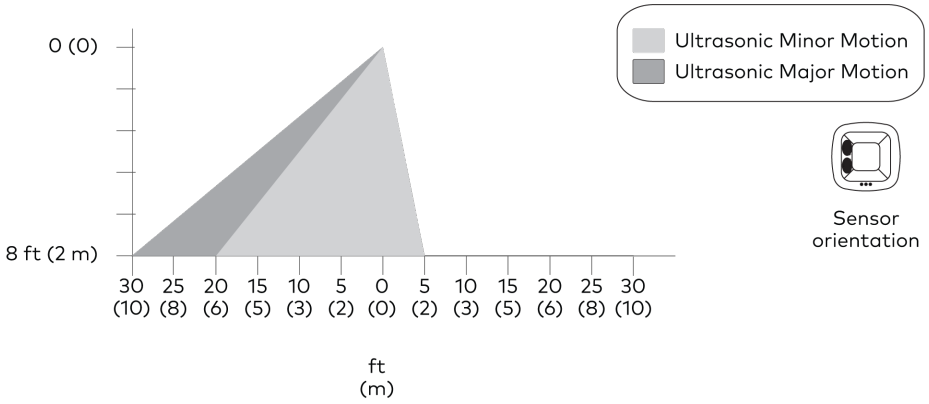


ZUMLINK-US-ONEWAY-DLS/ ZUMLINK-US-ONEWAY-DLS-RLY (Discontinued)

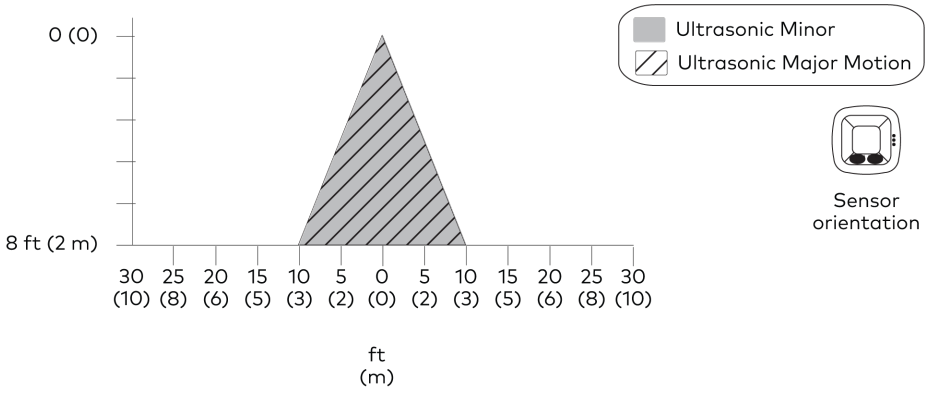
Top View



Side View Sensor Orientation A

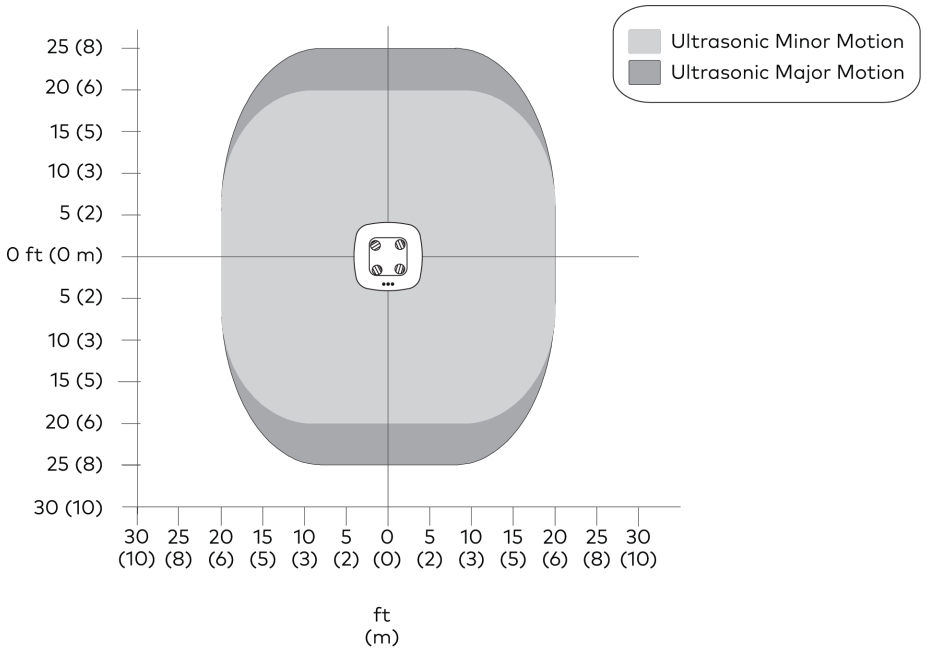


Side View Sensor Orientation B

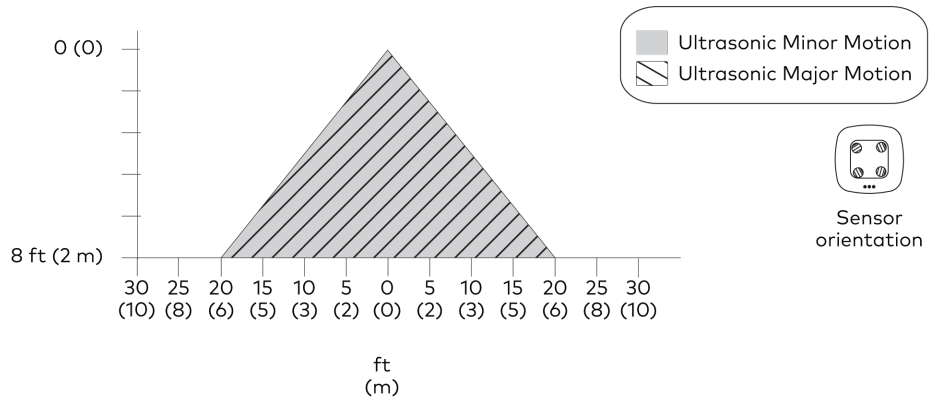


ZUMLINK-US-QUATTRO-DLS/ ZUMLINK-US-QUATTRO-DLS-RLY

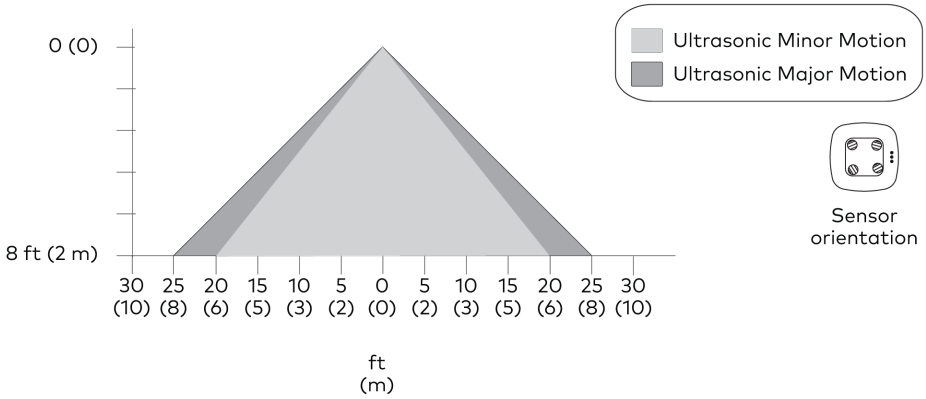
Top View



Side View Sensor Orientation A



Side View Sensor Orientation B



Hub Specifications

Specifications for the ZUM-HUB4 are provided below.

Product Specifications

Device Support and Time Clock

Rooms	1,000 maximum; Zūm wired, Zūm wireless, and external
External Rooms and Mirrored Rooms	Varies by control system based on hardware capabilities and program complexity of the external processor[1]

Communications

Ethernet	100/1000 Mbps, autoswitching, autonegotiating, autodiscovery, full/half duplex, BACnet, industry-standard TCP/IP stack, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), FIPS 140-2 compliant encryption, IEEE 802.1X, SNMP, IPv4 or IPv6, Active Directory® authentication, IIS v.6.0 web server
Control Subnet	100/1000 Mbps Ethernet, autoswitching, autonegotiating, autodiscovery, full/half duplex, DHCP server, DNS Server, port forwarding, isolation mode
USB	Supports computer console via front panel USB 2.0 device port

Connectors and Card Slots

MEMORY	(1) SD memory card slot; Accepts one 32 GB SD or SDHC card to enable logging and for troubleshooting purposes
USB	(1) USB Type-A connector, female; USB 2.0 host port; For firmware upgrades
LAN	(1) 8-pin RJ-45 connector, female; 100BASE-TX/1000BASE-T Ethernet port; Connects to the customer's LAN
CONTROL SUBNET	(1) 8-pin RJ-45 connector, female; 100BASE-TX/1000BASE-T Ethernet port; Provides a dedicated local network for Zūm Net wireless gateways and wired rooms
NET (24 Y Z G)	(1) 4-pin 3.5 mm detachable terminal block; Connects to a GLS-SIM which facilitate Demand Response when connected to a nonsystem sensor, such as a GLS-ODT-C-NS; Not used for power

24VDC 2.0A	(1) 2.1 x 5.5 mm DC power connector; 24VDC power input; PW-2420RU power pack included
G	(1) 6-32 screw; Chassis ground lug
COMPUTER (front)	(1) USB Type-B connector, female; USB 2.0 device port for configuration via computer console (cable included)

Controls and Indicators

PWR	(1) Green LED; Indicates operating power supplied from the included power pack
NET	(1) Amber LED; Not used
MSG	(1) Red LED; Indicates that the ZUM-HUB4 has generated an error message
HW-R	(1) Recessed push button for hardware reset
SW-R	(1) Recessed push button for software reset
LAN (rear)	(2) Bicolor green/amber LEDs; Left LED indicates Ethernet link status and connection speed; Right LED indicates Ethernet activity
CONTROL SUBNET (rear)	(2) Bicolor green/amber LEDs; Left LED indicates Ethernet link status and connection speed; Right LED indicates Ethernet activity

Power

Power Source Options	Power pack or Cresnet® power supply (connect only one)
Power Pack (included)	Input: 100–240VAC, 50/60 Hz; Output: 2.5A @ 24VDC Model: PW-2420RU
Cresnet Power Usage	15 W (0.625A @ 24VDC) when powered by a Cresnet power supply only
Available Cresnet Power	24 W (1A @ 24VDC) when powered by the included power pack only
Power Consumption	15 W (not including any connected Cresnet devices)

Environmental

Temperature	41° to 113°F (5° to 45°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	50 BTU/hr

Enclosure

Chassis	Metal, black finish
Faceplate	Extruded metal, black finish, polycarbonate label overlay

Mounting	Freestanding or 1 RU 19 in. rack-mountable; Adhesive feet and rack ears included

Dimensions

Height	1.70 in. (43 mm) without feet
Width	17.28 in. (439 mm); 19.00 in. (482 mm) with rack ears
Depth	6.47 in. (165 mm)

Weight

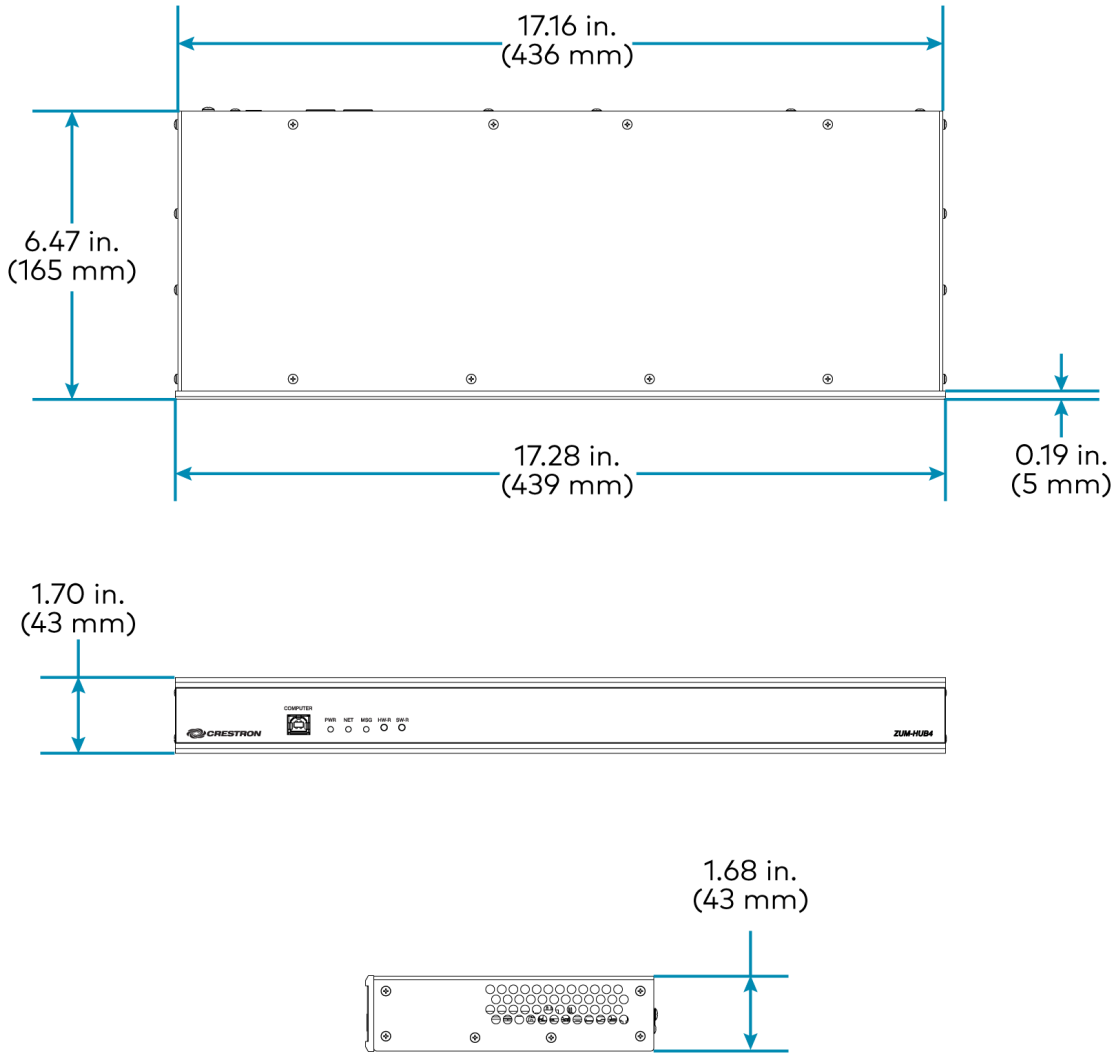
3.1 lb (1.42 kg)

Compliance

Regulatory Model: M201903003

UL® Listed for US & Canada, IC, CE, FCC Part 15 Class B digital device, UL 916, CEC Title 24, ASHRAE 90.1, IECC

Dimension Drawings



Notes:

1. SIMPL+® software modules are provided for use in commissioning a Crestron control system to work with the ZUM-HUB4. The software modules run within the control system program and provide virtual connections for all the necessary intersystem control signals. A separate dedicated module is required for each external and mirrored room. Control systems are limited in the number of modules supported, ranging from 0 to 2001000 depending on the model. For further assistance, please contact Crestron Commercial Lighting Support via email at clclighting@crestron.com or by calling 855-644-7643.
2. Other Crestron control systems must be commissioned to provide the control logic required to communicate and operate as part of the Zūm network. Once integrated, each external room effectively becomes a part of the Zūm ecosystem.

Zūm App Specifications

Specifications for the Zūm app are provided below.

Compatible Devices

Apple iOS	Requires Apple iOS 14.0 or later
Android	Requires Android OS 7.0 or later

Communications

Bluetooth	Bluetooth low energy, Version 4.0; Pairs with a compatible Zūm device

Power Supply Specifications

Product specifications for the junction box and DIN rail junction box, DIN rail, and shades power supplies are provided below.

ZUMLINK-JBOX-PSU Product Specifications

Power Requirements

AC Input Power	100–277VAC, 50/60 Hz
Zūm Link Output Current	250mA per segment; 500mA total across both segments (4 ports); Segment 1: ports 1 and 2 Segment 2: ports 3 and 4
Zūm Link Pass-through Current	250mA max; Including internal power supply: 750mA cumulative maximum

Wired Communications

ZUMLINK	(4) RJ-45 ports

Controls and Indicators

PWR Status	(1) green LED; Power indicator

Connections

Hot	(1) 14 AWG Class 1 flying lead; Black, line power input
Neutral	(1) 14 AWG Class 1 flying lead; White, neutral

Environmental

Rating	IP20
Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (noncondensing)

Construction

Housing	Plastic, white, UL 94 5VA flame rated
Mounting	Mounts to the side of a 4 in. square junction box via a 1/2 in. conduit knockout; Meets the requirements of UL 2043 for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.93 in. (125 mm)
Width	4.25 in. (108 mm)
Depth	2.03 in. (52 mm)

Weight

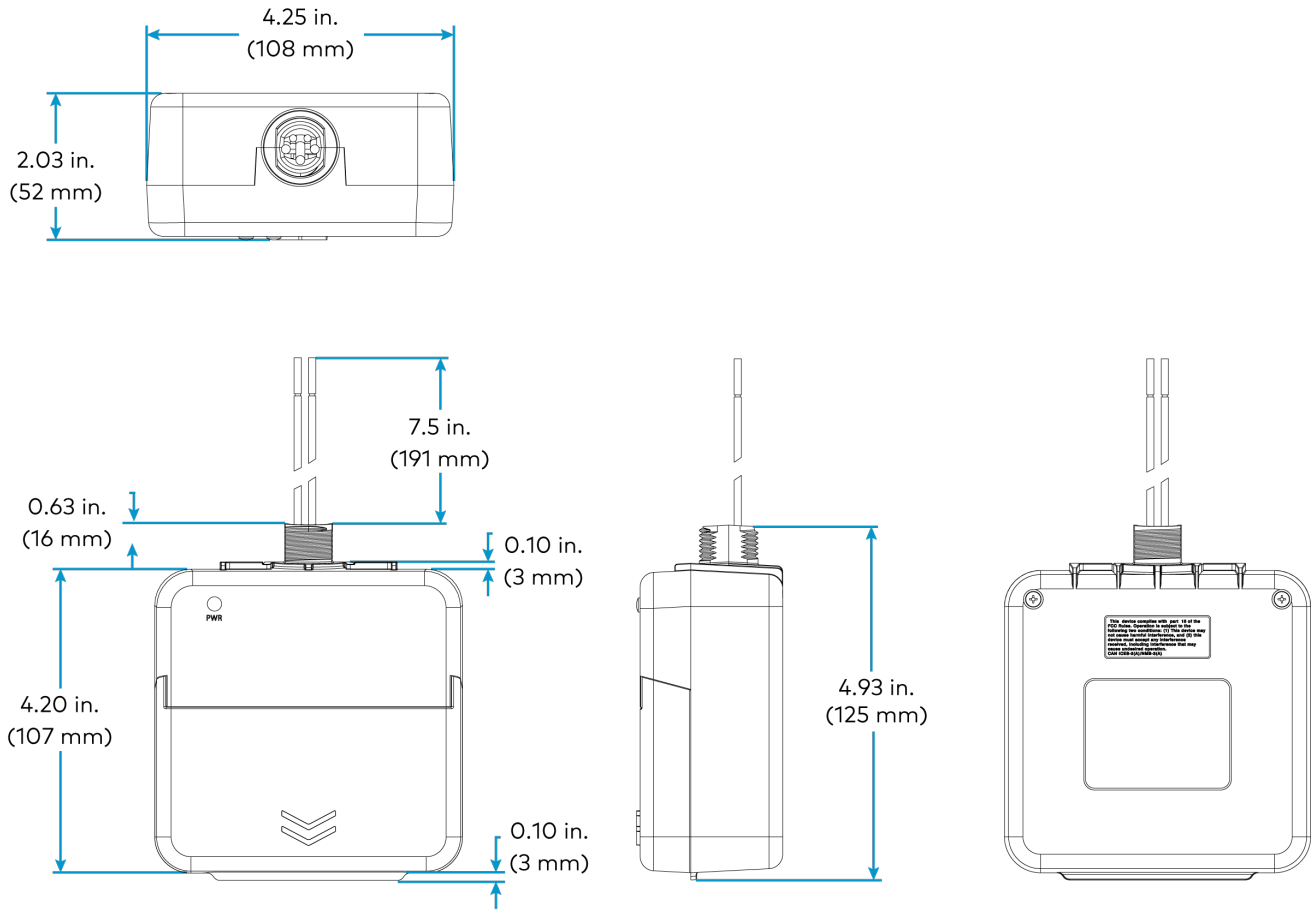
7 oz (199 g)

Compliance

Regulatory Model: M202107003

ETL Listed for the United States and Canada to UL 916 and CSA C22.2 No. 205.

ZUMLINK-JBOX-PSU Dimension Drawings



ZUMLINK-DIN-PSU Product Specifications

Power Requirements

AC Input Power	100–277VAC, 50/60 Hz
ZUMLINK (24V, 24V RTN)	(4) RJ-45 ports; 1,000mA max per left pair ports; 1,000mA max per right pair ports; 2,000mA max per module; Power output only. No communication.

Controls and Indicators

PWR Status	(1) green LED; Power indicator

Connections

N, L (Neutral, Line)	(1) 2-pin terminal block; Each terminal accepts one 12–24 AWG wire
ZUMLINK (24V, 24V RTN)	(4) RJ-45 ports for orange CBL-CAT5E-ZUMLINK-P cable (sold separately)

Environmental

Local In-Cabinet Air Temperature	32° to 122°F (0° to 50°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	23 BTU/hr @ 2A, 100VAC; 22 BTU/hr @ 2A, 120VAC; 19 BTU/hr @ 2A, 240–277VAC

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.79 in. (71 mm)
Depth	2.28 in. (58 mm)

Weight

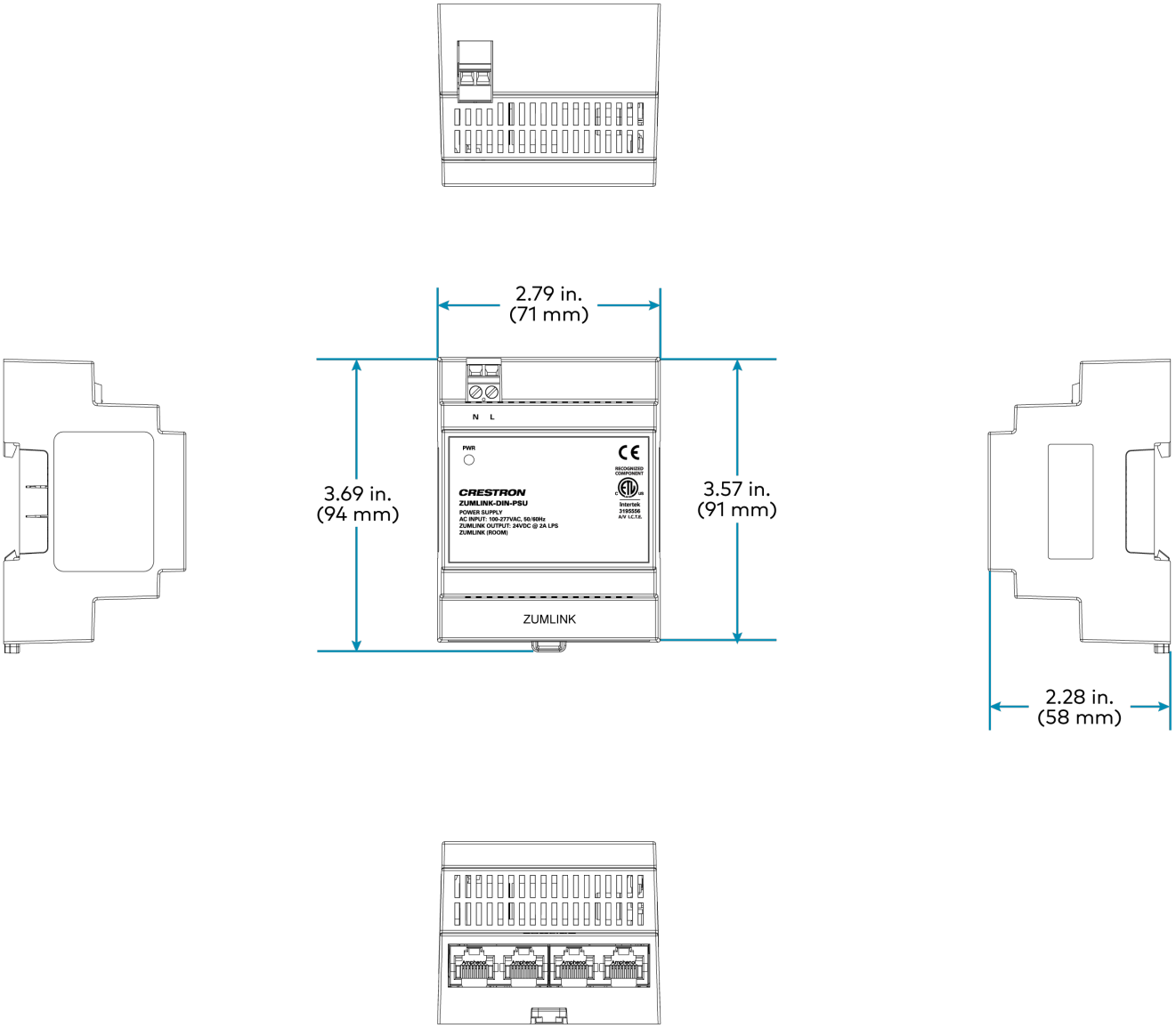
6 oz (171 g)

Compliance

Regulatory Model: M202231005

ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant for applicable European Union requirements.

ZUMLINK-DIN-PSU Dimension Drawings



CSA-PWS2S-JBOX-ZUMLINK-CN Product Specifications

Power Requirements

AC Input Power	100–240VAC, 50–60 Hz

Input Current	1A at 120VAC, 0.53A at 240VAC; Measured at full rated output
Maximum Output Rating	100 W (4.2A) @24VDC total, LPS; 50 W (2.1A) @24VDC per output, LPS; 75 W @24VDC total (continuous load) for additional Cresnet devices
Ripple/Noise	<0.5%
Efficiency	> 85%
Motor Support	Provides power for up to two motors with each motor homerun to the power supply; Supports two Crestron roller shade motors, two drapery motors, or a combination of both; Carries 145 lbs per load

Wired Communications

Zūm Link	(2) RJ-45 ports
Cresnet	(2) 4-pin 3.5 mm detachable terminal blocks

Indicators

24VDC	(2) Green LEDs, indicate the presence of 24VDC on its respective shade output

Connections

Line	(1) 18 AWG Class 1 flying lead; Black, line power input
Neutral	(1) 18 AWG Class 1 flying lead; White, neutral
Ground	(1) 16 AWG Class 1 flying lead; Green, ground
Shade Outputs	(2) 4-pin 5mm detachable terminal blocks; Independent Cresnet power output ports with polarity-sensitive terminals, supporting a maximum load of 50 W per output
CRESNET	(2) 4-pin 3.5 mm detachable terminal blocks, paralleled. Provides power and communication pass-through for Cresnet products. Maximum wire size: 14 AWG (1.5 mm²)
ZUMLINK	(2) RJ-45 ports for in-room Zūm Link device daisy-chaining. Passes through data from either the Cresnet ports or the Zūm Link ports

Environmental

Indoor use only

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

Heat Dissipation	19 BTU/hr @ 120VAC input and 1A on each output; 34 BTU/hr @ 120VAC input and 2A on each output; 45 BTU/hr @ 240VAC input and 1A on each output; 58 BTU/hr @ 240VAC input and 2A on each output;

Construction

Housing	Anodized Black, metal
Mounting	Mounts using screws on the back of the enclosure. Meets UL 2043 requirements for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.00 in. (102 mm)
Width	4.16 in. (106 mm)
Depth	2.18 in. (55 mm)

Weight

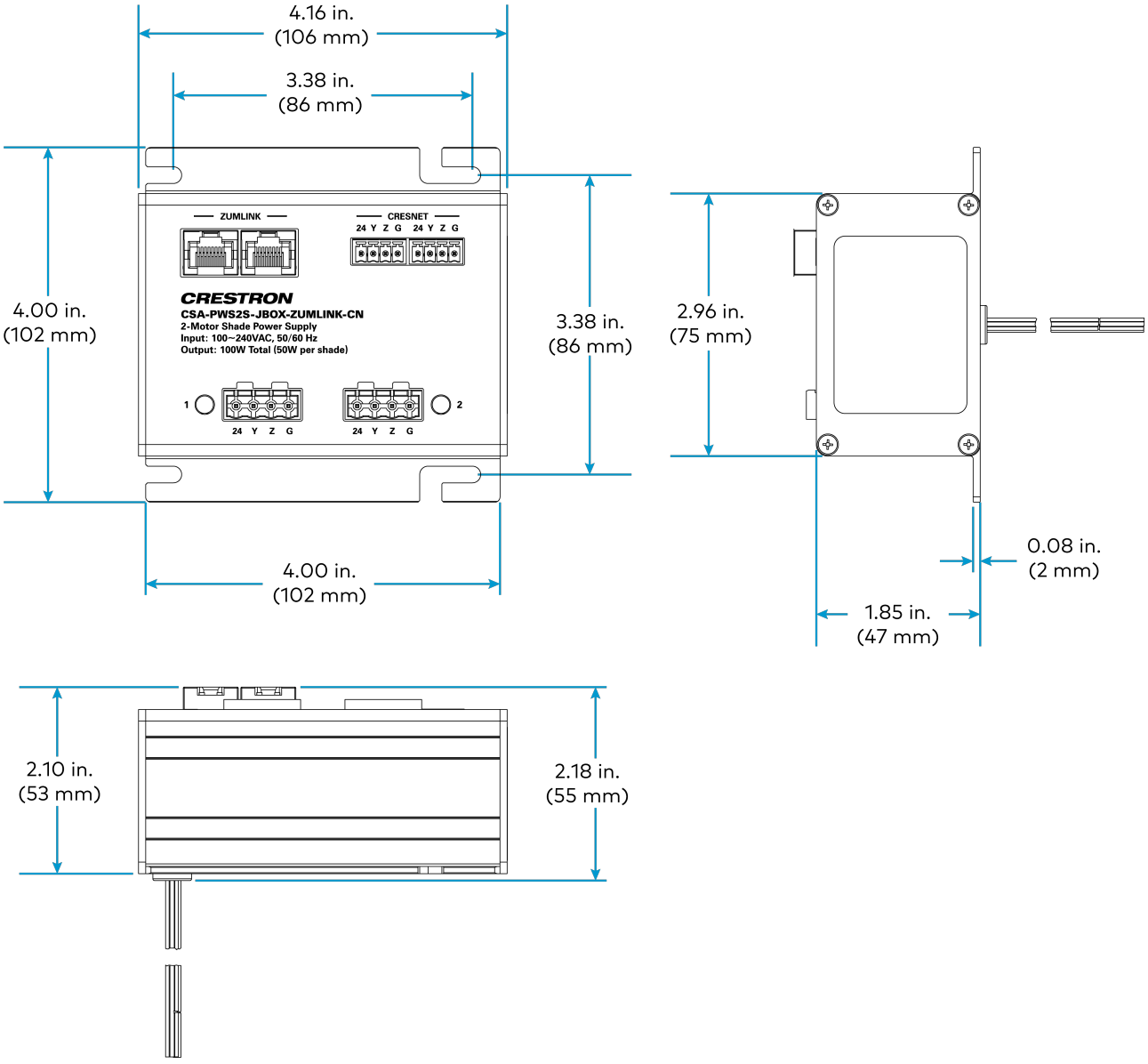
22 oz (635 g)

Compliance

Regulatory Model: M202237001

ETL® Listed for US & Canada, IC, FCC Part 15 Class B digital device, Conforms to UL 2043

CSA-PWS2S-JBOX-ZUMLINK-CN Dimension Drawings



Integration Module with Standalone Timeclock Specifications

Product specifications for the junction box and DIN rail integration modules are provided below.

ZUMLINK-JBOX-IO Product Specifications

Zūm Link Power Bus Requirements

Max Current Consumption	110mA
Max Keypad Feedback LED Current	20mA *Passthrough from Zūm Link bus*

Timeclock Backup Power

Battery Backup Life	10 years

Wired Communications

ZUMLINK	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining

Controls and Indicators

SETUP	(2) Push button and (1) green LED; Indicates On/Off status of connected load; Lights briefly to indicate a button press
PWR	(2) Bicolor LED; Power indicator; Turns red when power is first applied for approximately 0.5 seconds and then turns green
ZUMLINK	(2) Green LED; LED lights green in normal operation
CLOCK	(2) Green LED indicates when: A unit is part of a Zūm Link network; The time and location have been set; One or more timeclock events have been configured; The LED flashes for 0.5 seconds on/off when timeclock is in manual or maintained override

Connections

C, NO, NC RELAY	(2) 3-pin terminal blocks for output relays; 30VAC/VDC 1A; Each terminal accepts one 20–24 AWG wire
V+, IN, LED IN	(2) 3-pin terminal blocks for input relays with keyswitch LED support: Each terminal accepts one 20–24 AWG wire
V+, N IN	(2) 2-pin terminal blocks for input relays without keyswitch support Each terminal accepts one 20–24 AWG wire

RS-232 **COM1**	(1) 5-pin terminals block G, TX, RX, RTS, CTS Each terminal accepts one 20–24 AWG wire

> **NOTE**: The RS-232 COM port is intended for use with relatively simple devices that send and receive small packets and do not generate a lot of data. A small amount of delay may be normal when sending or receiving some control commands on a low-speed serial network. Zūm and Cresnet networks with many devices tend to exhibit more delay.

RS-485 **COM2**	(1) 3-pin terminal block G, D+, D- Each terminal accepts one 20–24 AWG wire

Environmental

Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	6 BTU/hr

Construction

Housing	Plastic, white, UL 94 5VA flame rated
Mounting	Mounts to the side of a 4 in. square junction box; Meets UL 2043 requirements for installation in an environmental air-handling (plenum) space

Dimensions

Height	4.16 in. (106 mm)
Width	4.16 in. (106 mm)
Depth	0.99 in. (25 mm)

Weight

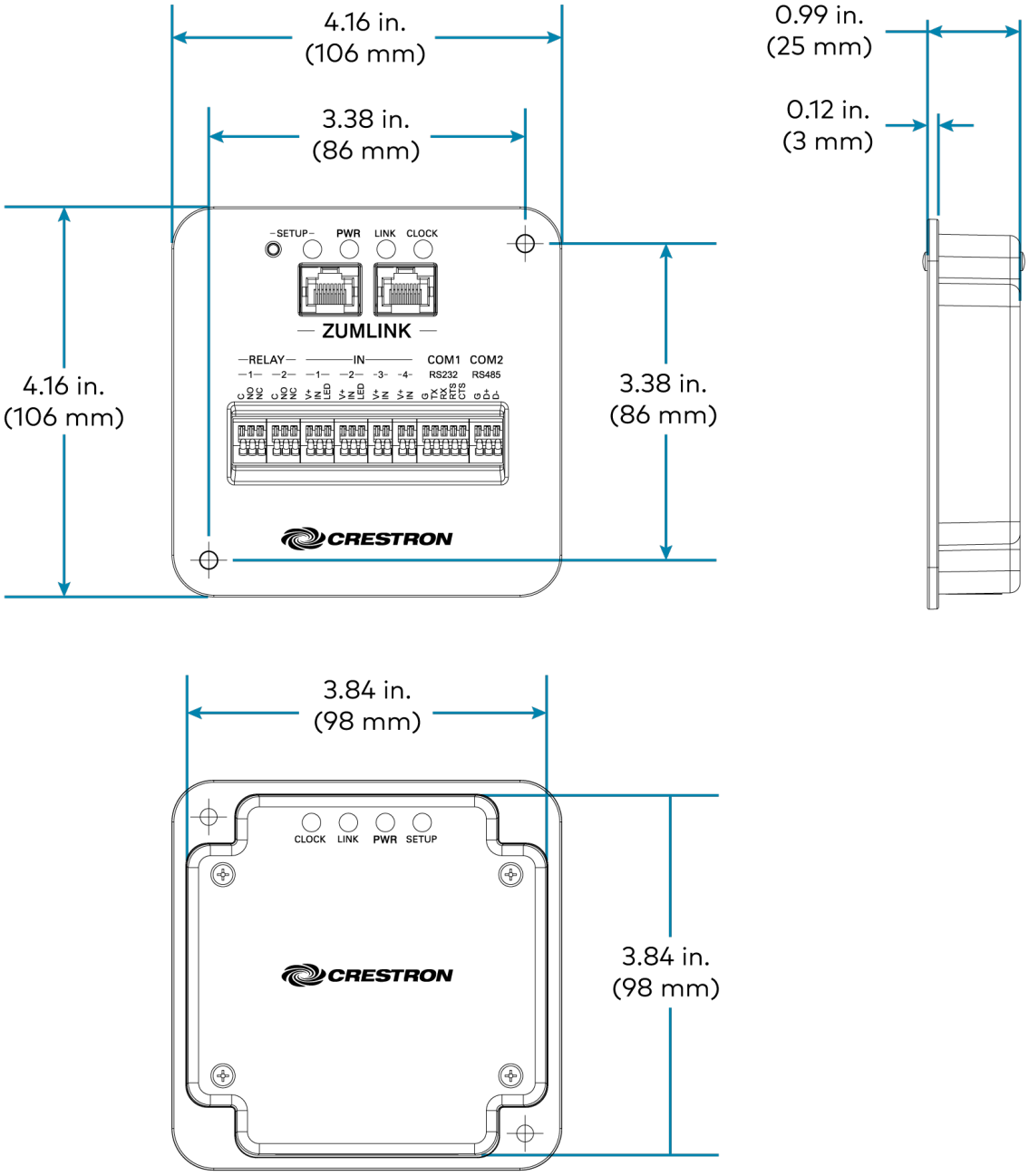
6 oz (171 g)

Compliance

Regulatory Model: M202107004

ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant for applicable European Union requirements.

ZUMLINK-JBOX-IO Dimension Drawings



ZUMLINK-DIN-IO Product Specifications

Zūm Link Power Bus Requirements

Max Current Consumption	80mA

Max Keypad Feedback LED Current	20mA *Passthrough from Zūm Link bus*

Timeclock Backup Power

Battery Backup Life	10 years

Wired Communications

ZUMLINK	(2) RJ-45 ports; In-room Zūm Link device daisy-chaining

Controls and Indicators

SETUP	(1) Push button and (1) green LED; Indicates On/Off status of connected load; Lights briefly to indicate a button press
PWR	(1) Bicolor LED; Power indicator; Turns red when power is first applied for approximately 0.5 seconds and then turns green
ZUMLINK	(1) Green LED; LED lights green in normal operation
CLOCK	(1) Green LED indicates when: A unit is part of a Zūm Link network; The time and location have been set; One or more timeclock events have been configured; The LED flashes for 0.5 seconds on/off when timeclock is in manual or maintained override

Connections

C, NO, NC RELAY	(2) 3-pin terminal blocks for output relays; 30VAC/VDC 1A; Each terminal accepts one 20–24 AWG solid wire
V+, IN, COM KEYPAD INPUTS	(2) 3-pin terminal blocks for input relays with keyswitch LED support: Each terminal accepts one 20–24 AWG solid wire
RS-232	(1) 5-pin terminals block GND, TX, RX, RTS, CTS Each terminal accepts one 20–24 AWG solid wire

> **NOTE**: The RS-232 COM port is intended for use with relatively simple devices that send and receive small packets and do not generate a lot of data. A small amount of delay may be normal when sending or receiving some control commands on a low-speed serial network. Zūm and Cresnet networks with many devices tend to exhibit more delay.

RS-485	(1) 3-pin terminal block GND, D+, D- Each terminal accepts one 20–24 AWG solid wire

Environmental

Local In-Cabinet Air Temperature	32° to 131°F (0° to 55°C)
Humidity	10% to 90% RH (noncondensing)
Heat Dissipation	5 BTU/hr

Construction

Light gray polycarbonate housing with polycarbonate label overlay, 71 mm53 mm DIN rail mount, occupies 3M4M DIN module spaces, DIN 43380 for factor for enclosures with 45 mm front panel cutout

Dimensions

Height	3.69 in. (94 mm)
Width	2.79 in. (71 mm)
Depth	2.32 in. (59 mm)

Weight

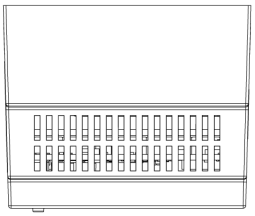
4 oz (133 g)

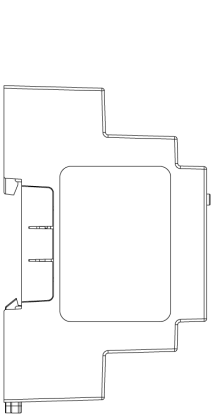
Compliance

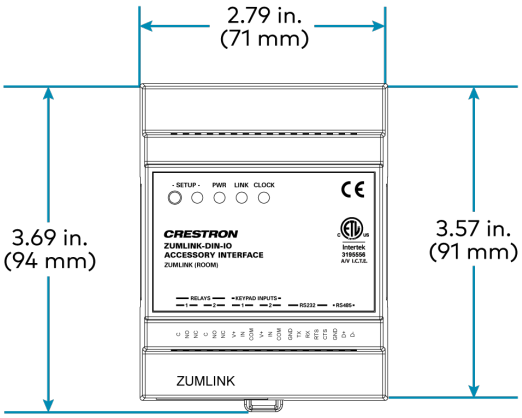
Regulatory Model: M202231004

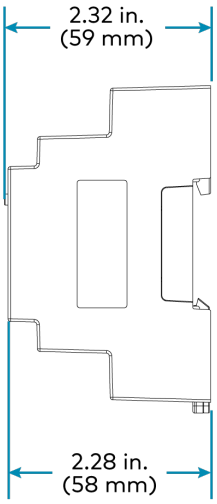
ETL Listed for the United States and Canada to UL/IEC 62368-1 safety standards.
CE compliant for applicable European Union requirements.

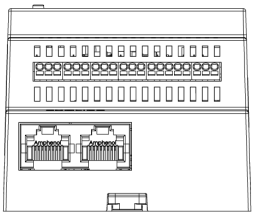
ZUMLINK-DIN-IO Dimension Drawings











Cable Specifications

Cables are available for Zūm Net and Zūm Link applications.

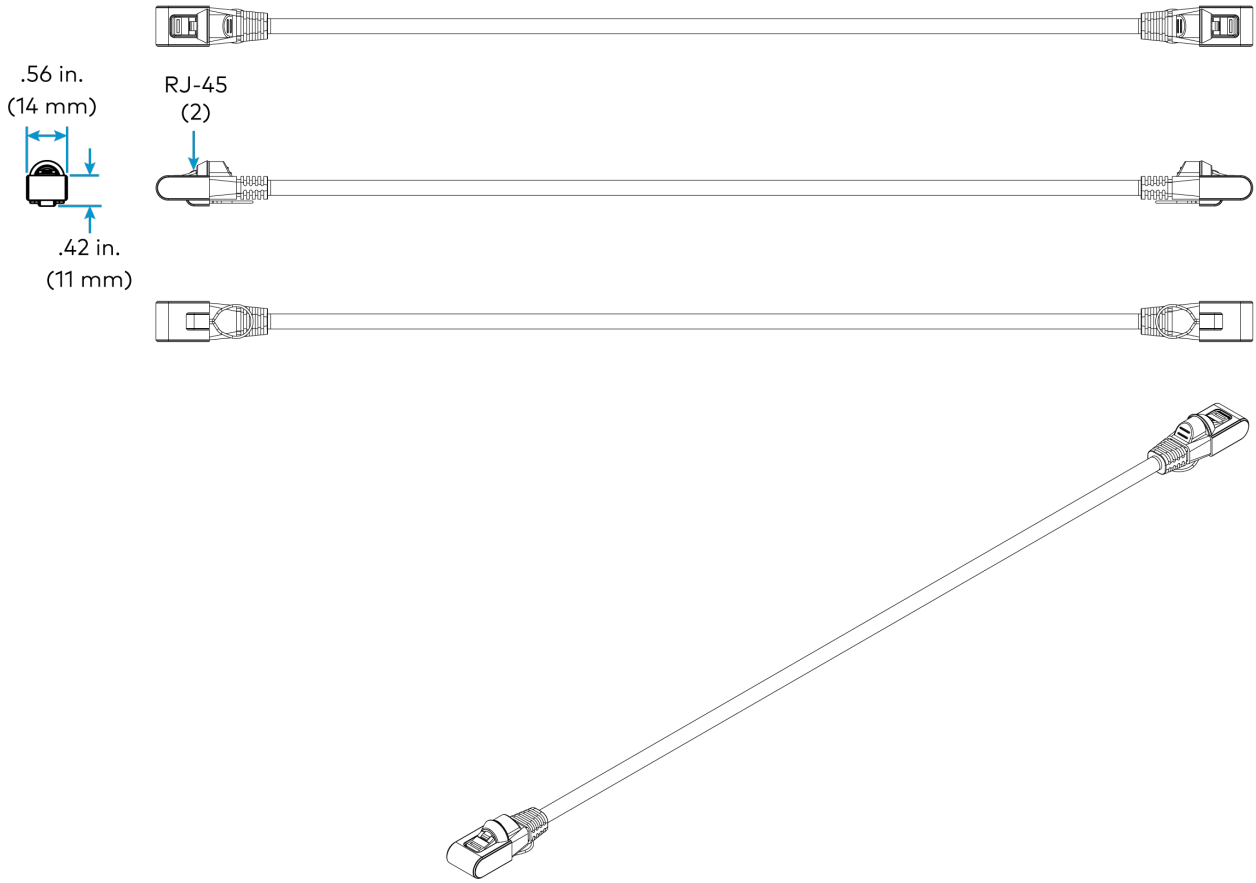
- CBL-CAT5E-ZUMNET-P Specifications on page 142
- CBL-CAT5E-ZUMLINK-P Specifications on page 143

CBL-CAT5E-ZUMNET-P Specifications

Cable

Terminations	(2) RJ-45 connectors; (1) connector per end with dust cap **NOTE:** RJ-45 connectors and dust caps are not included with the CBL-CAT5E-ZUMNET-P-SP500.
Unshielded Twisted Pairs (4)	Colors: Blue/white, orange/white, green/white, brown/white; Conductors: 24 AWG solid copper Insulation: FEP, 0.005 in. nominal thickness
Outer Jacket	Color: Purple; Material: Low smoke PVC
Lengths	CBL-CAT5E-ZUMNET-P-25: 25 ft (8 m) CBL-CAT5E-ZUMNET-P-50: 50 ft (15 m) CBL-CAT5E-ZUMNET-P-100: 100 ft (30 m) CBL-CAT5E-ZUMNET-P-SP500: 500 ft (152 m) spool

CBL-CAT5E-ZUMNET-P Dimension Drawings



CBL-CAT5E-ZUMLINK-P Specifications

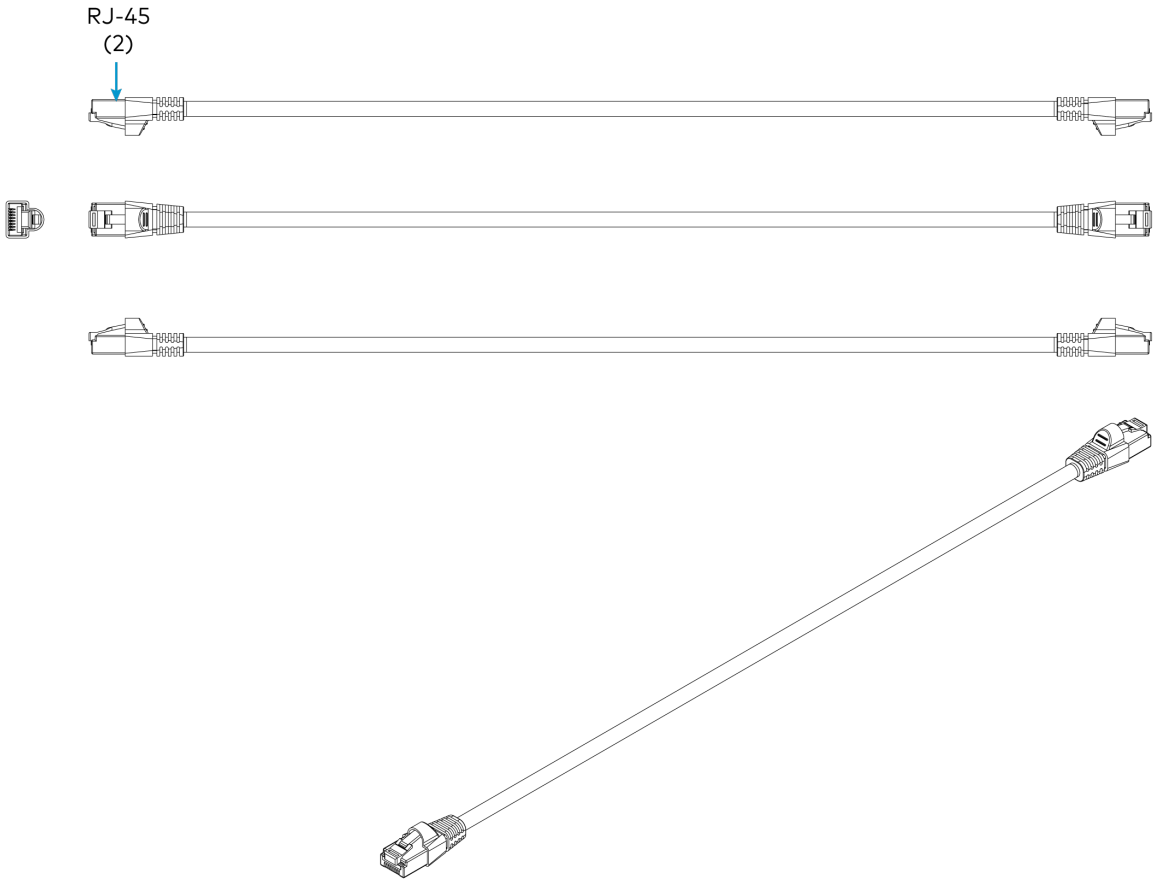
Cable

Power	Provides 24V power to Zūm Link devices
Terminations	(2) RJ-45 connectors; (1) connector per end
	NOTE: RJ-45 connectors are not included with the CBL-CAT5E-ZUMLINK-P-SP500.
Unshielded Twisted Pairs (4)	Colors: Blue/white, orange/white, green/white, brown/white; Conductors: 24 AWG solid copper Insulation: FEP, 0.005 in. nominal thickness
Outer Jacket	Color: Orange; Material: Low smoke PVC

Lengths

CBL-CAT5E-ZUMLINK-P-0.5: 6 in. (152 mm)
CBL-CAT5E-ZUMLINK-P-3: 3 ft (0.9 m)
CBL-CAT5E-ZUMLINK-P-6: 6 ft (2 m)
CBL-CAT5E-ZUMLINK-P-12: 12 ft (4 m)
CBL-CAT5E-ZUMLINK-P-25: 25 ft (8 m)
CBL-CAT5E-ZUMLINK-P-50: 50 ft (15 m)
CBL-CAT5E-ZUMLINK-P-SP500: 500 ft (152 m) spool

CBL-CAT5E-ZUMLINK-P Dimension Drawings



Cable Accessory Specifications

Cables accessories include the ZUMLINK-CONV-CN adapter cable and the ZUMLINK-SPLTR-RJ45 splitter.

- ZUMLINK-CONV-CN Product Specifications on page 145
- ZUMLINK-SPLTR-RJ45 Product Specifications on page 146

ZUMLINK-CONV-CN Product Specifications

Connectors

Cresnet Terminal Block	(1) 4-pin captive screw terminal block; 24: 24V power Y: Data terminal pass-through only Z: Data terminal pass-through only G: Ground
Emergency Override Terminal Block	(1) 4-pin captive screw terminal block; 24: 24V power O: Emergency override W: Future use G: Ground
ZUM LINK RJ-45	(1) female RJ-45 Zūm Link port

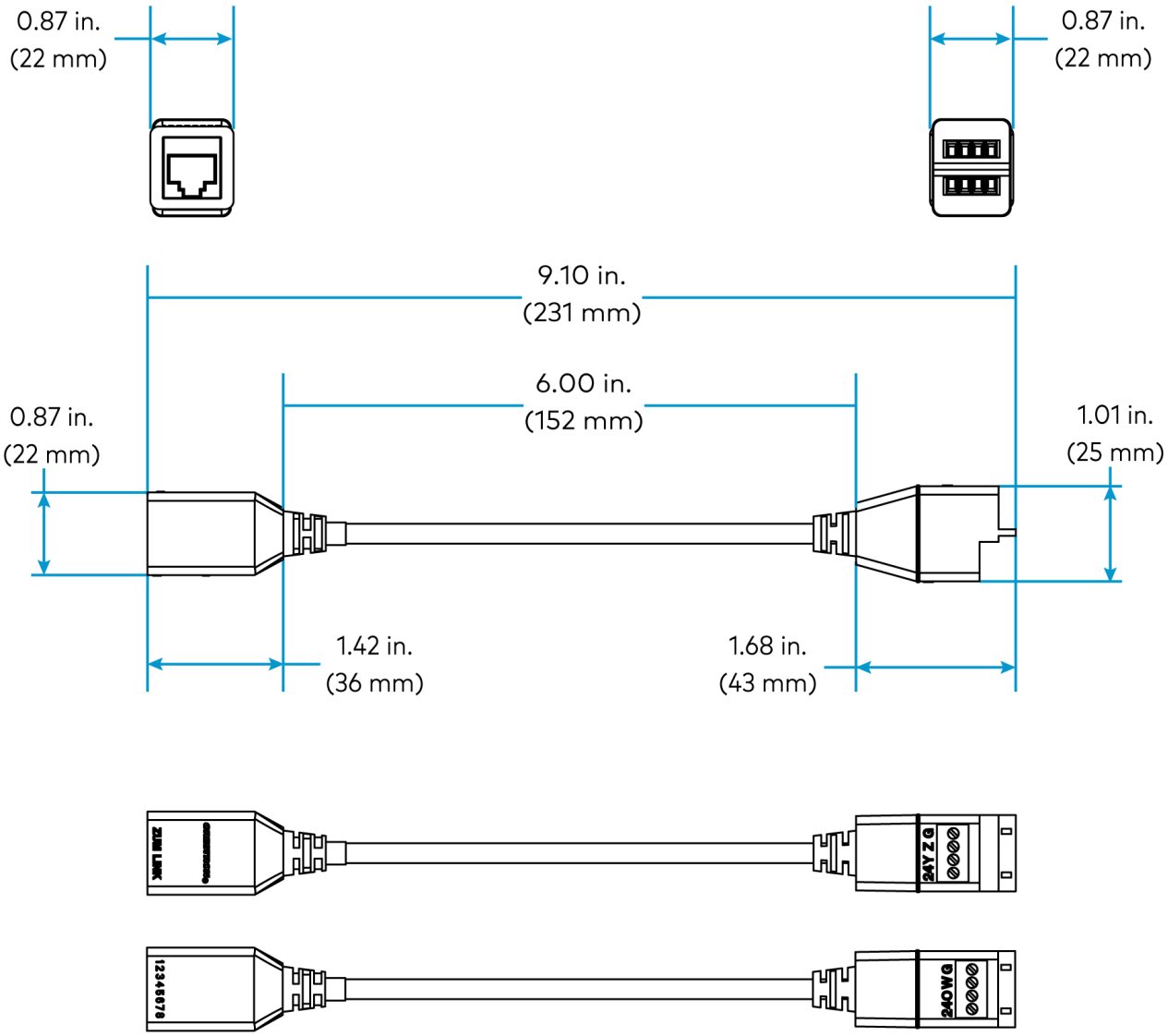
Construction

Conductors	24 AWG solid copper
Insulation	FEP, 0.005 in. nominal thickness
Outer Jacket	Color: Orange; plenum rated

Dimensions

Cable length	6 in. (152 mm), excluding the connectors

ZUMLINK-CONV-CN Dimension Drawings



ZUMLINK-SPLTR-RJ45 Product Specifications

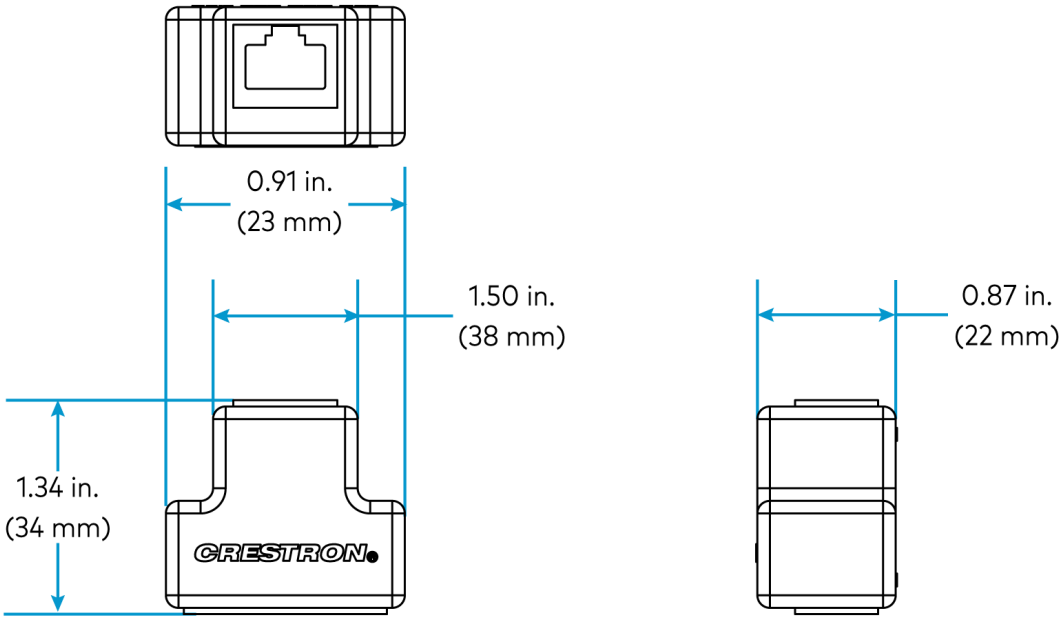
Connectors

ZUM LINK	(3) female RJ-45 Zūm Link connectors

Dimensions

Height	0.87 in. (22 mm)
Width	0.91 in. (23 mm)
Depth	1.34 in. (34 mm)

ZUMLINK-SPLTR-RJ45 Dimension Drawings



Rocker and Button Tree Specifications

Product specifications for the rocker and button tree configurations are provided below.

Product Specifications

Environmental

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

Construction

Composition	Plastic

Dimensions

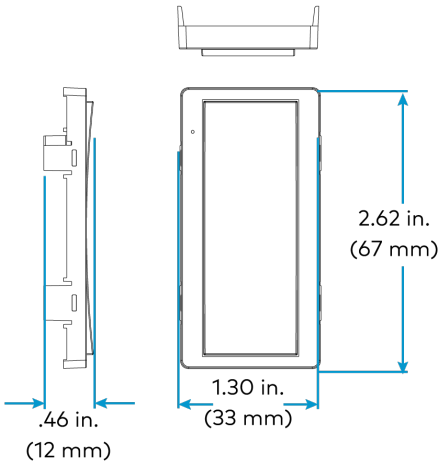
Height	2.62 in. (67 mm)
Width	1.30 in. (33 mm)
Depth	Rocker: 0.46 in. (12 mm)
	2, 4, 6, and 8 button trees: 0.47 in. (12 mm)

Weight

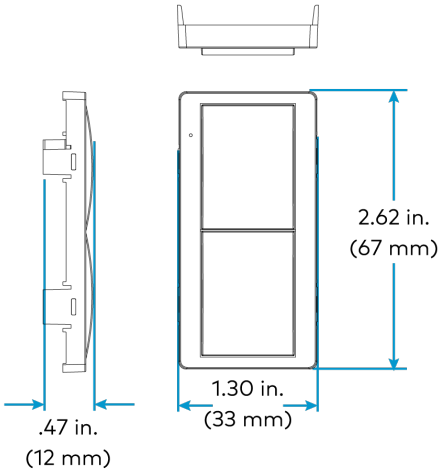
~0.2 oz (6.4 g)

Dimension Drawings

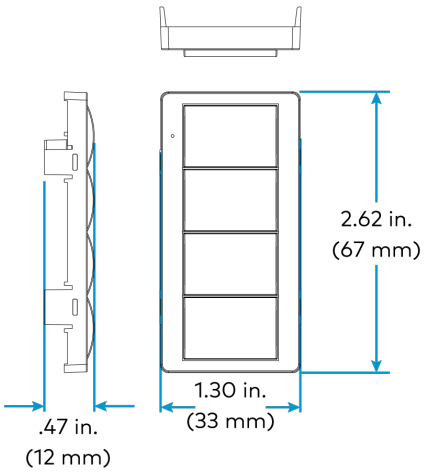
ZUMLINK-BTNR (BLANK shown)



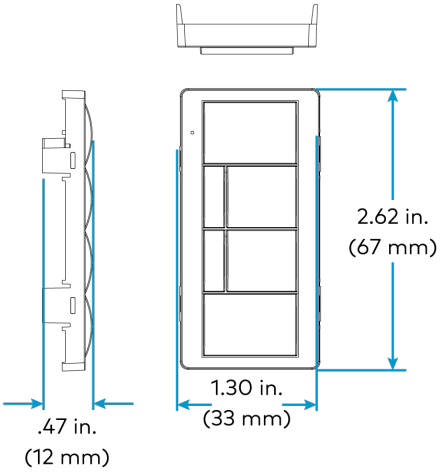
ZUMLINK-BTN2 (BLANK shown)



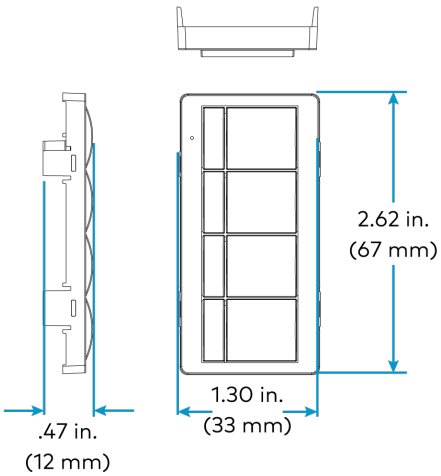
ZUMLINK-BTN4 (BLANK shown)



ZUMLINK-BTN6 (BLANK shown)



ZUMLINK-BTN8 (BLANK shown)



Installation

Refer to the following sections for installation instructions.

Wired DIN Rail Load Controllers, Power Supply, and Integration Module

Zūm Wired DIN Rail Installation on page 152

Junction Box and Surface Mounted Load Controllers, Power Supply, and Integration Module

Zūm Wired

- Zūm Wired Load Controller Installation on page 166
- Zūm Wired Universal Dimmer Load Controller Installation on page 177
- Power Supply Installation on page 209
- Integration Module with Standalone Timeclock Installation on page 220

Zūm Wireless

- Zūm Mesh Wireless Load Controller Installation on page 231
- Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241

Keypad and Rocker Button

Zūm Wired

- Zūm Wired Keypad Installation on page 183
- Rocker and Button Tree Installation on page 228

Zūm Wireless

- Zūm Mesh Wireless Keypad Installation on page 245

Presence Detectors

Zūm Wired

Presence Detectors Installation on page 190

Hub

Hub Installation on page 207

Cable Accessories

Cable Accessory Installation on page 226

Install Zūm Wired Devices

The following sections provide installation procedures for Zūm Wired devices.

- Zūm Wired DIN Rail Installation
- Zūm Wired Load Controller Installation
- Zūm Wired Universal Dimmer Load Controller Installation
- Zūm Wired Keypad Installation
- Presence Detectors Installation
- Hub Installation
- Power Supply Installation
- Integration Module with Standalone Timeclock Installation
- Cable Accessory Installation
- Rocker and Button Tree Installation

Zūm Wired DIN Rail Installation

DIN rail Zūm devices snap onto a standard DIN rail for installation in a wall mount enclosure (Crestron DIN-EN series or similar) or on a wall panel. DIN rail mounting enables modular installation alongside Crestron DIN Rail lighting and automation control modules as well as other third-party DIN rail mountable devices. Wiring connections using screw terminals, ZUMLINK, or ZUMNET ports are positioned along the top and bottom, clearly accessible from the front for easy installation and servicing. Devices are 3M or 4M wide. For details, refer to Specifications on page 64.

In the Box

Qty.	Description
1	Zūm® Wired Lighting Control DIN Rail Mounted Module ZUMNET-DIN-16A-LV, ZUMNET-DIN-DLI, ZUMLINK-DIN-16A-LV, ZUMLINK-DIN-20A-PLUG, ZUMLINK-DIN-20A-SW, ZUMLINK-DIN-DIMU, ZUMLINK-DIN-PSU, or ZUMLINK-DIN-IO

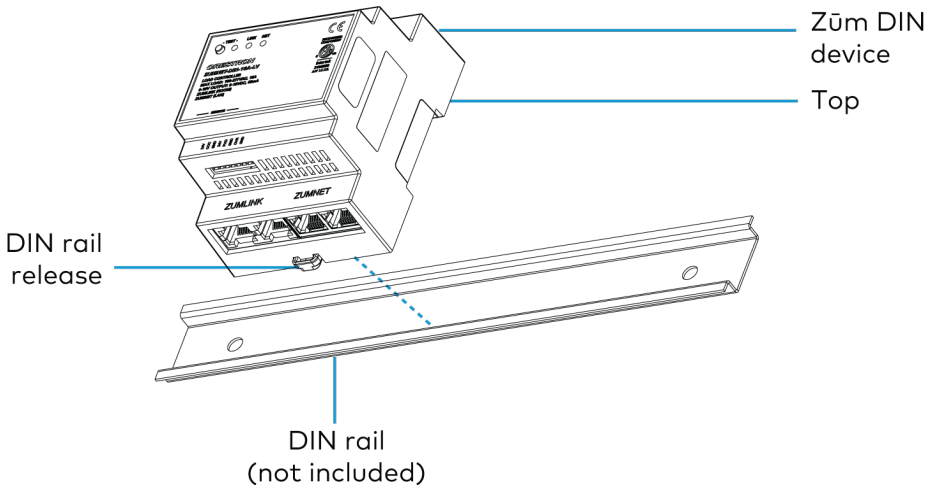
Mount to a DIN Rail

NOTES:

- Install and use the Zūm DIN rail device in accordance with appropriate electrical codes and regulations.
- Use the Zūm DIN rail device in a well-ventilated area. The venting holes should not be obstructed under any circumstances.
- Products with the ⧈ symbol on the product label are classified as Class II equipment.
- Populate the cabinet starting from the bottom rail, beginning with the units with the highest BTU/hr rating.

To install a Zūm DIN rail device:

1. Use a small, flat-head screwdriver to pull the DIN rail release downward.
2. Place the top of the Zūm DIN device rail mount over the top of the DIN rail.
3. Tilt the bottom of the Zūm DIN device toward the DIN rail until it snaps into place.



Remove from a DIN Rail

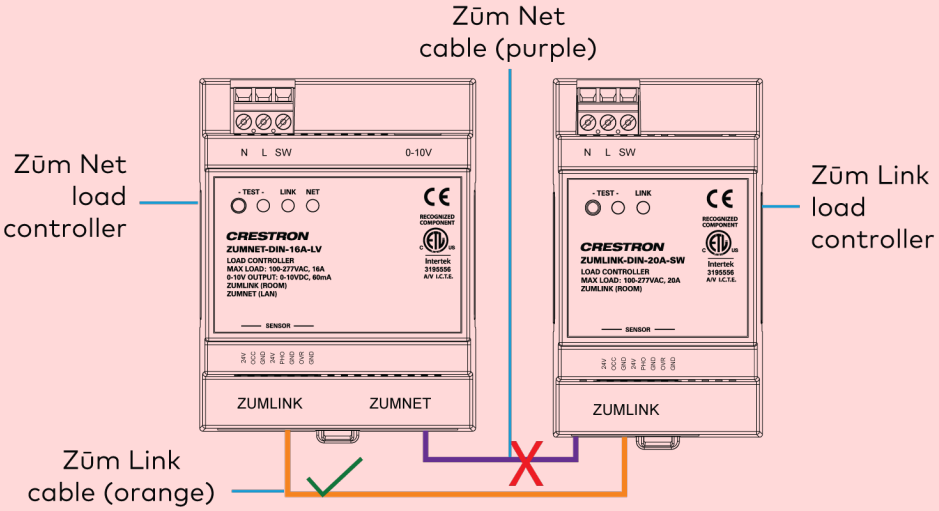
To remove a Zūm DIN rail device:

1. Turn off power to the Zūm DIN device.
2. Remove all connections from the Zūm DIN device.
3. Use a small, flat-head screwdriver to pull the DIN rail release.
4. Tilt the bottom of the Zūm DIN device away from the DIN rail and remove the device.

Connections

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Miswiring the Neutral and Load (**SW**/**OUT**) terminals can result in a hazardous scenario. Verify that these connections are correct before applying power.
- For optimal safety, any cabinets with DIN-mounted products should have their doors closed prior to energizing the circuit breaker.
- The power feed must have an appropriately sized circuit breaker meeting local and national codes.
- A licensed electrician should install this product.
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

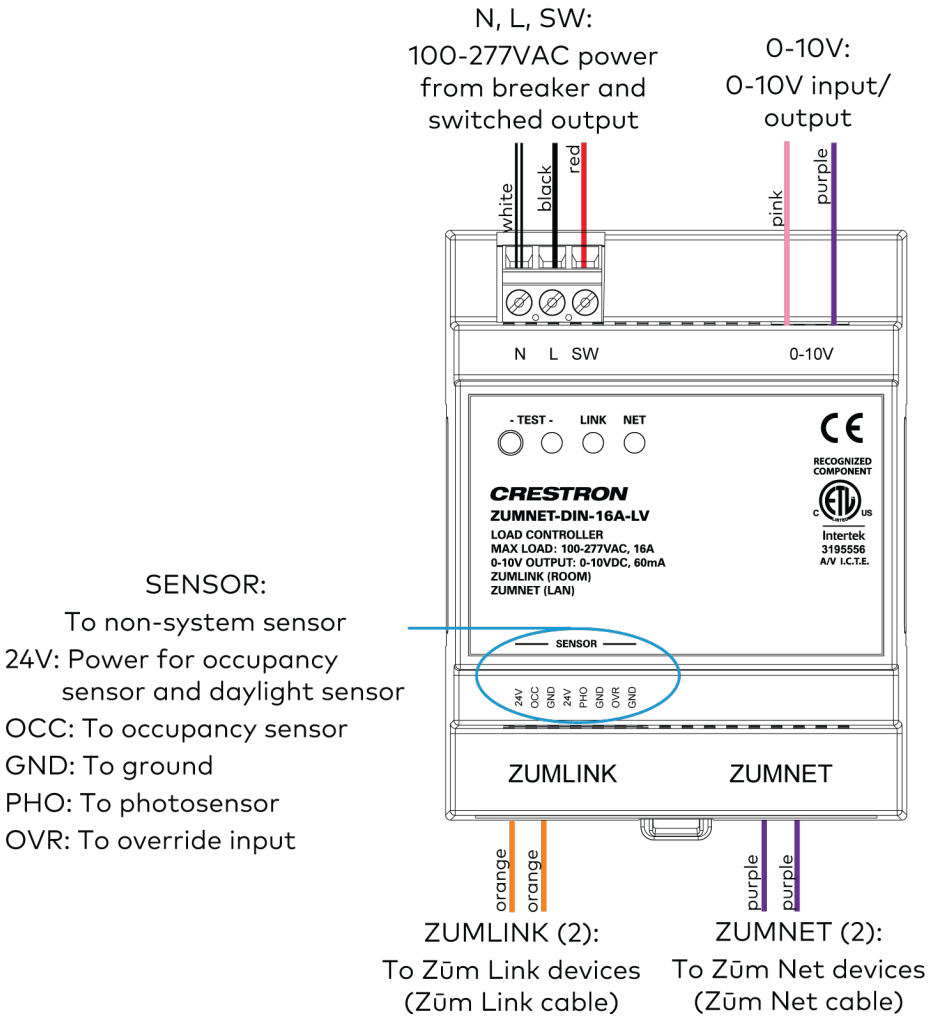
NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- High-voltage connections accept 12 AWG (2.5 mm^2) wire. Wire should be stripped to 1/3 in. (8 mm). Tighten the terminal blocks to 4 in-lbs (0.45 Nm).
- Use copper wire only. For high-voltage connections, use wires rated for at least 75°C.
- The National Electric Code (NEC) designates wiring as either Class1 (high voltage) or Class2 (low voltage).
- The ports located along the top of the devices are Class1 (AC Input, DALI, 0–10V) while the ports located along the bottom are Class2 (ZUMLINK, ZUMNET, sensor terminals).
- Section 725.136 of the NEC details the allowable mitigations required for Class1 and Class2 wiring to cohabitate a single cabinet:

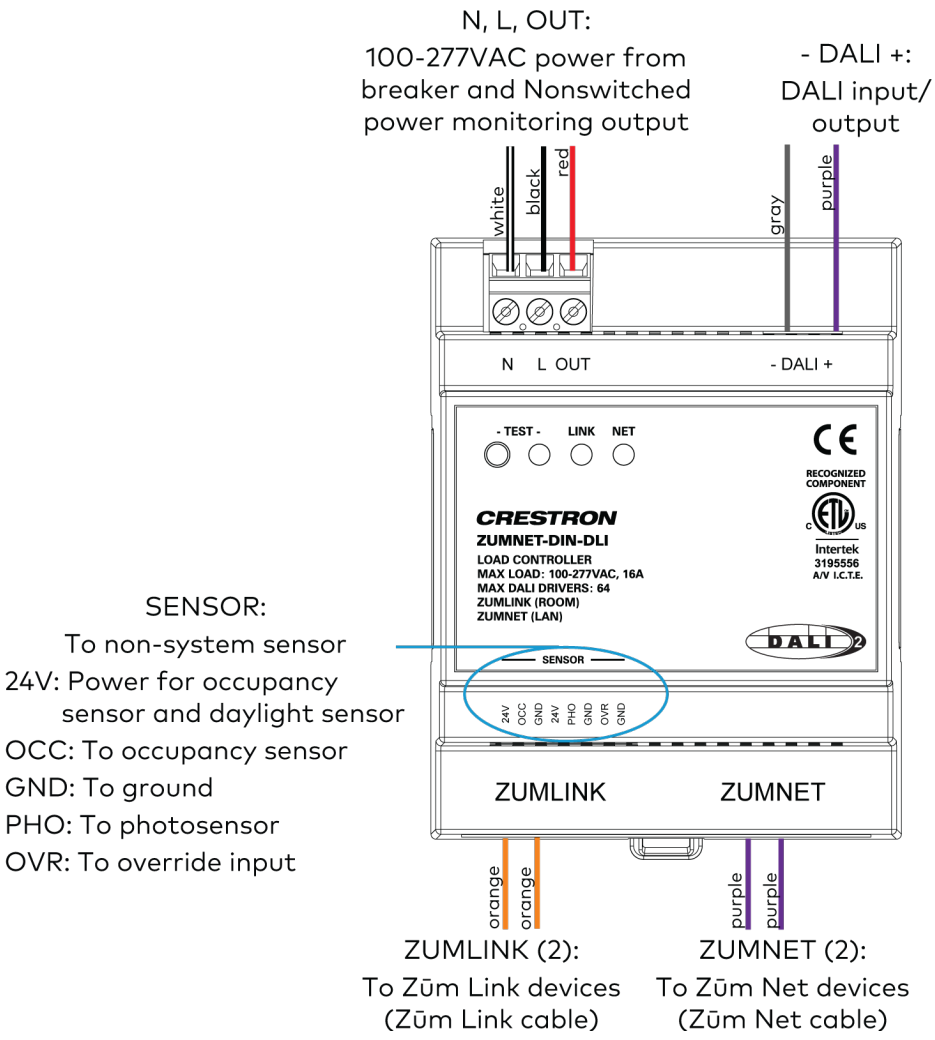
System Voltage	Cable Routing Scheme	Cable Type
≤150V (relative to ground)	0.25 in. spacing between classes	CL3 (or better, such as CMP, CMX) ZUMLINK and ZUMNET cables (CBL-CAT5E-ZUMNET-P and CBL-CAT5E-ZUMLINK-P) both meet this requirement
unrestricted	2 in. spacing between classes	unrestricted
unrestricted	Barrier or raceway (classes mechanically separated)	unrestricted

Follow electrical codes and regulations when wiring Zūm DIN devices, and use the illustrations for reference only. Apply power after all connections have been made.

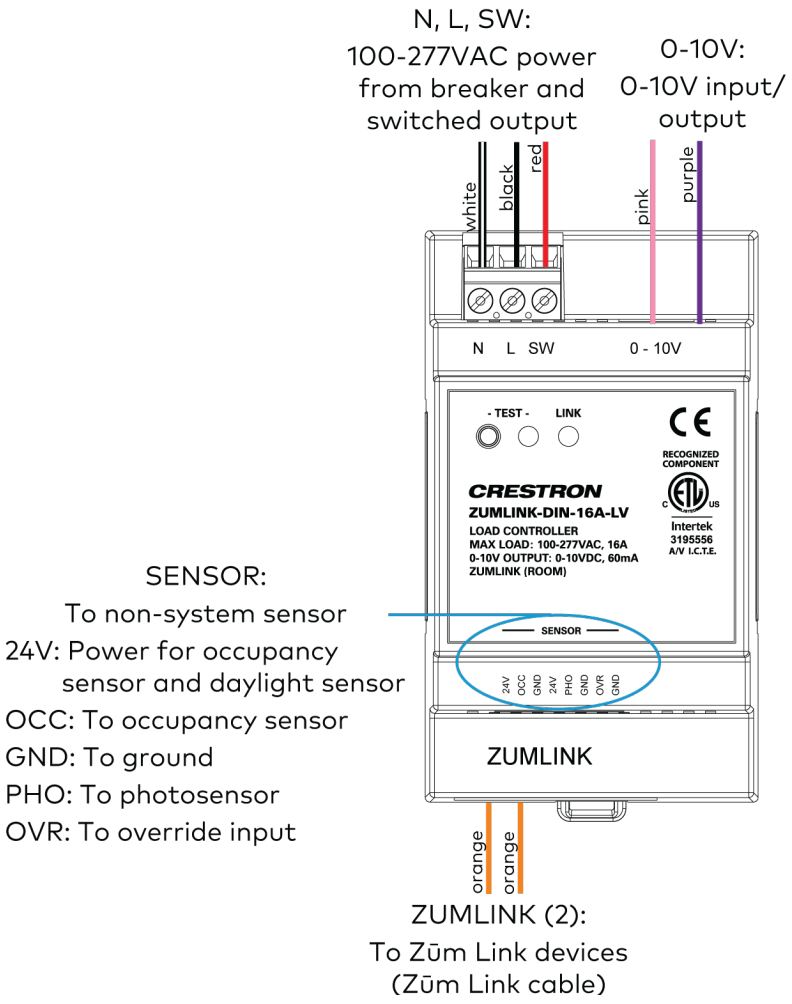
ZUMNET-DIN-16A-LV Wiring



ZUMNET-DIN-DLI Wiring

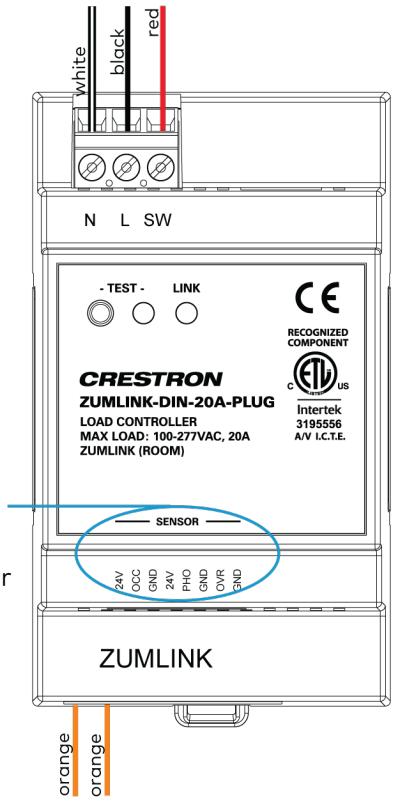


ZUMLINK-DIN-16A-LV Wiring



ZUMLINK-DIN-20A-PLUG Wiring

N, L, SW:
100-277VAC power
from breaker and
switched output

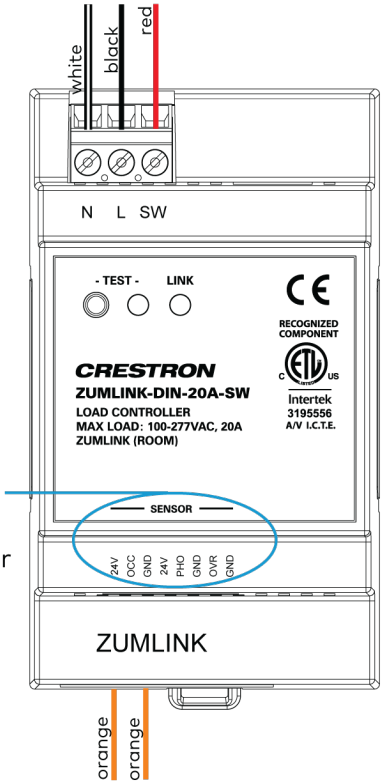


SENSOR:
To non-system sensor
24V: Power for occupancy
sensor and daylight sensor
OCC: To occupancy sensor
GND: To ground
PHO: To photosensor
OVR: To override input

ZUMLINK (2):
To Zūm Link devices
(Zūm Link cable)

ZUMLINK-DIN-20A-SW Wiring

N, L, SW:
100-277VAC power
from breaker and
switched output

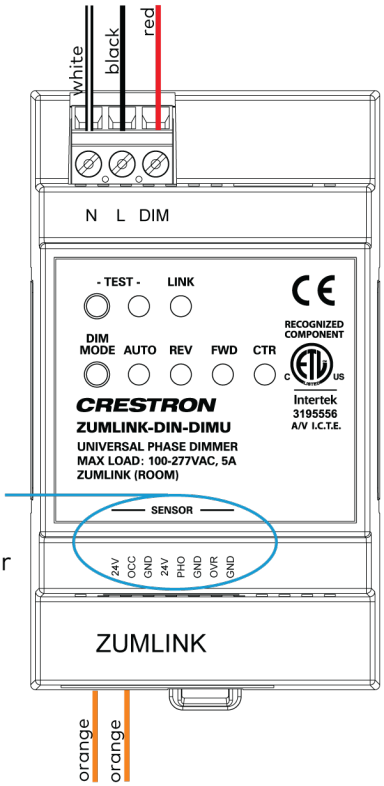


SENSOR:
To non-system sensor
24V: Power for occupancy sensor and daylight sensor
OCC: To occupancy sensor
GND: To ground
PHO: To photosensor
OVR: To override input

ZUMLINK (2):
To Zūm Link devices
(Zūm Link cable)

ZUMLINK-DIN-DIMU Wiring

N, L, DIM:
100-277VAC power
from breaker and
dimming output

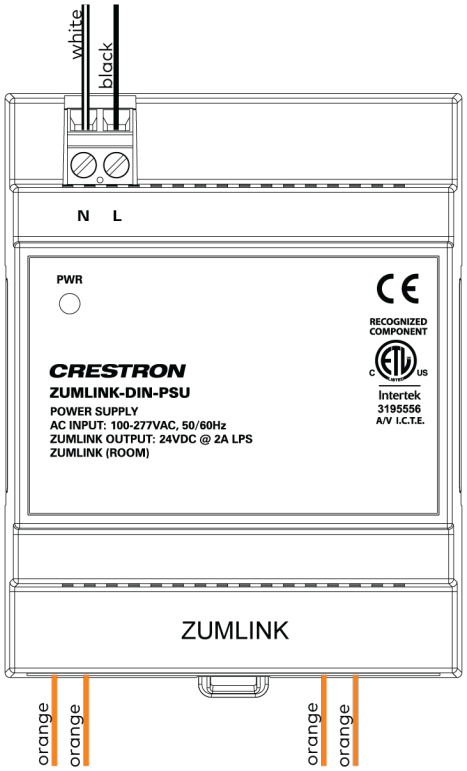


SENSOR:
To non-system sensor
24V: Power for occupancy sensor and daylight sensor
OCC: To occupancy sensor
GND: To ground
PHO: To photosensor
OVR: To override input

ZUMLINK (2):
To Zūm Link devices
(Zūm Link cable)

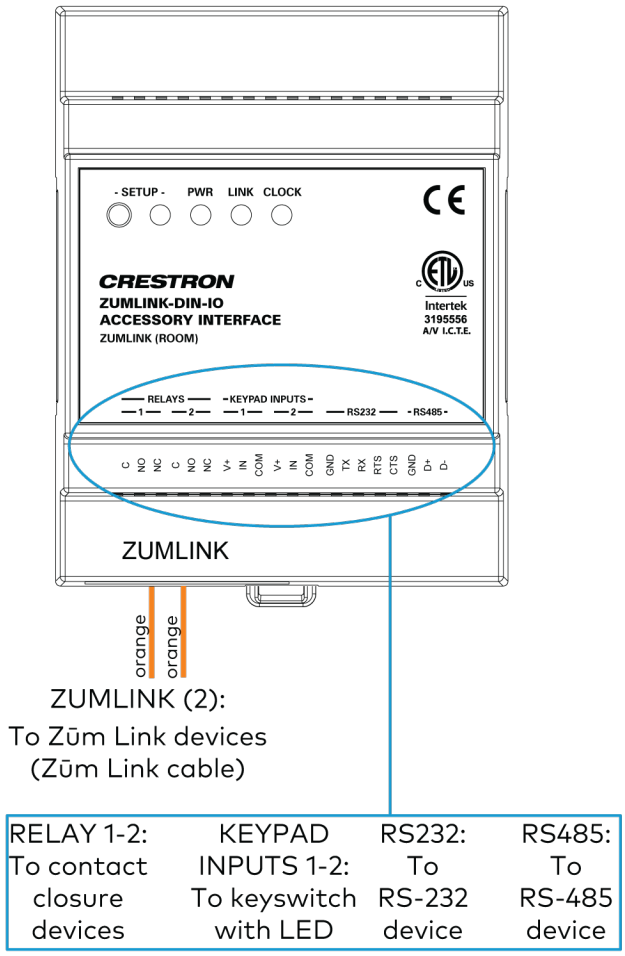
ZUMLINK-DIN-PSU Wiring

N, L:
100-277VAC power
from breaker

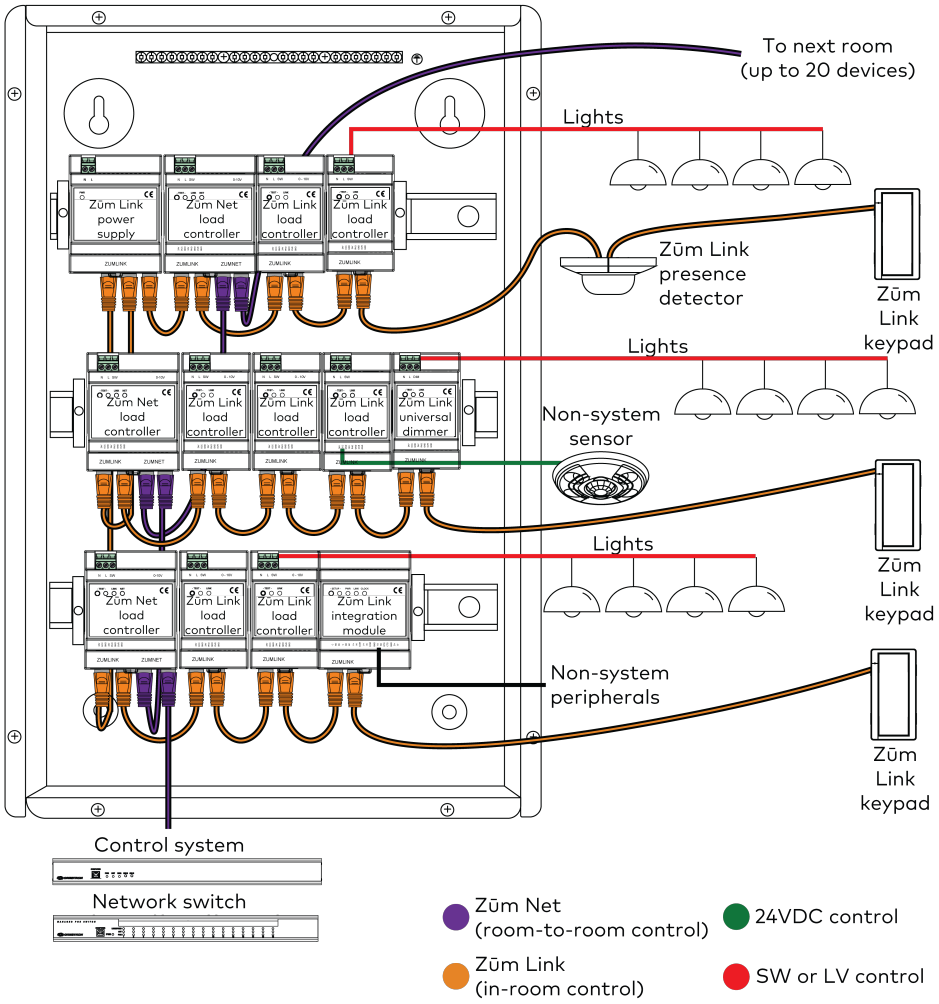


ZUMLINK (4):
To Zūm Link devices
(Zūm Link cable)

ZUMLINK-DIN-IO Wiring



Zūm DIN System Diagram



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Zūm Wired Load Controller Installation

The Zūm Net and Zūm Link junction box load controllers mount directly to a 4 in. square junction box (not included) and connects to other Zūm devices via CBL-CAT5E-ZUMLINK-P or CBL-CAT5E-ZUMNET-P cables (sold separately, refer to Cables on page 26).

For installing the wired universal dimmer load controller, refer to Zūm Wired Universal Dimmer Load Controller Installation on page 177. For installing a DIN rail load controller, refer to Zūm Wired DIN Rail Installation on page 152. For wireless installations, refer to Install Zūm Mesh Wireless Devices on page 230.

NOTES:

- Zūm Net load controllers facilitate communications between rooms via CBL-CAT5E-ZUMNET-P cables (sold separately) and can be daisy-chained for network expansion. Zūm Link devices connect to ZUMNET-JBOX devices to provide in-room lighting control
- Zūm Link load controllers allow for in-room lighting control through compatible keypads and sensors. Two RJ-45 ports on the device and the CBL-CAT5E-ZUMLINK-P cables (sold separately) allow for connection to a Zūm Net device and for in-room device daisy-chaining.

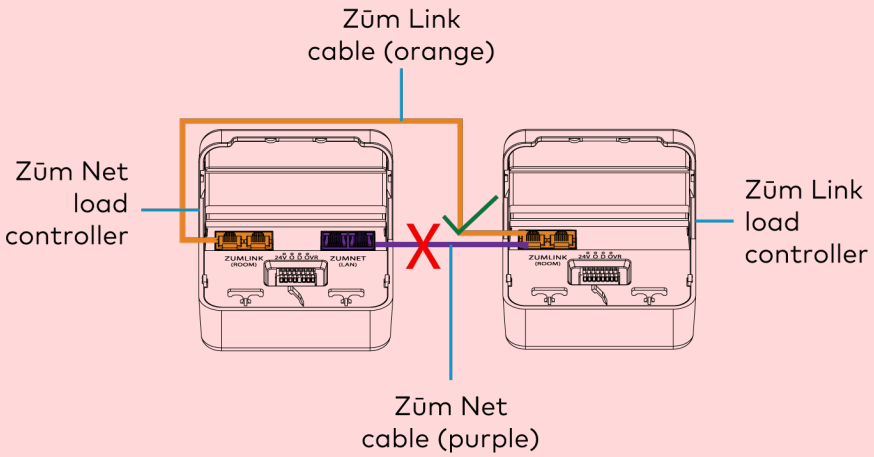
In the Box

Qty.	Description
1	ZUMNET-JBOX-16A-LV, ZUMNET-JBOX-DALI, ZUMLINK-JBOX-16A-LV, ZUMLINK-JBOX-20A-PLUG, or ZUMLINK-JBOX-20A-SW Wired J-Box Load Controller
	Additional Items
5	Yellow Wire Nut, 22-10 AWG (2049245)
1	Locknut (2047626)
1	Tie Wrap (2005429)

Install the Load Controller

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



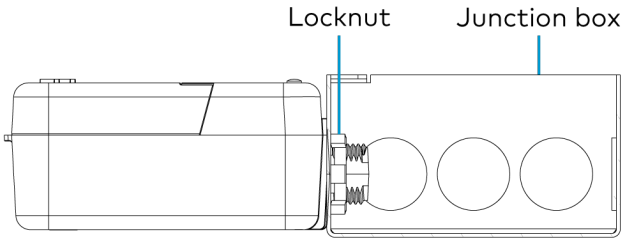
[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install this product.
- The product should project 4.40 in. (112 mm) from the junction box when installed.
- For use where temperatures are between 32° to 104°F (0° to 40°C).
- For Chicago plenum compliant installations:
  - Ensure that the junction boxes and other electrical components are rated for Chicago plenum.
  - Separate the high-voltage lines from the low-voltage cables.
  - Install two junction boxes: one junction box for the high-voltage lines and one junction box for the low-voltage cables and load controller. A 6 in. square, 3.5 in. deep box with conduit knockouts is recommended for the low-voltage cables and load controller.

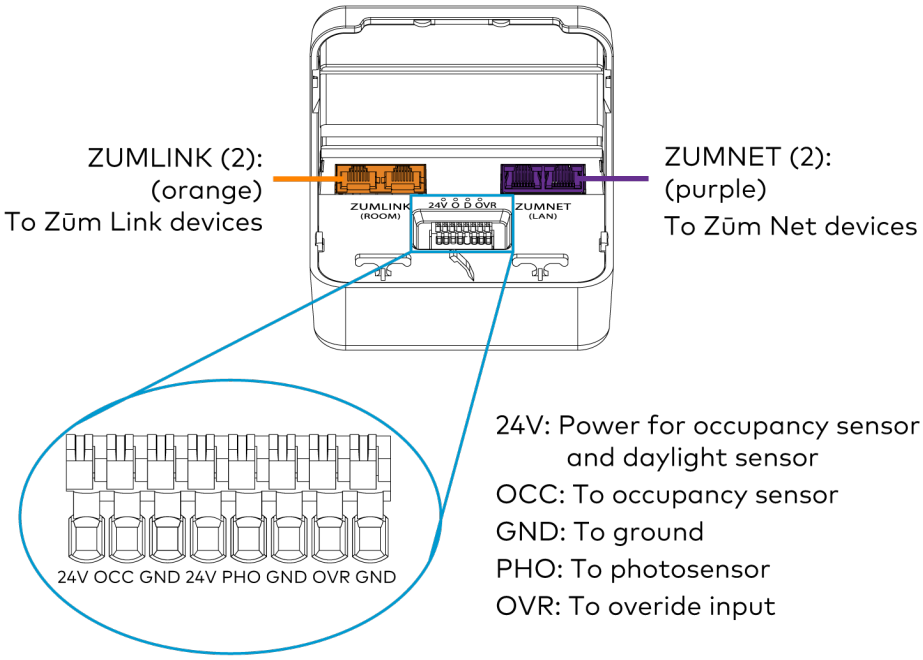
To install a load controller:

1. Turn off power at the circuit breaker and to all devices connected to the Zūm low-voltage wiring.
2. Mount the load controller to the junction box using the included locknut.

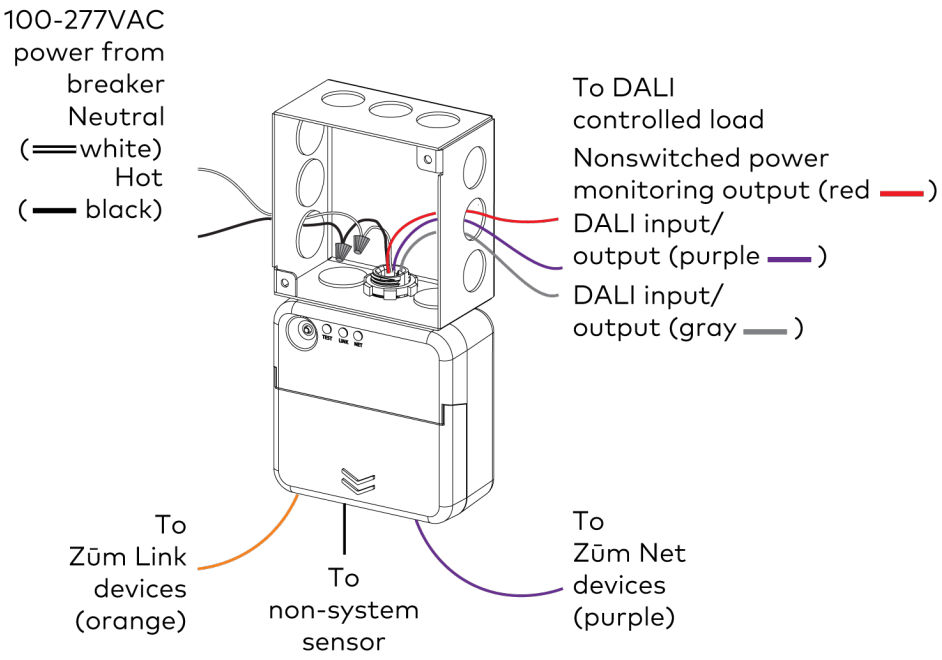


3. Wire the load controller as shown in the following diagrams.
4. Restore the power at the circuit breaker.

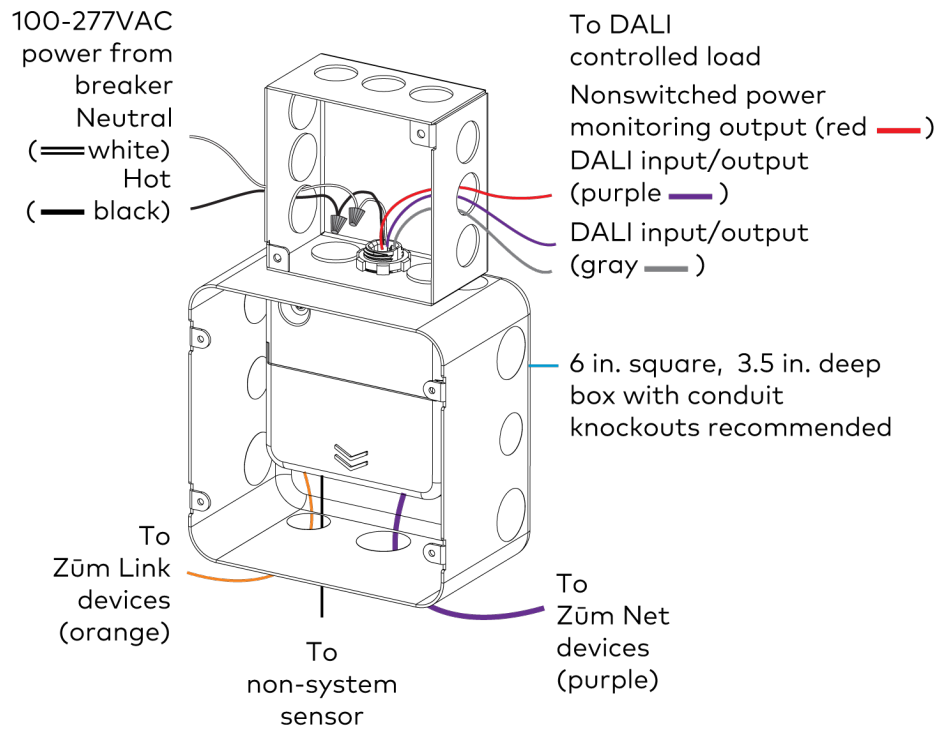
Zūm Net Load Controller Wiring to Other Zūm Net and Zūm Link Devices



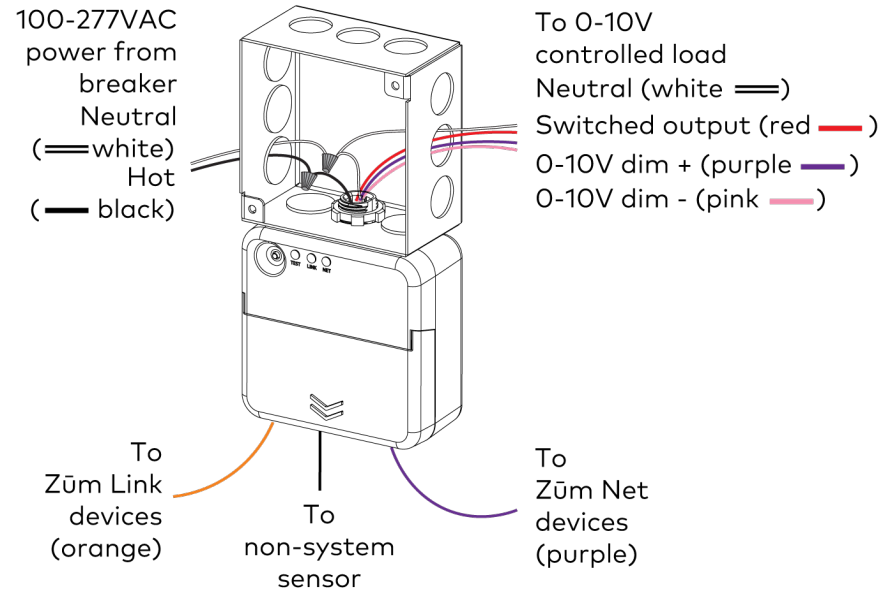
ZUMNET-JBOX-DALI Wiring



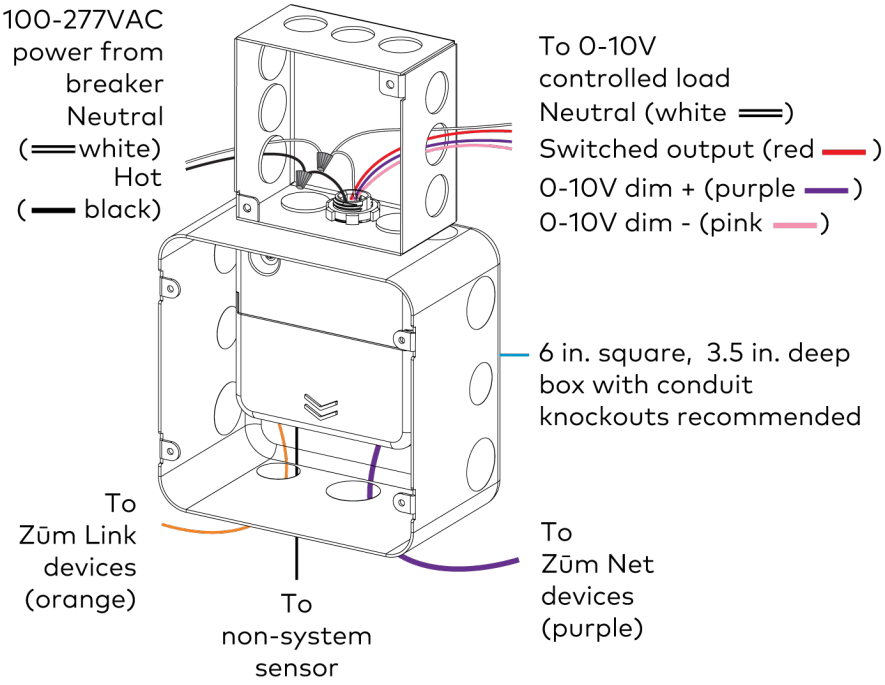
ZUMNET-JBOX-DALI Wiring to Meet Chicago Electric Code



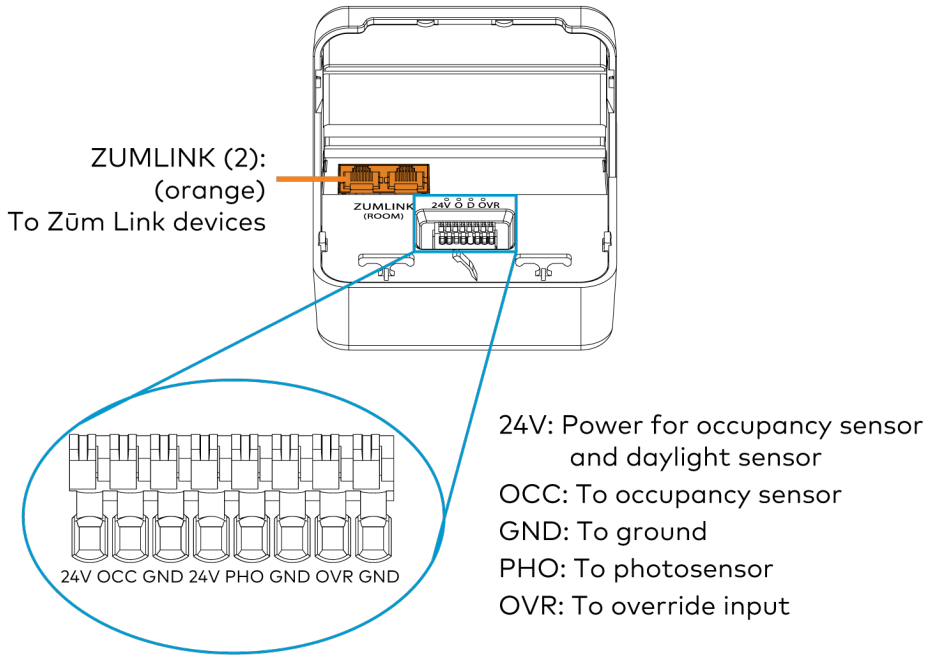
ZUMNET-JBOX-16A-LV Wiring



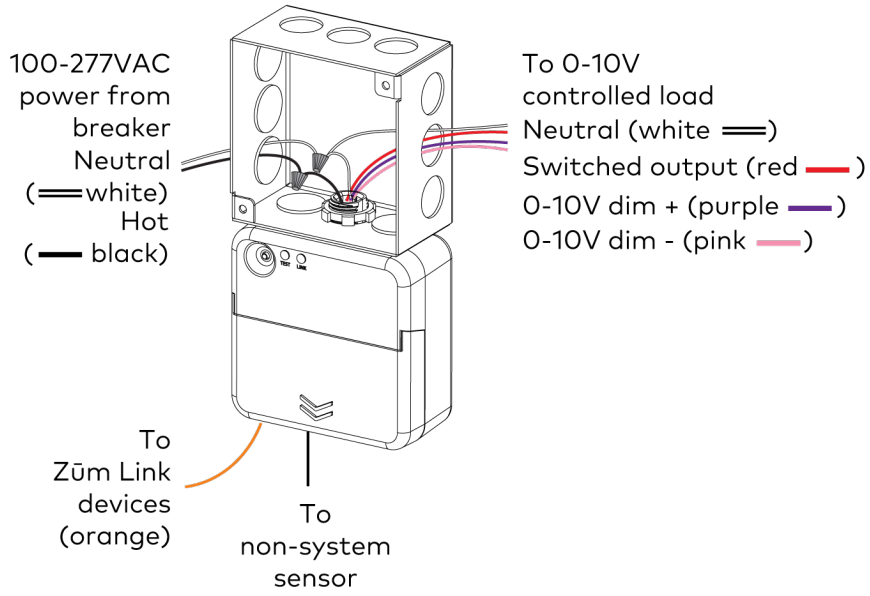
ZUMNET-JBOX-16A-LV Wiring to Meet Chicago Electric Code



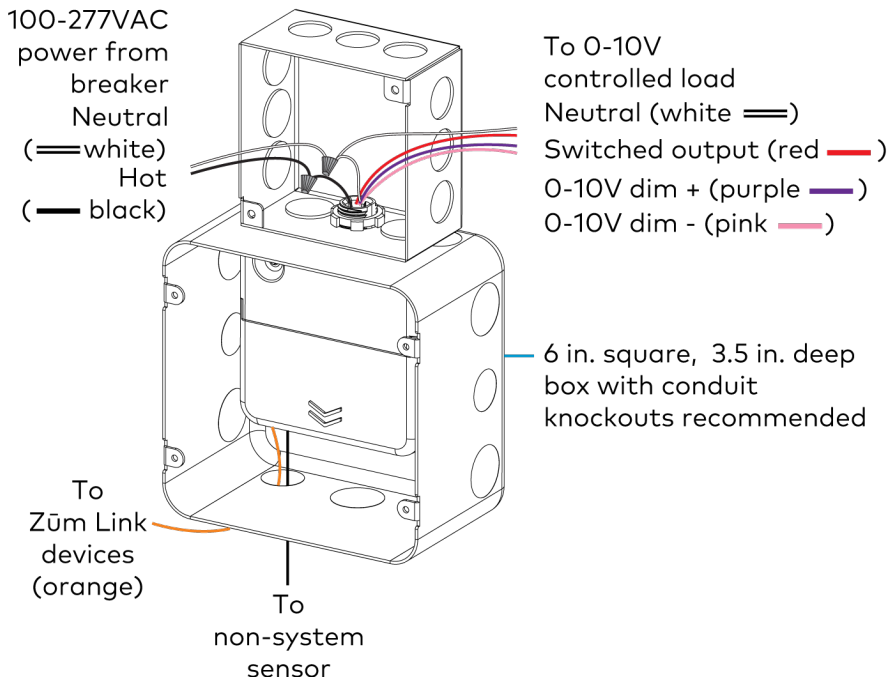
Zūm Link Load Controller Wiring to Other Zūm Link Devices



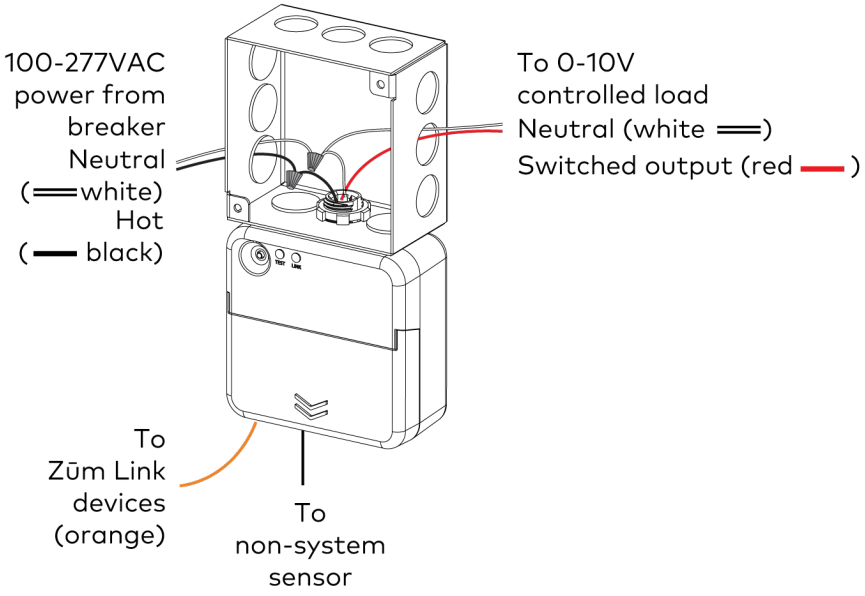
ZUMLINK-JBOX-16A-LV Wiring



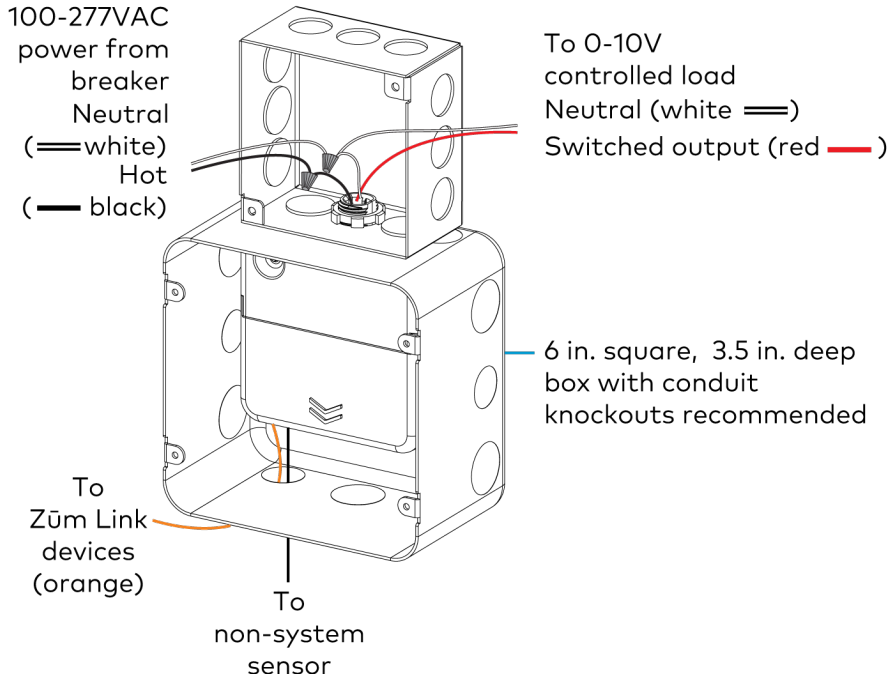
ZUMLINK-JBOX-16A-LV Wiring to Meet Chicago Electric Code



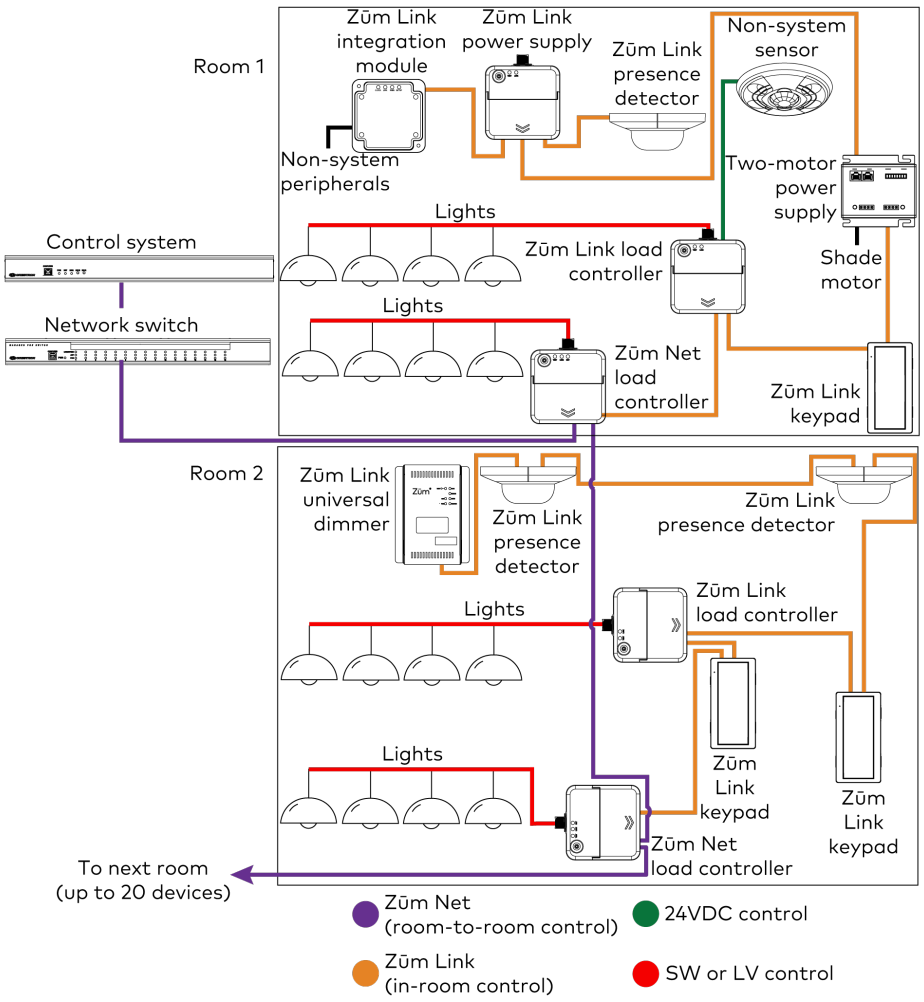
ZUMLINK-JBOX-20A-PLUG and ZUMLINK-JBOX-20A-SW Wiring



ZUMLINK-JBOX-20A-PLUG and ZUMLINK-JBOX-20A-SW Wiring to Meet Chicago Electric Code



Zūm Wired System Diagram



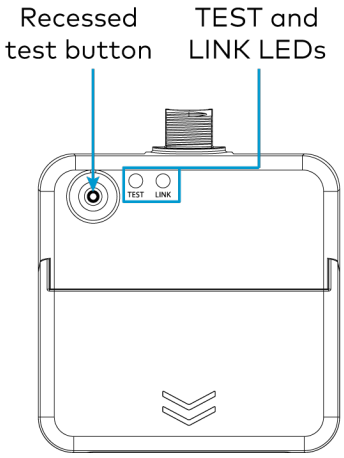
NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

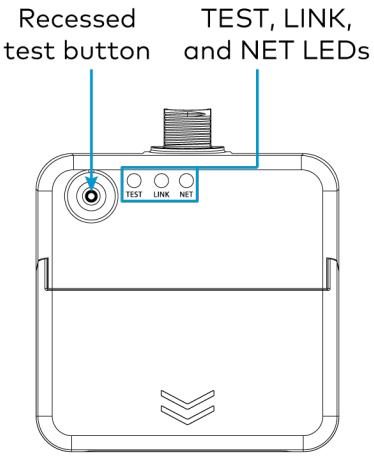
Test the Loads

To verify system wiring, test the loads. Pres the **TEST** button to turn the connected loads on and off. Press and hold the **TEST** button to cycle the connected dimmers.

Zūm Link Load Controllers



Zūm Net Load Controllers



More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266

- Setup
    - Zūm App Configuration on page 284

Zūm Wired Universal Dimmer Load Controller Installation

The ZUMLINK-EXP-16A-DIMU is a single-channel universal dimmer and 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 significant reduction of lamp flicker.

Energy-saving options, such as Zūm link presence detectors or analog photosensors (sold separately) are available to enable daylighting, occupancy or vacancy sensing, integration, and centralized monitoring and management.

For installing the DIN rail universal dimmer load controller, refer to Zūm Wired DIN Rail Installation on page 152.

In the Box

Qty.	Description
1	ZUMLINK-EXP-16A-DIMU, Zūm® Wired Universal Dimmer Load Controller
	Additional Items
1	Bushing, Open/Closed, 0.94 in. ID x 1.23 in. OD, Black (2060645)

Important Safeguards

CAUTION: When using electrical equipment, basic safety precautions should always be followed:

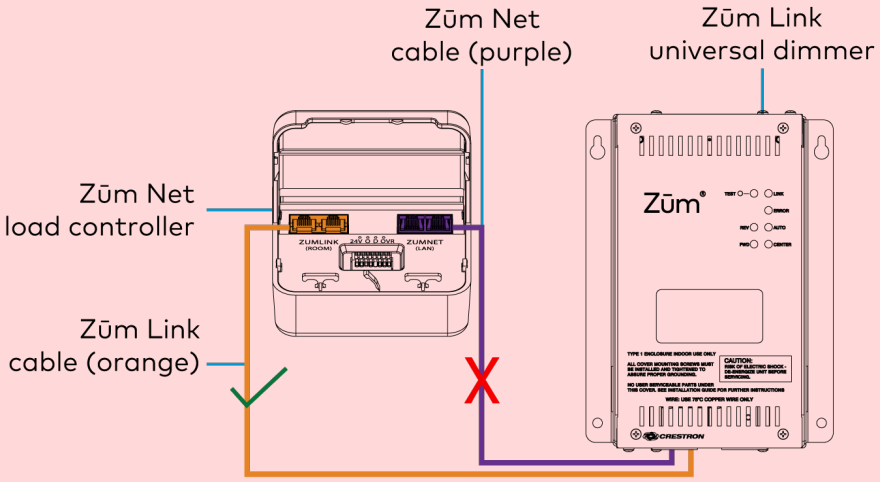
- Read and follow all safety instructions.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Save these instructions.

Install the Universal Dimmer Load Controller

Install the ZUMLINK-EXP-16A-DIMU on any vertical surface using four screws (not included). The screws must be appropriate for the mounting surface.

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

CAUTION: To prevent heat damage to drywall, secure a 1/2 in. (13 mm) thick piece of plywood to the wall and then secure the ZUMLINK-EXP-16A-DIMU to the plywood.

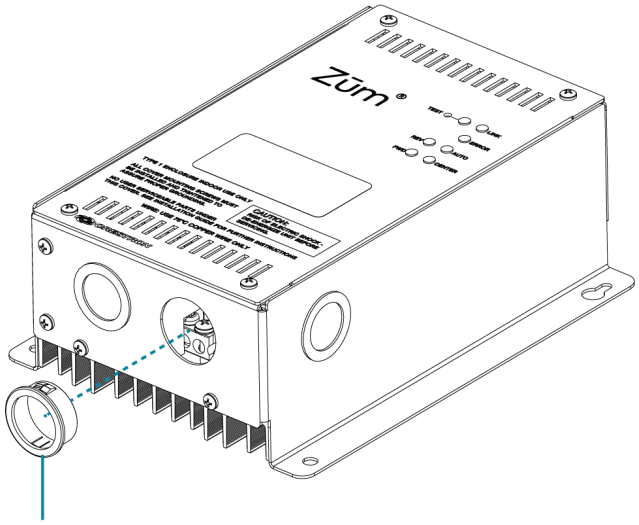
NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install this product.
- Use copper wire rated 75°C (167°F) or better.
- Suitable for damp locations
- For use where temperatures are between 32° to 104°F (0° to 40°C).

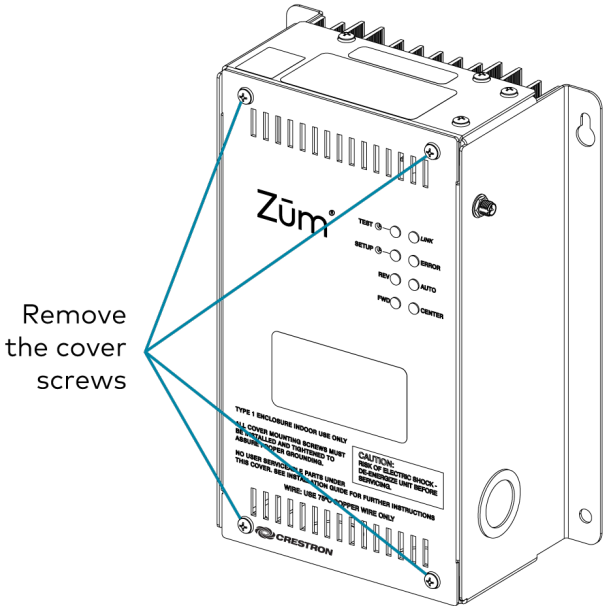
Wiring the Universal Dimmer Load Controller

WARNING: RISK OF SERIOUS PERSONAL INJURY. To avoid fire, shock, or death, turn off the power at the circuit breaker(s) or fuse and test that power is off before installing and wiring! Installing with power on can result in serious personal injury and damage to the device.

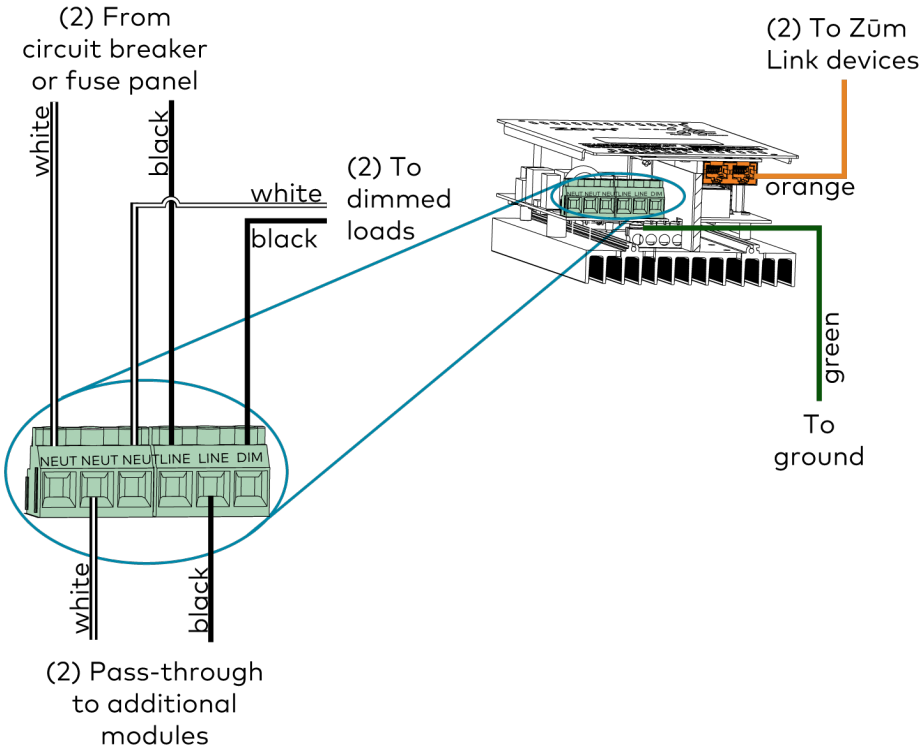
1. Turn the power off at the circuit breaker.
2. Insert the included bushing into the knockout hole to protect the low voltage wires.



3. Use a #2 Phillips screwdriver to remove the cover screws and then remove the cover.

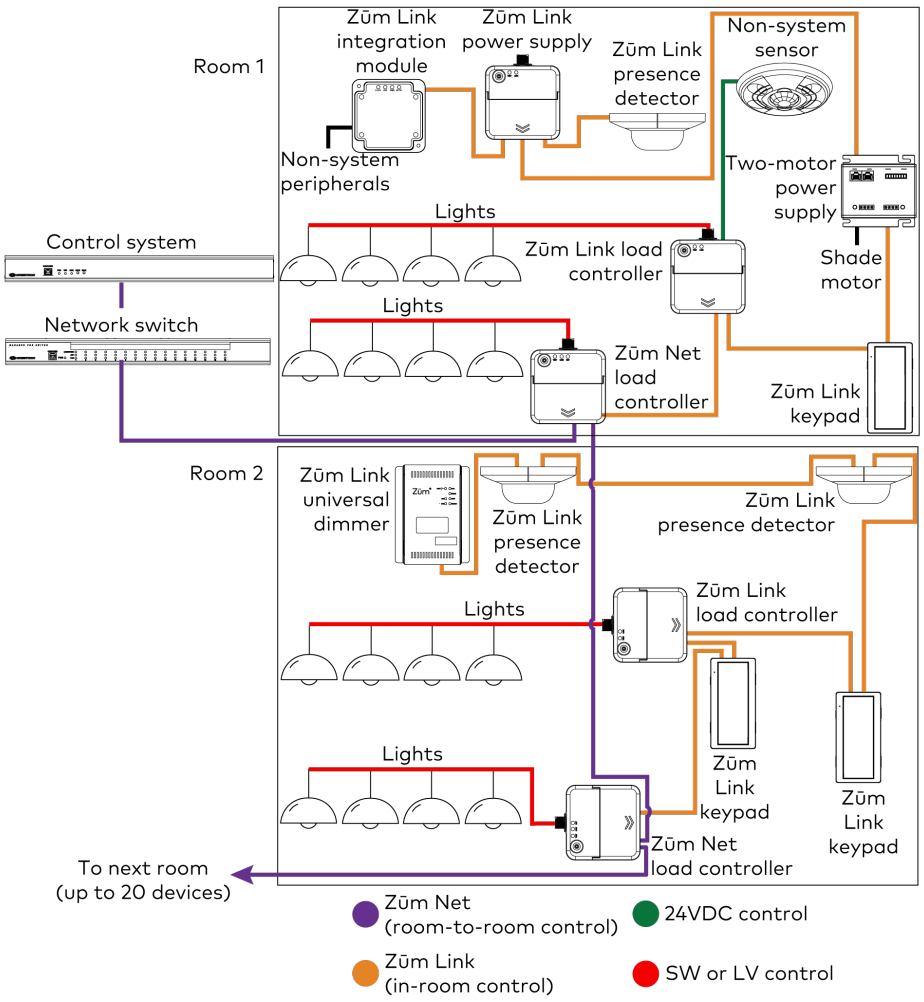


4. Wire the device as shown below. Additional LINE, NEUT, and GND connections are supplied for power pass-through. When making connections, consider the following:
    - Wires should be 24 to 10 AWG.
    - Strip wires to 5/16 in. (8 mm).
    - Tighten screw terminals to 4.5 in.-lbs (0.5 Nm).



5. Connect the orange CBL-CAT5E-ZUMLINK-P (sold separately) to the ZUMLINK ports.

Zūm Wired System Diagram



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Zūm Wired Keypad Installation

The ZUMLINK-KP mounts to a standard electrical box. Rocker buttons/button trees and bezels are available in almond, black, gray, red, and white. The button trees also have options for blank buttons, standard pad printed labels, or custom engravings. A finished installation requires a decorator-style faceplate (FP-G series, sold separately).

For wireless installations, refer to Zūm Mesh Wireless Keypad Installation on page 245.

In the Box

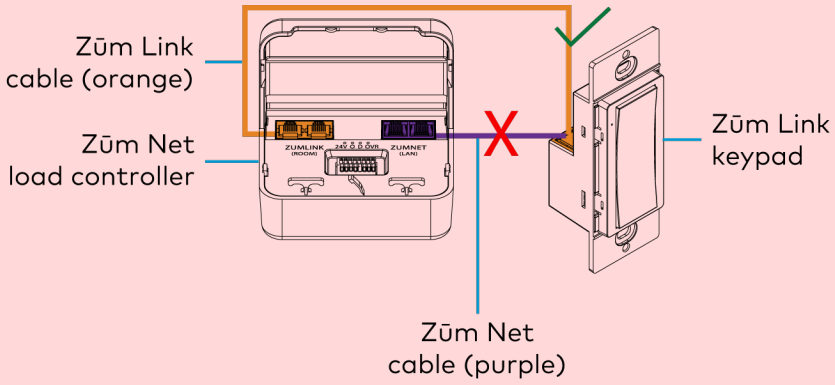
Qty.	Description
1	ZUMLINK-KP, Zūm® Wired Keypad with Link Communication, Rocker Button
	Additional Items
2	Screw, 6-32 x 3/4 in., Truss Head, Combo (2009211)

Install the Keypad

The ZUMLINK-KP comes preassembled with the white ZUMLINK-BTNR rocker button. If another rocker button or button tree is required, refer to Replace the Rocker Button/Button Tree and Bezel on page 187.

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



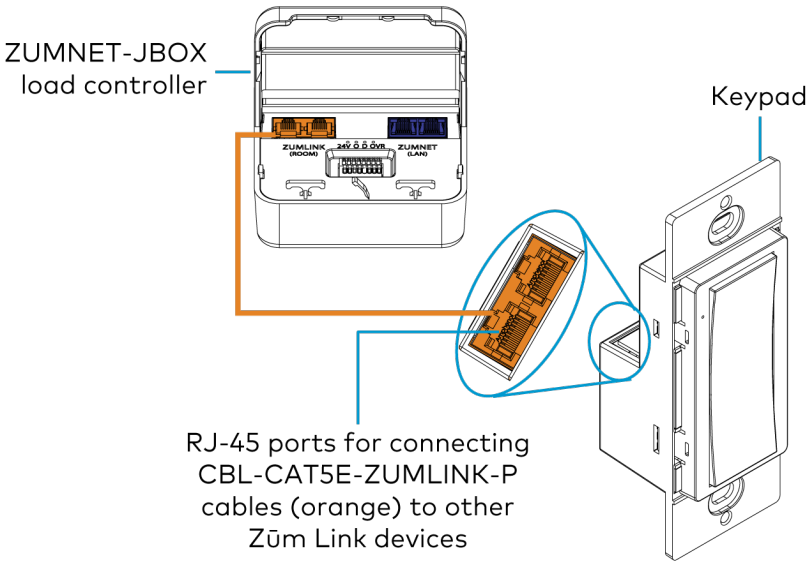
[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician should install this product.
- Ensure that the system power is off until the keypad is fully installed.
- For use where temperatures are between 32° to 104°F (0° to 40°C).
- Several keypads may be installed in one electrical box (multigang). For a smooth appearance, install one-piece multigang faceplates (not included).

Wire the Keypad

Use orange CBL-CAT5E-ZUMLINK-P cables (sold separately) to wire in-room Zūm wired devices, such as load controllers, to the ZUMLINK-KP.



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

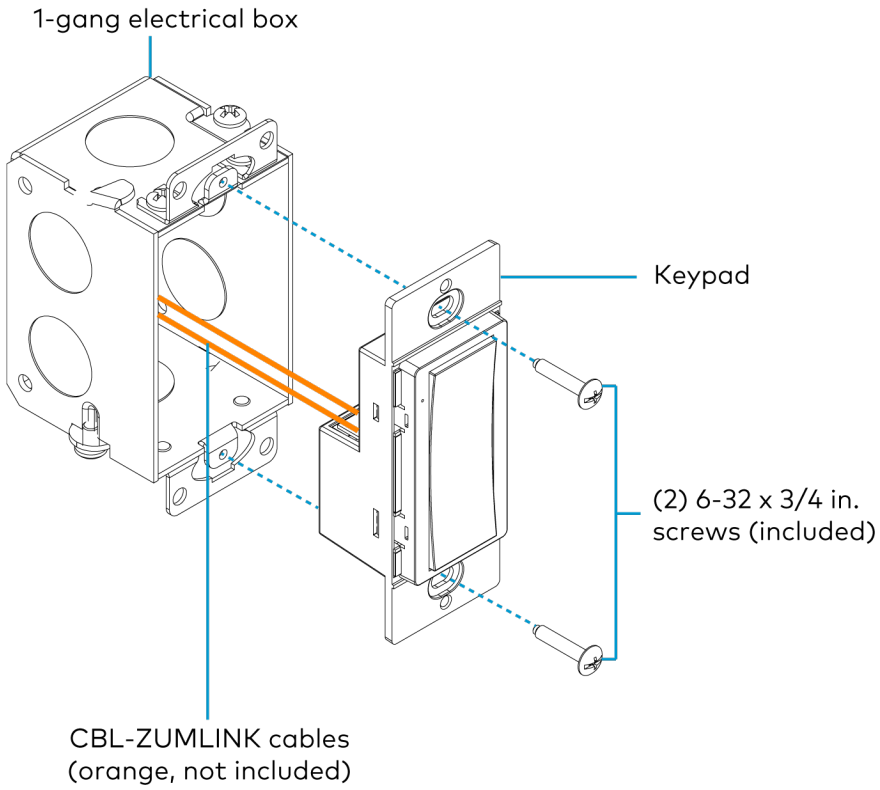
Mount the Keypad

The ZUMLINK-KP mounts to into a standard 1-gang electrical box.

NOTE: Turn the system power off before making connections. Do not turn the system power on until the device is fully installed in the mounting surface.

1. Holding the keypad with the LED on the left, place it in the electrical box.
2. Secure the keypad using the included 6-32 x 3/4 in. truss screws.

   CAUTION: Excess wire pinched between the keypad and electrical box could short out. Make sure all excess wire is completely inside the electrical box and not between the box and the keypad.

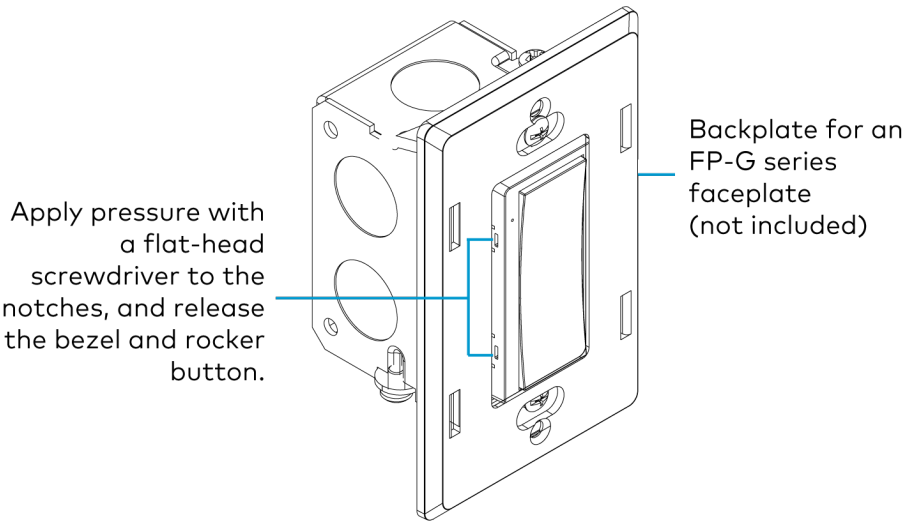


3. Attach the desired decorator-style faceplate (not included).
4. Turn the system power on.

Replace the Rocker Button/Button Tree and Bezel

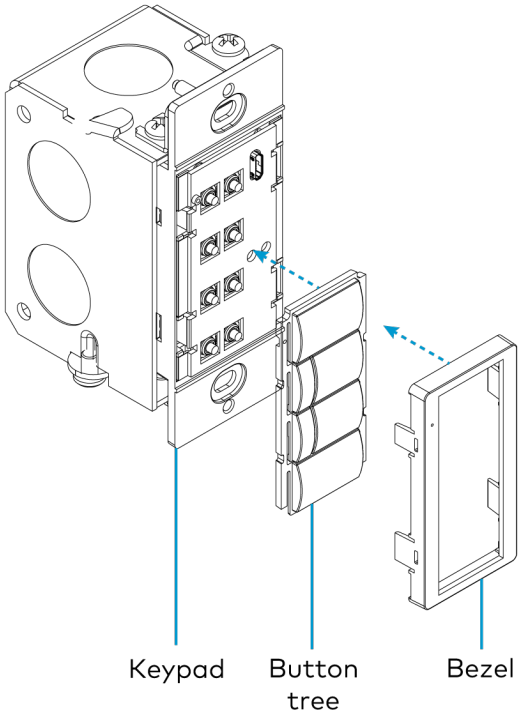
The ZUMLINK-KP comes preassembled with the ZUMLINK-BTNR rocker button. Follow the procedure below to replace the bezel and rocker button with a new bezel and rocker button/button tree.

1. Remove the faceplate from the keypad.
   If a Crestron FP-G series faceplate (not included) is installed, remove only the cover.
2. Use a flat-head screwdriver to remove the bezel and rocker button by pressing the screwdriver into the notches on the side of the keypad.
   The bezel and rocker button release from the keypad.



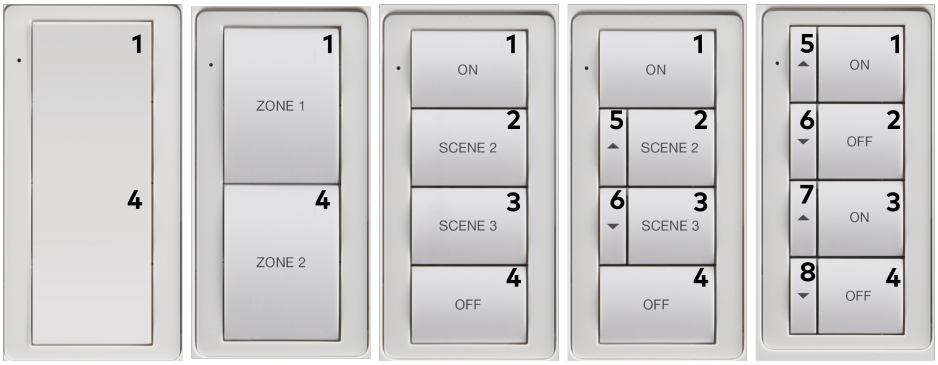
3. Position the replacement rocker button/button tree on the keypad.

4. Place the replacement bezel on top of the rocker button/button tree, making sure to align the LED hole with the LED on the keypad, and snap the bezel into place.



Button Positions

ZUMLINK-BTNR **ZUMLINK-BTN2** **ZUMLINK-BTN4** **ZUMLINK-BTN6** **ZUMLINK-BTN8**



More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183

- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Presence Detectors Installation

The presence detectors can be mounted to a junction box (not included) or directly to a ceiling. Before mounting, make sure the backplate is separated from the presence detectors. Refer to Remove or Attach the Backplate on page 191.

Presence Detector with Daylight Sensing

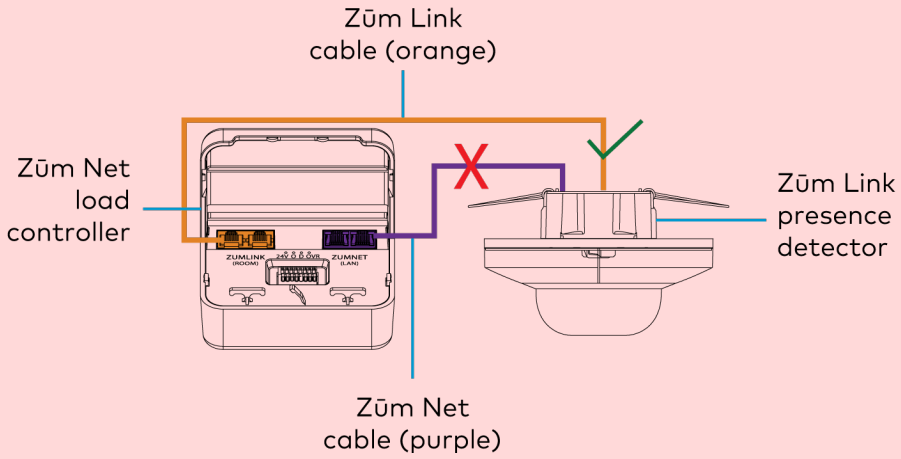
- ZUMLINK-IR-QUATTRO-DLS with passive infrared technology
- ZUMLINK-DT-QUATTRO-DLS with passive infrared and ultrasonic technology
- ZUMLINK-US-QUATTRO-DLS with ultrasonic technology
- ZUMLINK-IR-QUATTRO-HD-DLS with high-definition, passive infrared technology
- ZUMLINK-US-HALLWAY-DLS with ultrasonic technology and bidirectional detection for hallways
- ZUMLINK-US-ONEWAY-DLS with ultrasonic technology and unidirectional detection for hallways (Discontinued)

Presence Detector with Daylight Sensing and Output Relay

- ZUMLINK-IR-QUATTRO-DLS-RLY with passive infrared technology
- ZUMLINK-DT-QUATTRO-DLS-RLY with passive infrared and ultrasonic technology
- ZUMLINK-US-QUATTRO-DLS-RLY with ultrasonic technology
- ZUMLINK-IR-QUATTRO-HD-DLS-RLY with high-definition, passive infrared technology
- ZUMLINK-US-HALLWAY-DLS-RLY with ultrasonic technology and bidirectional detection for hallways
- ZUMLINK-US-ONEWAY-DLS-RLY with ultrasonic technology and unidirectional detection for hallways (Discontinued)

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician should install this product.

In the Box

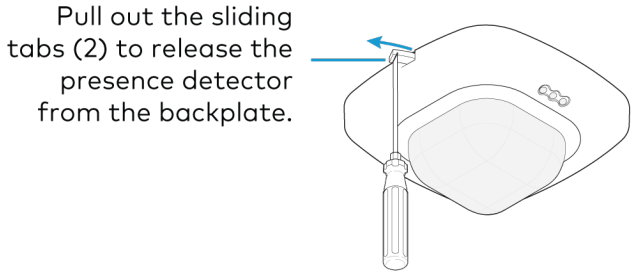
Qty.	Description
1	Zūm Wired Presence Detectors with Link Communication

Remove or Attach the Backplate

To remove the backplate from the presence detector:

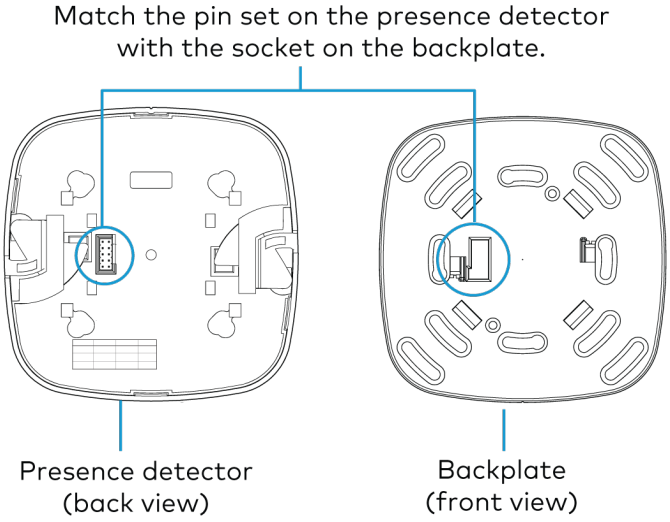
1. Locate the two sliding tabs on opposite sides of the presence detector.
2. Extend the sliding tabs out of the housing. A flat-head screwdriver can be used.

Once both sliding tabs are exposed, the presence detector releases from the backplate.



To attach the backplate to the presence detector:

1. Ensure the sliding tabs are extended out of the housing.
2. Align the pins on the back of the presence detector with the socket on the backplate and press.



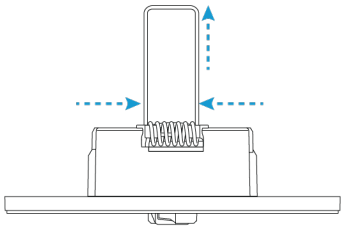
3. Push both sliding tabs back into the housing

Junction Box Mounting

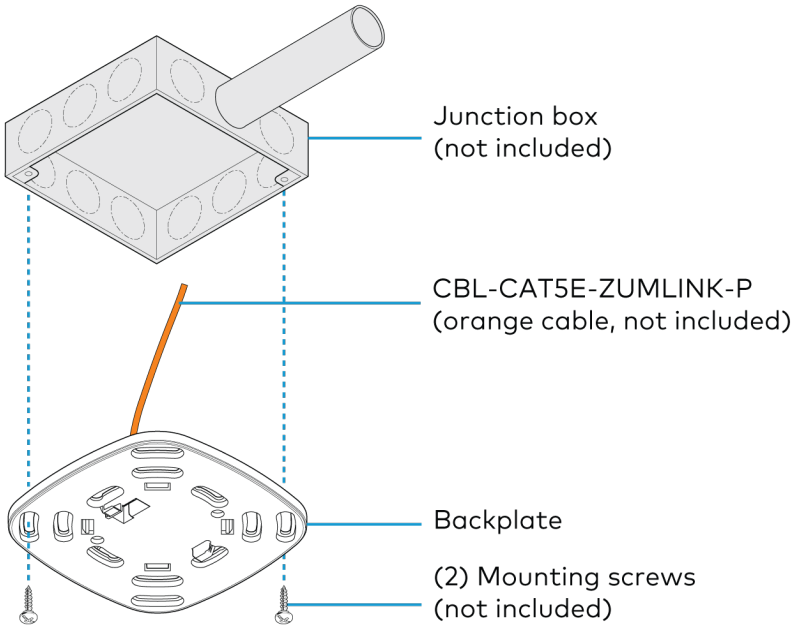
The presence detectors are compatible with 4 in. square junction boxes, 4 in. round junction boxes, and 3 in. mud rings (not included). After the junction box is installed, follow the procedure for mounting the presence detectors.

1. Install the junction box according to its requirements.
2. Remove the backplate from the presence detector. Refer to Remove or Attach the Backplate on page 191.

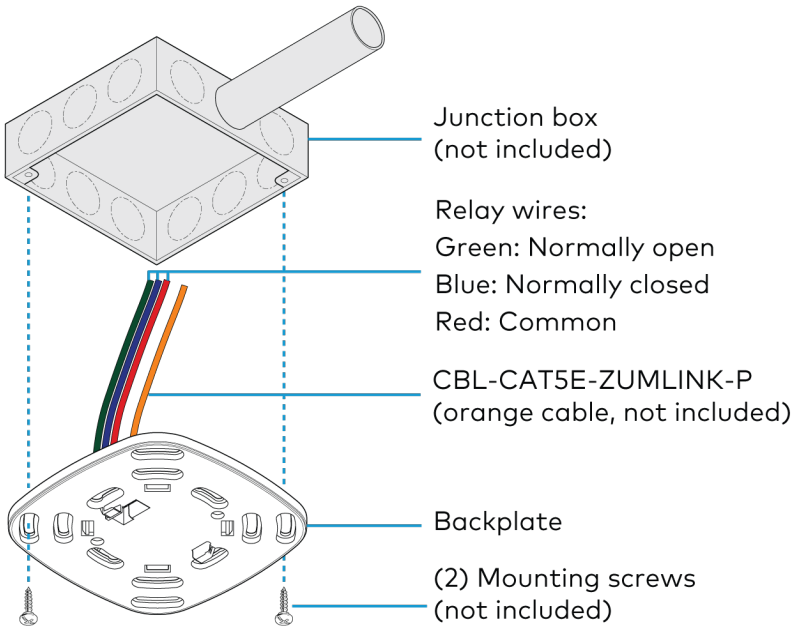
3. Remove both spring tabs from the backplate. Use your fingers or needle-nose pliers.
    a. Pinch one spring tab to minimize it's width.
    b. Carefully lift the spring out of the housing.
    c. Repeat the process with the other spring tab.
    d. Discard the spring tabs.



4. Feed the CBL-CAT5E-ZUMLINK-P cable through the junction box or mud ring, and connect it to the Zūm Link Presence Detectors backplate.



For presence detectors with additional output relays, connect the relays to a relay-input capable device before mounting the backplate to the junction box or mud ring.

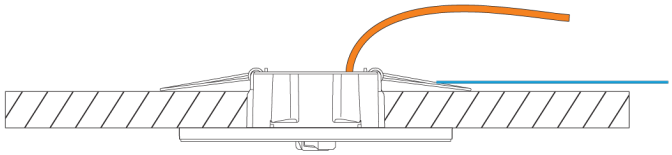


Relay connection applicable for the following presence detectors:

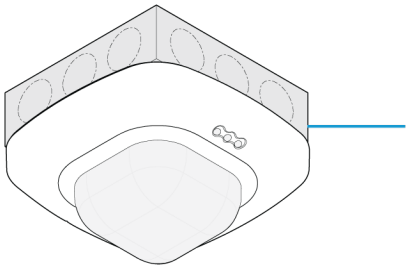
- ZUMLINK-IR-QUATTRO-DLS-RLY
- ZUMLINK-DT-QUATTRO-DLS-RLY
- ZUMLINK-US-QUATTRO-DLS-RLY

- ZUMLINK-IR-QUATTRO-HD-DLS-RLY
- ZUMLINK-US-HALLWAY-DLS-RLY
- ZUMLINK-US-ONEWAY-DLS-RLY

5. Using two mounting screws (not included), attach the back plate to the electrical box or mud ring.



6. Attach the presence detector to the backplate. Refer to Remove or Attach the Backplate on page 191.

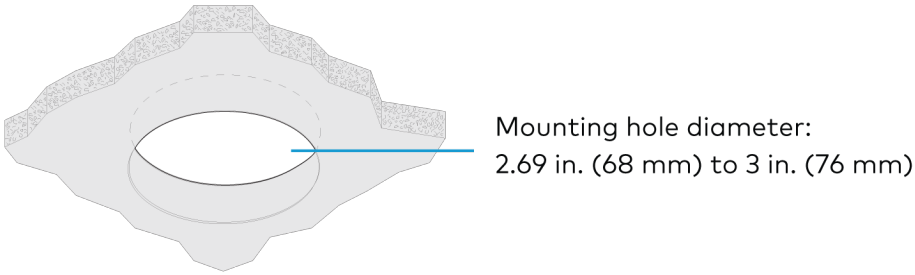


7. Wire the presence detector according to the Zūm Wired System Diagram on page 197

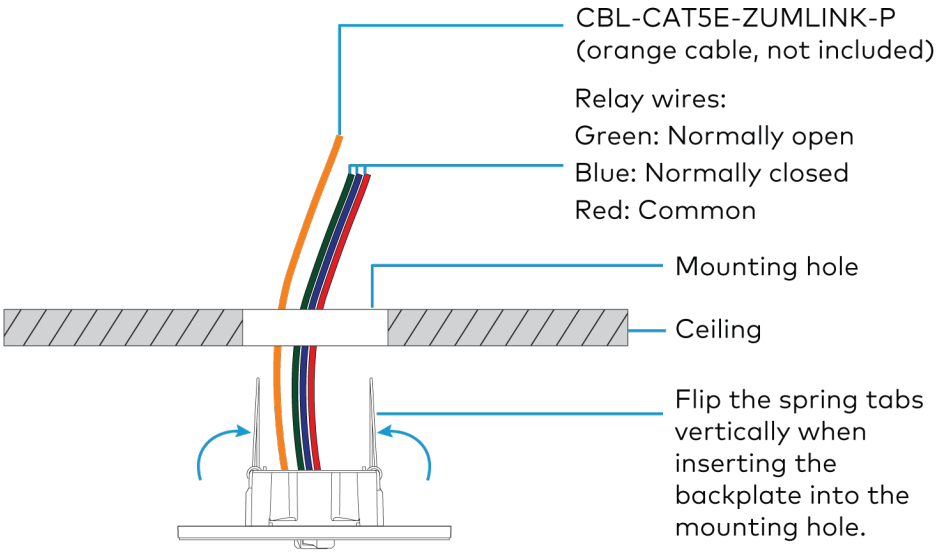
Ceiling Mounting

A mounting hole 2.69 in. (68 mm) to 3 in. (76 mm) in diameter must be cut before mounting the presence detector to the ceiling.

1. Cut a mounting hole that is 2.69 in. (68 mm) to 3 in. (76 mm) in diameter.



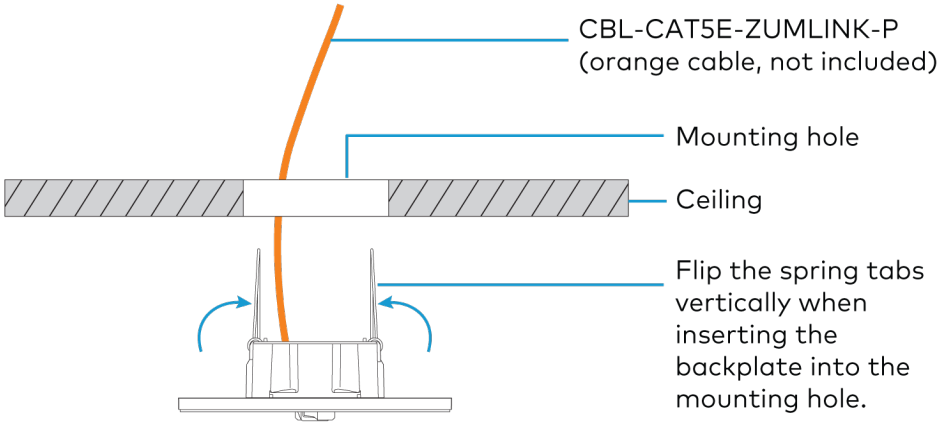
2. Feed the CBL-CAT5E-ZUMLINK-P cable through the mounting hole, and connect it to the Zūm Link Presence Detectors backplate.
   For presence detectors with additional output relays, connect the relays to a relay-input capable device before mounting the backplate to the mounting hole.



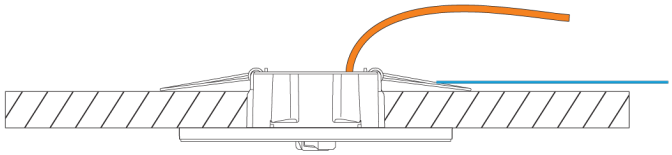
   Relay connection applicable for the following presence detectors:

   - ZUMLINK-IR-QUATTRO-DLS-RLY
   - ZUMLINK-DT-QUATTRO-DLS-RLY
   - ZUMLINK-US-QUATTRO-DLS-RLY
   - ZUMLINK-IR-QUATTRO-HD-DLS-RLY
   - ZUMLINK-US-HALLWAY-DLS-RLY
   - ZUMLINK-US-ONEWAY-DLS-RLY

3. Flip the backplate spring tabs to the vertical position and insert them into the mounting hole.

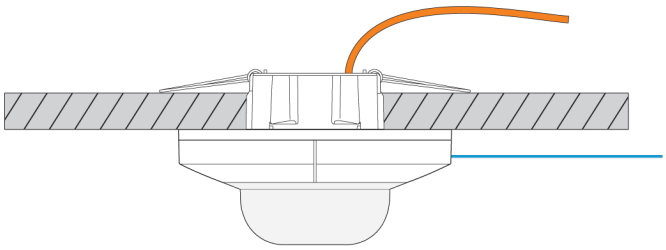


   When the spring tabs release, they snap back down to secure the backplate to the ceiling.



Release the spring tabs once they are in the mounting hole.

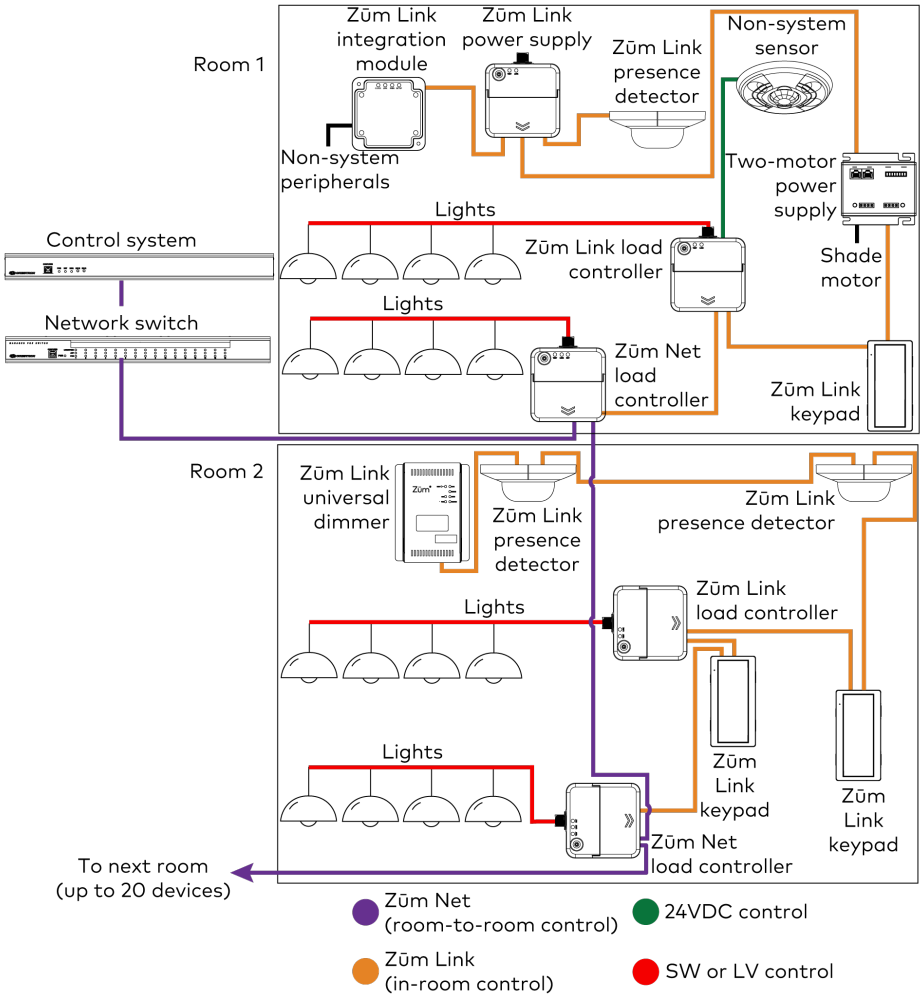
4. Attach the presence detector to the backplate. Refer to Remove or Attach the Backplate on page 191.



Attach the presence detector to the backplate. (QUATTRO shown)

5. Wire the presence detector according to the Zūm Wired System Diagram on page 197

Zūm Wired System Diagram



NOTES:

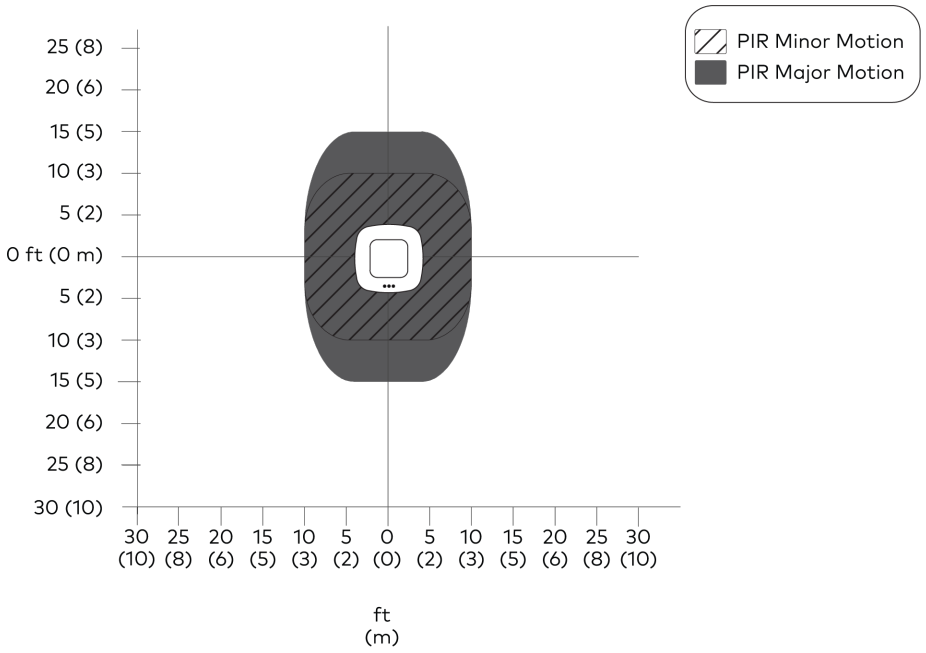
- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

Beam Pattern Coverage

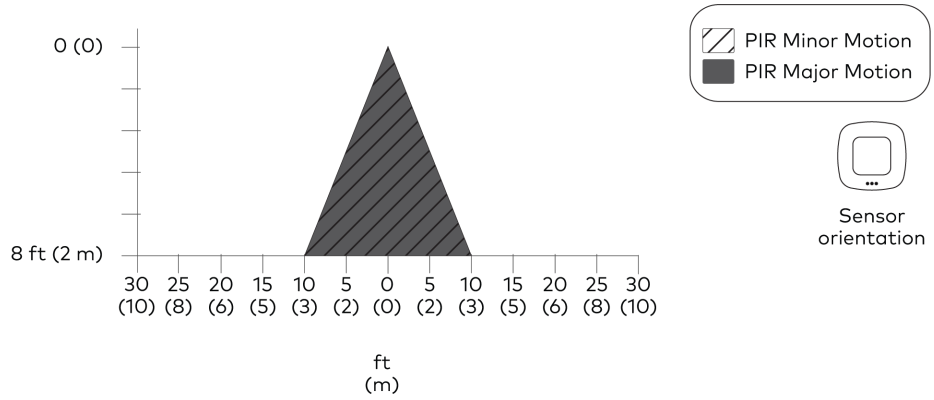
> **NOTE:** Detection along the far edge of the detection range may be inconsistent.

ZUMLINK-IR-QUATTRO-DLS/ ZUMLINK-IR-QUATTRO-DLS-RLY

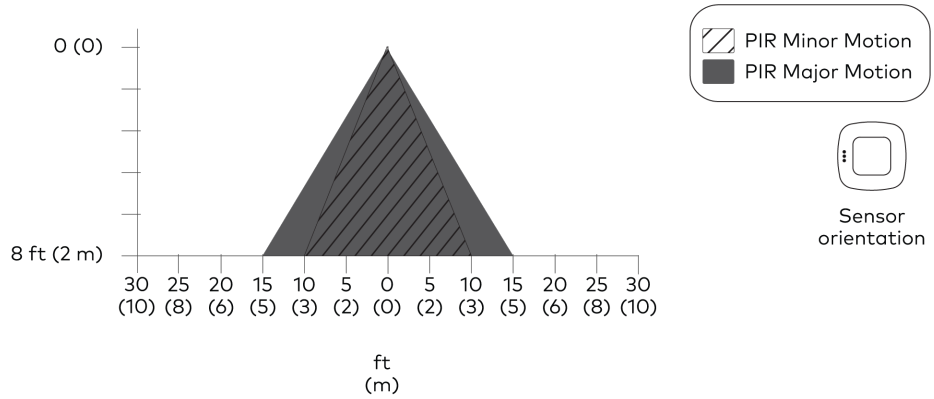
Top View



Side View Sensor Orientation A

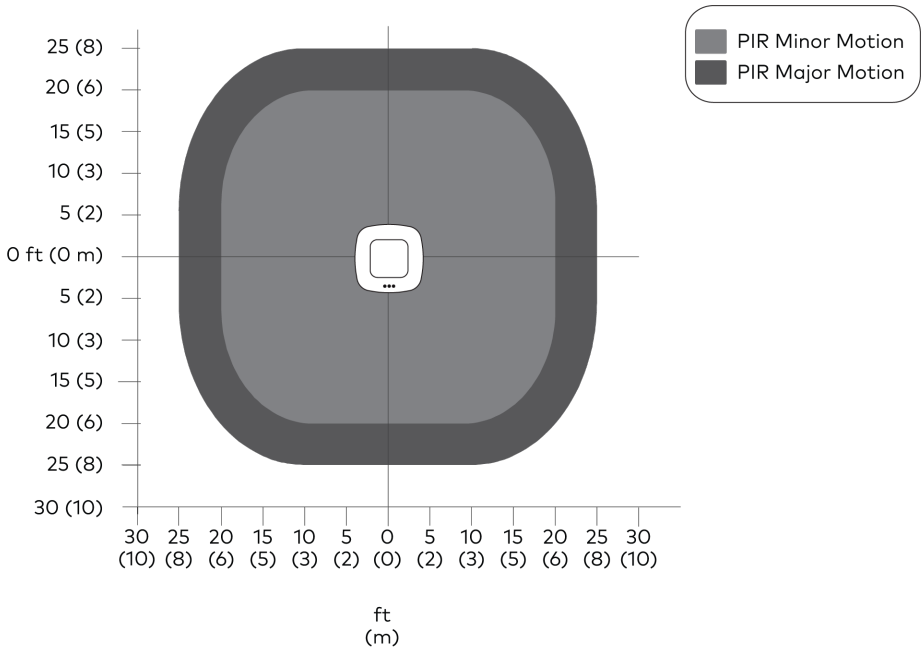


Side View Sensor Orientation B

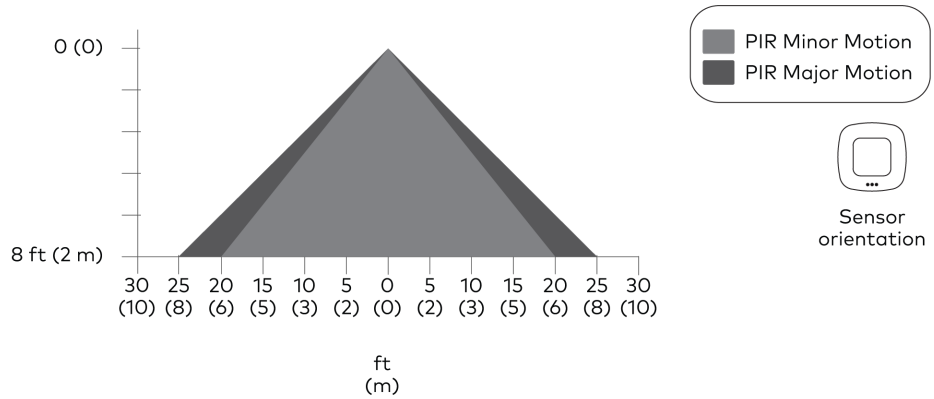


ZUMLINK-IR-QUATTRO-HD-DLS/ ZUMLINK-IR-QUATTRO-HD-DLS-RLY

Top View

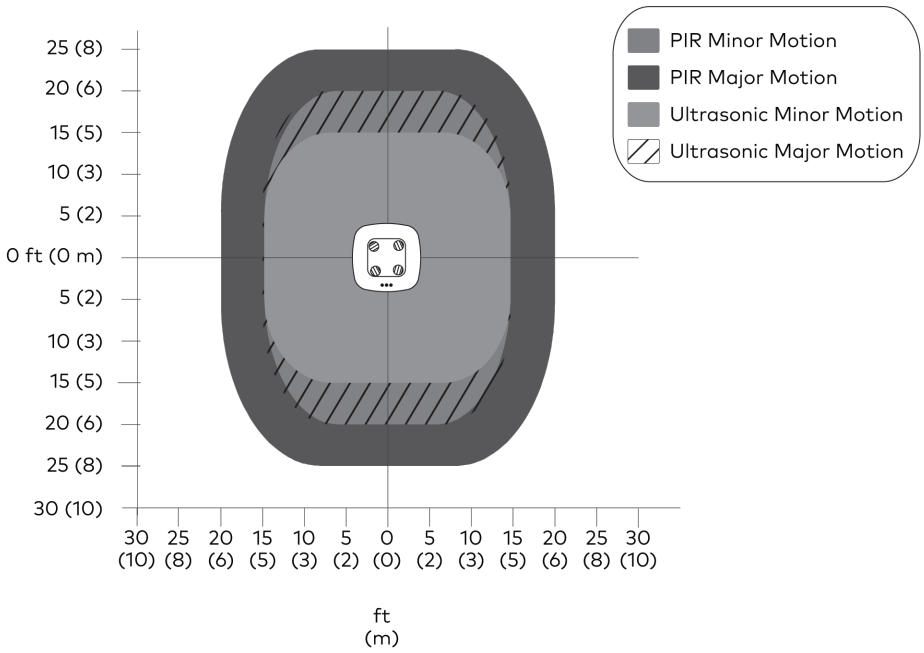


Side View

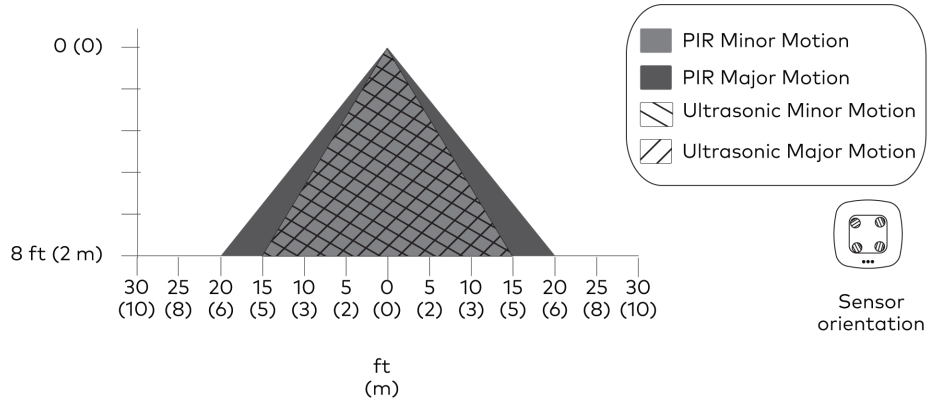


ZUMLINK-DT-QUATTRO-DLS/ ZUMLINK-DT-QUATTRO-DLS-RLY

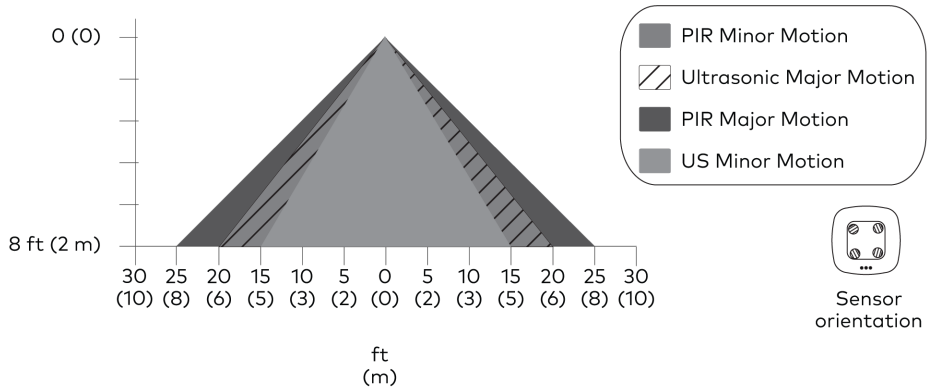
Top View



Side View Sensor Orientation A

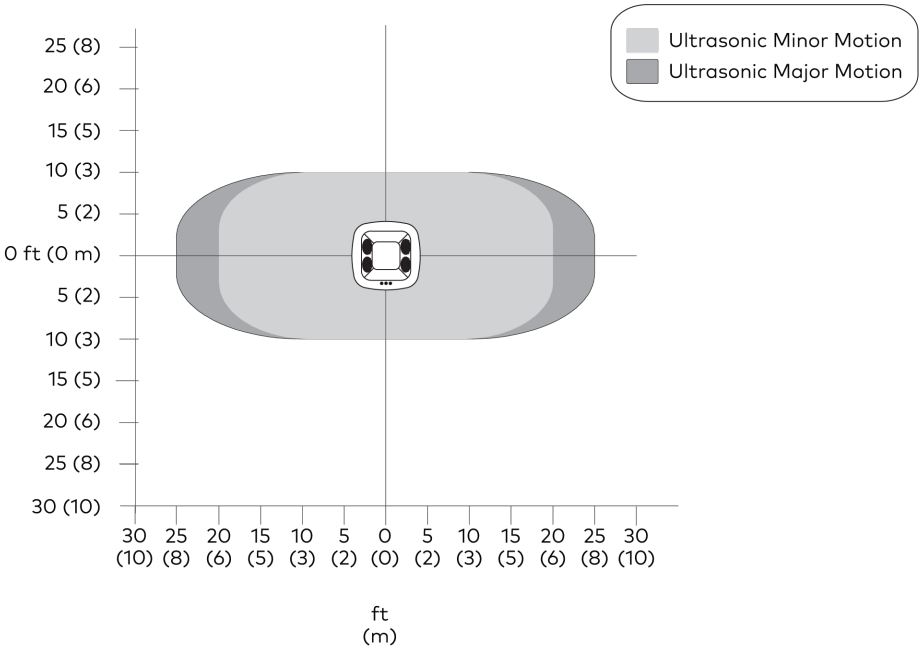


Side View Sensor Orientation B

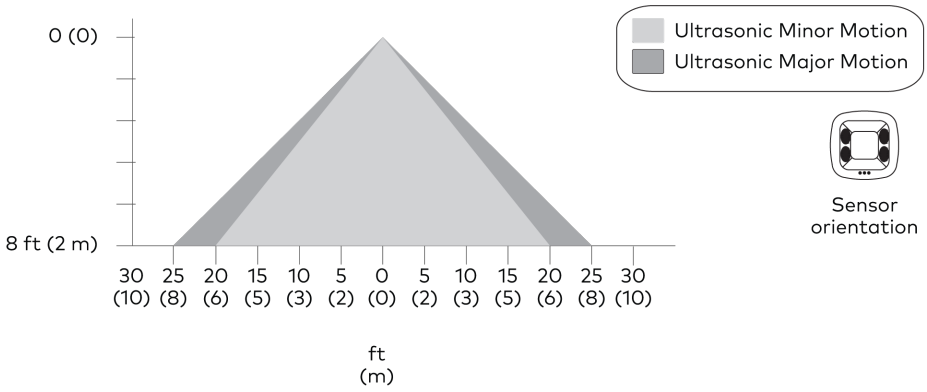


ZUMLINK-US-HALLWAY-DLS/ ZUMLINK-US-HALLWAY-DLS-RLY

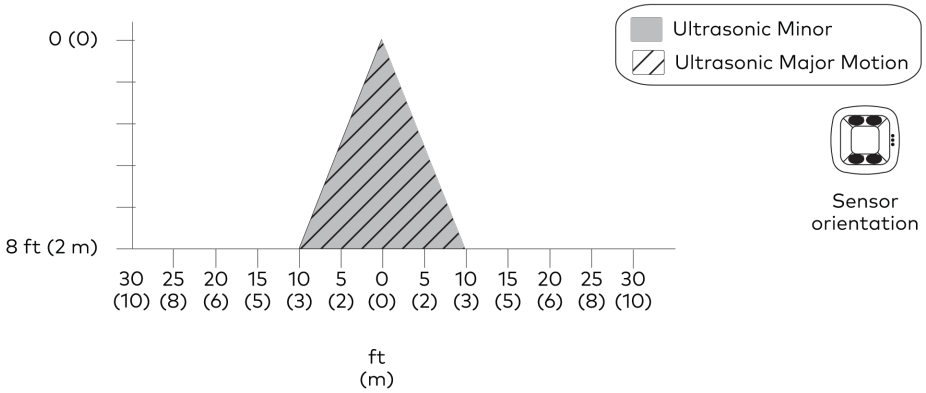
Top View



Side View Sensor Orientation A

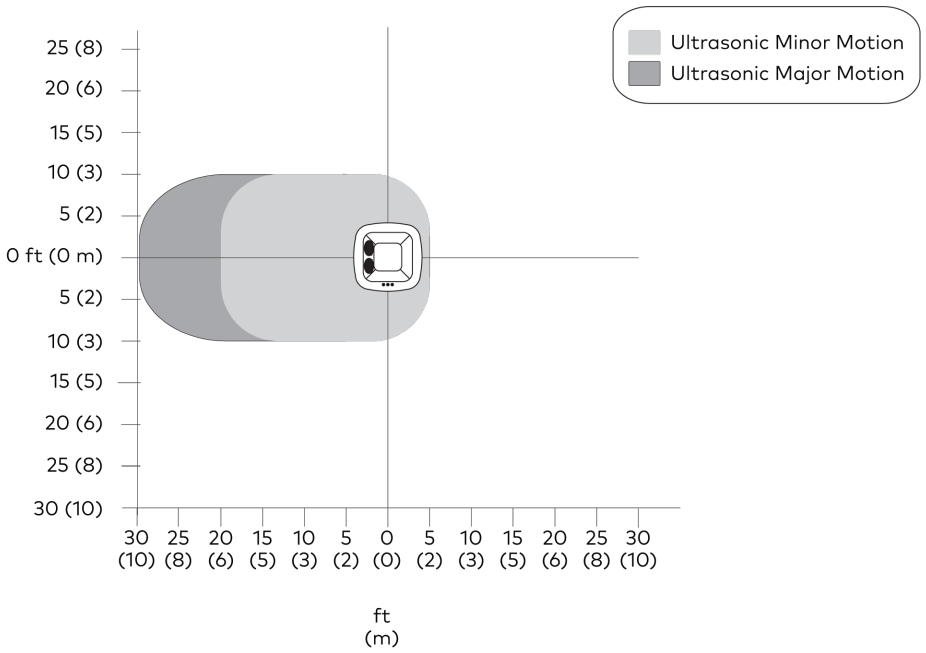


Side View Sensor Orientation B

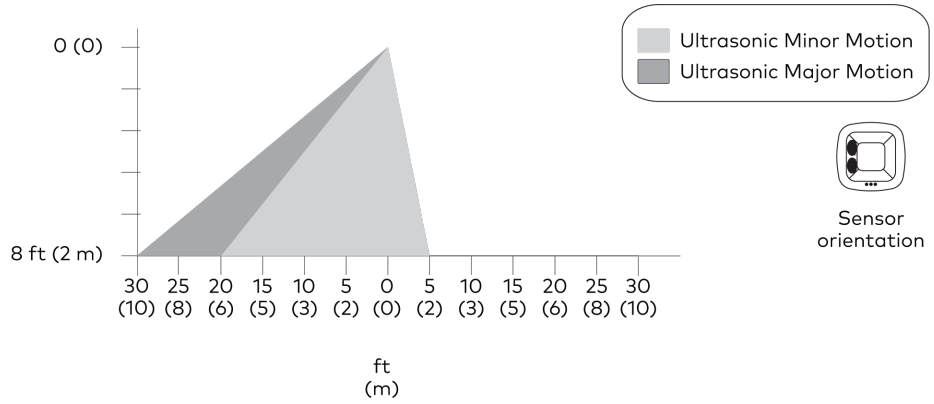


ZUMLINK-US-ONEWAY-DLS/ ZUMLINK-US-ONEWAY-DLS-RLY

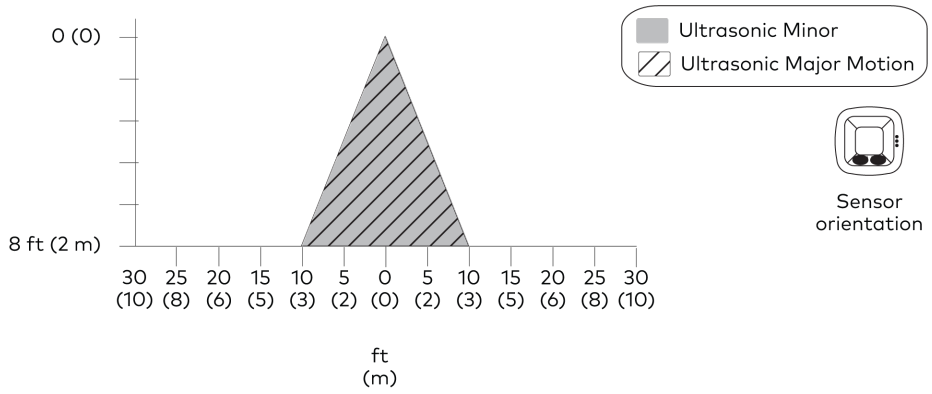
Top View



Side View Sensor Orientation A

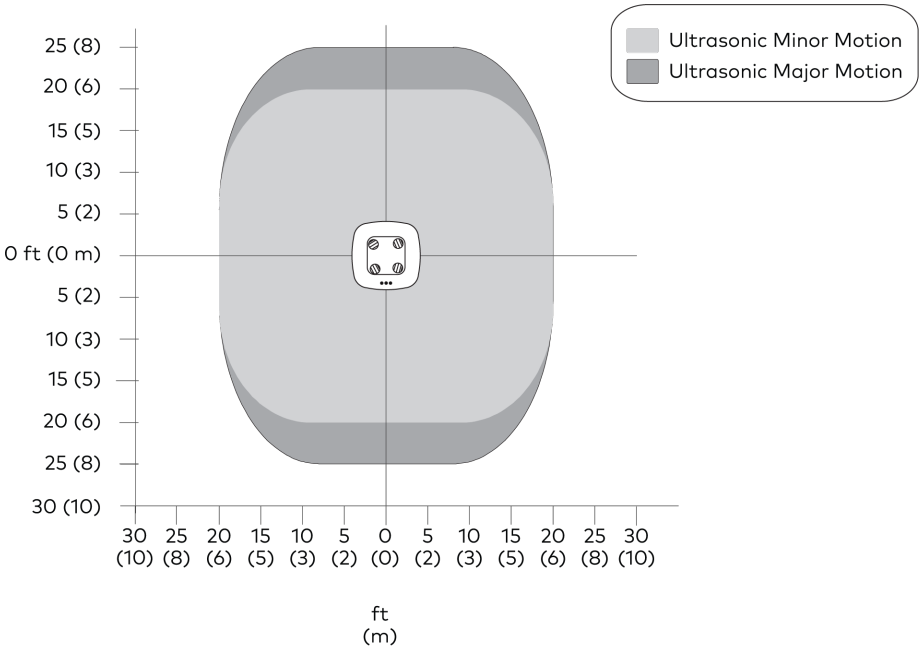


Side View Sensor Orientation B

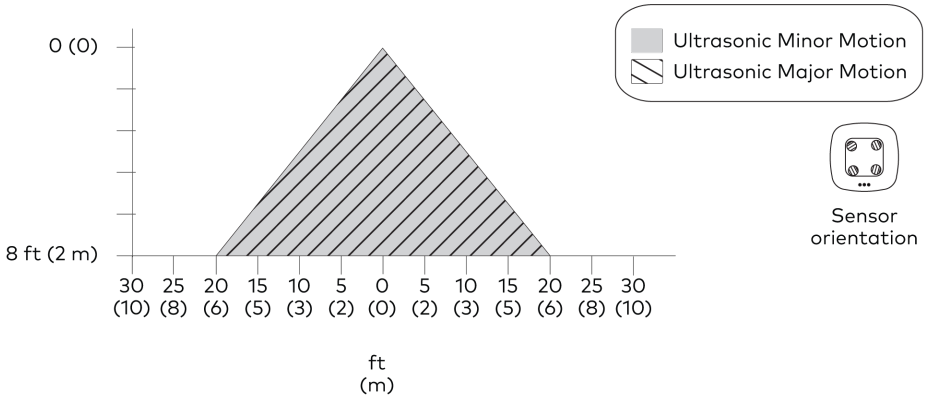


ZUMLINK-US-QUATTRO-DLS/ ZUMLINK-US-QUATTRO-DLS-RLY

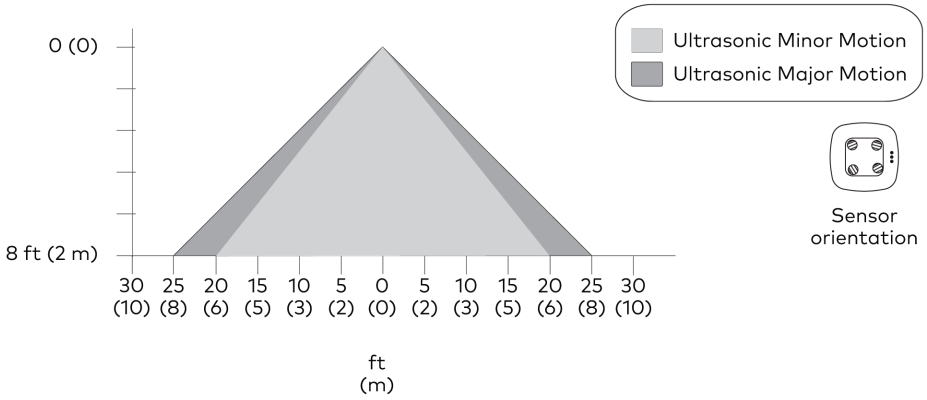
Top View



Side View Sensor Orientation A



Side View Sensor Orientation B



More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Hub Installation

Mount the ZUM-HUB4 and connect it to the network. The ZUM-HUB4 can be mounted into a rack or placed onto a flat surface.

In the Box

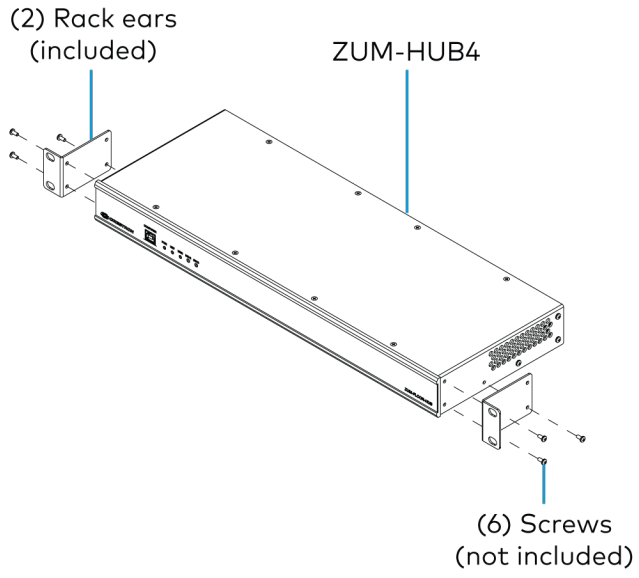
Qty.	Description
1	ZUM-HUB4, 4-Series® Control Processor for Zūm® Lighting Control System
	Additional Items
1	Connector, 4-Pin (2003576)
1	Power Pack, 24VDC, 2.5A, 100-240VAC (2045873)
2	Bracket, Rack Ear, 1U (2032122)
4	Foot, 0.5 in. x 0.5 in. x 0.23 in., Rubber, Black (2002389)
1	Power Cord, 5 ft 10 in. (1.78 m) (2042043)

Mount to a Rack

The hub occupies 1U of rack space.

To install the included rack ears:

1. Use a #1 or #2 Phillips screwdriver to remove the three screws from each side of the front of the device as shown in the following illustration.
2. Use the screwdriver and the screws removed in the previous step to attach the included rack ears to the device.
3. Mount the device into the rack using four mounting screws (not included).



Place onto a Flat Surface

When placing the device onto a flat surface or stacking it with other equipment, attach the included rubber feet near the corners on the underside of the device.

Make Connections

The hub has a dedicated Control Subnet that is used for communication between the control system and Crestron Ethernet devices. This subnet allows for dedicated communication between the control system and Crestron Ethernet devices without interferences from other network traffic on the LAN.

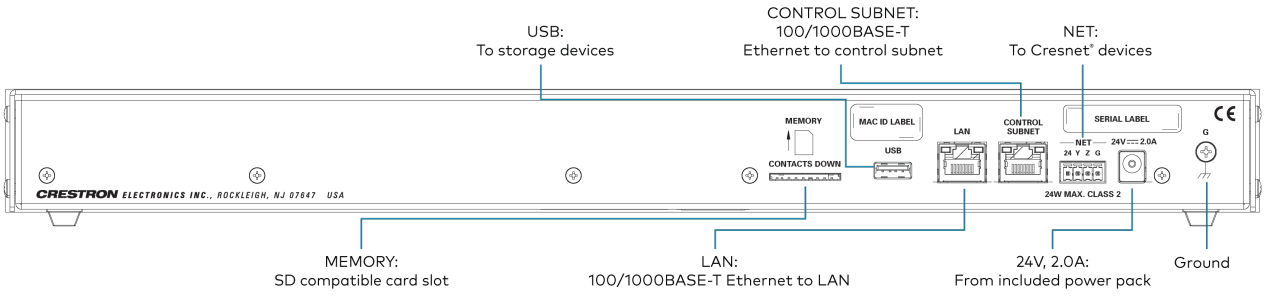
Make the connections, and note the following:

- Use Crestron power supplies for Crestron equipment.
- The included cable(s) cannot be extended.
- Apply power after all connections have been made.

NOTES:

- Ensure the unit is properly grounded by connecting the chassis ground lug to an earth ground (building steel).
- The hub can be powered with the (included) 24VDC power pack.
- Do not connect the CONTROL SUBNET port to the LAN. The CONTROL SUBNET port must be connected only to Crestron Ethernet devices.

Connections



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

More Information

To configure the hub, refer to Hub Web Interface on page 381 for details.

Power Supply Installation

Installation procedures for the junction box and shades power supplies are provided below.

- Junction Box Power Supply: ZUMLINK-JBOX-PSU Installation on page 209
- Shades Power Supply: CSA-PWS2S-JBOX-ZUMLINK-CN Installation on page 213

For installing the DIN rail power supply, refer to Zūm Wired DIN Rail Installation on page 152.

ZUMLINK-JBOX-PSU Installation

The ZUMLINK-JBOX-PSU mounts directly to a 4 in. square junction box (sold separately) and connects to other Zūm Link devices via CBL-CAT5E-ZUMLINK-P cables (sold separately).

In the Box

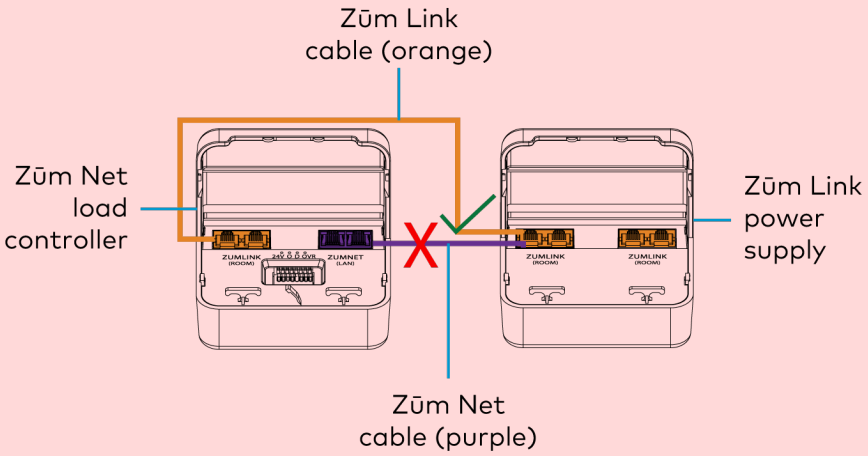
Qty.	Description
1	ZUMLINK-JBOX-PSU, Zūm® Wired J-Box Power Supply

	Additional Items
5	Yellow Wire Nut, 22-10 AWG (2049245)
1	Locknut (2047626)
1	Tie Wrap (2005429)

Install the Power Supply

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



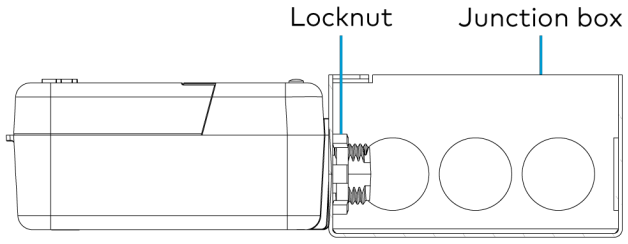
[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install this product.
- The product should project from the junction box when installed.
- For use where temperatures are between 32° to 104°F (0° to 40°C).
- For Chicago plenum compliant installations:
  - Ensure that the junction boxes and other electrical components are rated for Chicago plenum.
  - Separate the high-voltage lines from the low-voltage cables.
  - Install two junction boxes: one junction box for the high-voltage lines and one junction box for the low-voltage cables and load controller. A 6 in. square, 3.5 in. deep box with conduit knockouts is recommended for the low-voltage cables and load controller.

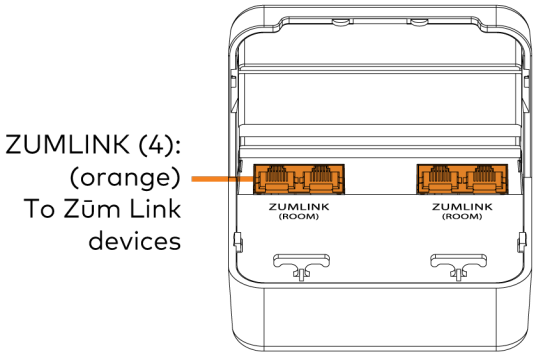
To install a power supply:

1. Turn the power off at the circuit breaker.
2. Mount the power supply to the junction box using the included locknut.

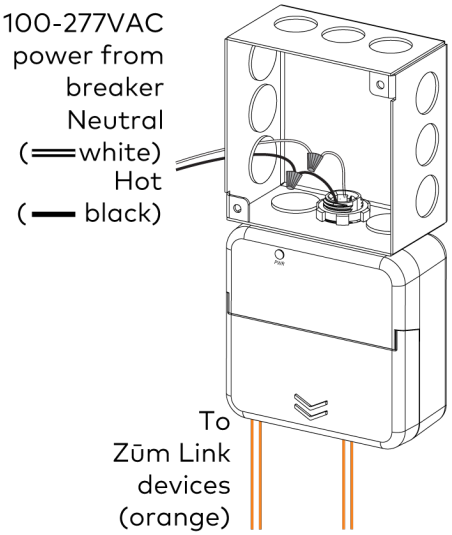


3. Wire the power supply as shown in the following diagrams.
4. Restore the power at the circuit breaker.

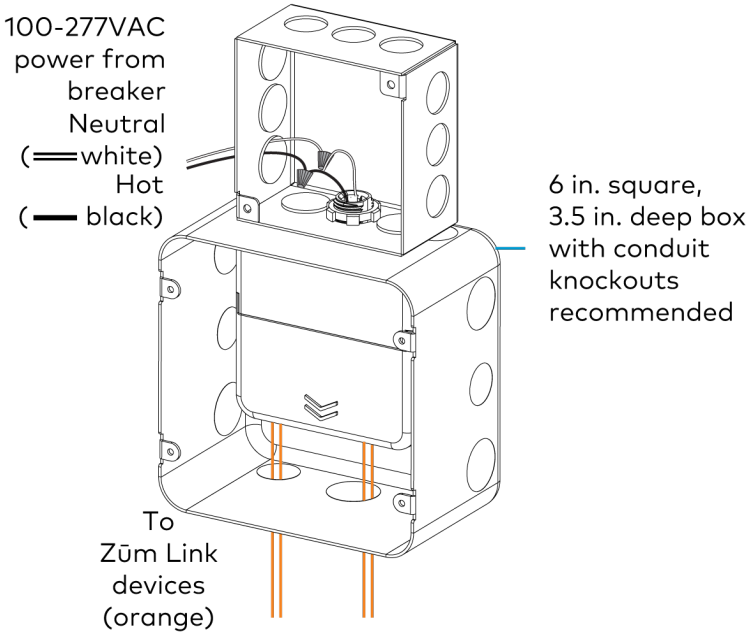
ZUMLINK-JBOX-PSU Wiring to Other Zūm Link Devices



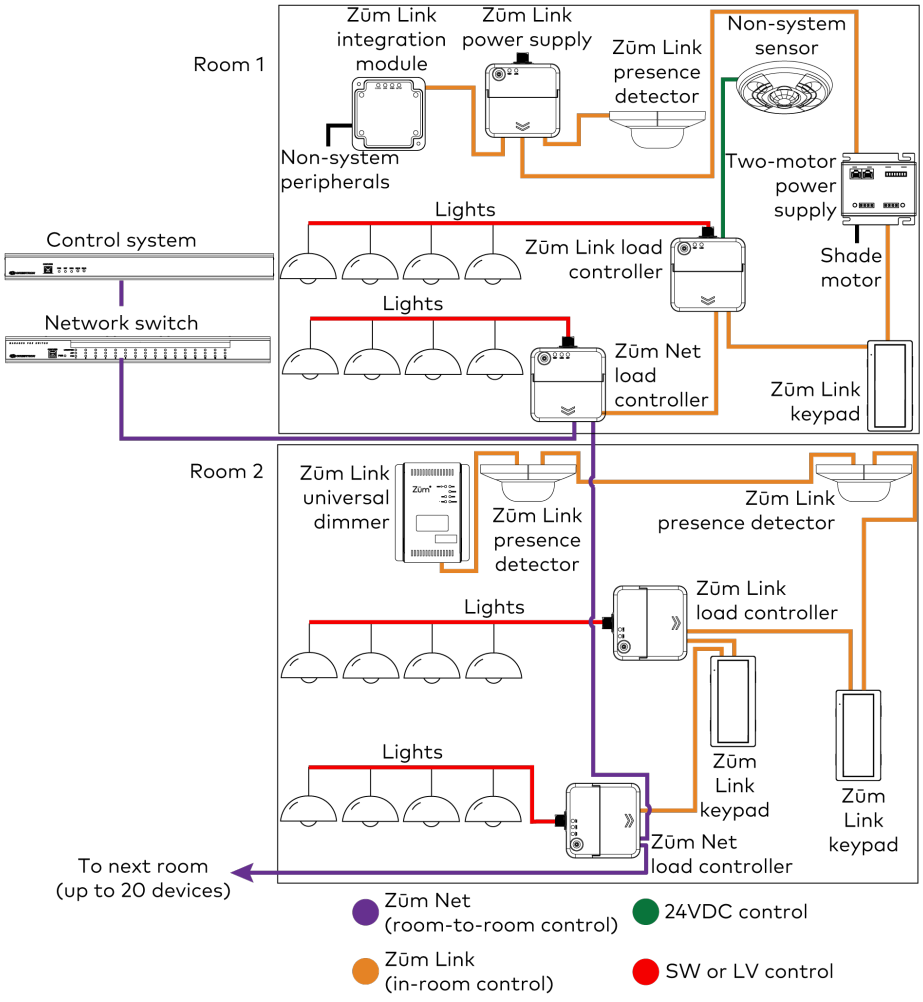
ZUMLINK-JBOX-PSU Wiring



ZUMLINK-JBOX-PSU Wiring to Meet Chicago Electric Code



Zūm Wired System Diagram



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

CSA-PWS2S-JBOX-ZUMLINK-CN Installation

The CSA-PWS2S-JBOX-ZUMLINK-CN two-motor power supply mounts directly to a 4 in. square junction box (sold separately) and connects shade motors with other Zūm Link devices via CBL-CAT5E-ZUMLINK-P cables (sold separately).

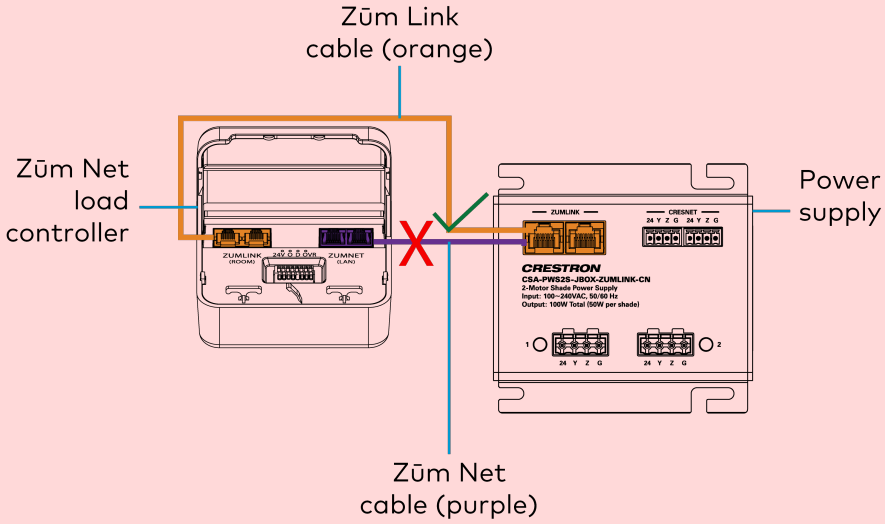
In the Box

Qty.	Description
1	CSA-PWS2S-JBOX-ZUMLINK-CN, Two-Motor J-Box Mounted Power Supply for Motorized Shading Solutions
	Additional Items
2	Connector, 4-Pin Terminal Block for Shades Motor (2003576)
2	Connector, 4-Pin Screw Terminal Block for Cresnet Communication (2003584)

Install the Power Supply

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



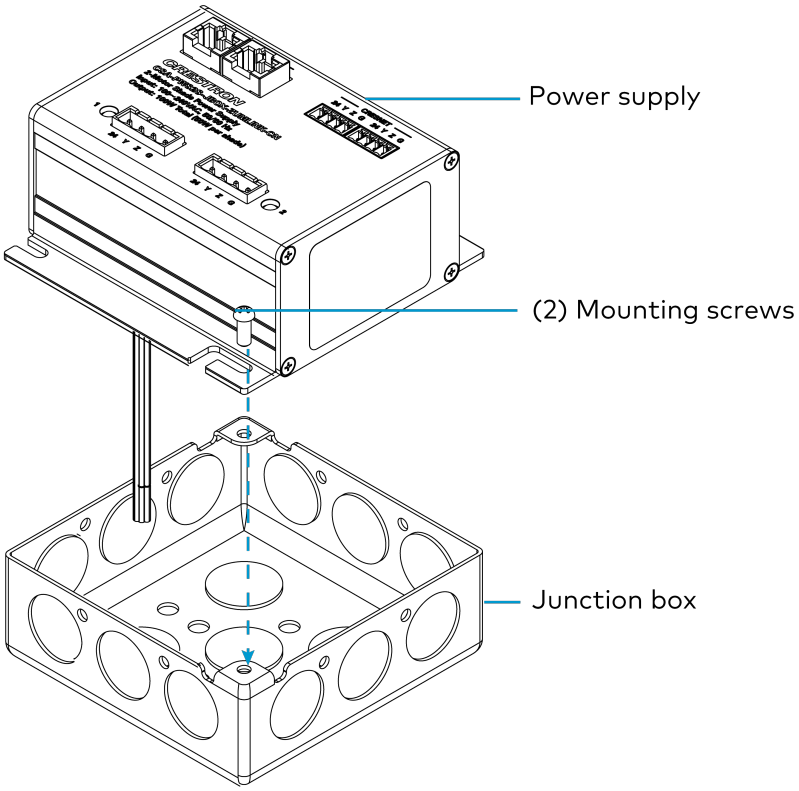
[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

NOTES:

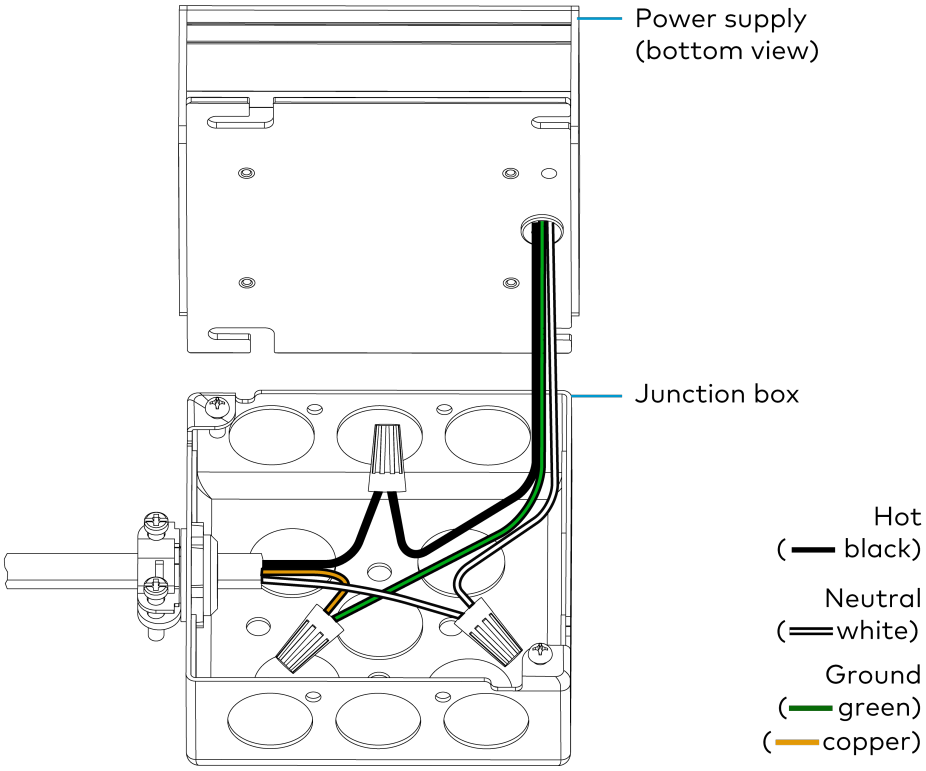
- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install this product.
- For use where temperatures are between 32° to 104°F (0° to 40°C).
- For indoor use only.

To install the power supply:

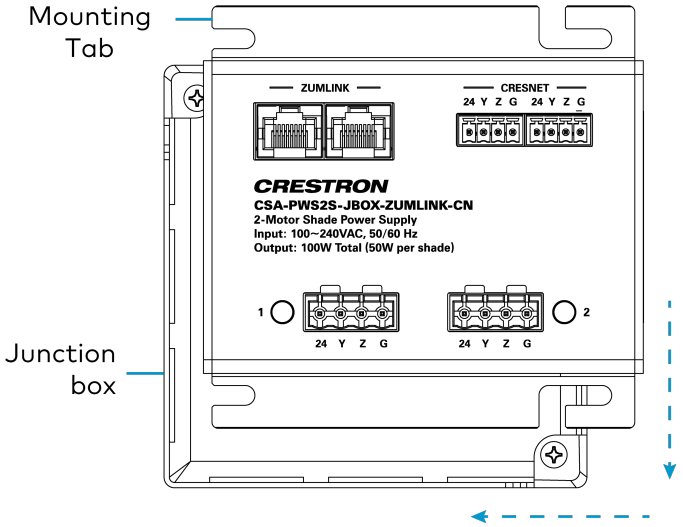
1. Turn the power off at the circuit breaker.
2. Loosen the two screws on the junction box and remove the cover if it is present.



3. Wire the Hot, Neutral, and Ground wires.



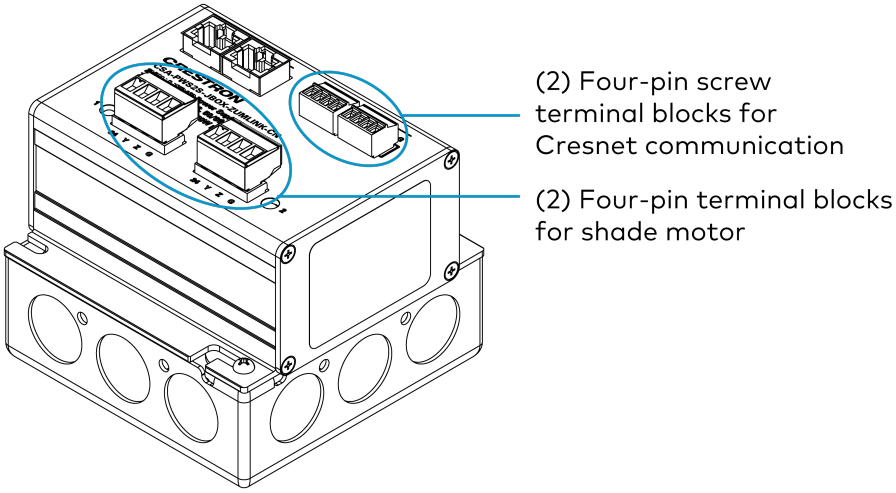
4. Mount the power supply to the junction box (not included).
5. Slide the power supply mounting tab grooves over the junction box screws.



6. Tighten the junction box screws.

> **NOTE:** Hand tighten only. Do not use a power tool to tighten the screws.

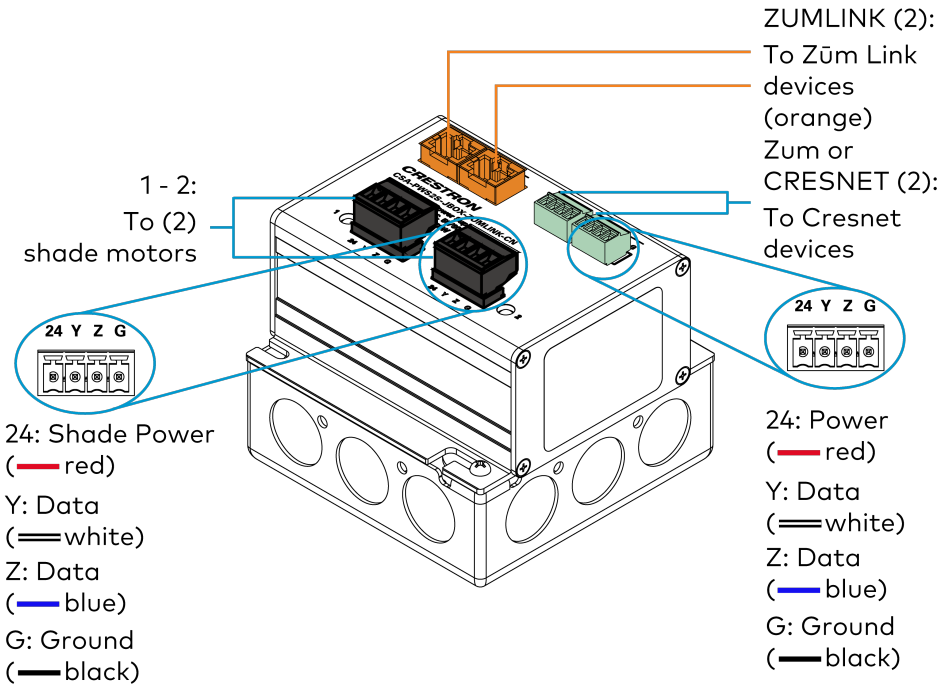
7. Attach the included terminal blocks to the **CRESNET** and shade motor ports.



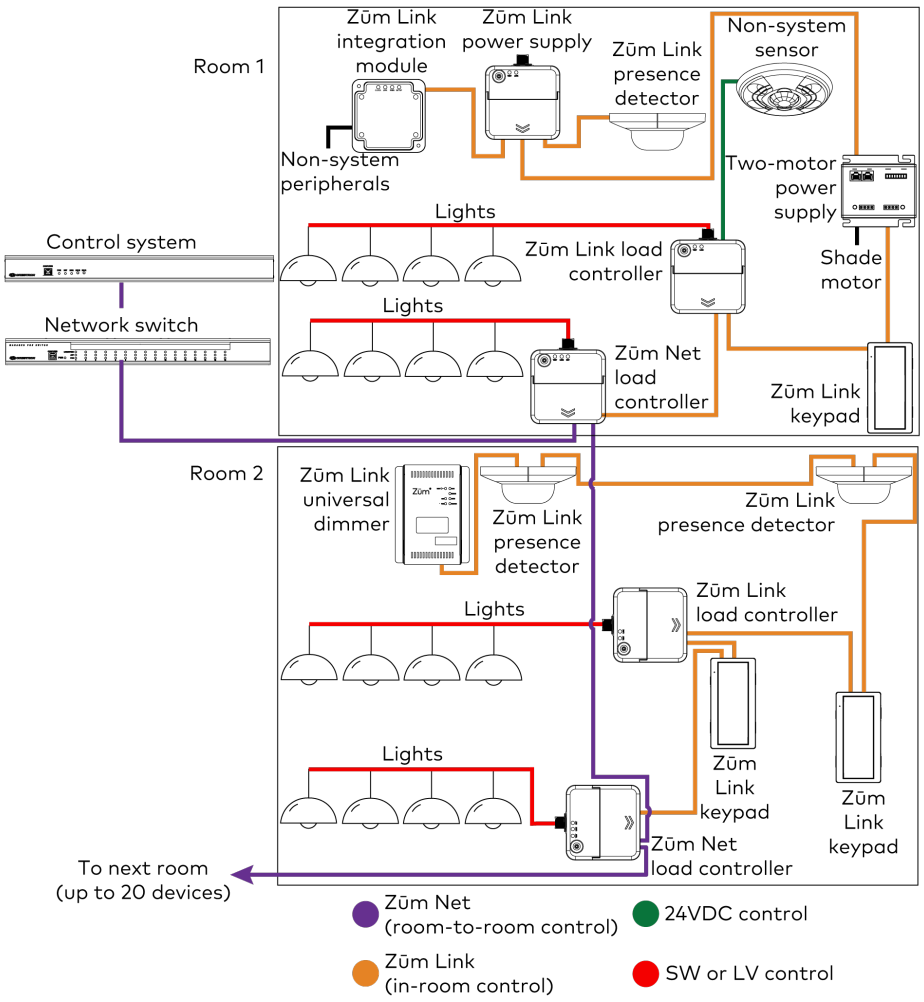
Wire the Power Supply

Wire the power supply as shown in the following diagram. Once a Zūm Link connection is established, the control system manages and communicates with devices on the Cresnet network.

CAUTION: Only one control system can be connected to the power supply at any point in the Cresnet and Zūm network chains. Powered devices may not function correctly if multiple control systems are connected



Zūm Wired System Diagram



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

Maximum Wire Runs

The cable length between the CSA-PWS2S-JBOX-ZUMLINK-CN and shade motor is limited by voltage drop along the cable. The maximum total length of a Cresnet cable run on each hub segment is 3,000 ft (~915 m).

For reliable performance, observe the following maximum Cresnet cable lengths between the power supply and shade:

- Cresnet-P (Plenum Rated, 2x #18 Power, 2x #22 Twisted Data) 130 ft (~40 m)
- Cresnet-NP (2x #18 Power, 2x #22 Twisted Data) 130 ft (~40 m)

- Cresnet-HP-NP (2x #12 Power, 2x #22 Twisted Data) 500 ft (~153 m)

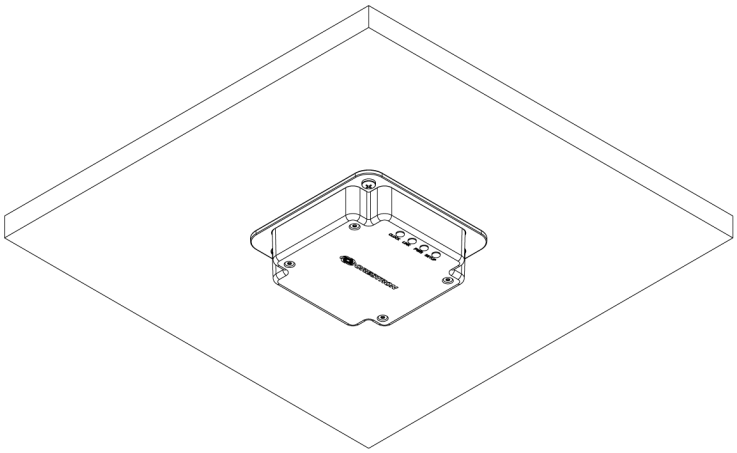
> **NOTE:** Wiring must be home run from the power supply to each shade motor.

Integration Module with Standalone Timeclock Installation

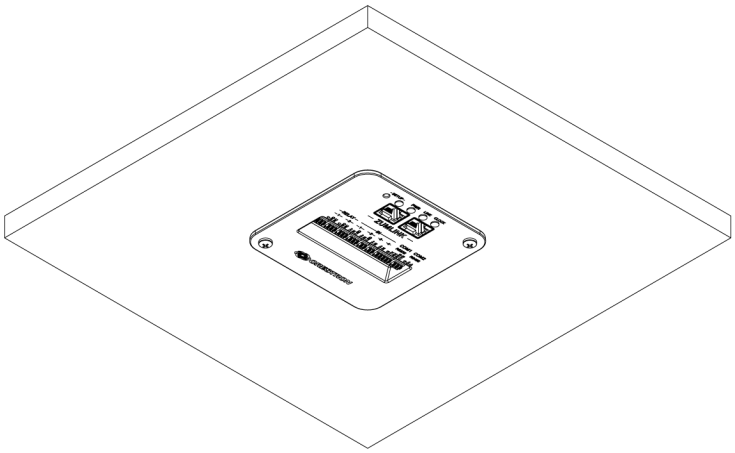
The ZUMLINK-JBOX-IO can be mounted directly to a 4 in. square junction box. It can be installed with the connections facing into the electrical box (LEDs facing out) or with the connections facing out from the electrical box (LEDs facing in).

For installing the DIN rail integration module with standalone timeclock, refer to Zūm Wired DIN Rail Installation on page 152.

Integration Module with LEDs Facing Out



Integration Module with Connections Facing Out



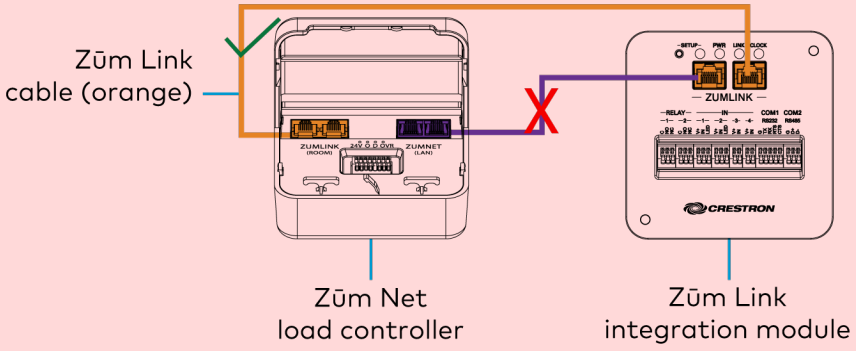
In the Box

Qty.	Description
1	ZUMLINK-JBOX-IO, J-Box Integration Module with Standalone Timeclock for Zūm® Lighting Control
	Additional Items
2	Screw, 8-32 x 3/4 in., Truss Head, Phillips (2054721)

Install the Integration Module

WARNINGS:

- 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!
- To avoid electric shock, turn off power to all devices connected to the Zūm low-voltage wiring and confirm that power is off before connecting any wires.[1]
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



[1] All Zūm devices comply with UL 916, Energy Management Equipment. Section 44 covers the applicable test requirements.

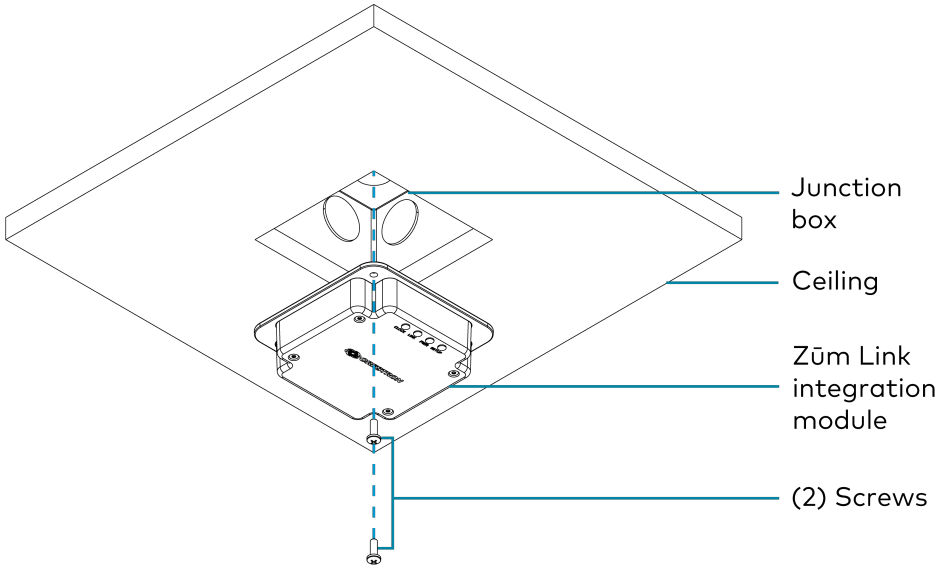
NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install this product.
- For use where temperatures are between 32° to 104°F (0° to 40°C).

Install the Integration Module with LEDs Facing Out

Install the Integration Module with the connections facing into the junction box (LEDs facing out).

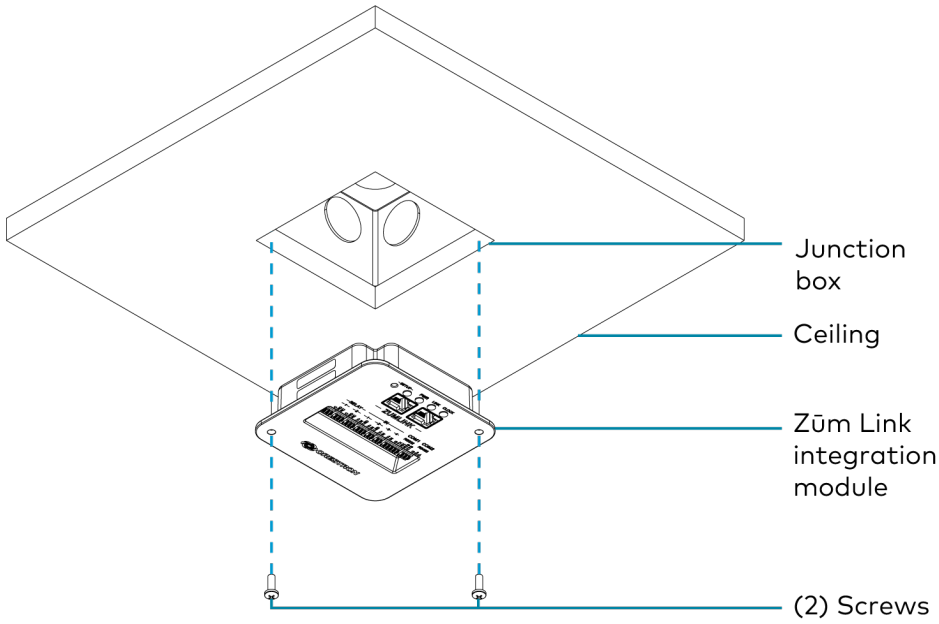
1. Turn the power off at the circuit breaker.
2. Install the junction box into the ceiling.
3. Feed the wires through the electrical box.
4. Make the necessary connections.
5. Use the included screws to secure the Integration Module to the junction box.



Install the Integration Module with Connections Facing Out

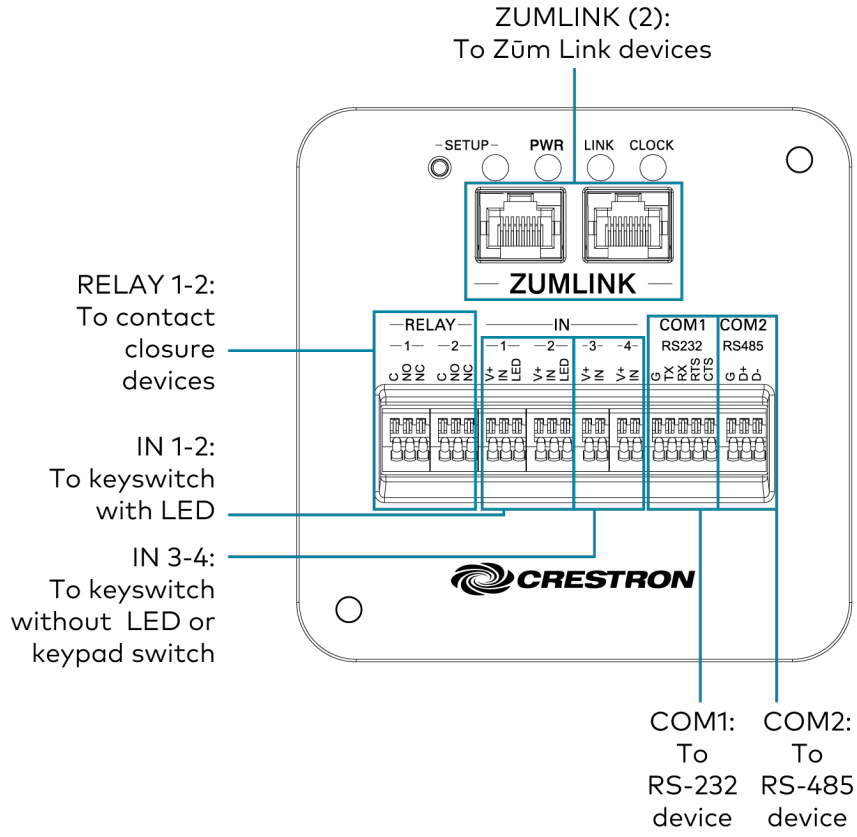
Install the Integration Module with the connections facing out from the junction box (LEDs facing in).

1. Turn the power off at the circuit breaker.
2. Install the junction box in the ceiling.
3. Use the included screws to secure the Integration Module to the junction box.
4. Make the necessary connections.

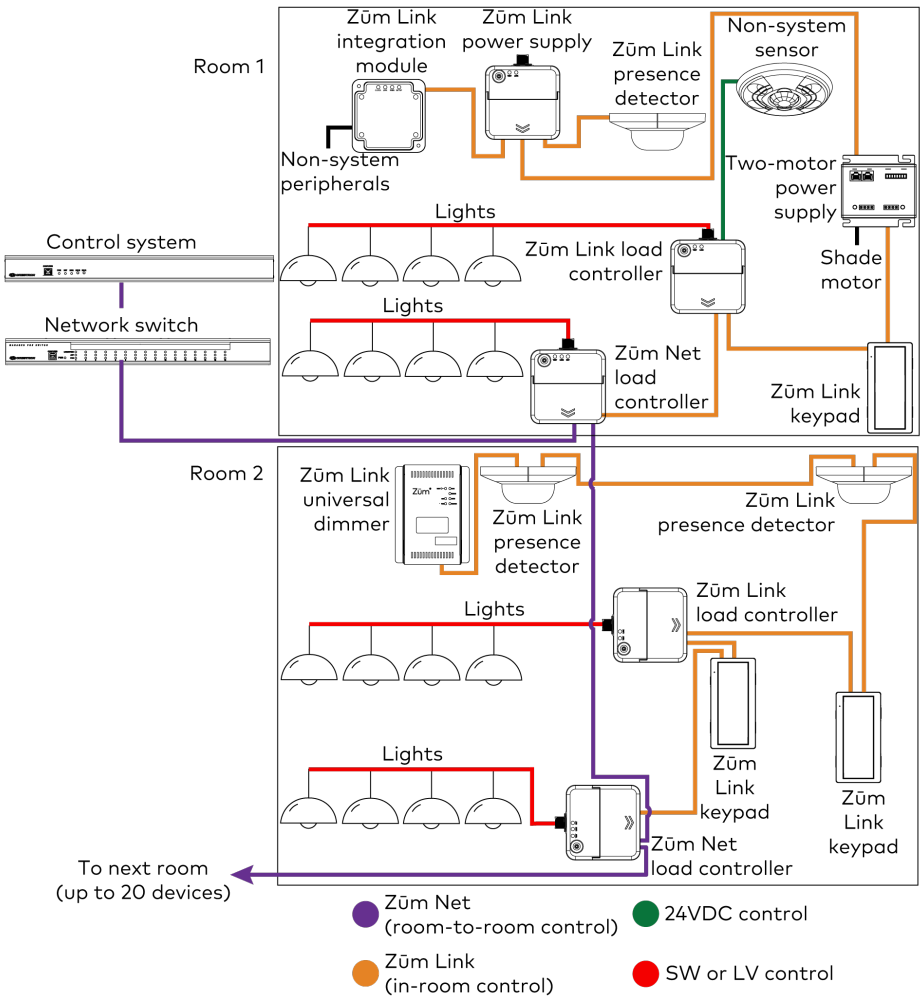


Connect the Integration Module

Make the necessary connections as called out in the following illustration.



Zūm Wired System Diagram



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Cable Accessory Installation

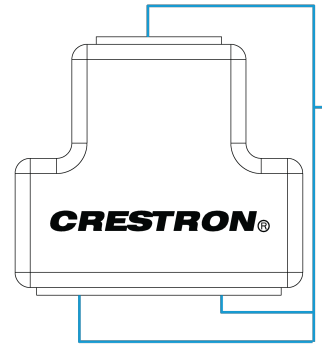
Refer to the following sections for using the ZUMLINK-SPLTR-RJ45 and ZUMLINK-CONV-CN in a Zūm Wired system. For example application diagrams, refer to Application Scenarios on page 61.

In the Box

Qty.	Description
1	ZUMLINK-CONV-CN, Zūm® Wired Adapter Cable for Cresnet® Devices or ZUMLINK-SPLTR-RJ45, Zūm® Wired RJ-45 Splitter

ZUMLINK-SPLTR-RJ45 Connections

The ZUMLINK-SPLTR-RJ45 is a pass-through accessory that splits one Zūm link signal into two ports. Use Zūm link cable (CBL-CAT5E-ZUMLINK-P) to connect bidirectional RJ-45 ports to Zūm link devices, including Zūm link load controllers, sensors, or keypads.



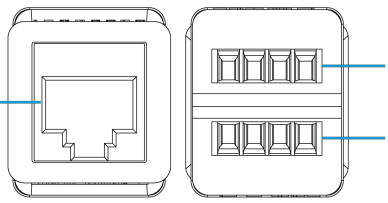
(3) ZUM LINK
RJ-45 ports:
To Zūm link devices
via Zūm link cable



ZUMLINK-CONV-CN Connections

The ZUMLINK-CONV-CN integrates Cresnet devices into a Zūm system. Use the Zūm link cable (CBL-CAT5E-ZUMLINK-P) to connect the RJ-45 port to Zūm link sensors and keypad. Connect the Cresnet terminal block to legacy Cresnet lighting products, including a SpaceBuilder® system (such as the CL-SPACEBUILDER-DIN) or traditional processor panel.

ZUM LINK
RJ-45 port:
To Zūm link device
via Zūm link cable



24 Y Z G
4-pin terminal block:
To Cresnet device

24 O W G
4-pin terminal block:
To emergency
override device

Cresnet Terminal Block Connections

Terminal	Description
24	24V power
Y	Data terminal pass-through only
Z	Data terminal pass-through only
G	Ground

Emergency Override Terminal Block Connections

Terminal	Description
24	24V power
O	Emergency override
W	Future use
G	Ground

Rocker and Button Tree Installation

The ZUMLINK-KP comes preassembled with the white ZUMLINK-BTNR rocker button. The following procedure describes how to replace the bezel and rocker button with a new bezel and rocker button/button tree.

In the Box

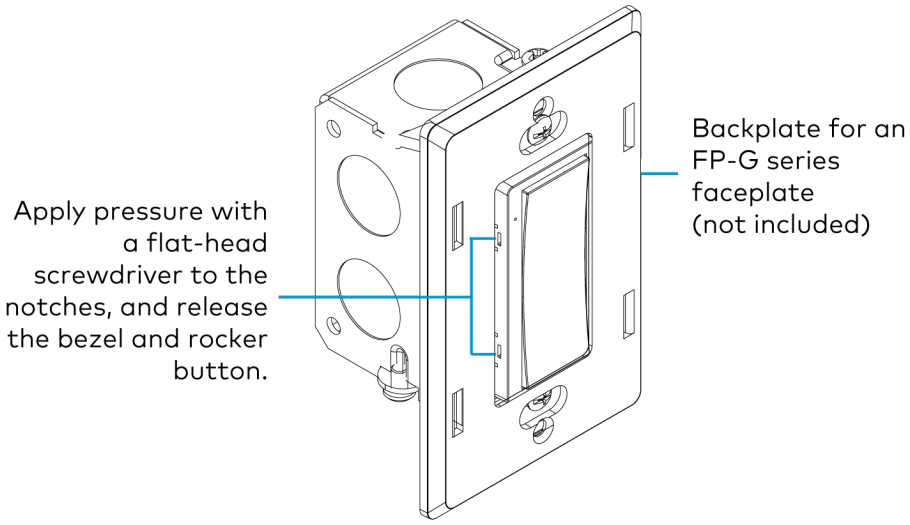
Qty.	Description
1	ZUMLINK-BTN, 2, 4, 6, or 8 Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP) or ZUMLINK-BTNR, Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP)

NOTE: ZUMLINK-BTN and ZUMLINK-BTNR are available with blank, pad-printed, or custom engraved buttons and in almond, black, gray, red, and white finishes.

Install a Bezel and Rocker Button or Button Tree

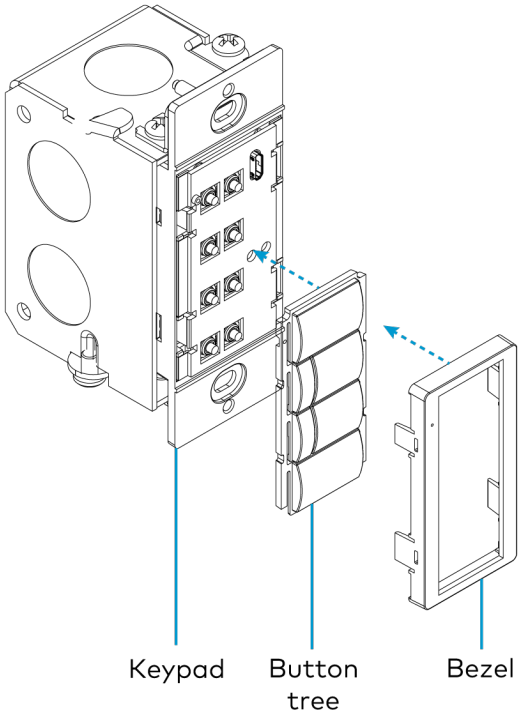
To replace the bezel and rocker button with a new bezel and rocker button/button tree:

1. Remove the faceplate from the keypad.
   If a Crestron FP-G series faceplate (not included) is installed, remove only the cover.
2. Use a flat-head screwdriver to remove the bezel and rocker button by pressing the screwdriver into the notches on the side of the keypad.
   The bezel and rocker button release from the keypad.



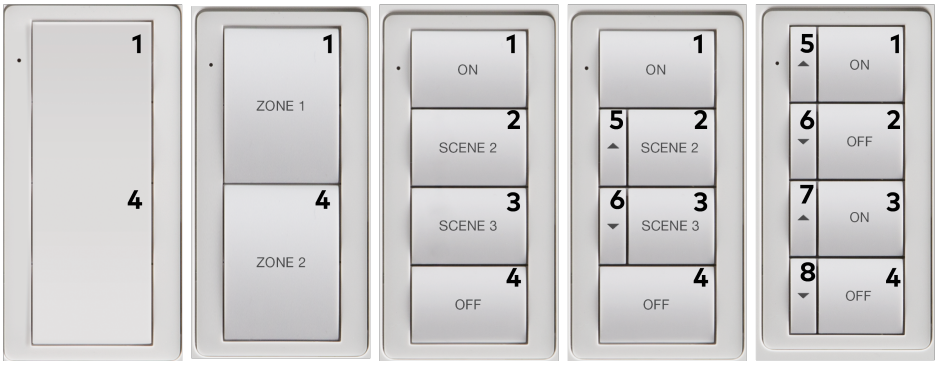
3. Position the replacement rocker button/button tree on the keypad.

4. Place the replacement bezel on top of the rocker button/button tree, making sure to align the LED hole with the LED on the keypad, and snap the bezel into place.



Button Positions

ZUMLINK-BTNR **ZUMLINK-BTN2** **ZUMLINK-BTN4** **ZUMLINK-BTN6** **ZUMLINK-BTN8**



For more information about installing the ZUMLINK-KP, refer to Zūm Wired Keypad Installation on page 183.

Install Zūm Mesh Wireless Devices

The following sections provide installation procedures for Zūm Wireless devices.

- Zūm Mesh Wireless Load Controller Installation
- Zūm Mesh Wireless Universal Dimmer Load Controller Installation
- Zūm Mesh Wireless Keypad Installation

Zūm Mesh Wireless Load Controller Installation

Zūm Mesh wireless load controllers can be in installed in junction box or wall box applications. For installing the wireless universal dimmer load controller, refer to Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241. For wired installations, refer to Install Zūm Wired Devices on page 151.

Wireless installation topics in this section include:

- Zūm Wireless Junction Box Load Controllers on page 231
- Zūm Wireless Wall Box Load Controllers on page 236

Zūm Wireless Junction Box Load Controllers

Zūm wireless junction box load controllers include:

- ZUMMESH-JBOX-5A-LV
- ZUMMESH-JBOX-16A-LV
- ZUMMESH-JBOX-16A-LV-EM
- ZUMMESH-JBOX-20A-PLUG
- ZUMMESH-JBOX-20A-SW
- ZUMMESH-JBOX-DALI

The ZUMMESH-JBOX load controller provides sophisticated lighting control with simple installation. The ZUMMESH-JBOX mounts directly to a 4 in. square junction box and pairs wirelessly with one or more Zūm wireless keypads.

In the Box

Qty.	Description
1	ZUMMESH-JBOX-5A-LV, ZUMMESH-JBOX-16A-LV, ZUMMESH-JBOX-16A-LV-EM, ZUMMESH-JBOX-20A-PLUG, ZUMMESH-JBOX-20A-SW, or ZUMMESH-JBOX-DALI Wireless J-Box Load Controller
	Additional Items
1	Yellow Wire Nut, 22-10 AWG (2049245)
1	Locknut (2047626)

Install the Load Controller

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!

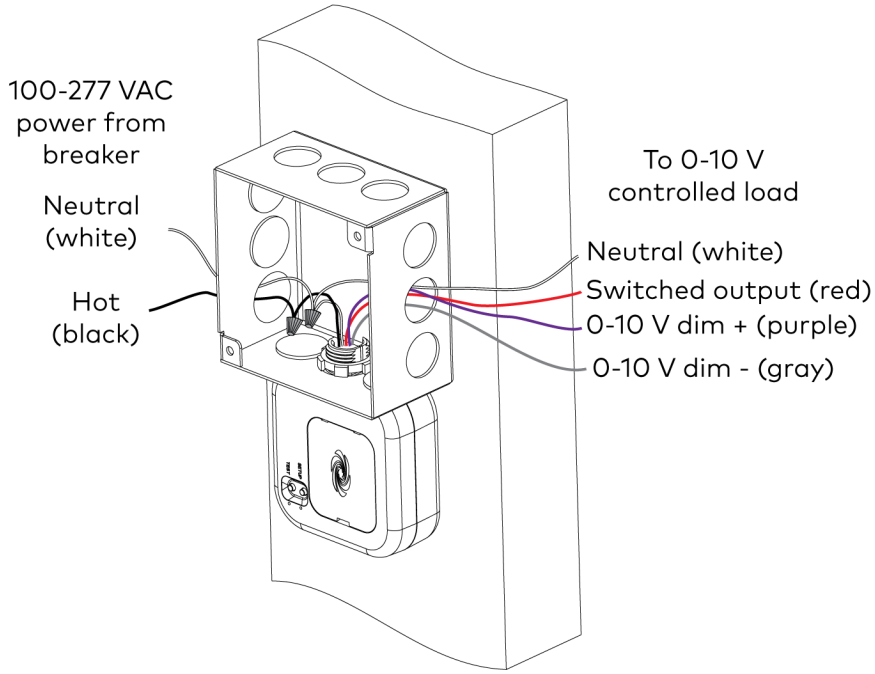
NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- The product should project 3-11/16 in. (93 mm) from the junction box when installed.
- For a Chicago plenum compliant installation, refer to the ZUMMESH-JBOX-FMKT-CP Quick Start.

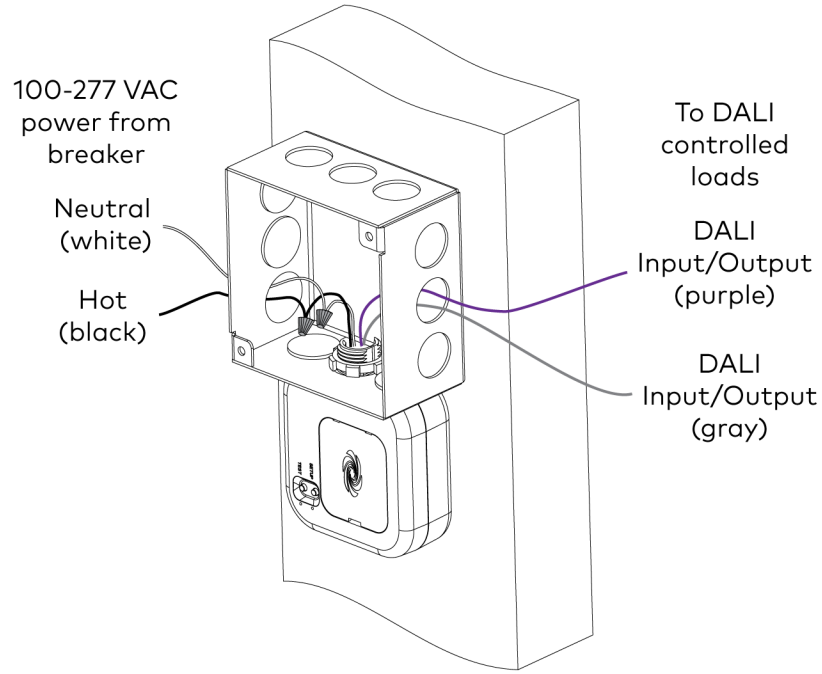
To install a load controller:

1. **NOTE:** When installing a ZUMMESH-JBOX-16A-LV-EM, ensure that any back-up power source is also off.
2. Mount the load controller to the junction box using the included locknut.
3. Wire the load controller as shown in the following diagrams.
4. Restore the power at the circuit breaker.

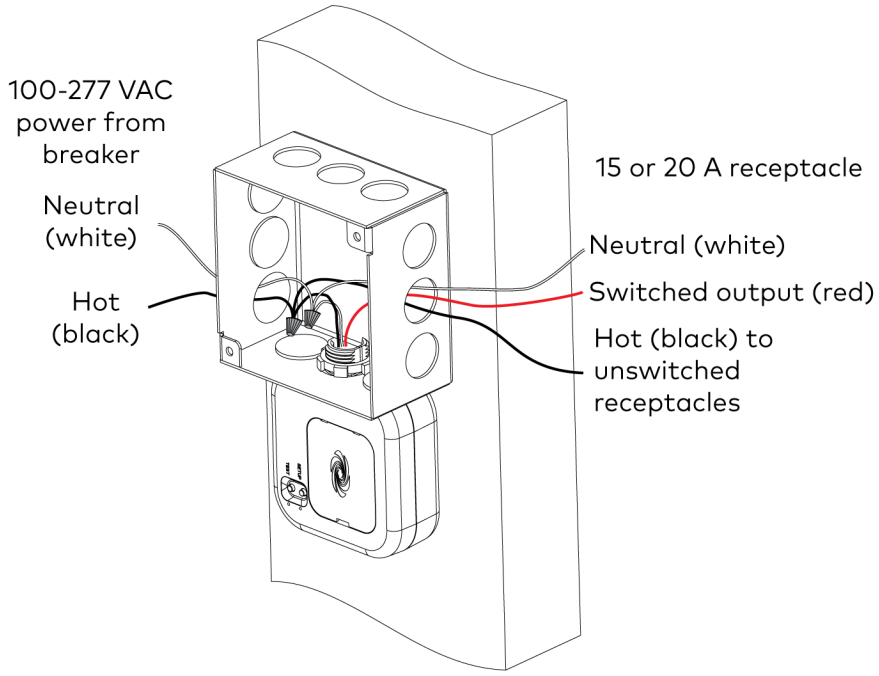
ZUMMESH-JBOX-5A-LV, ZUMMESH-JBOX-16A-LV, and ZUMMESH-JBOX-20A-SW Wiring



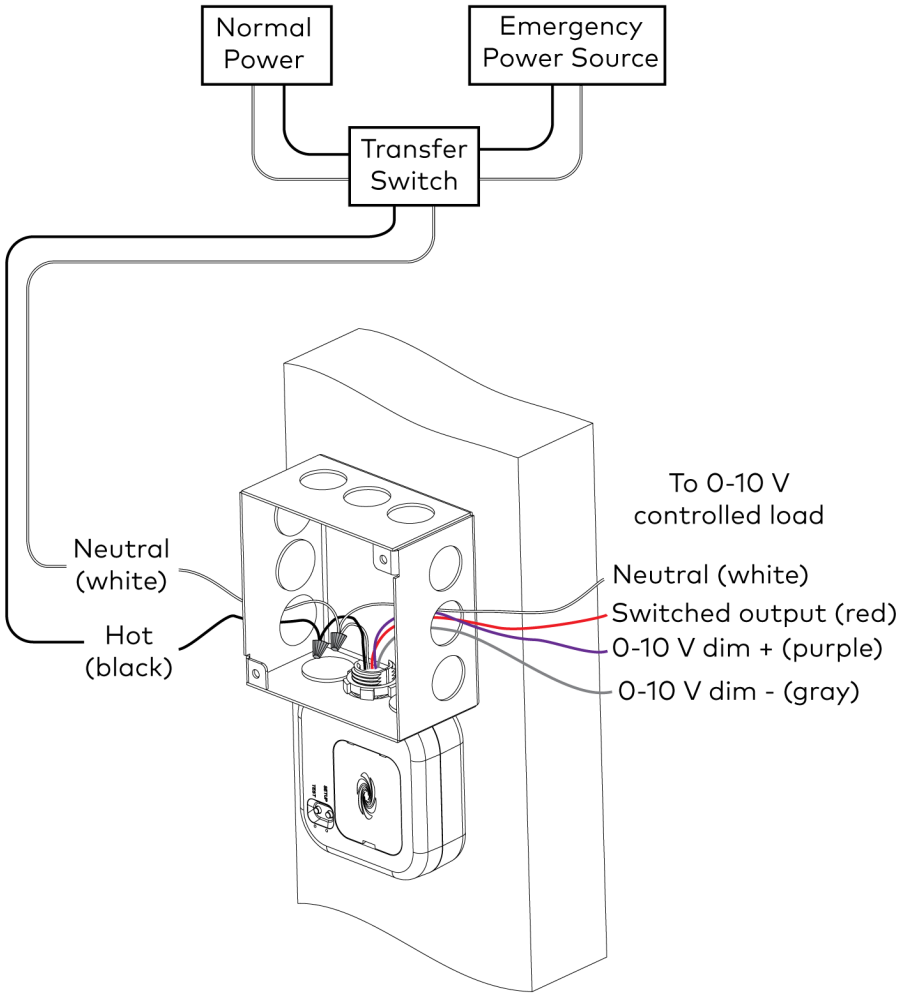
ZUMMESH-JBOX-DALI Wiring



ZUMMESH-JBOX-20A-PLUG Wiring



ZUMMESH-JBOX-16A-LV-EM Wiring



IMPORTANT SAFEGUARDS:

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than its intended use.

SAVE THESE INSTRUCTIONS

WARNING: The installation and the use of this product within a specific installation must be approved by applicable local, state, or federal Authority Having Jurisdiction (AHJ). All installations must be performed by a qualified personnel according to applicable local and regional codes and standards. Requirements vary between jurisdictions.

NOTES:

- When wiring a ZUMMESH-JBOX-16A-LV-EM, ensure that power is routed through a transfer switch for emergency load control.
- After normal power is lost, 200 ms (120V) or 750 ms (277V) must pass before the ZUMMESH-JBOX-16A-LV-EM is powered by an emergency power source.

Test Loads

To verify system wiring, test the loads. Pres the **TEST** button to turn the connected loads on and off. Press and hold the **TEST** button to cycle the connected dimmers.

Zūm Wireless Wall Box Load Controllers

For easy installation, use 3-1/2 in (89 mm) deep electrical boxes. Several devices can be installed in one electrical box (multigang). For a smooth appearance, one-piece multigang faceplates (sold separately) can be installed.

Zūm wireless wall box load controllers include:

- ZUMMESH-5A-SW and ZUMMESH-5A-LV
- ZUMMESH-DELV
- ZUMMESH-DIM

In the Box

Qty.	Description
	ZUMMESH-5A-LV, ZUMMESH-5A-SW ZUMMESH-DIM, orZUMMESH-DELV Wireless Wall Box Switch or Dimmer
	Additional Items
2	Screw, 6-32 x 3/4 in., Truss Head, Combo (2009211)

Install the Load Controller

The wireless ZUMMESH-5A-SW wall-box switch and ZUMMESH-5A-LV wall box mount in standard electrical boxes.

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!

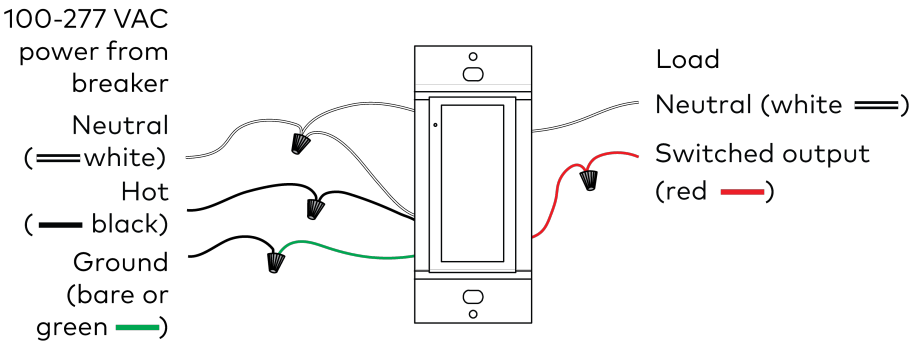
NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install this product.
- A licensed electrician should install this product.
- A neutral connection is required to operate the product.
- If mounting one device above another, leave at least 4-1/2 in. (115 mm) vertical space between them.
- Use copper wire rated 75°C (167°F) or better.
- Do not use mechanical 3- or 4-way switches.
- For use where temperatures are between 32° to 104°F (0° to 40°C).
- Operating a low-voltage circuit with all lamps inoperative or removed may result in current flow in excess of normal levels. To protect against transformer overheating and premature transformer failure:
  - Do not operate low-voltage circuits without operative lamps in place.
  - Replace burned-out lamps as quickly as possible.
  - Use transformers that incorporate thermal protection to prevent transformer failure due to overcurrent.

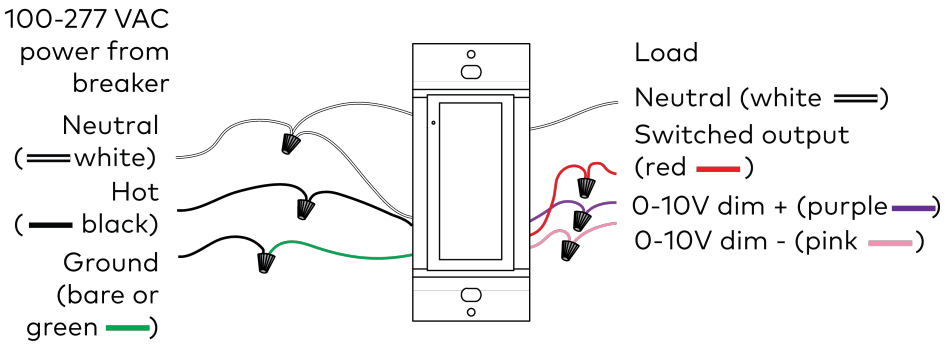
To install a load controller:

1. Turn the power off at the circuit breaker.Turn off power at the circuit breaker and to all devices connected to the Zūm low-voltage wiring.
2. Wire the load controller as shown in the following diagrams.
3. Push all power wires back into the electrical box and fasten the device to the electrical box with the provided screws.
4. Attach the faceplate (not included).
5. Restore the power at the circuit breaker.

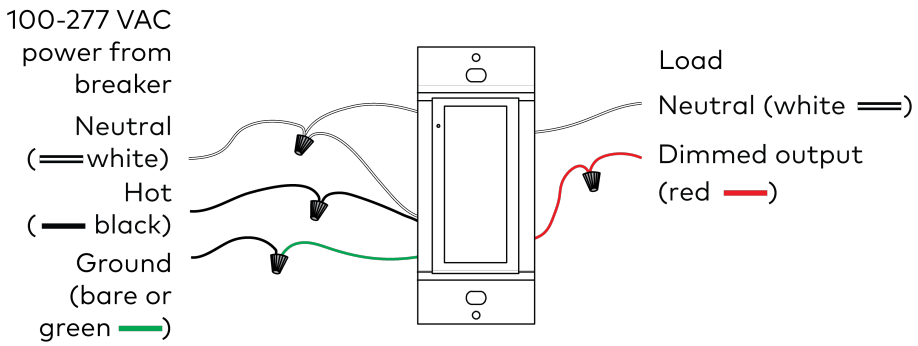
ZUMMESH-5A-SW Wiring



ZUMMESH-5A-LV Wiring



ZUMMESH-DIM and ZUMMESH-DELV Wiring



Multigang Installations

In multigang installations, several devices are grouped horizontally in one electrical box. For a smooth appearance, install a one-piece multigang faceplate (not included).

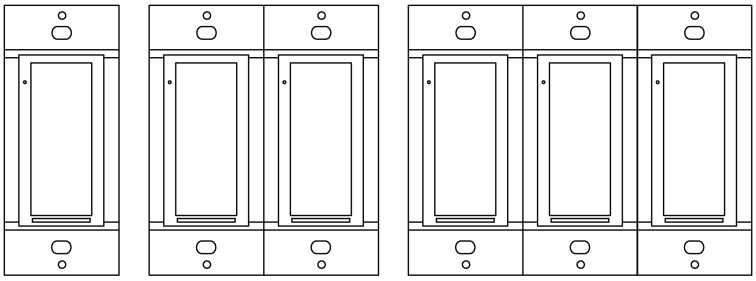
NOTES:

- When installing into a multigang box, do not fully tighten devices to the box until the faceplate has been aligned.
- Devices do not mount within a 2-gang mud ring. Use a standard 2-gang box.

ZUMMESH-DIM and ZUMMESH-DELV Derating Information

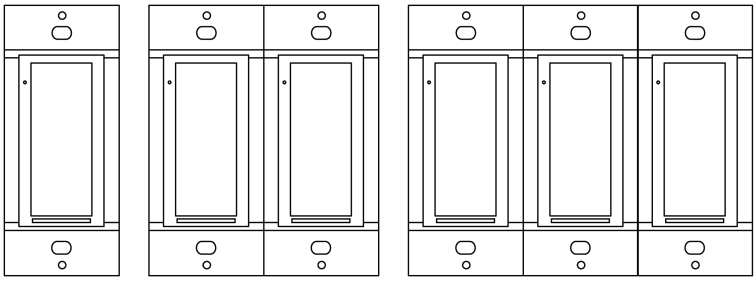
The load capacity for each device in the electrical box must be derated. Refer to the following diagrams for derating information. The VA ratings are for input power to the transformer. If the input power requirement of the transformer is unknown, use the bulb's wattage rating to determine proper rating.

ZUMMESH-DIM at 120 V



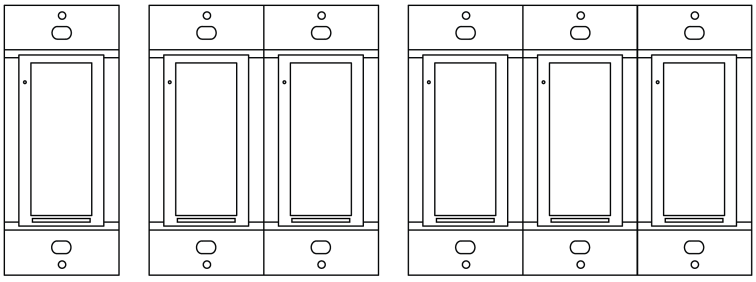
500 W @ 120 V | 340 W @ 120 V | 340 W @ 120 V | 340 W @ 120 V | 260 W @ 120 V | 340 W @ 120 V

ZUMMESH-DIM at 277 V



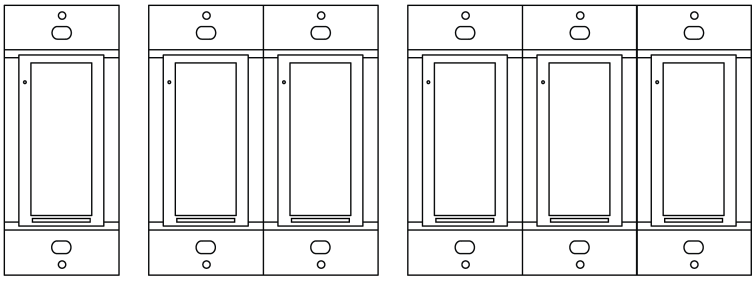
1,200 W @ 277 V | 800 W @ 277 V | 800 W @ 277 V | 800 W @ 277 V | 600 W @ 277 V | 800 W @ 277 V

ZUMMESH-DELV at 120 V



500 W @ 120 V | 340 W @ 120 V | 340 W @ 120 V | 340 W @ 120 V | 260 W @ 120 V | 340 W @ 120 V

ZUMMESH-DELV at 277 V



500 W @ 277 V | 400 W @ 277 V | 400 W @ 277 V | 400 W @ 277 V | 250 W @ 277 V | 400 W @ 277 V

Test the Loads

To verify system wiring, test the loads. Pres the **TEST** button to turn the connected loads on and off. Press and hold the **TEST** button to cycle the connected dimmers.

More Information

For more Zūm wireless information, refer to the following topics:

- Installation
  - Zūm Mesh Wireless Load Controller Installation on page 231
  - Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241
  - Zūm Mesh Wireless Keypad Installation on page 245
- Operation
  - Zūm Mesh Wireless Load Controller Operation on page 268
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wireless Keypad Operation on page 276
- Setup
  - Zūm Mesh Wireless Network Setup on page 558
  - Zūm App Configuration on page 284

Zūm Mesh Wireless Universal Dimmer Load Controller Installation

The ZUMMESH-EXP-16A-DIMU is a universal dimmer that provides a single-channel of universal dimming control to a Zūm space. The ZUMMESH-EXP-16A-DIMU uses reverse phase (trailing edge) dimming or forward phase (leading edge) dimming to control a wide variety of load types. Auto Dimming mode detects the connected load type and selects the appropriate dimming mode.

Proprietary zerocross filter technology allows the ZUMMESH-EXP-16A-DIMU to compensate for line voltage and frequency fluctuations and provides superior immunity to power-linenoise and a dramatic reduction in lamp flicker.

For installing wireless load controller, refer to Zūm Mesh Wireless Load Controller Installation on page 231. For wired installations, refer to Install Zūm Wired Devices on page 151.

In the Box

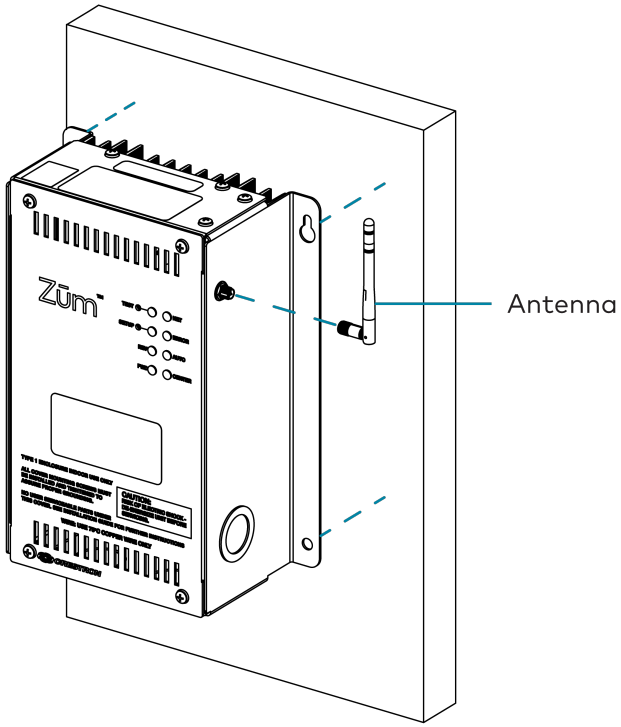
Qty.	Description
	ZUMMESH-EXP-16A-DIMU, Wireless Universal Dimmer Load Controller
	Additional Items
1	Antenna, 2.4 GHz, 1/4 Wave, Reverse Polarity, Female (P/N 2001016)

Install the Universal Dimmer Load Controller

NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician must install this product.
- Use copper wire rated 75°C (167°F) or better.
- This product meets the requirements of UL®2043 for installation in an environmental air-handling (plenum) space.

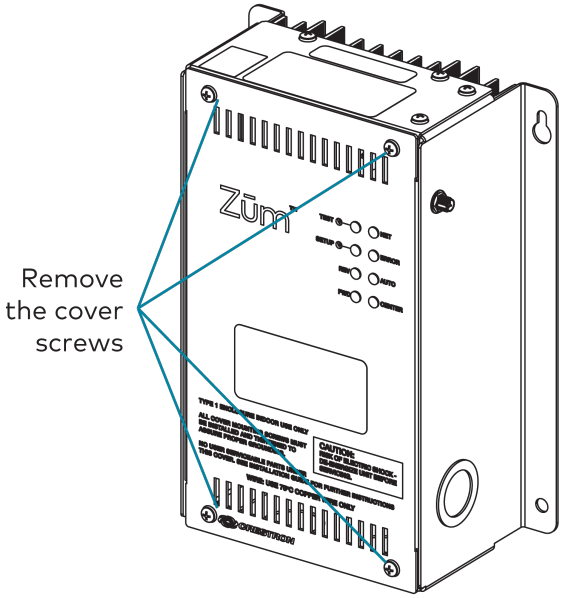
1. Install the ZUMLINK-EXP-16A-DIMU on any vertical surface using four screws (not included). The screws must be appropriate for the mounting surface.
2. Attach the antenna to the side of the ZUMLINK-EXP-16A-DIMU.



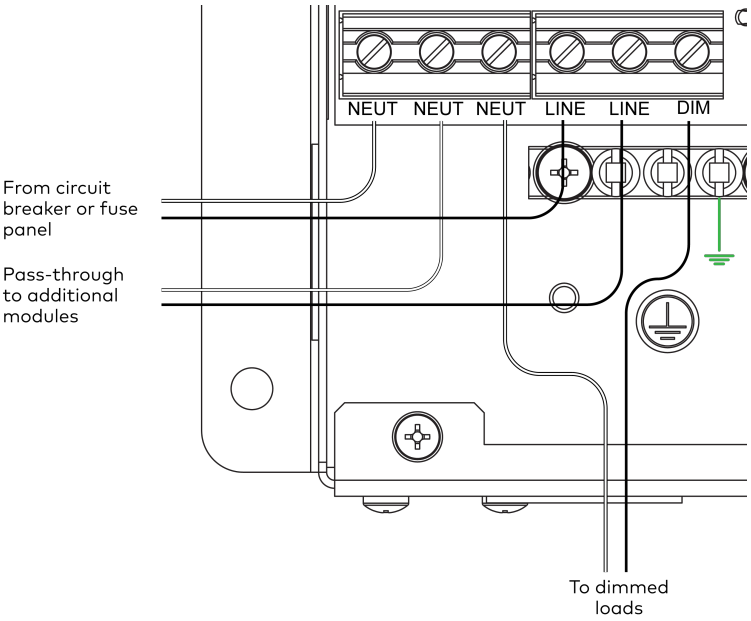
Wiring the Universal Dimmer Load Controller

WARNING: RISK OF SERIOUS PERSONAL INJURY. To avoid fire, shock, or death, turn off the power at the circuit breaker(s) or fuse and test that power is off before installing and wiring! Installing with power on can result in serious personal injury and damage to the device.

1. Turn the power off at the circuit breaker.
2. Use a #2 Phillips screwdriver to remove the cover screws and then remove the cover.



3. Wire the device as shown below. Additional LINE, NEUT, and GND connections are supplied for power pass-through. When making connections, consider the following:
    - Wires should be 24 to 10 AWG.
    - Strip wires to 5/16 in. (8 mm).
    - Tighten screw terminals to 4.5 in.-lbs (0.5 Nm).



More Information

For more Zūm wireless information, refer to the following topics:

- Installation
  - Zūm Mesh Wireless Load Controller Installation on page 231
  - Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241
  - Zūm Mesh Wireless Keypad Installation on page 245
- Operation
  - Zūm Mesh Wireless Load Controller Operation on page 268
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wireless Keypad Operation on page 276
- Setup
  - Zūm Mesh Wireless Network Setup on page 558
  - Zūm App Configuration on page 284

Zūm Mesh Wireless Keypad Installation

Follow the instructions below to install the Zūm Mesh keypads (ZUMMESH-KP) and Zūm Mesh battery-powered keypads (ZUMMESH-KPBATT).

- Zūm Mesh Keypads on page 245
- Zūm Mesh Wireless Battery-Powered Keypads on page 247

For wired installations, refer to Zūm Wired Keypad Installation on page 183.

Zūm Mesh Keypads

Standard gang-box installation allows one or more ZUMMESH-KP units to be installed in a 3-1/2 in. (89 mm) deep electrical box. A finished installation requires a decorator-style faceplate (FP-G series, sold separately).

NOTE: Devices mount in standard electrical boxes. Several devices can be installed in one electrical box (multigang). For a smooth appearance, one-piece multigang faceplates (sold separately) can be installed.

In the Box

Qty.	Description
1	ZUMMESH-KP, Zūm® Wireless Keypad

	Additional Items
2	Screw, 6-32 x 3/4 in., Truss Head, Combo (2009211)

NOTE: Keypads are available in color and button variations.

Install the ZUMMESH-KP

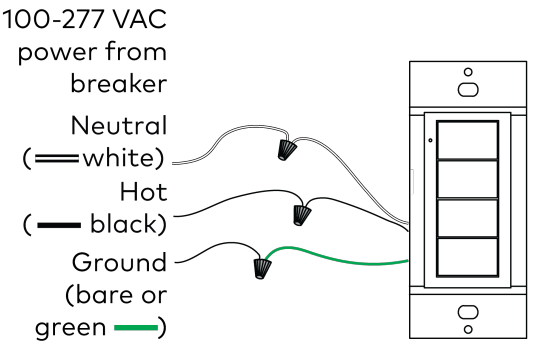
WARNING: To avoid fire, shock, or death, turn off the power at the circuit breaker or fuse and test that the power is off before wiring!

NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician should install this product.
- A neutral connection is required to operate the product.
- If mounting one device above another, leave at least 4-1/2 in. (115 mm) vertical space between them.
- Use copper wire rated 75°C (167°F) or better.
- Do not use mechanical 3- or 4-way switches.
- For use where temperatures are between 32° to 104°F (0° to 40°C).
- Several keypads may be installed in one electrical box (multigang). For a smooth appearance, install one-piece multigang faceplates (not included).

To install the ZUMMESH-KP, do the following:

1. Turn the power off at the circuit breaker.
2. Wire the device as shown in the following diagram.



3. Push all power wires back into the electrical box and fasten the device to the electrical box with the provided screws.
4. Attach the decorative faceplate (not included).
5. Restore the power at the circuit breaker.

Multigang Installations

In multigang installations, several devices are grouped horizontally in one electrical box. For a smooth appearance, install a one-piece multigang faceplate (not included).

NOTES:

- When installing into a multigang box, do not fully tighten devices to the box until the faceplate has been aligned.
- Devices do not mount within a 2-gang mud ring. Use a standard 2-gang box.

Zūm Mesh Wireless Battery-Powered Keypads

The ZUMMESH-KP10BATT and ZUMMESH-KP10AMBATT have similar installation procedures. For simplicity within this document, the term "ZUMMESH-KPBATT" is used except where otherwise noted.

In the Box

Qty.	Description
1	ZUMMESH-KP10BATT, Zūm® Battery-Powered Keypad or ZUMMESH-KP10AMBATT, AirMedia® Wireless Battery-Powered Keypad

	Additional Items
2	Screw, 6-32 x 3/4 in., Truss Head, Combo (2009211)
2	Double-sided Tape (2048130)

NOTE: Keypads are available in color and/or button variations.

Install the ZUMMESH-KPBATT

Mount the ZUMMESH-KPBATT to a single-gang box or directly to a flat surface using double-sided tape. A finished installation requires a decorator-style faceplate (FP-G series, sold separately)

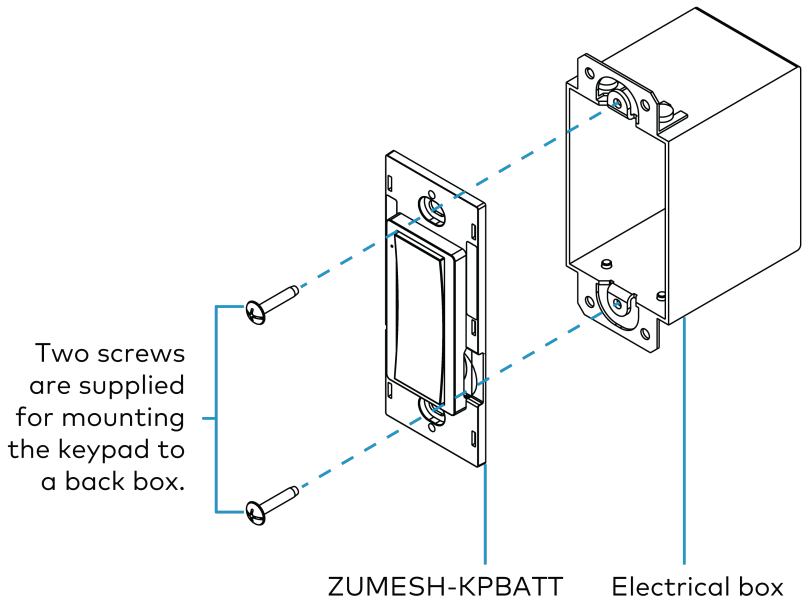
NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- For use where temperatures are between 32° to 104°F (0° to 40°C).
- Several keypads may be installed in one electrical box (multigang). For a smooth appearance, install one-piece multigang faceplates (not included).

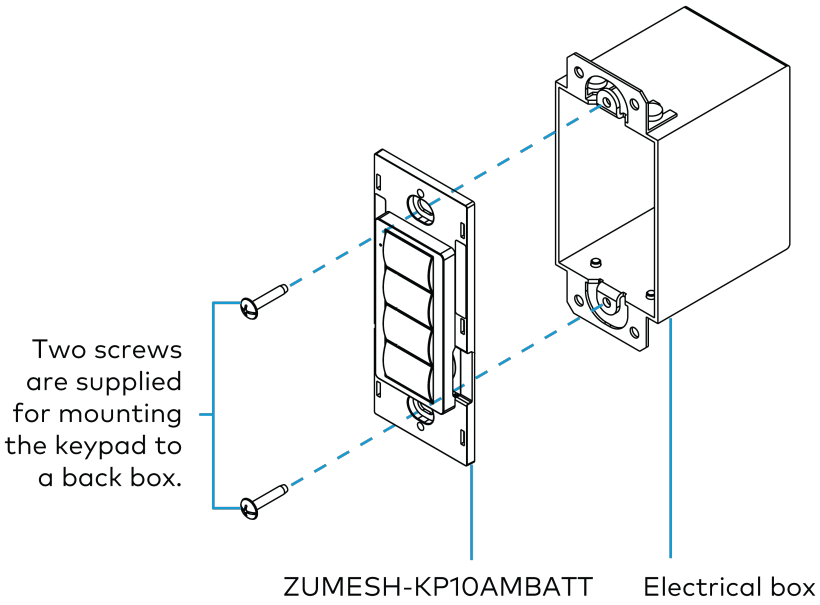
Single-Gang Box Mounting

Secure the ZUMMESH-KPBATT to a single-gang box using the two supplied screws. Attach a decorator-style faceplate (not included).

ZUMMESH-KP10BATT



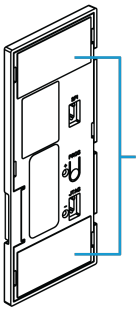
ZUMMESH-KP10AMBATT



Double-Sided Tape Mounting

Secure the ZUMMESH-KPBATT to a flat, clean surface using the supplied double-sided tape.

1. Clean the mounting surface with a light cleaning agent that does not leave a residue.
2. Remove the backing of one piece of the double-sided tape, and apply it to the back of the keypad. Repeat for the other piece of double-sided tape.

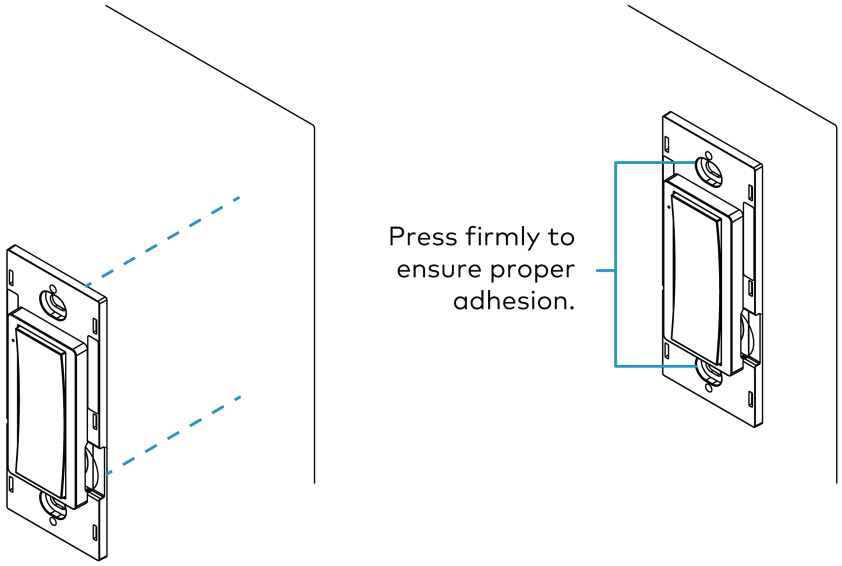


Two pieces of tape are supplied to mount the keypad without a backbox.

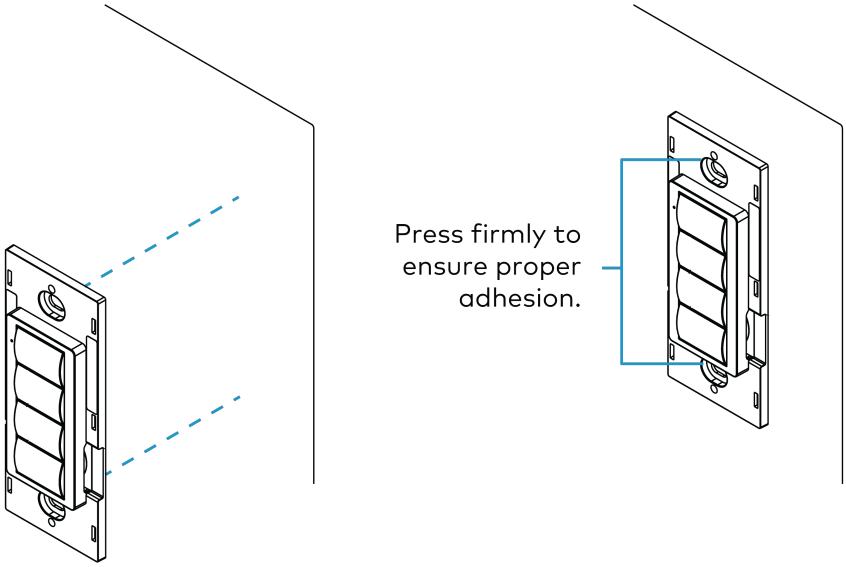
3. Ensure that the keypad is vertical and press it firmly against the wall to ensure it is properly secured.

> **CAUTION:** Removing the keypad after installation may damage the mounting surface.

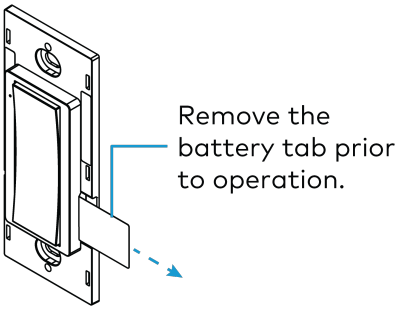
ZUMMESH-KP10BATT



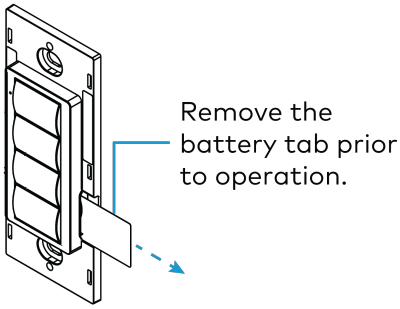
ZUMMESH-KP10AMBATT



4. Remove the battery tab to turn on the keypad.
ZUMMESH-KP10BATT



ZUMMESH-KP10AMBATT



5. Attach a decorator-style faceplate (not included).

Replace the Battery

To remove the battery, insert a pin or paper clip into the slot on the left side of the keypad. The battery slides out of the opposite side of the keypad.

WARNING: Refer to the following warnings before changing the batteries.

- Do not ingest batteries. Ingesting a battery poses a chemical burn hazard.
- This product contains a coin cell battery. If a coin cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- Keep new and used batteries away from children. If the battery compartment does not close securely, stop using the product and keep it away from children.
- If you think batteries have been swallowed or placed inside any part of the body, seek immediate medical attention.

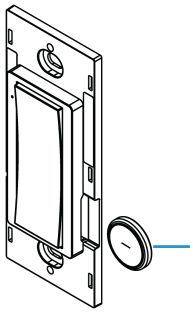
CAUTION: The battery used in this device may present a risk of fire or chemical burn if mistreated. Do not recharge, disassemble, heat above 212°F (100°C), or incinerate. Replace batteries with an identical CR2032 only. Use of another battery may present a risk of fire or explosion.

NOTES :

- The battery must be inserted properly.
- The keypad will not operate if the battery is inserted incorrectly.

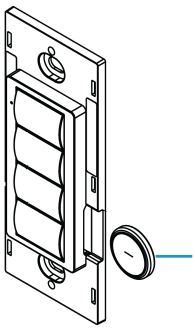
To install a new battery, insert the battery into the battery slot. The — terminal faces away from the wall.

ZUMMESH-KP10BATT



Battery CR2032
(—) toward the
front of the keypad

ZUMMESH-KP10AMBATT



Battery CR2032
(—) toward the
front of the keypad

More Information

For more Zūm wireless information, refer to the following topics:

- Installation
  - Zūm Mesh Wireless Load Controller Installation on page 231
  - Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241
  - Zūm Mesh Wireless Keypad Installation on page 245
- Operation
  - Zūm Mesh Wireless Load Controller Operation on page 268
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wireless Keypad Operation on page 276
- Setup
  - Zūm Mesh Wireless Network Setup on page 558
  - Zūm App Configuration on page 284

Operation

A Zūm Wired space consists of at least one Zūm Net or Zūm Link load controller connected to lights, sensors or another Zūm Wired device. Once the devices are installed and connected together in a space, they communicate with each other. Without any programming, the devices behave as described below.

> **NOTE:** To add an Zūm Wired device to an existing space, simply connect the device and it will become part of the space logic.

Refer to the following operation sections.

- Operate Zūm Wired Devices
- Operate Zūm Mesh Wireless Devices

Operate Zūm Wired Devices

The following sections provide operation procedures for Zūm Wired devices.

- Zūm Wired Load Controller Operation
- Zūm Universal Dimmer Load Controller Operation
- Zūm Wired Keypad Operation
- Presence Detectors Operation

Zūm Wired Load Controller Operation

Follow the sections below to operate the Zūm wired junction box and DIN rail load controllers. For universal load controllers, refer to Zūm Universal Dimmer Load Controller Operation on page 271.

In a room with multiple load controllers, one load controller is the primary controller and the others are secondary. Observe the LINK LED to identify the primary load controller. The LINK LED on the primary load controller consistently flashes for 0.5 seconds on and 0.5 seconds off.

Additional LED behavior is described in the following tables.

LED Status for Room Primary Load Controllers

LED	LED Color	Description
LINK	Off	The load controller is not polling any secondary load controllers.
LINK	Green (flashes 0.5 seconds on and 0.5 seconds off)	The load controller is the room primary load controller.
TEST	Off	The local load is off.
TEST	Green	The local load is on.
TEST (ZUMNET-JBOX-DALI and ZUMNET-DIN-DLI only)	Red (flashes 0.5 seconds on and 0.5 seconds off)	The DALI bus overloaded or shorted. Once the condition is removed, the error will self-clear.
NET (Zūm Net load controller only)	Off	The Zūm Net load controller is not connected to a control system or ZUM-HUB4.
NET (Zūm Net load controller only)	Green	The Zūm Net load controller is connected to a control system or ZUM-HUB4.
NET (Zūm Net load controller only)	Red	The Zūm Net load controller lost connection to a control system or ZUM-HUB4.

LED Status for Secondary Load Controllers

LED	LED Color	Description
LINK	Off	The load controller is not being polled by the room primary load controller.
LINK	Green (solid)	The load controller is actively being polled by the room primary load controller.
TEST	Off	The local load is off.
TEST	Green	The local load is on.

Sensor Terminal LED Status (for junction box load controllers only)

LED	LED Color	Description
24V	Green (solid)	24V is available at the sensor terminal.
24V	Off	24V is not available at the sensor terminal. Check for short circuits or overloading.
O	Red (solid)	Briefly lights when an occupancy event is detected.
D	Yellow (solid)	A daylighting signal is detected at the PHO terminal.
D	Off	A daylighting signal is not detected at the PHO terminal. Confirm that the sensor is connected and receiving light.
OVR	Green	An override event is present.
OVR	Off	An override event is not present.

Perform a Factory Reset on a Load Controller

On the load controller, press and hold the **TEST** button for 10 seconds. Release the button when all LEDs turn red. Wait a few seconds for the factory reset to finish.

NOTES:

- Performing a factory reset on the primary Zūm Wired load controller restores the space to default functionality and resets the load controller as a secondary device that no longer controls the space. Refer to Assign a Load Controller as the Primary Controller on page 257.
- Performing a factory reset on any other Zūm Wired load controller or device in the space only restores the default settings for that device.

Assign a Load Controller as the Primary Controller

Change a load controller from the primary controller to secondary or a secondary controller to primary.

> **NOTES:**
>
> - Only one load controller can be assigned as the primary load controller in a Zūm space.
> - Zūm Net load controllers are preconfigured as a primary devices. In applications with more than one Zūm Net load controller in the same Zūm space, keep one Zūm Net load controller as the primary controller and follow the procedure to set the others as secondary controllers.

To assign aload controller as the primary or secondary controller:

1. Tap the **TEST** button three times, then press and hold for five to seven seconds.
2. Release the button when the LINK LED flashes red. The load controller reboots.
   After three to five minutes, the LINK LED flashes 0.5 seconds on and 0.5 seconds off consistently.
3. Connect to the Zūm app and confirm the load controller assignment.

Reboot a Load Controller

To restart a load controller:

1. Tap the **TEST** button four times, then press and hold for five seconds.
2. Release the button when all LEDs flash red.

Remove a Missing Device from a Zūm Wired Room

To remove a missing device from a Zūm Wired room:

1. Identify the primary load controller.
   The LINK LED on the primary load controller consistently flashes for 0.5 seconds on and 0.5 seconds off.
2. Perform a factory reset on the load controller.
   Refer to Perform a Factory Reset on a Load Controller on page 256.
3. Reassign the load controller as the primary controller.
   Refer to Assign a Load Controller as the Primary Controller on page 257.

> **NOTE:** Performing a factory reset on a primary load controller erases all previous room logic to the default settings.

More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Zūm Universal Dimmer Load Controller Operation

Follow the sections below to operate the wireless and wired surface mount and DIN rail universal dimmer load controllers and configure the devices.

For operating Zūm wireless junction box and wall box load controllers, refer to Zūm Mesh Wireless Load Controller Operation on page 268. For operating Zūm wired load controllers, refer to Zūm Wired Load Controller Operation on page 255.

Set the Dimming Mode

The universal dimmer load controller uses Auto Dimming mode to determine the attached load type and applies Forward Phase (leading edge) or Reverse Phase (trailing edge) Dimming mode based on the autodetected load type.

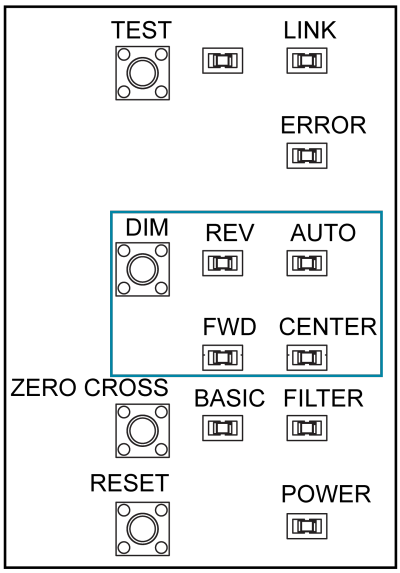
WARNINGS:

- Auto Dimming mode should not be disabled unless suggested by a Crestron True Blue Technical Support representative. Incorrectly setting these switches to force the wrong mode can cause damage to the dimmer and lighting fixture or create a hazardous condition.
- Only use Center Dimming mode if instructed by a Crestron True Blue Technical Support representative.
  Most lighting fixtures do not support Center Phase Dimming. Exposing such fixtures to this mode can damage or degrade their lifetime. The dimmer load rating must be derated when used in Center Phase Dimming.

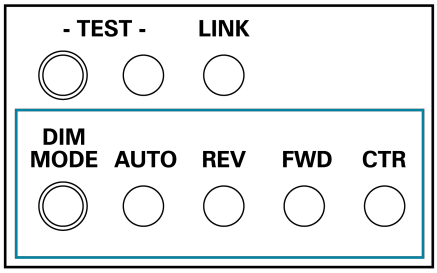
If necessary, set the universal dimmer load controller to operate in Forward Phase, Reverse Phase, or Center Phase Dimming mode.

1. ZUMLINK-EXP-16A-DIMU and ZUMMESH-EXP-16A-DIMU only: Remove the cover as shown in Wiring the Universal Dimmer Load Controller on page 179.
2. Press the **DIM MODE** button until the desired dimming mode is indicated by the REV, AUTO, FWD, or CENTER LED.

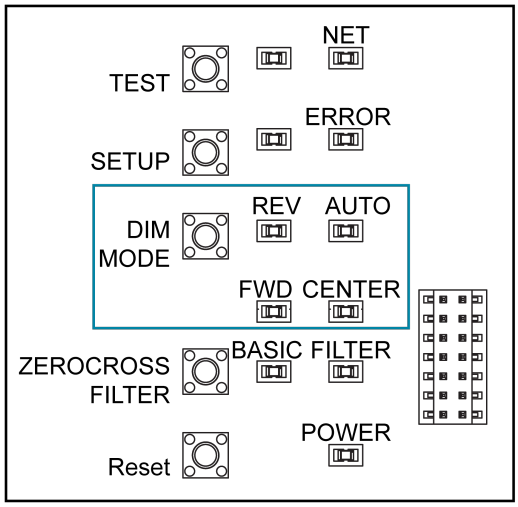
ZUMLINK-EXP-16A-DIMU



ZUMLINK-DIN-DIMU



ZUMMESH-EXP-16A-DIMU



Test the Loads

To verify system wiring, the loads can be tested before setting up the Zūm space. Press the **TEST** button to toggle the connected loads on and off. Press and hold the **TEST** button to cycle dim the connected loads.

Factory Reset

A factory reset should be performed when the ZUMLINK-EXP-16A-DIMU is removed from the network or to remove the configuration settings from the device. The ZUMLINK-EXP-16A-DIMU must also be factory reset if it is being moved to a different system.

> **NOTE:** New-in-box devices do not need to be factory reset before joining a system.

To factory reset the ZUMLINK-EXP-16A-DIMU, press and hold the **TEST** button until the TEST LED lights (about 10 seconds), and then release the button. The TEST LED and the connected load output turn on to indicate that the factory reset procedure is complete.

To factory reset the ZUMLINK-DIN-DIMU, refer to Perform a Factory Reset on a Load Controller on page 256.

To factory reset the ZUMMESH-EXP-16A-DIMU, press and hold the **SETUP** and **TEST** buttons until the SETUP LED lights (about 10 seconds), and then release both buttons. The TEST LED and the connected load output turn on to indicate that the factory reset procedure is complete.

Universal Dimmer LEDs

The LEDs on the ZUMLINK-EXP-16A-DIMU operate as follows:

- TEST: Lights when the connected loads are on.
- LINK: Lights to indicate that it is joined to a Zūm space. Flashes when the universal dimmer load controller receives a message.
- ERROR: Flashes to indicate an error in the line or load. Refer to Error States on page 262.
- AUTO: Lights to indicate that the dimmer is in Auto Dimming mode. When operating in Auto Dimming mode, the REV or FWD LED lights to indicate the dimming mode is in use.
- REV: Lights to indicate that the dimmer is in Reverse Phase Dimming mode.
- FWD: Lights to indicate that the dimmer is in Forward Phase Dimming mode.
- CENTER: Lights to indicate that the dimmer is in Center Phase Dimming mode.
- FILTER: Lights to indicate that the zero-cross filter is applying filtering to sync the AC line power.
- BASIC: Lights to indicate that the zero-cross filter is performing basic filtering.

The LEDs on the ZUMLINK-DIN-DIMU operate as follows:

- TEST: Lights when the connected loads are on.
- LINK: Lights to indicate that it is joined to a Zūm space. Flashes when the universal dimmer load controller receives a message.
- ERROR: Flashes to indicate an error in the line or load. Refer to Error States on page 262.
- AUTO: Lights to indicate that the dimmer is in Auto Dimming mode. When operating in Auto Dimming mode, the REV or FWD LED lights to indicate the dimming mode is in use.
- REV: Lights to indicate that the dimmer is in Reverse Phase Dimming mode.
- FWD: Lights to indicate that the dimmer is in Forward Phase Dimming mode.
- CENTER: Lights to indicate that the dimmer is in Center Phase Dimming mode.

The LEDs on the ZUMMESH-EXP-16A-DIMU operate as follows:

- TEST: Lights when the **TEST** button is pressed. Lights when the connected loads are on.
- SETUP: Lights when the **SETUP** button is pressed.
- NET: Lights to indicate that it is joined to a Zūm space. Flashes when the ZUMMESH-EXP-16A-DIMU receives a message.
- ERROR: Flashes to indicate an error in the line or load. Refer to Error States on page 262.
- AUTO: Lights to indicate that the dimmer is in Auto Dimming mode. When operating in Auto Dimming mode, the REV or FWD LED lights to indicate the dimming mode is in use.
- REV: Lights to indicate that the dimmer is in Reverse Phase Dimming mode.
- FWD: Lights to indicate that the dimmer is in Forward Phase Dimming mode.
- CENTER: Lights to indicate that the dimmer is in Center Phase Dimming mode.
- FILTER: Lights to indicate that the zero-cross filter is applying filtering to sync the AC line power.
- BASIC: Lights to indicate that the zero-cross filter is performing basic filtering.

Error States

The following table provides corrective action error states that are indicated by the ERROR LED. If further assistance is required, please contact a Crestron True Blue Technical Support representative.

LED Flash Pattern	Issue	Action
1-1	The secondary processor is in bootloader.	Power cycle the unit.
1-2	The secondary processor is unresponsive.	Power cycle the unit.
1-3	The secondary processor firmware update failed.	Power cycle the unit.
2-1	There is an overcurrent error.	ZUMLINK-EXP-16A-DIMU and ZUMLINK-DIN-DIMU: Check the output for a short circuit or overload. Verify that the device is not dimming incandescent or electronic drivers in Forward Phase or Center Phase Dimming mode. ZUMMESH-EXP-16A-DIMU: Check the output for a short circuit or overload. Verify that the device is not dimming incandescent or electronic drivers in Forward Phase Dimming mode.
2-2	A FET is shorted.	Contact Crestron's True Blue Technical Support.
2-3	An overtemperature error exists.	Check the output for overload. Ensure that the device is receiving adequate air for cooling.
2-4	An overvoltage error exists.	Verify that the device is not dimming magnetic transformer loads in Reverse Phase Dimming mode.
2-5	An overload error exists	ZUMLINK-DIN-DIMU only Verify that the lighting load is within the specifications of the ZUMLINK-DIN-DIMU.
3-1	A zero-cross sync error exists.	ZUMLINK-EXP-16A-DIMU and ZUMMESH-EXP-16A-DIMU: Change the Zero-cross mode from Basic mode to Filter mode. ZUMLINK-DIN-DIMU: Contact Crestron's True Blue Technical Support.
3-2	No AC Power.	Verify that the incoming AC voltage is within spec.

Zero-Cross Filter (ZUMLINK-EXP-16A-DIMU and ZUMMESH-EXP-16A-DIMU)

An unusual line condition, indicated by a 3-1 flash pattern from the ERROR LED, can be corrected by changing the Zero-cross mode from Basic mode (default) to Filter mode. Consult with Crestron's True Blue Technical Support before changing the Zero-cross mode. To change the Zero-cross mode:

1. Remove the cover. For the ZUMLINK-EXP-16A-DIMU, refer to Wiring the Universal Dimmer Load Controller on page 179. For ZUMMESH-EXP-16A-DIMU, refer to Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241.
2. Press the **ZERO CROSS** (ZUMLINK-EXP-16A-DIMU) or **ZEROCROSS FILTER** (ZUMMESH-EXP-16A-DIMU) button. The BASIC or FILTER LED lights.
    - BASIC LED: Indicates that basic filtering is being performed.
    - FILTER LED: Indicates that the universal load controller is using filters to sync the AC line power.

More Information

To configure the device using the Zūm app, refer to Load Controllers Zūm App Configuration on page 291.

Refer to Zūm Mesh Wireless Network Setup on page 558 for more wireless setup.

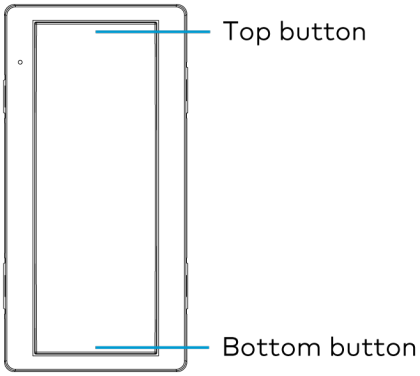
Zūm Wired Keypad Operation

The ZUMLINK-KP-R controls most of the connected load controllers in a space.

> **NOTE:** The ZUMLINK-KP-R will not control a ZUMLINK-JBOX-20A-PLUG.

ZUMLINK-KP Functionality When Connected to Load Controllers

Load Controller	Top Button Tap	Top Button Hold	Bottom Button Tap	Bottom Button Hold
ZUMNET-JBOX-16A-LV and ZUMLINK-JBOX-16A-LV	Recalls Scene 1	Raise all loads	Recalls Off	Lower all loads
ZUMLINK-JBOX-20A-SW	Recalls On	N/A	Recalls Off	N/A
ZUMLINK-JBOX-20A-PLUG	N/A	N/A	N/A	N/A



The ZUMLINK-KP-R can be used with any ZUMLINK-BTN button tree for up to 8 programmable buttons. Use the Zūm app to change a button's default functionality. Each of the buttons can be programmed with the following functions:

- None
- Off: Assigned loads controllers turn off.
- On: Assigned loads turn on
- Raise: Assigned load controllers raise.
- Lower: Assigned load controllers lower.
- Recall Scene 1 - Scene 16: Assigned load controllers recall the behavior set for the specified scene.

More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Presence Detectors Operation

Nonsystem (such as the GLA-IR-QUATTRO-HD-COM1-24 or GLS-ODT-C-NS) and system sensors (such as the ZUMLINK-IR-QUATTRO-DLS) will trigger and control the connected load controller. Non-system sensors connect to the load controller via the I/O ports, while system sensors connect to the load controller via a CBL-CAT5E-ZUMLINK-P cable.

For presence detectors with a relay (such as the ZUMLINK-IR-QUATTRO-DLS-RLY), the default function is set to None. Use the Zūm app to change the functionality to follow occupancy logic or button presses.

Presence Detector Functionality When Connected to Load Controllers

Load Controller	Occupancy Detected	Vacancy Detected
ZUMNET-JBOX-16A-LV and ZUMLINK-JBOX-16A-LV	Recalls Scene 1 (all on)	Recalls Scene 16 (all off)
ZUMLINK-JBOX-20A-SW	On	Recalls Scene 16 (all off)
ZUMLINK-JBOX-20A-PLUG	On	Off after grace period delay

Refer to Zūm App Configuration on page 284for configuring the device.

To adjust the presence detector sensitivity, refer to Sensor Test Mode on page 337.

More Information

For more Zūm wired information, refer to the following topics:

- Installation
  - Zūm Wired Load Controller Installation on page 166
  - Zūm Wired DIN Rail Installation on page 152
  - Zūm Wired Universal Dimmer Load Controller Installation on page 177
  - Zūm Wired Keypad Installation on page 183
- Operation
  - Zūm Wired Load Controller Operation on page 255
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wired Keypad Operation on page 264
  - Presence Detectors Operation on page 266
- Setup
  - Zūm App Configuration on page 284

Operate Zūm Mesh Wireless Devices

The following sections provide operation procedures for Zūm Mesh Wireless devices.

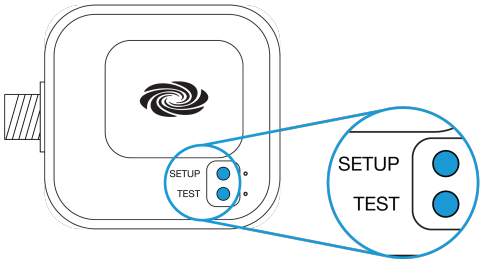
- Zūm Mesh Wireless Load Controller Operation
- Zūm Universal Dimmer Load Controller Operation
- Zūm Wireless Keypad Operation

Zūm Mesh Wireless Load Controller Operation

Follow the sections below to operate the Zūm wireless junction box and wall box load controllers. For universal load controllers, refer to Zūm Universal Dimmer Load Controller Operation on page 271.

Zūm Wireless Junction Box Load Controllers

- ZUMMESH-JBOX-5A-LV
- ZUMMESH-JBOX-16A-LV
- ZUMMESH-JBOX-16A-LV-EM
- ZUMMESH-JBOX-20A-SW
- ZUMMESH-JBOX-20A-PLUG



To operate standard J-box load controllers, refer to Zūm Mesh Wireless Network Setup on page 558.

ZUMMESH-JBOX-16A-LV-EM Emergency Lighting

The ZUMMESH-JBOX-16A-LV-EM provides emergency load control to meet UL® 924 standards. Refer to Installation to install the device.

The device operates as a standard J-box load controller in normal conditions, where it can bind to keypads, make scene modifications, follow sensor control states, and perform any other actions that ZUMMESH-JBOX controllers can. When power to the lighting system is lost, the device enters Emergency Mode.

In Emergency mode, the device operates with the following behavior:

- All loads in the zone fully illuminate.
- Attached loads remain fully illuminated for 90 minutes or until normal power is restored to a non-emergency AC-powered device, whichever comes first.
- Keypads and any other user controls are disabled.
- Daylight sensors, occupancy sensors, and vacancy sensors are disabled.
- The **TEST** button toggles the connected load On and Off.

The device will exit Emergency mode and return to normal operation when normal power is restored. Communications with nonemergency devices continue when normal power is restored.

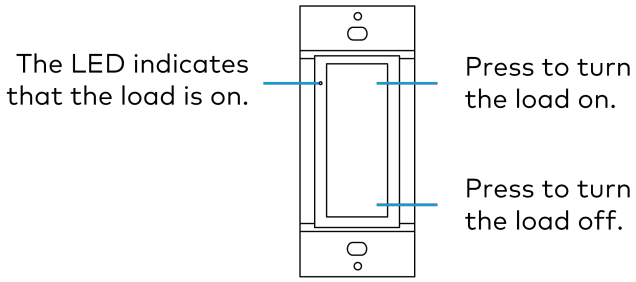
Test the Loads

To verify system wiring, test the loads. Pres the **TEST** button to turn the connected loads on and off. Press and hold the **TEST** button to cycle the connected dimmers.

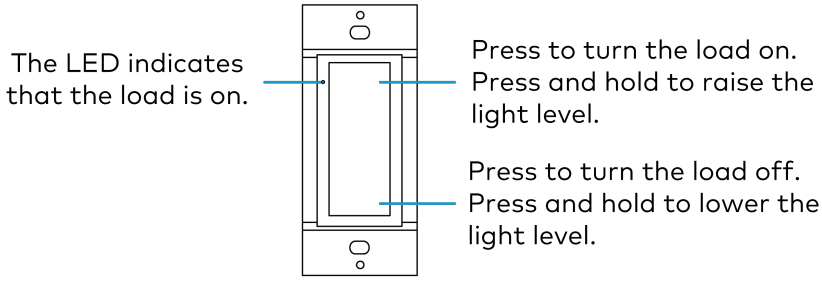
Zūm Wireless Wall Box Load Controllers

- ZUMMESH-5A-SW
- ZUMMESH-5A-LV
- ZUMMESH-DIM
- ZUMMESH-DELV

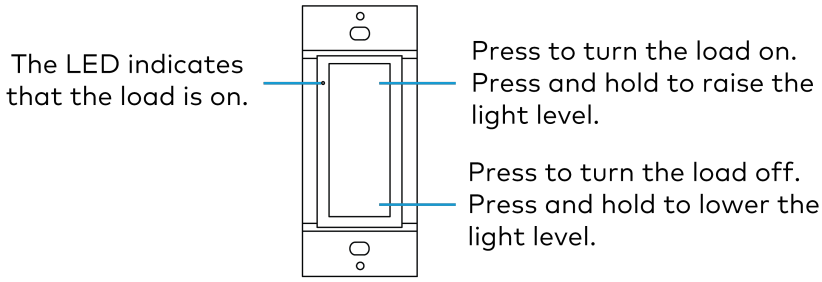
ZUMMESH-5A-SW Functions

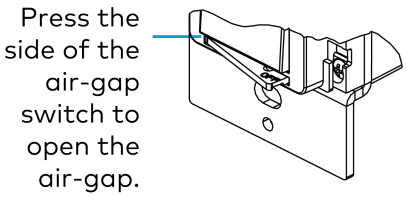


ZUMMESH-5A-LV Functions



ZUMMESH-DIM and ZUMMESH-DELV Functions





Test the Loads

To verify system wiring, test the loads. Pres the **TEST** button to turn the connected loads on and off. Press and hold the **TEST** button to cycle the connected dimmers.

More Information

For more Zūm wireless information, refer to the following topics:

- Installation
  - Zūm Mesh Wireless Load Controller Installation on page 231
  - Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241
  - Zūm Mesh Wireless Keypad Installation on page 245
- Operation
  - Zūm Mesh Wireless Load Controller Operation on page 268
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wireless Keypad Operation on page 276
- Setup
  - Zūm Mesh Wireless Network Setup on page 558
  - Zūm App Configuration on page 284

Zūm Universal Dimmer Load Controller Operation

Follow the sections below to operate the wireless and wired surface mount and DIN rail universal dimmer load controllers and configure the devices.

For operating Zūm wireless junction box and wall box load controllers, refer to Zūm Mesh Wireless Load Controller Operation on page 268. For operating Zūm wired load controllers, refer to Zūm Wired Load Controller Operation on page 255.

Set the Dimming Mode

The universal dimmer load controller uses Auto Dimming mode to determine the attached load type and applies Forward Phase (leading edge) or Reverse Phase (trailing edge) Dimming mode based on the autodetected load type.

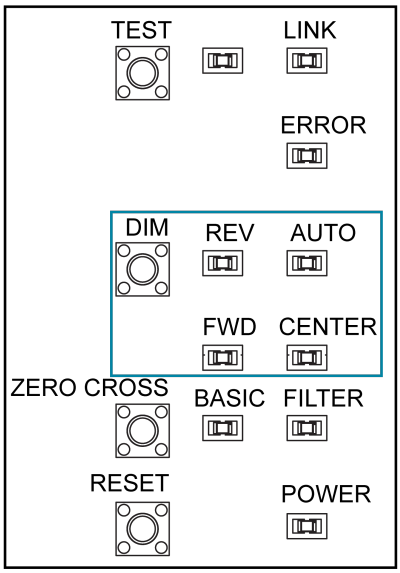
WARNINGS:

- Auto Dimming mode should not be disabled unless suggested by a Crestron True Blue Technical Support representative. Incorrectly setting these switches to force the wrong mode can cause damage to the dimmer and lighting fixture or create a hazardous condition.
- Only use Center Dimming mode if instructed by a Crestron True Blue Technical Support representative.
  Most lighting fixtures do not support Center Phase Dimming. Exposing such fixtures to this mode can damage or degrade their lifetime. The dimmer load rating must be derated when used in Center Phase Dimming.

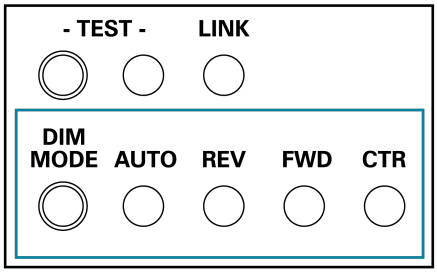
If necessary, set the universal dimmer load controller to operate in Forward Phase, Reverse Phase, or Center Phase Dimming mode.

1. ZUMLINK-EXP-16A-DIMU and ZUMMESH-EXP-16A-DIMU only: Remove the cover as shown in Wiring the Universal Dimmer Load Controller on page 179.
2. Press the **DIM MODE** button until the desired dimming mode is indicated by the REV, AUTO, FWD, or CENTER LED.

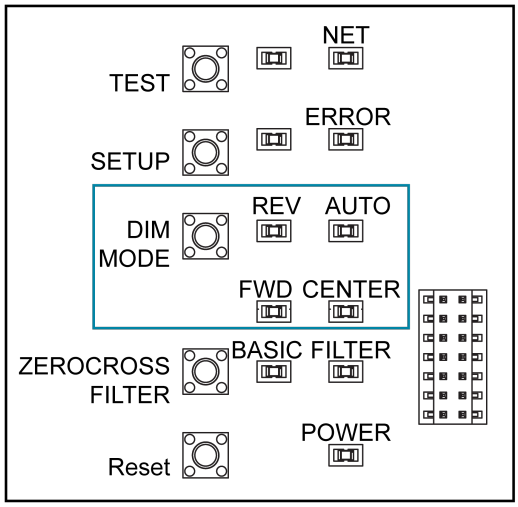
ZUMLINK-EXP-16A-DIMU



ZUMLINK-DIN-DIMU



ZUMMESH-EXP-16A-DIMU



Test the Loads

To verify system wiring, the loads can be tested before setting up the Zūm space. Press the **TEST** button to toggle the connected loads on and off. Press and hold the **TEST** button to cycle dim the connected loads.

Factory Reset

A factory reset should be performed when the ZUMLINK-EXP-16A-DIMU is removed from the network or to remove the configuration settings from the device. The ZUMLINK-EXP-16A-DIMU must also be factory reset if it is being moved to a different system.

> **NOTE:** New-in-box devices do not need to be factory reset before joining a system.

To factory reset the ZUMLINK-EXP-16A-DIMU, press and hold the **TEST** button until the TEST LED lights (about 10 seconds), and then release the button. The TEST LED and the connected load output turn on to indicate that the factory reset procedure is complete.

To factory reset the ZUMLINK-DIN-DIMU, refer to Perform a Factory Reset on a Load Controller on page 256.

To factory reset the ZUMMESH-EXP-16A-DIMU, press and hold the **SETUP** and **TEST** buttons until the SETUP LED lights (about 10 seconds), and then release both buttons. The TEST LED and the connected load output turn on to indicate that the factory reset procedure is complete.

Universal Dimmer LEDs

The LEDs on the ZUMLINK-EXP-16A-DIMU operate as follows:

- TEST: Lights when the connected loads are on.
- LINK: Lights to indicate that it is joined to a Zūm space. Flashes when the universal dimmer load controller receives a message.
- ERROR: Flashes to indicate an error in the line or load. Refer to Error States on page 274.
- AUTO: Lights to indicate that the dimmer is in Auto Dimming mode. When operating in Auto Dimming mode, the REV or FWD LED lights to indicate the dimming mode is in use.
- REV: Lights to indicate that the dimmer is in Reverse Phase Dimming mode.
- FWD: Lights to indicate that the dimmer is in Forward Phase Dimming mode.
- CENTER: Lights to indicate that the dimmer is in Center Phase Dimming mode.
- FILTER: Lights to indicate that the zero-cross filter is applying filtering to sync the AC line power.
- BASIC: Lights to indicate that the zero-cross filter is performing basic filtering.

The LEDs on the ZUMLINK-DIN-DIMU operate as follows:

- TEST: Lights when the connected loads are on.
- LINK: Lights to indicate that it is joined to a Zūm space. Flashes when the universal dimmer load controller receives a message.
- ERROR: Flashes to indicate an error in the line or load. Refer to Error States on page 274.
- AUTO: Lights to indicate that the dimmer is in Auto Dimming mode. When operating in Auto Dimming mode, the REV or FWD LED lights to indicate the dimming mode is in use.
- REV: Lights to indicate that the dimmer is in Reverse Phase Dimming mode.
- FWD: Lights to indicate that the dimmer is in Forward Phase Dimming mode.
- CENTER: Lights to indicate that the dimmer is in Center Phase Dimming mode.

The LEDs on the ZUMMESH-EXP-16A-DIMU operate as follows:

- TEST: Lights when the **TEST** button is pressed. Lights when the connected loads are on.
- SETUP: Lights when the **SETUP** button is pressed.
- NET: Lights to indicate that it is joined to a Zūm space. Flashes when the ZUMMESH-EXP-16A-DIMU receives a message.
- ERROR: Flashes to indicate an error in the line or load. Refer to Error States on page 274.
- AUTO: Lights to indicate that the dimmer is in Auto Dimming mode. When operating in Auto Dimming mode, the REV or FWD LED lights to indicate the dimming mode is in use.
- REV: Lights to indicate that the dimmer is in Reverse Phase Dimming mode.
- FWD: Lights to indicate that the dimmer is in Forward Phase Dimming mode.
- CENTER: Lights to indicate that the dimmer is in Center Phase Dimming mode.
- FILTER: Lights to indicate that the zero-cross filter is applying filtering to sync the AC line power.
- BASIC: Lights to indicate that the zero-cross filter is performing basic filtering.

Error States

The following table provides corrective action error states that are indicated by the ERROR LED. If further assistance is required, please contact a Crestron True Blue Technical Support representative.

LED Flash Pattern	Issue	Action
1-1	The secondary processor is in bootloader.	Power cycle the unit.
1-2	The secondary processor is unresponsive.	Power cycle the unit.
1-3	The secondary processor firmware update failed.	Power cycle the unit.
2-1	There is an overcurrent error.	ZUMLINK-EXP-16A-DIMU and ZUMLINK-DIN-DIMU: Check the output for a short circuit or overload. Verify that the device is not dimming incandescent or electronic drivers in Forward Phase or Center Phase Dimming mode. ZUMMESH-EXP-16A-DIMU: Check the output for a short circuit or overload. Verify that the device is not dimming incandescent or electronic drivers in Forward Phase Dimming mode.
2-2	A FET is shorted.	Contact Crestron's True Blue Technical Support.
2-3	An overtemperature error exists.	Check the output for overload. Ensure that the device is receiving adequate air for cooling.
2-4	An overvoltage error exists.	Verify that the device is not dimming magnetic transformer loads in Reverse Phase Dimming mode.
2-5	An overload error exists	ZUMLINK-DIN-DIMU only Verify that the lighting load is within the specifications of the ZUMLINK-DIN-DIMU.
3-1	A zero-cross sync error exists.	ZUMLINK-EXP-16A-DIMU and ZUMMESH-EXP-16A-DIMU: Change the Zero-cross mode from Basic mode to Filter mode. ZUMLINK-DIN-DIMU: Contact Crestron's True Blue Technical Support.
3-2	No AC Power.	Verify that the incoming AC voltage is within spec.

Zero-Cross Filter (ZUMLINK-EXP-16A-DIMU and ZUMMESH-EXP-16A-DIMU)

An unusual line condition, indicated by a 3-1 flash pattern from the ERROR LED, can be corrected by changing the Zero-cross mode from Basic mode (default) to Filter mode. Consult with Crestron's True Blue Technical Support before changing the Zero-cross mode. To change the Zero-cross mode:

1. Remove the cover. For the ZUMLINK-EXP-16A-DIMU, refer to Wiring the Universal Dimmer Load Controller on page 179. For ZUMMESH-EXP-16A-DIMU, refer to Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241.
2. Press the **ZERO CROSS** (ZUMLINK-EXP-16A-DIMU) or **ZEROCROSS FILTER** (ZUMMESH-EXP-16A-DIMU) button. The BASIC or FILTER LED lights.
    - BASIC LED: Indicates that basic filtering is being performed.
    - FILTER LED: Indicates that the universal load controller is using filters to sync the AC line power.

More Information

To configure the device using the Zūm app, refer to Load Controllers Zūm App Configuration on page 291.

Refer to Zūm Mesh Wireless Network Setup on page 558 for more wireless setup.

Zūm Wireless Keypad Operation

Button functions the Zūm Mesh keypads (ZUMMESH-KP) and Zūm Mesh battery-powered keypads (ZUMMESH-KPBATT) are described below.

- Zūm Mesh Keypads on page 276
- Zūm Mesh Wireless Battery-Powered Keypads on page 278

Zūm Mesh Keypads

The ZUMMESH-KP layouts and button functions are described below.

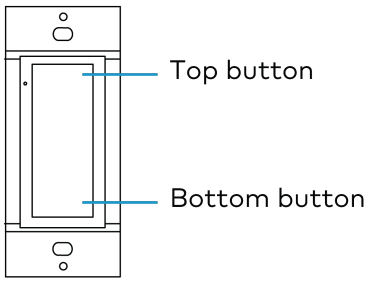
ZUMMESH-KPA

Top Button

- Press: Sets lights to 90% (Scene 1)
- Press and hold: Raises lights

Bottom Button

- Press: Turns lights off
- Press and hold: Lowers lights



ZUMMESH-KPB

ON

- Press: Sets lights to 90% (Scene 1)
- Press and hold: Raises lights

SCENE 2

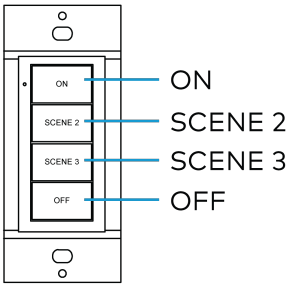
- Press: Sets lights to 50%
- Press and hold 5 seconds: Scene 2

SCENE 3

- Press: Sets lights to 90%
- Press and hold 5 seconds: Saves Scene 3

OFF

- Press: Turns lights off
- Press and hold: Lowers lights



Zūm Mesh Wireless Battery-Powered Keypads

The ZUMMESH-KPBATT's functionality is based upon its button layout. By default, they control all loads in the room. If linked to a dimmer, the ZUMMESH-KPBATT controls only its linked loads.

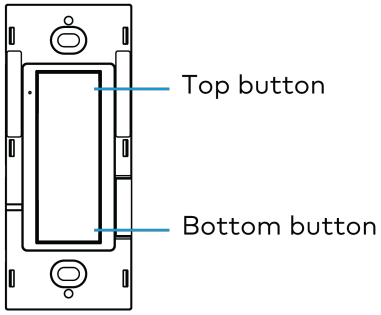
ZUMMESH-KP10ABATT

Top Button

- Press: Recalls Scene 1
- Press and hold: Raises lights

Bottom Button

- Press: Turns lights off
- Press and hold: Lowers lights



ZUMMESH-KP10BBATT

ON

- Press: Recalls Scene 1
- Press and hold: Raises lights

SCENE 2

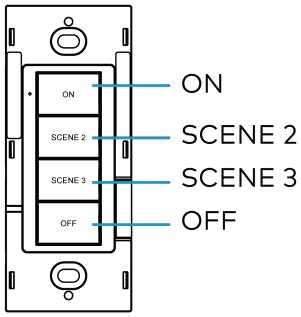
- Press: Recalls Scene 2
- Press and hold 5 seconds: Saves Scene 2

SCENE 3

- Press: Recalls Scene 3
- Press and hold 5 seconds: Saves Scene 3

OFF

- Press: Turns lights off
- Press and hold: Lowers lights



ZUMMESH-KP10CBATT

ON

- Press: Recalls Scene 1
- Press and hold: No action

SCENE 2

- Press: Recalls Scene 2
- Press and hold 5 seconds: Saves Scene 2

SCENE 3

- Press: Recalls Scene 3
- Press and hold 5 seconds: Saves Scene 3

OFF

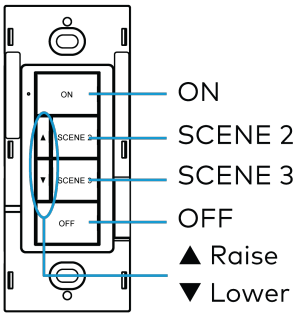
- Press: Turns lights off

▲

- Hold: Raises lights

▼

- Hold: Lowers lights



ZUMMESH-KP10DBATT

ON

- Press: Recalls Scene 1
- Press and hold: No action

SCENE 2

- Press: Recalls Scene 2
- Press and hold 5 seconds: Saves Scene 2

SENSOR DISABLE

- Press: Recalls Scene 3
- Press and hold 5 seconds: Saves Scene 3

OFF

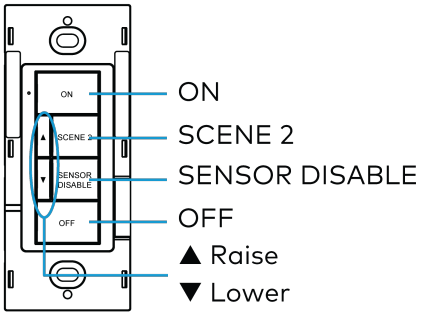
- Press: Turns lights off

▲

- Hold: Raises lights

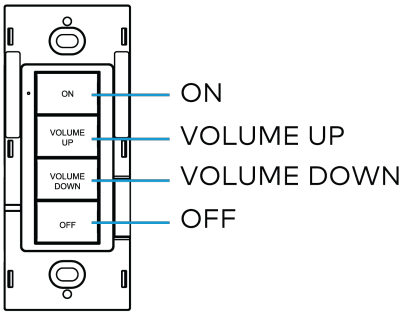
▼

- Hold: Lowers lights



ZUMMESH-KP10AMBATT

The ZUMMESH-KP10AMBATT has **ON**, **VOLUME UP**, **VOLUME DOWN**, and **OFF** buttons that control the display.



More Information

For more Zūm wireless information, refer to the following topics:

- Installation
  - Zūm Mesh Wireless Load Controller Installation on page 231
  - Zūm Mesh Wireless Universal Dimmer Load Controller Installation on page 241
  - Zūm Mesh Wireless Keypad Installation on page 245
- Operation
  - Zūm Mesh Wireless Load Controller Operation on page 268
  - Zūm Universal Dimmer Load Controller Operation on page 271
  - Zūm Wireless Keypad Operation on page 276
- Setup
  - Zūm Mesh Wireless Network Setup on page 558
  - Zūm App Configuration on page 284

Configuration

Before using a Zūm Wired device, ensure it is updated with the latest firmware. Check for the latest firmware at www.crestron.com/firmware. Load the firmware onto the device using Crestron Toolbox™ software, the ZUM-HUB4 web interface (refer to Version Management on page 423), or the Zūm app (refer to Update Firmware with the Zūm App on page 285).

Once all of the devices are installed in the space and using the latest firmware, use the Zūm app to modify default room behavior. Expedite commissioning by copying a room configuration and sending it to a room with identical devices. Save a room configuration template and share it via email, or other methods available on the device. A template can be deployed to any identical room via the Zūm app or the ZUM-HUB4.

> **NOTE:** The ZUMLINK-KP Bluetooth® connection is required to configure a Zūm wired space with the Zūm app.

This section provides the following information:

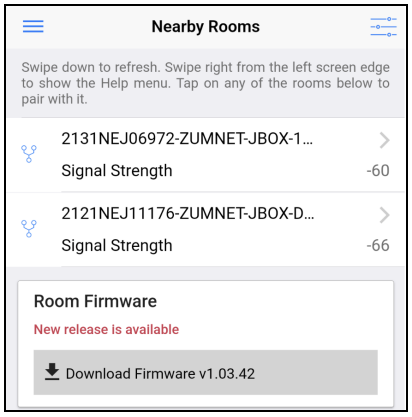
- Zūm App Configuration
- Hub Web Interface

Zūm App Configuration

Download the Zūm app from the Google Play™ online store or the Apple® App Store® online store.

To use the Zūm app:

1. Enable Bluetooth wireless connection on your device to communicate with the Zūm space.
2. Launch the Zūm app and grant the permissions the app requests. The Zūm app displays a list of available spaces.



3. If new firmware is detected, update the firmware. Refer to Update Firmware with the Zūm App on page 285.
4. Select the desired space.
5. When prompted, enter the PIN. The Zūm app main screen opens.

NOTES:

- For Primary load controllers running firmware 3.6.18 and higher, the default PIN is 246800. For firmware lower than 3.6.18, the default PIN is 2468.
- To change the PIN, navigate to the Room Settings. When changing the PIN, the previous PIN is required.
- The first failed log-in attempt locks the user out of the Zūm space. With subsequent failed attempts, the lockout duration increases up to 60 minutes.
- The lockout duration resets when the correct PIN is entered, the Primary load controller restarts, or when the PIN is changed from the Web-Interface.

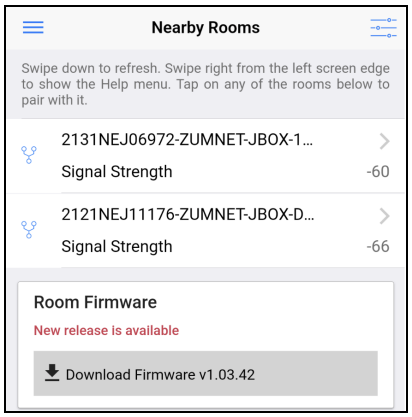
Update Firmware with the Zūm App

Follow the required work flow to update device firmware for a Zūm space. Each Zūm space must be updated separately.

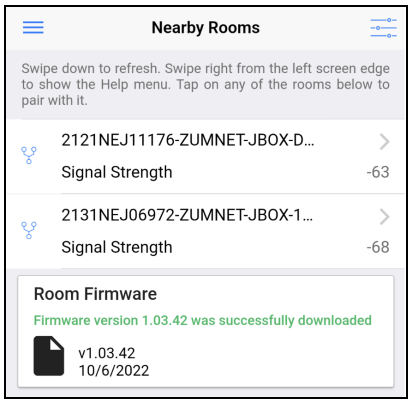
- Load the Latest Firmware to the App on page 285
- Update Firmware for a Zūm Space on page 286

Load the Latest Firmware to the App

If new firmware is detected when connecting to the Zūm app, the **Room Firmware** window appears on the **Nearby Rooms** screen.



Tap **Download Firmware** to load the firmware to the app. The **Room Firmware** window message changes when the firmware is successfully downloaded. The Zūm app is now ready to connect to the Zūm space and start updating outdated devices.



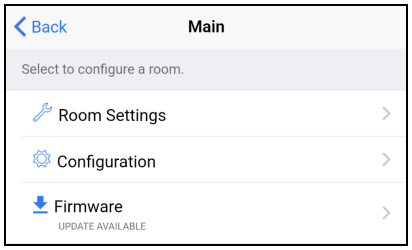
Update Firmware for a Zūm Space

CAUTION: Interrupting the firmware update can cause the update to fail. To avoid interrupting the firmware update, follow these best practices:

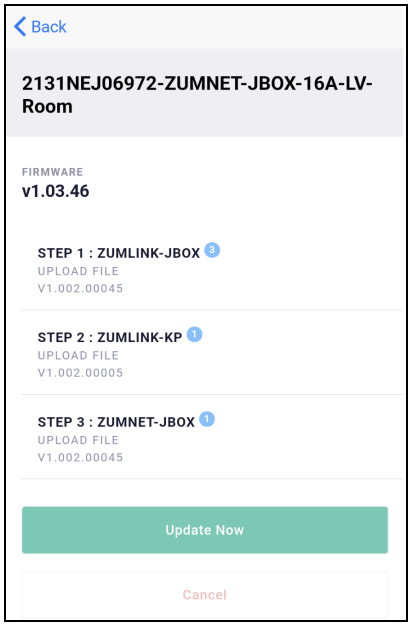
- Place the mobile device in Do Not Disturb Mode.
- Do not minimize or place the Zūm app in the background.
- Do not lock the mobile device.

To update device firmware in a Zūm space.

1. Choose the desired Zūm space to access the **Main** screen and tap **Firmware**.

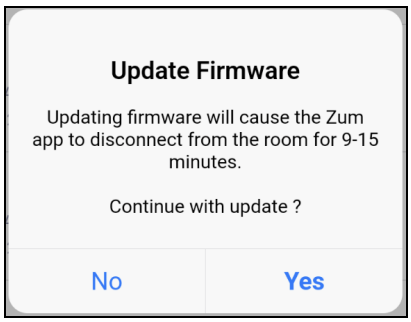


2. Tap **Update Now** to initiate the firmware update for STEP 1. Devices are grouped based on the device type.



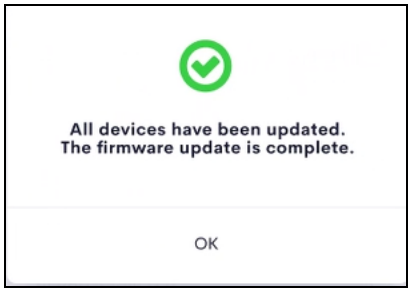
NOTE: The number next to the device type indicates the number of devices of that type that need to be updated in that Zūm space.

3. When the **Update Firmware** confirmation displays, select **Yes** to continue or **No** to cancel and return to **Firmware**. The confirmation also estimates the amount of time it will take to update the room based on the number of devices.



> **NOTE:** The Zūm space is inaccessible via Bluetooth until the firmware update process is complete.

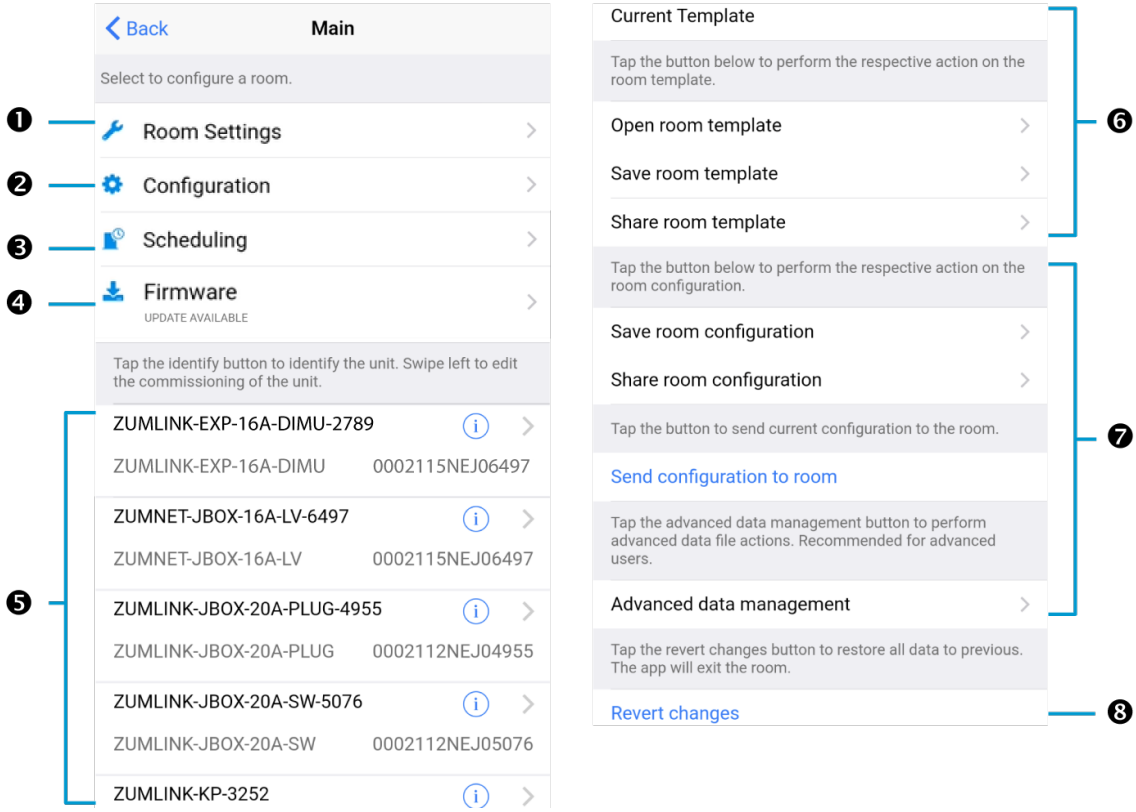
4. When all of the devices are updated in a Zūm space, a notification displays stating the update is complete. Click **OK**, and repeat the process for every Zūm space listed in **Nearby Rooms**.



5. If a device fails to update, a notification opens stating that some of the devices were not updated. Click **OK**.
   The notification closes and displays the **Nearby Rooms** screen. To restart the firmware update, select the room and repeat the procedure from step 1 until all of the devices have been successfully updated.

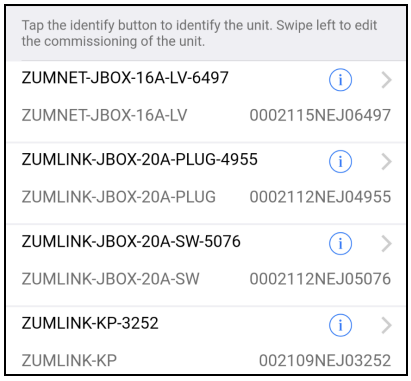
Zūm App Main Screen

From the **Nearby Rooms** screen, tap the desired room to open the **Main** screen. The following sections describe the actions available for each area of the **Main** screen.



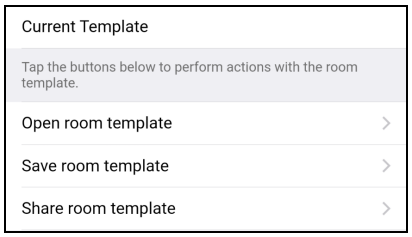
NOTE: The numbers below correspond with the numbers in the **Main** screen diagram.

1. **Room Settings:** Edit the Room Name, PIN, Floor ID, Zone ID, and Network information.
2. **Configuration:** Edit the room logic to view the current state of the room.
    - **Occupancy Sensors:** View details for the connected sensor(s) or edit the sensor name.
    - **Photo Sensors:** View details for the connected sensor(s) or edit the sensor name.
    - **Load Controllers:** Identify and view details for the connected load controller(s).
    - **Scenes:** View and edit room scenes: Scene 1 - Scene 16. When editing the scene, tap the Identify icon ⓘ to identify the load controller. The load controller emits a sound and flashes the Link LED. The connected loads also flash.
    - **Keypads:** Identify and view details for the connected keypad(s). Edit the keypad name and assign the button layout.
    - **Load Shedding:** Adjust the slider to set the maximum light levels. Load shedding can also be configured through Demand Response on the ZUML-HUB4 Web Interface. For more information, refer to Configure the Demand Response and Alarm Modes on page 396.
    - **Load/Sensor Groups:** Create groups within the room.
    - **DALI Controllers:** Address drivers, create DALI groups, assign drivers, and identify drivers.
    - **Current Scene:** Displays the current room scene.
    - **Occupancy Status:** Displays occupied or vacant. If any area of the room is occupied, then the status is Occupied. When all areas of the room are vacant, the status is Vacant.
3. **Scheduling:** Appears only when an Integration Module is discovered in the room. Configure date and time, schedules, events, and holidays. For more information, refer to Integration Module with Standalone Timeclock Zūm App Configuration on page 342.
4. **Firmware:** To update firmware, refer to Update Firmware with the Zūm App on page 285.
5. **List of devices:** Identify a device and edit the commissioning settings

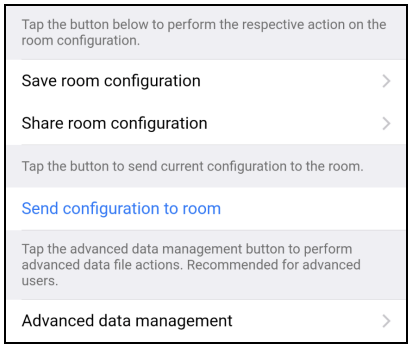


    - Tap the Identify icon ⓘ to identify a device. A load controller emits a sound and the Link LED flashes. The connected loads also flash. A keypad flashes its LED.
    - Tap the device to edit or review the device details: Edit Name. Review the Model, Serial Number, Status, and edit the device settings.

6. **Current Template Settings:** Choose Open room template, Save room template, or Share room template.

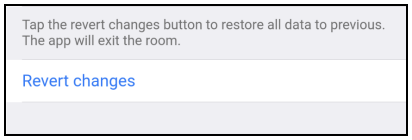


7. **Configuration Data:**
   - **Save room configuration:** Save the room configuration data in the space.
   - **Share room configuration:** Share the room configuration data in the space.
   - **Send configuration to room:** Send room logic changes made in the app to the room.
   - **Advanced data management:** Review the Map, Logic, and Settings of the data currently loaded. Load, save or share new Map, Logic, or Settings data.



> **NOTE:** Changes made in the app are not sent to the room until they are deployed using the Send configuration to room button.

8. **Revert changes:** Restore all non-deployed changes made since launching the app.



Load Controllers Zūm App Configuration

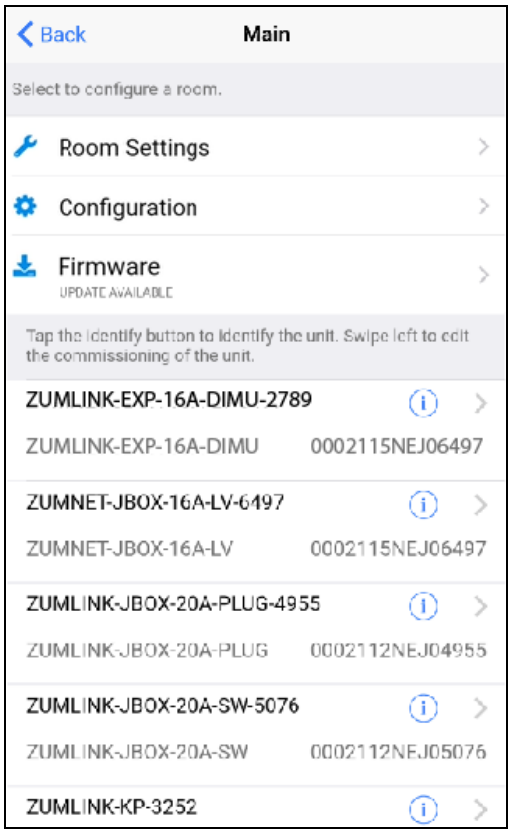
The following sections describe Zūm app configuration for the following load controllers:

- ZUMNET-JBOX-16A-LV
- ZUMNET-JBOX-DALI
- ZUMLINK-JBOX-16A-LV
- ZUMLINK-JBOX-20A-PLUG
- ZUMLINK-JBOX-20A-SW
- ZUMLINK-EXP-16A-DIMU
- ZUMNET-DIN-16A-LV
- ZUMNET-DIN-DLI
- ZUMLINK-DIN-16A-LV
- ZUMLINK-DIN-20A-PLUG
- ZUMLINK-DIN-20A-SW
- ZUMLINK-DIN-DIMU

For ZUMNET-JBOX-DALI and ZUMNET-DIN-DLI commissioning, refer to DALI Load Controller Zūm App Commissioning on page 315.

Navigating the Configuration Screens

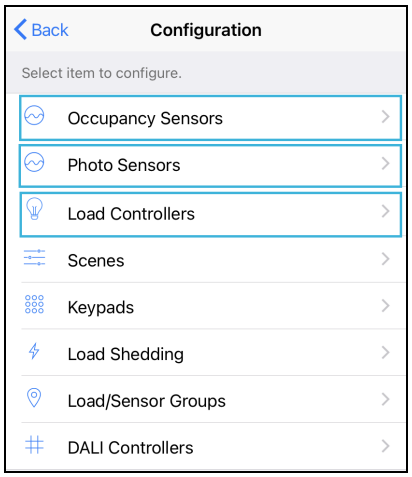
Load controllers have three components: the load controller, a photo sensor, and an occupancy sensor. Each component is configurable and there are two ways of accessing the configuration pages from the Main screen.



View Individual Components by Type

To view individual components by type:

1. Tap on **Configuration** (number 2 in the image above).
2. Tap the desired component category: **Load Controllers**, **Occupancy Sensors**, or **Photo Sensors**.



3. Tap the desired component to begin the configuration.

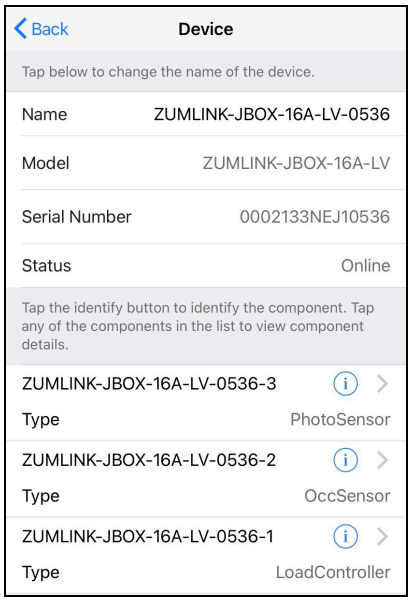
> **NOTE:** Tap the Identify icon ⓘ to identify a device. A load controller emits a sound and the Link LED flashes.

View a Load Controller and its Components

To view a load controller and its components:

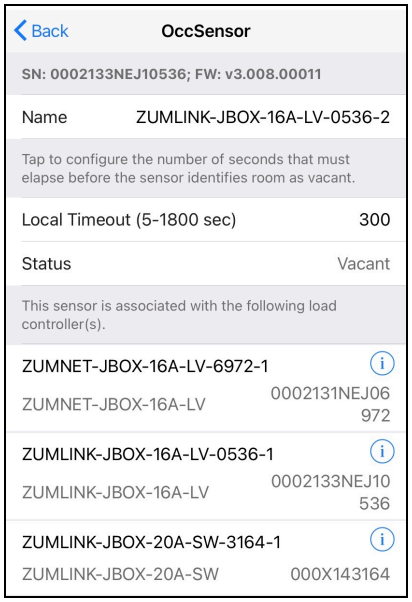
1. Tap on the load controller in the list of devices (number 4 in the image above) to view information about the load controller.
2. (Optional) Tap in the **Name** field to edit the load controller name.
3. Tap on the desired component to begin the configuration.

> **NOTE:** Tap the Identify icon ⓘ to identify a device. A load controller emits a sound and the Link LED flashes.



Occupancy Sensor Component

Navigate to the OccSensor component configuration page for the load controller.



- **Name:** Edit the name of the photo sensor component.

  > **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

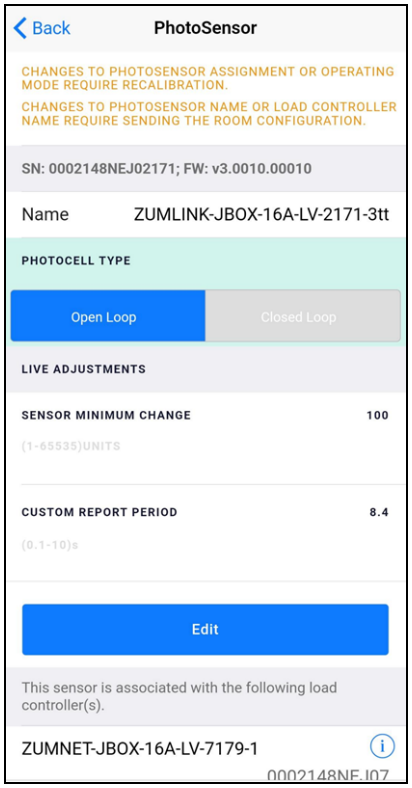
- **Local Timeout (5–1800 sec):** Set the duration of time the sensor must wait before designating a room as vacant.
- **Status:** States the room status as Vacant or Occupied.
- List of load controllers associated with the occupancy sensor component.

NOTE: Tap the Identify icon ⓘ to identify a device. A load controller emits a sound and the Link LED flashes.

Photo Sensor Component

Navigate to the PhotoSensor component configuration page for the following load controllers:

- ZUMNET-JBOX-16A-LV
- ZUMNET-JBOX-DALI
- ZUMLINK-JBOX-16A-LV
- ZUMLINK-JBOX-20A-PLUG
- ZUMLINK-JBOX-20A-SW
- ZUMNET-DIN-16A-LV
- ZUMNET-DIN-DLI
- ZUMLINK-DIN-16A-LV
- ZUMLINK-DIN-20A-PLUG
- ZUMLINK-DIN-20A-SW



- **Name:** Select the **Name** field to edit the name of the photo sensor component.

  NOTE: Valid characters: a–z A–Z 0–9 _ - () . and space

- **Photocell Type:** Choose **Closed Loop** or **Open Loop** mode.

  NOTES: Zūm Link presence detectors only have **Closed Loop** mode. Analog sensors connected to a load controller can function in **Closed Loop** or **Open Loop** mode.

  - Open-Loop mode senses natural light.
  - Closed-Loop mode senses natural and artificial light.

- **Live Adjustments:** Select **Edit** to make live adjustments to the **Sensor Minimum Change** or the **Custom Report Period**. If any changes are made, select **Apply** to save and return to the **PhotoSensor** page.
  - **Sensor Minimum Change (1–65535) UNITS:** The minimum amount of light level change detected by the photosensor before it sends data back to the load controller.

    NOTE: Sensor Minimum Change range for Closed-Loop mode is (10–100) Units.

  - **Custom Report Period (0.1–10) s:** Set how frequently photosensor light reading data is sent. This overrides any Closed-Loop or Open-Loop mode default settings.

  CAUTIONS:
  - Calibrate daylighting before making any live adjustments. For details, refer to Calibrate Daylighting Settings on page 296.
  - Make live adjustments during daylight hours.

- List of load controllers associated with the photo sensor component.

Calibrate Daylighting Settings

CAUTION: Calibrate daylighting during daylight hours.

The photocell component of a Zūm Link presence detector, Zūm Net load controller, Zūm Link load controller, Zūm Link universal dimmer load controller detects the amount of ambient light in the room. When a space is calibrated for Daylighting and Scene 1 is called, the photocell will detect the ambient light levels and dim the lights accordingly.

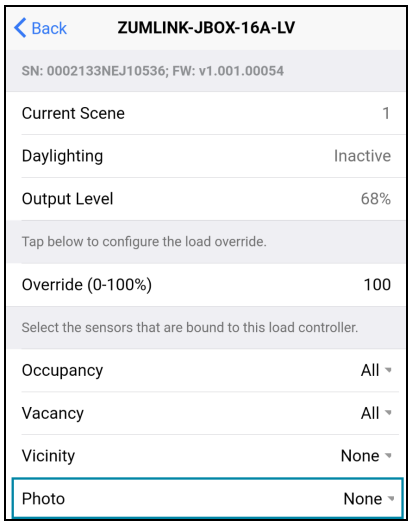
NOTE: Daylighting is not supported for the load controller components of the following devices: ZUMLINK-JBOX-20A-PLUG, ZUMLINK-JBOX-20A-SW, ZUMLINK-IR-QUATTRO-DLS-RLY, ZUMLINK-DT-QUATTRO-DLS-RLY, ZUMLINK-US-QUATTRO-DLS-RLY, ZUMLINK-IR-QUATTRO-HD-DLS-RLY, ZUMLINK-US-HALLWAY-DLS-RLY, and ZUMLINK-US-ONEWAY-DLS-RLY.

Calibrating Daylighting requires three main steps:

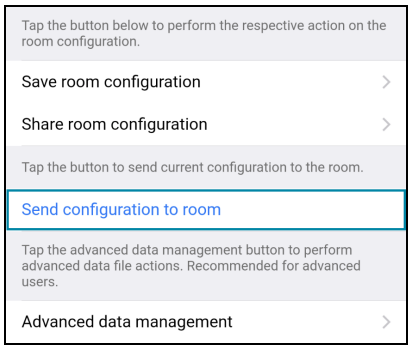
1. Assign the photocell component to the load controller.
2. Send the new configuration to the space.
3. Calibrate Daylighting.

To calibrate the daylight settings:

1. Assign the photocell component to the load controller that will participate in Daylighting.
   a. Navigate to the photocell component's configuration page.
   b. For Photo, select a photocell from the drop-down menu.

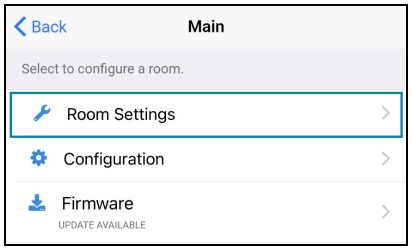


2. Send the configuration to the room.
   a. Navigate back to the Main screen.
   b. Select **Send configuration to room**.

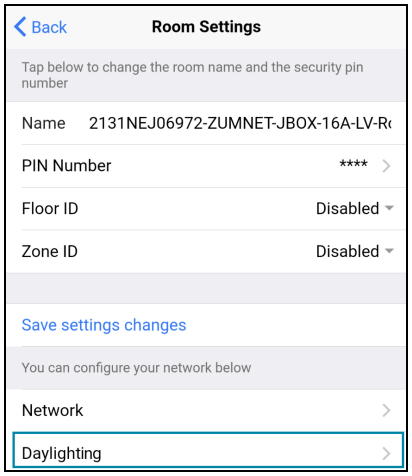


   A confirmation window opens stating that the app will disconnect from the room. Select **OK** to continue or **Cancel** to close without sending the configuration. The Retrieving Data Map screen displays.

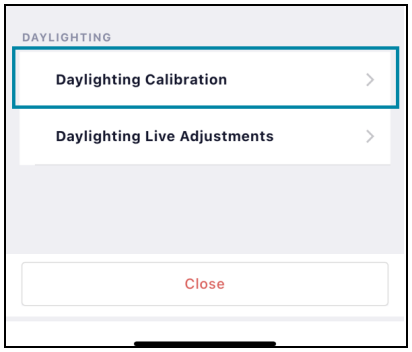
3. Calibrate Daylighting.
    a. Navigate back to the Main screen.
    b. Select **Room Settings**.



    c. Select **Daylighting**.



    d. Select **Daylighting Calibration**.
    During Daylighting calibration, the lights in the space will turn full on, turn off, and then back on with the Daylighting settings.

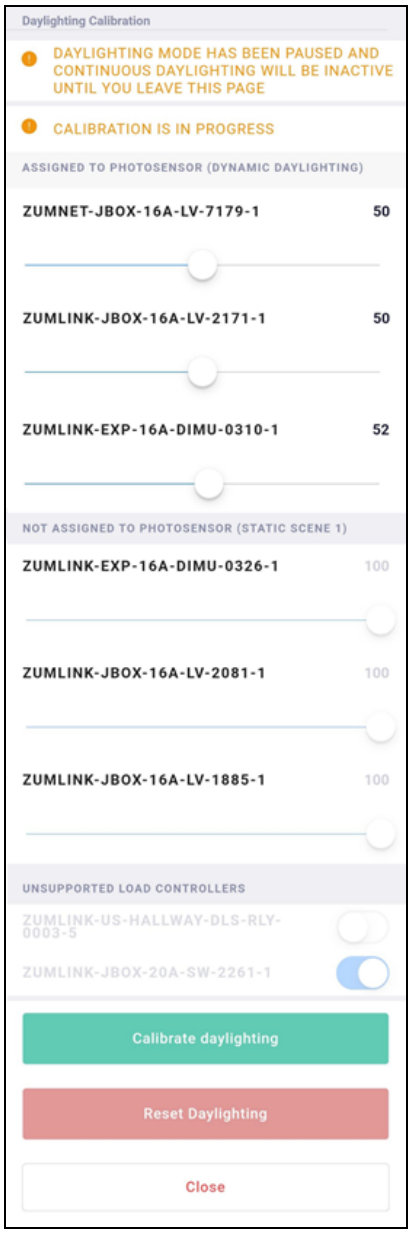


e. Use the slider to set the daylighting scene, and then select **Calibrate daylighting**.

When on the Daylighting Calibration screen, Daylighting mode is paused. When Daylighting calibration begins, a message appears at the top of the page that calibration is in progress. The message will go away when calibration ends.

The Daylighting Calibration page has three sections:

- **Assigned to Photosensor (Dynamic Daylighting):** List of load controller components with a photosensor assigned. Adjust the slider from 1–100% to modify the output level of the load and calibrate accordingly.
- **Not Assigned to Photosensor (Static Scene 1):** List of load controller components without a photosensor assigned and will not participate in daylighting. The output levels of load controllers cannot be modified in the Daylighting Calibration page. Output levels shown reflect the settings for Scene 1.
- **Unsupported Load Controllers:** List of load controller components that do not support daylighting, such as a ZUMLINK-JBOX-20A-PLUG, ZUMLINK-JBOX-20A-SW, or ZUMLINK-IR-QUATTRO-DLS-RLY.

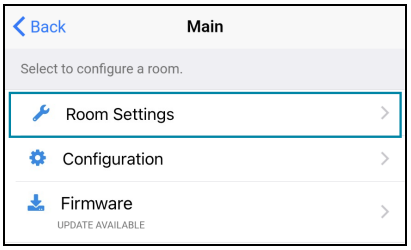


f. Select **Close** to exit **Daylighting Calibration**.

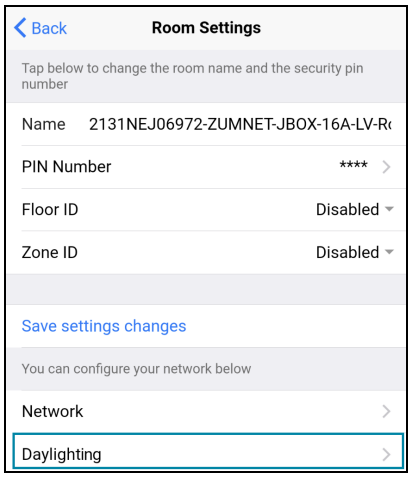
Reset Daylighting

To reset the daylighting configuration:

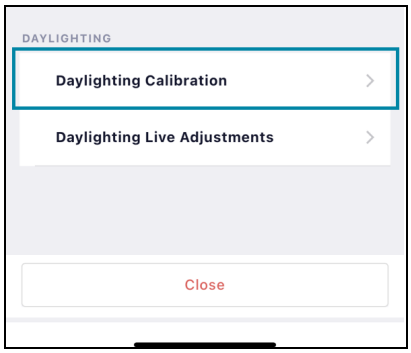
1. Select **Room Settings**.



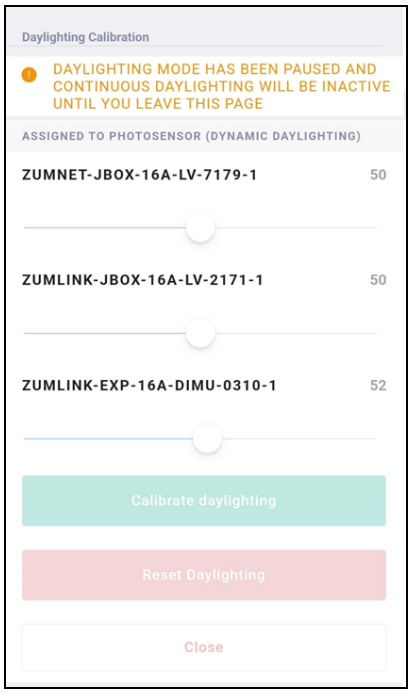
2. Select **Daylighting**.



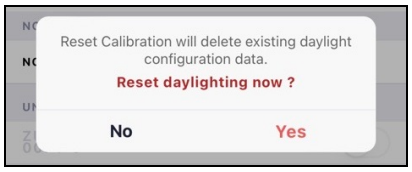
3. Select **Daylighting Calibration**.
   During Daylighting calibration, the lights in the space will turn full on, turn off, and then back on with the Daylighting settings.



4. Select **Reset Daylighting**.



5. Select **Yes** to confirm.



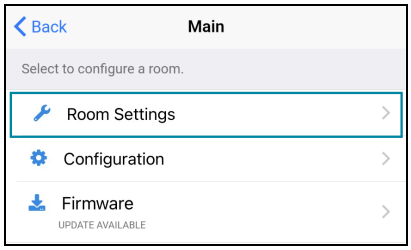
Make Live Adjustments to the Daylighting Scene

CAUTIONS:

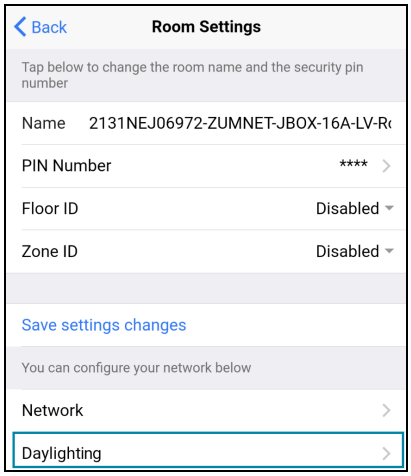
- Calibrate daylighting before making any live adjustments. For details, refer to Calibrate Daylighting Settings on page 296.
- Make live adjustments during daylight hours.

To make live adjustments to the daylight scene:

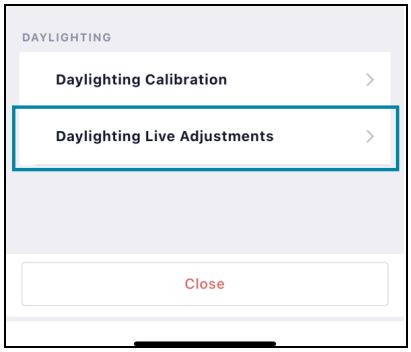
1. Select **Room Settings** on the Main screen.



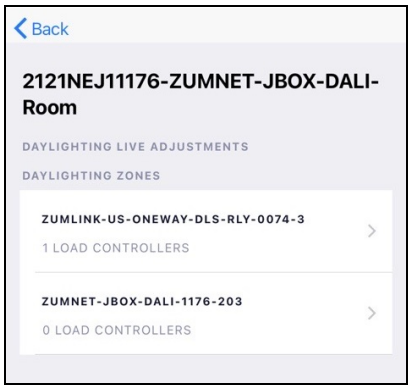
2. Select **Daylighting**.



3. Select **Daylighting Live Adjustments**.
   During Daylight calibration, the lights in the space will turn full on, turn off, and then back on with the Daylighting settings.



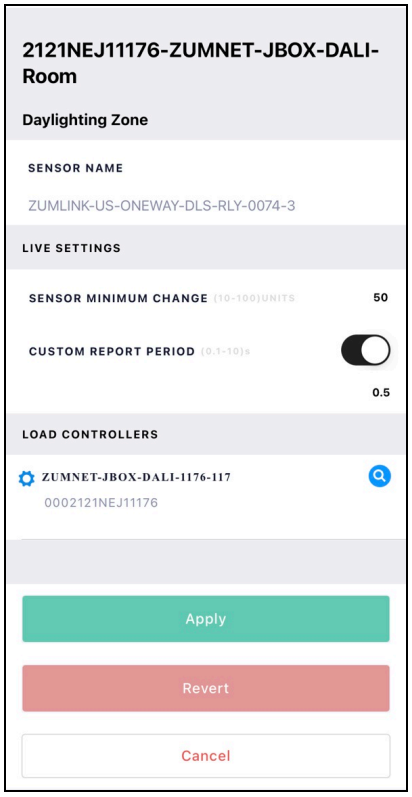
4. Select the desired component from the list to open the **Daylighting Zone** screen.



5. Make the following adjustments and select **Apply** to save changes. Once applied, the page closes and returns to the list of components.
   - **Sensor Minimum Change (10–100) UNITS:** The minimum amount of light level change detected by the photosensor before it sends data back to the load controller.

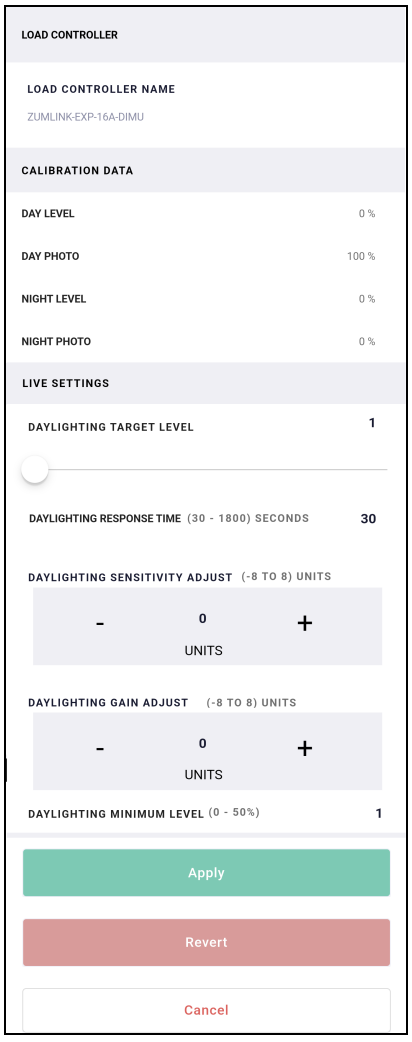
     > **NOTE:** Sensor Minimum Change range for Open-Loop mode is (1–65535) Units.

   - **Custom Report Period (0.1–10) s:** Tap to enable. Set how frequently photosensor light reading data is sent. This overrides any Closed-Loop or Open-Loop mode default settings.



6. Select the load controller listed to live edit the daylighting settings.

7. Make the following adjustments and click **Apply** to save changes. Once applied, the page closes and returns to the **Daylighting Zone** page.
    - **Daylighting Target Level:** The target and calibrated light level of the load that is configured to participate in the daylighting scene.
    - **Daylighting Response Time:** Time it takes for a load controller to ramp from 0 to 100% light level while configured for daylighting.
    - **Daylighting Sensitivity Adjust:** Selects how sensitive daylighting should be to reach the target setting. More sensitivity (positive number) will ramp up and down more aggressively to reach the target. Less sensitivity (negative number) will ramp more slowly.
    - **Daylighting Gain Adjust (Open-Loop mode only):** Allows more or less aggressive daylighting curve and overall response in the light level ramping.
    - **Daylighting Minimum Level:** The lowest light level the photosensor can ramp down to in Scene 1 and still participate in daylighting.



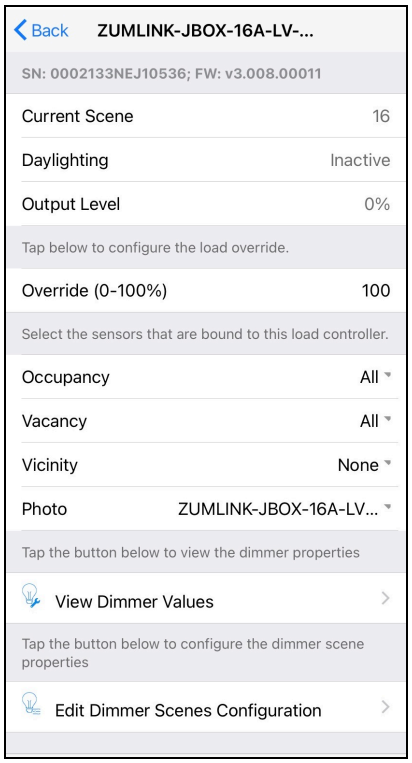
8. If adjustments were made to the load controller page, select **Apply** on the **Daylighting Zone** page. To revert changes to the previous settings, select **Revert**. To exit the page without making any changes, select **Cancel**.

Load Controller Component

Navigate to the load controller component configuration page.

ZUMNET-JBOX-16A-LV, ZUMNET-JBOX-DALI, ZUMLINK-JBOX-16A-LV, ZUMLINK-EXP-16A-DIMU ZUMNET-DIN-16A-LV, ZUMNET-DIN-DLI, ZUMLINK-DIN-16A-LV, and ZUMLINK-DIN-DIMU

To configure the load controller components:



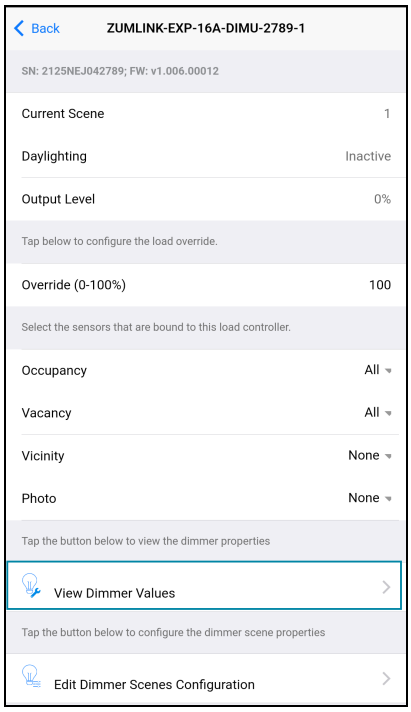
- **Current Scene:** States the current scene.
- **Daylighting:** States the Daylighting status.
- **Output Level:** States the light level detected.
- **Override (0–100%):** Set the light level for when override is initiated.
- **Occupancy:** Assign the occupancy mode to a chosen load controller.
- **Vacancy:** Assign the vacancy mode to a chosen load controller.
- **Vicinity:** Assign the vicinity mode to a chosen load controller.
- **Photo:** Assign the photo mode (daylight harvesting) to a chosen load controller.

- **View Dimmer Values:** Set the dimmer values.
  - **Dim Level:** States the dimming level set for day and night calibration.
  - **Sensor Reading:** States the sensor reading intensity for day and night calibration.
  - **Output Level:** Use the slider to adjust the Output level.
  - **Min Level (0–45%):** Set the minimum light level threshold a driver cannot pass.
  - **Max Level (55–100%):** Set the maximum light level threshold a driver cannot pass.
  - **Fade Rate (0.25–10.00 secs):** Set the amount of time it takes to raise the light level from 0% to 100% or dim the level from 100% to 0% when pressing the raise or lower buttons on a keypad.
  - **Fade Time (0.25–30.00 secs):** Set the amount of time to fade from the current light level to a recalled scene or discrete level.
  - **On Fade Time (0.25-30.00 secs):** Set the amount of time to fade from the current light level to the On scene.
  - **Off Fade Time (0.25–30.00 secs):** Set the amount of time to fade from the current light level to the Off scene.
- Edit Dimmer Scene Configurations. Tap on the value or move the sliders to configure levels for each scene. To exclude scenes from participating in the group, uncheck the box next to the scene.

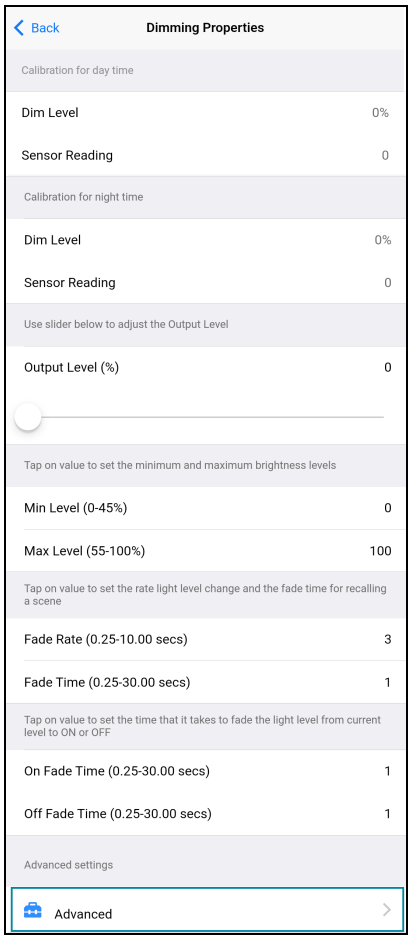
Universal Dimmer Load Controller Advanced Properties

Use the Advanced Properties to change the phase and zero-cross settings.

1. Navigate to **View Dimmer Values** and tap to open the Dimming Properties.



2. Select **Advanced** to open the Advanced Properties.



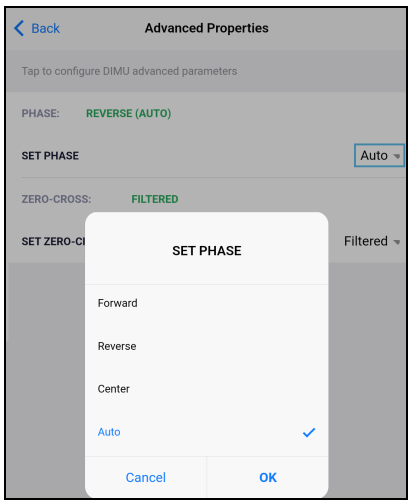
Set Phase

WARNINGS:

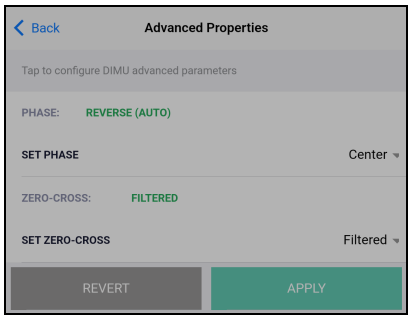
- Auto Dimming mode should not be disabled unless suggested by a Crestron True Blue Technical Support representative. Incorrectly setting these switches to force the wrong mode can cause damage to the dimmer and lighting fixture or create a hazardous condition.
- Only use Center Dimming mode if instructed by a Crestron True Blue Technical Support representative.
  Most lighting fixtures do not support Center Phase Dimming. Exposing such fixtures to this mode can damage or degrade their lifetime. The dimmer load rating must be derated when used in Center Phase Dimming.

By default, **Auto** is selected. To change the phase:

1. Select the **SET PHASE** menu to open the options: **Forward**, **Reverse**, **Center**, and **Auto**.

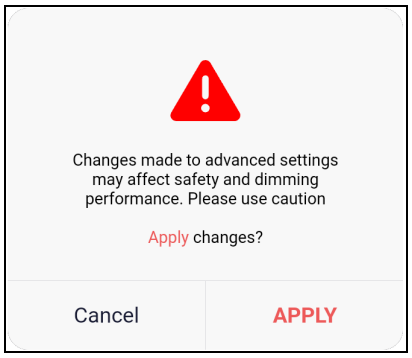


2. Select the desired option and select **OK**. The **REVERT** and **APPLY** options display.



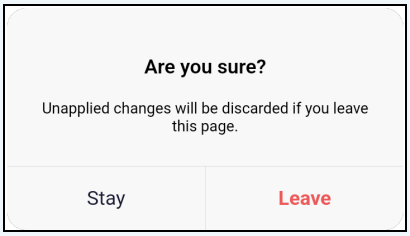
   a. Select **APPLY** to apply the change. The dimming performance warning displays requiring a confirmation to apply the change.

      Select **APPLY** to confirm and apply the change, or select **Cancel** to go back to the previous screen.



   b. Select **REVERT** to change the selection to the default or previously set phase.

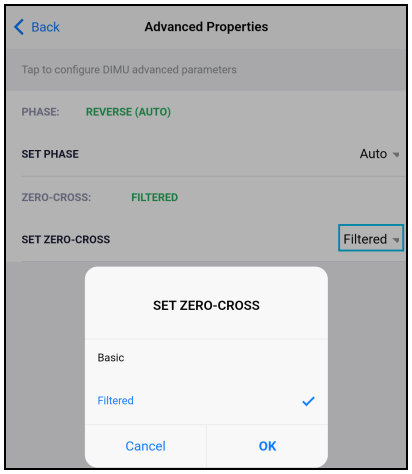
NOTE: If **Back** is selected while changing the Advanced Properties settings, the following warning displays. Select **Leave** to leave without applying a change or **Stay** to apply the change.



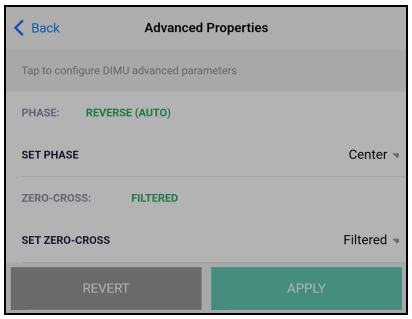
Set Zero-Cross

By default, **Filtered** is selected and is strongly recommended for best performance. To change the zero-cross.

1. Select the **SET ZERO-CROSS** menu to open the options: **Basic** and **Filtered**.

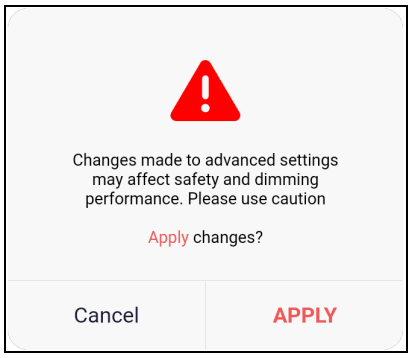


2. Select the desired option and select **OK**. The **REVERT** and **APPLY** options display.



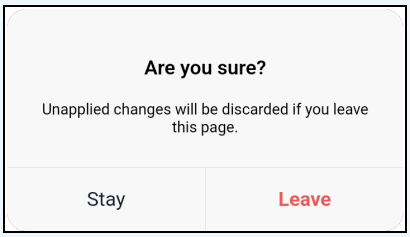
   a. Select **APPLY** to apply the change. The dimming performance warning displays requiring a confirmation to apply the change.

      Select **APPLY** to confirm and apply the change, or select **Cancel** to go back to the previous screen.



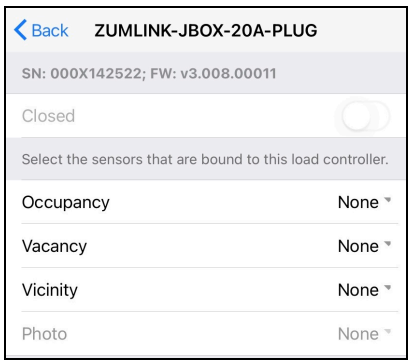
   b. Select **REVERT** to change the selection to the default or previously set option.

NOTE: If **Back** is selected while changing the Advanced Properties settings, the following warning displays. Select **Leave** to leave without applying a change or **Stay** to apply the change.



ZUMLINK-JBOX-20A-PLUG and ZUMLINK-DIN-20A-PLUG

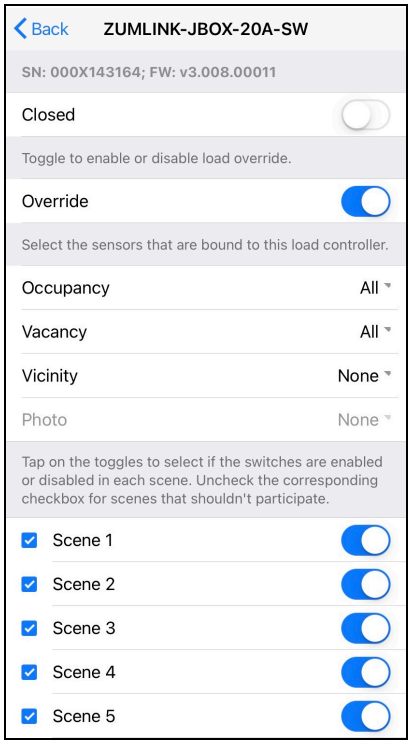
To configure the load controller component:



- **Occupancy:** Assign the occupancy mode to a chosen load controller.
- **Vacancy:** Assign the vacancy mode to a chosen load controller.
- **Vicinity:** Assign the vicinity mode to a chosen load controller.
- **Photo:** Assign the photo mode (daylight harvesting) to a chosen load controller.

ZUMLINK-JBOX-20A-SW and ZUMLINK-DIN-20A-SW

To configure the load controller component:



- **Closed:** Tap the toggle to turn the load on or off.
- **Override:** The state of the load when Override is recalled. Tap the toggle to turn the load on or off during Override.
- **Occupancy:** Assign the occupancy mode to a chosen load controller.

- **Vacancy:** Assign the vacancy mode to a chosen load controller.
- **Vicinity:** Assign the vicinity mode to a chosen load controller.
- **Photo:** Assign the photo mode (daylight harvesting) to a chosen load controller.
- **Scenes:** Allow keypad access to the scene by selecting or deselecting the checkbox. Determine the state of the load when the scene is recalled by clicking the toggle on or off.

DALI Load Controller Zūm App Commissioning

The following sections describe Zūm app commissioning for the ZUMNET-JBOX-DALI and ZUMNET-DIN-DLI load controller.

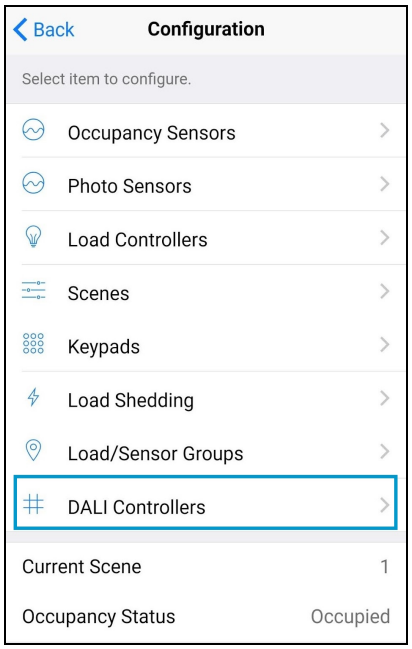
Follow the required work flow for DALI commissioning of a DALI load controller:

1. Confirm Operating mode (Operating Mode on page 316)
2. Address drivers (Addressing on page 318)
3. Create DALI groups (Add a Group on page 320)

   > **NOTE:** For DALI Groups mode only. Broadcast mode does not use Groups. Refer to Operating Mode on page 316 for more information.

4. Assign drivers (Assign Drivers to a Group on page 319)

To begin the commissioning process, tap **DALI Controllers** in **Configuration**.

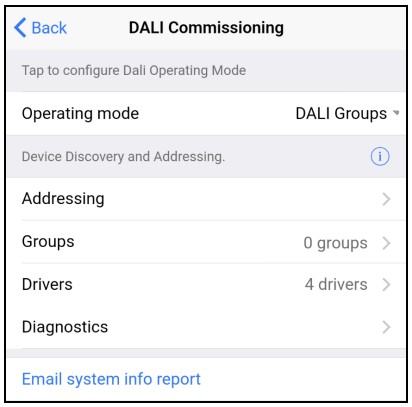


Tap the desired DALI controller to open the **DALI Commissioning** screen. The app may not respond until the system fully loads. The DALI Commissioning screen offers the following options:

- **Addressing:** Address all drivers and discover new drivers.
- **Groups:** Assign drivers to DALI groups and review DALI group assignments.

  > **NOTE:** For DALI Groups mode only. Broadcast mode does not use Groups. Refer to Operating Mode on page 316 for more information.

- **Drivers:** Edit drivers and review their status.
- **Diagnostics:** Start a diagnostics test and review results.
- Email system info report: Send an system report to an email address.

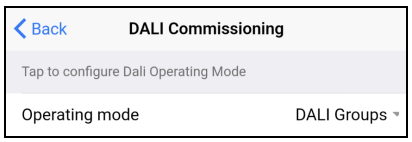


Operating Mode

DALI Commissioning operates in two modes: Broadcast or DALI Groups. In Broadcast mode, every device connected to the DALI load controller can be controlled in unison. In Groups mode, individual drivers can be placed in groups for granular control over the devices.

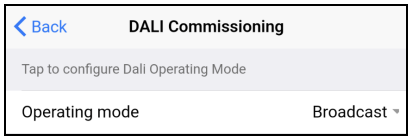
To confirm the room's operating mode:

1. Navigate to **Configuration** > **DALI Controllers** > **DALI Commissioning**
2. Review the DALI Commissioning screen.
    - If the Operating mode states **DALI Groups** or no operating mode is identified, then the DALI load controller is operating in DALI Groups mode.



> **NOTE:** If **Operating mode** is not present on the **DALI Commissioning** screen, make sure to update to the latest firmware. Refer to Update Firmware with the Zūm App on page 285.

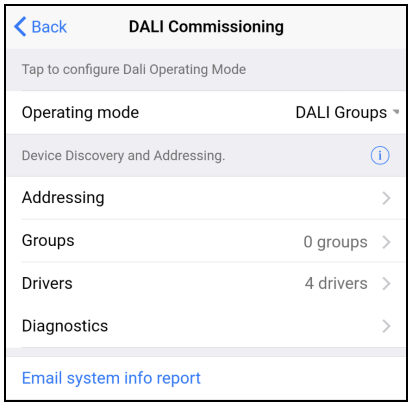
    - If the Operating mode states **Broadcast**, then the DALI load controller is operating in Broadcast mode.



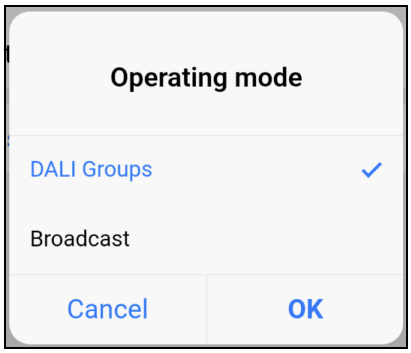
To change the Operating mode:

> **NOTE:** Changing the Operating mode affects keypad programming assignments. Review the assignments after implementing the change.

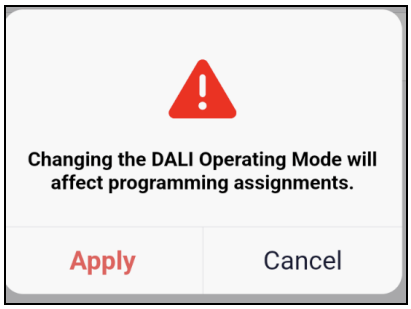
1. Tap the current Operating mode to open the Operating mode menu.



2. Select either **DALI Groups** or **Broadcast**.



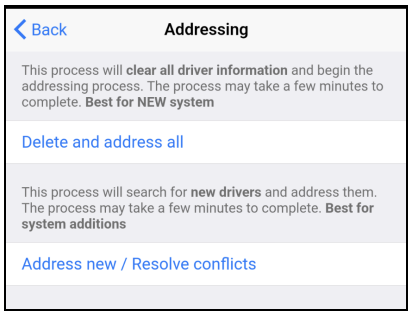
3. Tap **OK** to continue and a warning dialog opens.
4. Tap **Apply** to change the Operating mode or **Cancel** to close without making a change.



Addressing

Use **Addressing** to discover new drivers for a new or established system.

> **NOTE:** Addressing is required in DALI Groups Operating mode but is optional in Broadcast Operating mode.



New Systems

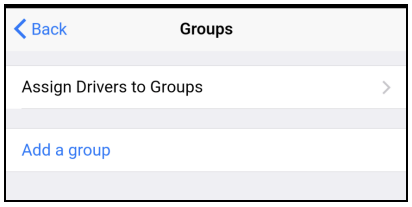
Tap **Delete and Address All** to delete any driver information and begin the addressing process. When the confirmation window opens, tap **OK** to continue or **Cancel** to exit without readdressing the system.

Established Systems

Tap **Address New / Resolve Conflicts** to discover new drivers and add them to a system. Each driver must have a unique address. If there are duplicate addresses, resolve the conflict. When the confirmation window opens, tap **OK** to continue or **Cancel** to close without addressing the system.

Groups

Use **Groups** to assign drivers to a DALI group and review DALI group assignments.

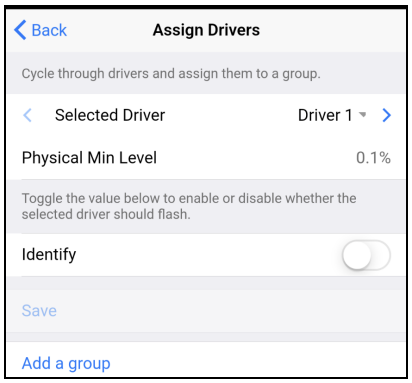


NOTES:

- For DALI Groups mode only. Broadcast mode does not use Groups. Refer to Operating Mode on page 316 for more information.
- DALI groups also appear as load controllers in **Configuration** > **Load Controllers**. The DALI groups are inactive until a DALI group has been created in **Groups**. DALI groups are not the same as load controller groups or occupancy sensor groups.

Assign Drivers to a Group

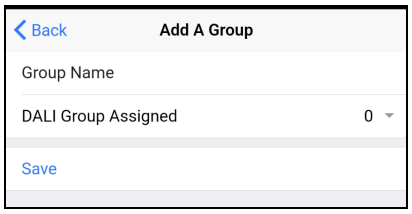
Tap **Assign Drivers** to assign a driver to a DALI group.



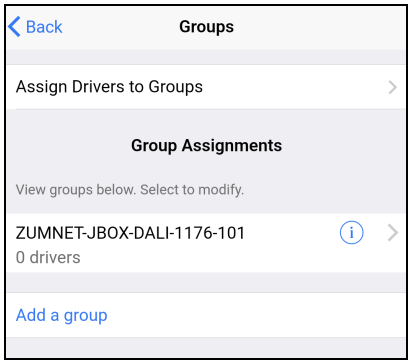
- **Selected Driver:** Choose a driver to assign. Tap < or > to cycle through the drivers. The Physical Min Level is stated.
  The Physical Min Level is the actual level (%) the driver is capable of lowering to. Only Drivers with the same Physical Min Level should be added to the same DALI group.
- **Identify:** Tap the toggle to enable or disable whether the selected driver should flash.
- **DALI groups:** Tap the check box next to the desired DALI group. Tap **Save** to save the changes or tap **Back** to return to the previous screen without saving.
- **Add a group:** Opens the same screen as Add a Group on page 320.

Add a Group

Tap **Save** to save the DALI group.

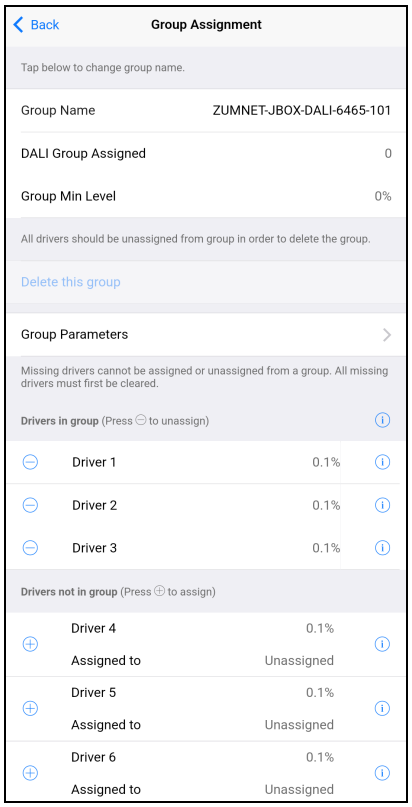


The previous screen appears with the new DALI group listed under Group Assignments.



Group Assignments

Created DALI groups are listed under Group Assignments. To flash drivers, tap the Identify icon ⓘ next to **Drivers in group** to flash all drivers in the group or next to a driver to identify a single driver.

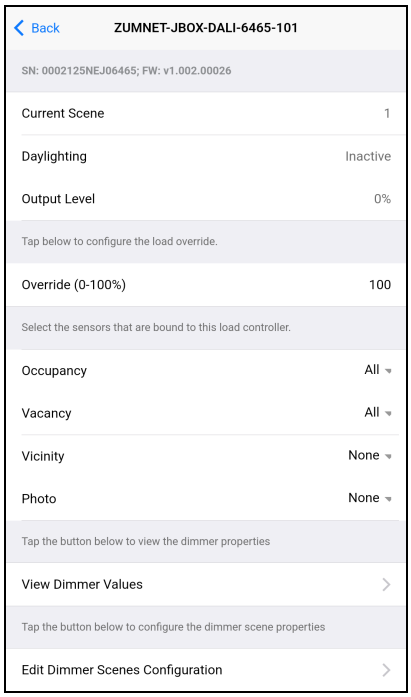


- **Group Name:** Tap to edit the DALI group name.
  After editing the Group Name, save the new name by tapping the go or enter button on your phone's keyboard or tapping outside of the Group Name field.

  > **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

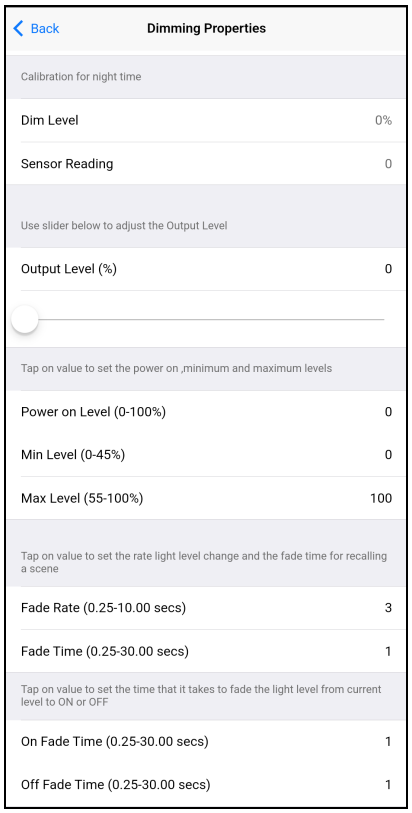
- **DALI Group Assigned:** Displays the group number of the DALI group.
- **Group Min Level:** Displays the value set in View Dimming Properties > Min Level (0–45%).
- **Delete this Group:** Tap to delete the DALI group.
  Delete this Group is only enabled after all drivers are removed from the group.

- **Group Parameters:** Tap to access the Group Parameters.



  - Current scene
  - Daylighting
  - Output Level
  - Override
  - Occupancy
  - Vacancy
  - Vicinity
  - Photo

- View Dimmer Values

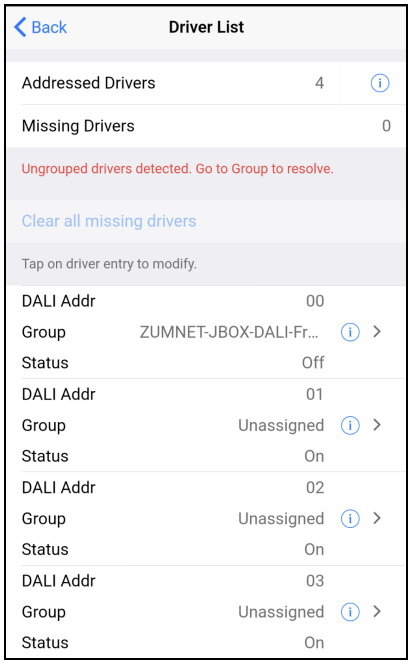


  - **Dim Level:** Review the dimming level set for day and night calibration.
  - **Sensor Reading:** Review the sensor reading intensity for day and night calibration.
  - **Output Level:** Use the slider to adjust the Output level.
  - **Power on Level (0–100%):** Set the light level when powering On.
  - **Min Level (0–45%):** Set the minimum light level threshold a driver cannot pass.
  - **Max Level (55–100%):** Set the maximum light level threshold a driver cannot pass.
  - **Fade Rate (0.25–10.00 secs):** Set the amount of time it takes to raise the light level from 0% to 100% or dim the level from 100% to 0% when pressing the raise or lower buttons on a keypad.
  - **Fade Time (0.25–30.00 secs):** Set the amount of time to fade from the current light level to a recalled scene or discrete level.
  - **On Fade Time (0.25–30.00 secs):** Set the amount of time to fade from the current light level to the On scene.
  - **Off Fade Time (0.25–30.00 secs):** Set the amount of time to fade from the current light level to the Off scene.
- Edit Dimmer Scene Configurations. Tap on the value or move the sliders to configure levels for each scene. To exclude scenes from participating in the group, uncheck the box next to the scene.

- **Drivers in group** and **Drivers not in group**: Tap **+** to add a driver to the DALI group or tap **-** to remove a driver from the DALI group.

Drivers

Use the Drivers screen to review the Drivers List.



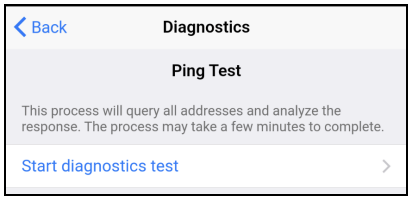
- **Addressed Drivers:** States the number of drivers addressed.
- **Missing Drivers:** States the number of drivers missing. Missing drivers are drivers that were previously addressed but currently can not be found.
  The Status is displayed as Missing in red to indicate which driver needs to be checked.
- If drivers have been addressed but not assigned to a DALI group, the message "Unassigned drivers detected. Go to Groups to resolve." appears. Drivers must be assigned to a DALI group before they can be controlled.
- If missing drivers are detected, **Clear all missing drivers** is active. Tap **Clear all missing drivers** to delete the addressed information. Return to **Addressing** and tap **Address New / Resolve Conflicts**.
- **Drivers listed:** Each listed driver states the DALI Address number (00–63), the Group name or Unassigned, and the Status (On, Off, or Missing).

  Tap the Identify icon ⓘ. The drivers flash, identifying the driver.

  Tap on the driver to access the Driver Setting.
  - Review **Driver details** such as DALI Address, Long Address, Physical Min Level, Driver Type, and Status.
  - Change the DALI Address. Chose a number 00–63 and tap **Save** to save the new address. Only available addresses can be selected. Addresses already assigned to another driver are grayed out and cannot be selected.
  - Review the name of the group the driver is assigned to and the Min Level Set.
  - Tap Grouping to access **Assign Drivers**. The same screen as Assign Drivers to a Group on page 319 opens.

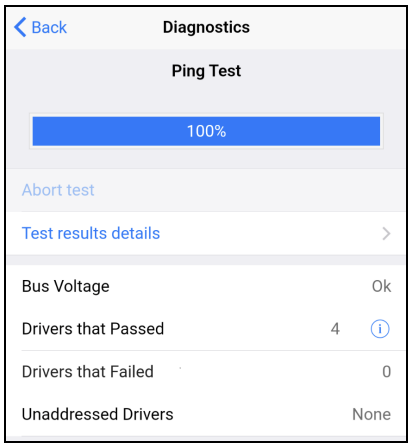
Diagnostics

Use the Diagnostics screen to test the DALI loop for the selected DALI controller.

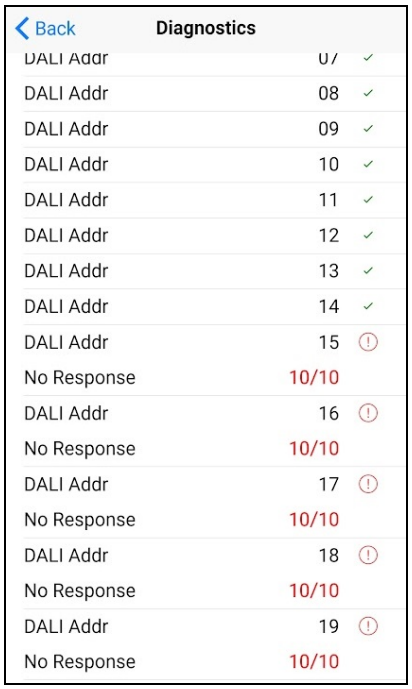


Tap **Start diagnostics test** to begin a Ping Test. The test pings each driver ten times to trigger a response and report the following data:

- Status of bus voltage
- Number of drivers that passed
- Number of drivers that failed
- Presence of unassigned drivers



Tap **Test result details** to view the driver address and how many times out of 10 the driver did not respond to a ping.

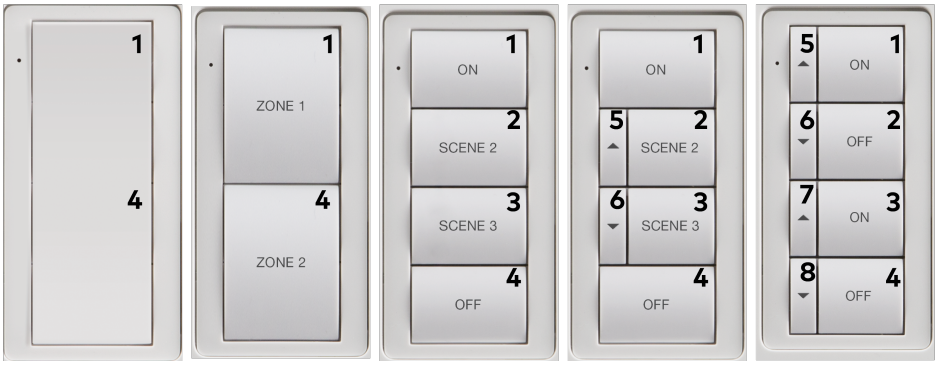

Back
Diagnostics
DALI Addr 07
DALI Addr 08
DALI Addr 09
DALI Addr 10
DALI Addr 11
DALI Addr 12
DALI Addr 13
DALI Addr 14
DALI Addr 15
No Response 10/10
DALI Addr 16
No Response 10/10
DALI Addr 17
No Response 10/10
DALI Addr 18
No Response 10/10
DALI Addr 19
No Response 10/10

Keypad Zūm App Configuration

The following sections describe Zūm app configuration for keypads.

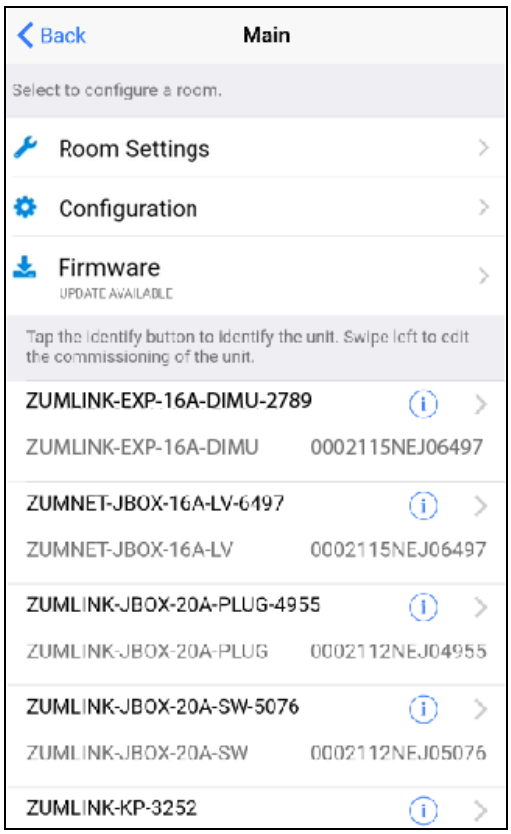
Button Positions

ZUMLINK-BTNR **ZUMLINK-BTN2** **ZUMLINK-BTN4** **ZUMLINK-BTN6** **ZUMLINK-BTN8**



Navigating the Configuration Screens

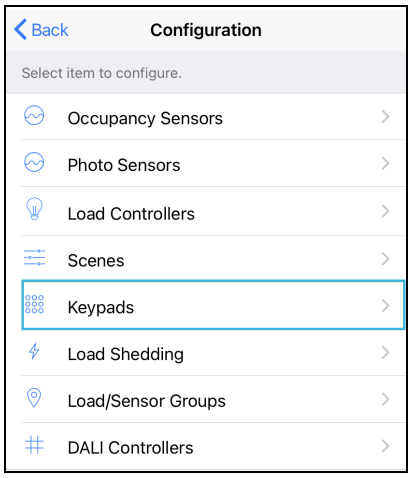
There are two ways to access the configuration pages from the Main screen.



View All Keypads

To view all keypads:

1. Tap on **Configuration** (number 2 in the image above).
2. Tap **Keypads**.



3. Tap the desired keypad to begin the configuration.

> **NOTE:** Tap the Identify icon ⓘ to identify a device. A keypad flashes its LED.

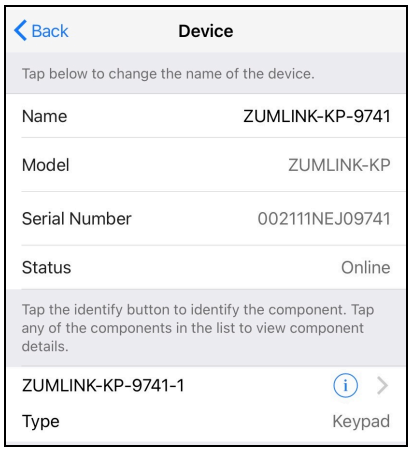
4. (Optional) Tap in the Name field to edit the keypad name.

View an Individual Keypad

To view an individual keypad:

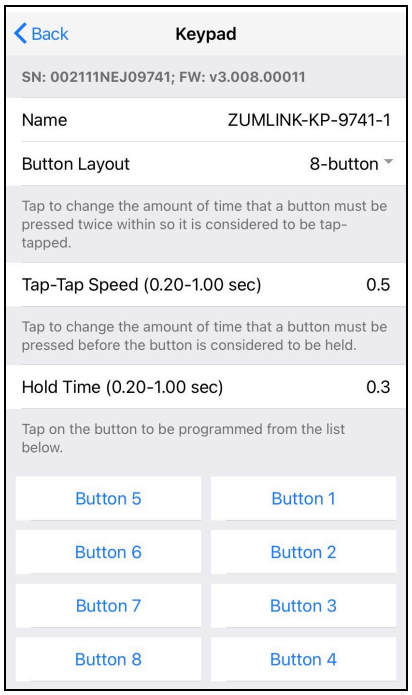
1. Tap on the keypad in the list of devices (number 4 in the image above) to view information about the keypad.
2. (Optional) Tap in the **Name** field to edit the keypad name.
3. Tap on the keypad to begin the configuration.

> **NOTE:** Tap the Identify icon ⓘ to identify a device. A keypad flashes its LED.



Configure a Keypad

Navigate to the keypad's configuration page.



- **Name:** Tap in the Name field to edit the keypad name.

  > **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

- **Button Layout:** Select not specified, Rocker, 2-button, 4-button, 6-button, or 8-button.

  > **NOTE:** When a layout other than "not specified" is selected, the button layout displays at the bottom of the page.

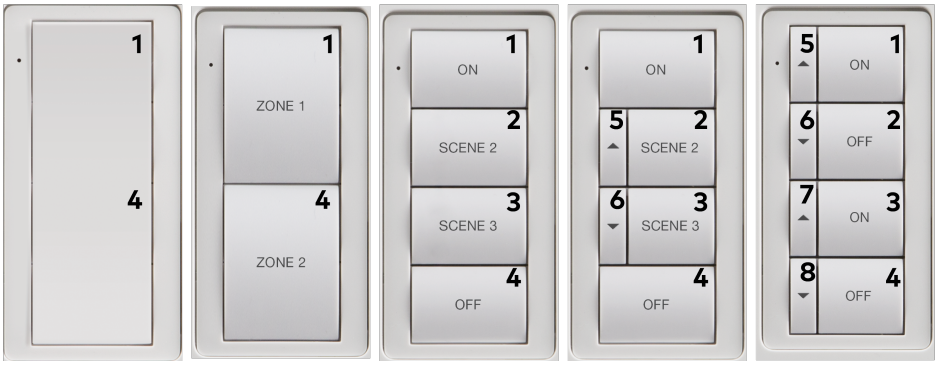
- **Tap-Tap Speed (0.20–1.00 sec):** Set the amount of time between two button presses to qualify as a double tap.
- **Hold Time (0.20–1.00 sec):** Set the amount of time that a button must be pressed to be considered a hold.
- **Buttons:** Tap on a button to program it.

Program Buttons

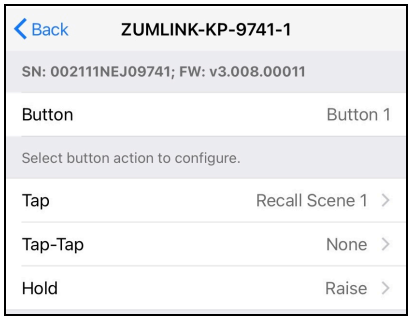
Program buttons and button actions.

Button Positions

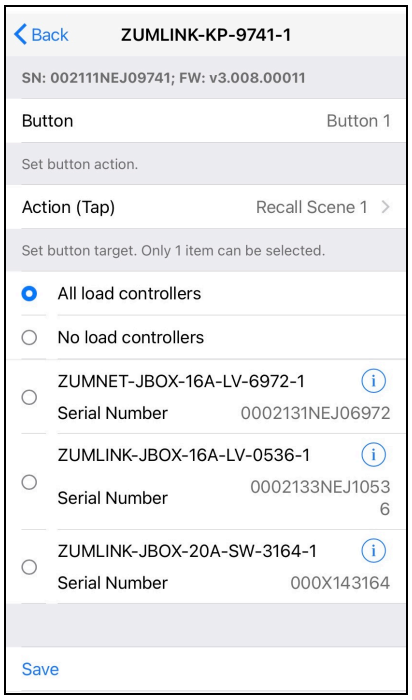
ZUMLINK-BTNR **ZUMLINK-BTN2** **ZUMLINK-BTN4** **ZUMLINK-BTN6** **ZUMLINK-BTN8**



- Tap the button in the layout to program a button.



- Select events for the actions Tap, Tap-Tap, and Hold.



  - **Button:** Button Name.
  - **Action:** Set the button action.
    - None
    - Off: Assigned load controllers turn off.
    - On: Assigned loads turn on.
    - Raise (for Hold action): Assigned load controllers raise.
    - Lower (for Hold action): Assigned load controllers lower.
    - Toggle: Switches load controllers between ON and OFF states.
    - Recall Scene 1 - Scene 16: Assigned load controllers recall the behavior set for the specified scene.
    - Export to Hub: Name and send information to ZUM-HUB4 for macro actions.
  - **Load Controllers:** Select the affected load controller.

    > **NOTE:** Only one load controller can be selected.

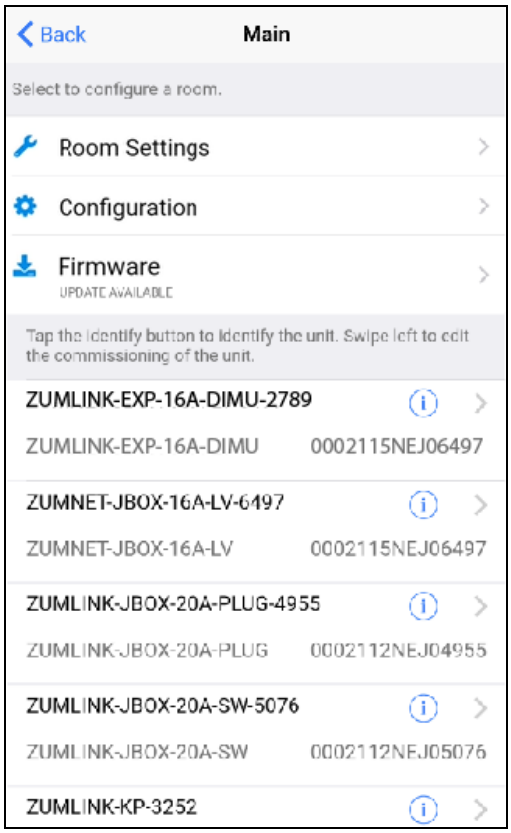
  - **Save:** Save changes.

Presence Detectors Zūm App Configuration

The following sections describe Zūm app configuration for Zūm presence detectors. Models with the additional low-voltage relays (-RLY) have a load controller component. Load controller functionality is not natively programmed; all load controller functionality must be configured.

Navigating the Configuration Screens

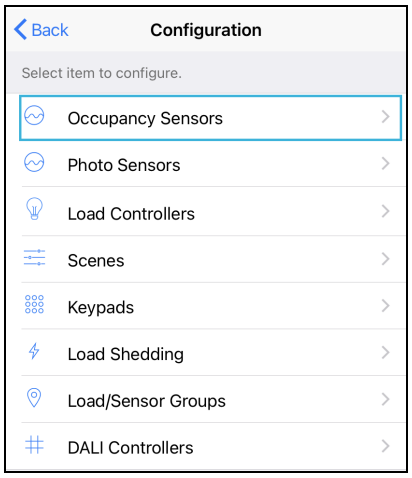
All presence detectors have an occupancy sensor and a photo sensor component. Presence detectors with the additional relays (-RLY models) have two components: the occupancy sensor and a load controller. Each component is configurable and there are two ways of accessing the configuration pages from the Main screen.



View Individual Components by Type

To view individual components by type:

1. Tap on **Configuration** (number 2 in the image above).
2. Tap the desired component category: **Photo Sensors**, **Occupancy Sensors**, or **Load Controllers**.



3. Tap the desired component to begin the configuration.

> **NOTE:** Tap the Identify icon ⓘ to identify a device. A presence detector flashes its LED.

View a Presence Detector and Its Components

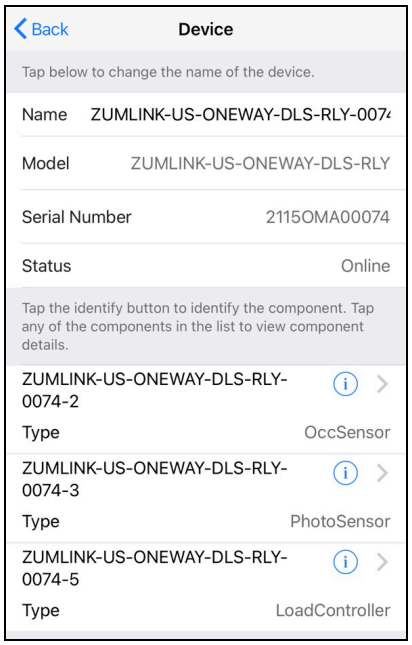
To view a presence detector and its components:

1. Tap on the presence detector in the list of devices (number 4 in the image above) to view information about the presence detector.
2. (Optional) Tap in the **Name** field to edit the presence detector name.

> **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

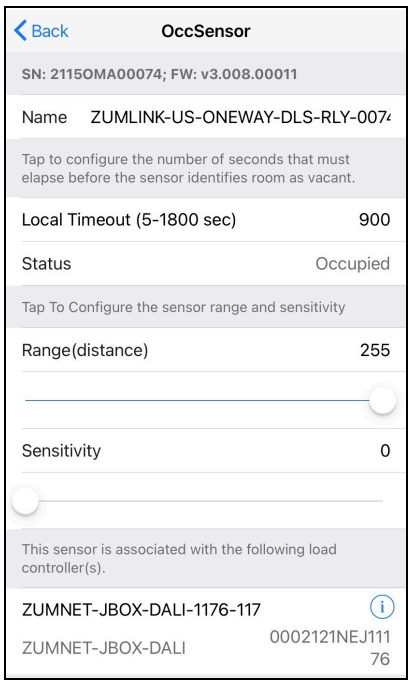
3. Tap on the desired component to begin the configuration.

> **NOTE:** Tap the Identify icon ⓘ to identify a device. A presence detector flashes its LED.



Occupancy Sensor Component

Navigate to the OccSensor component configuration page for the presence detector.



- **Name:** Edit the name of the photo sensor component.

  > **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

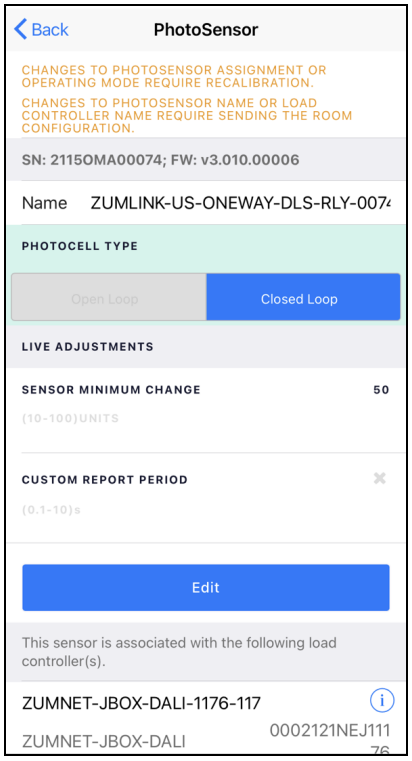
- **Local Timeout (5–1800 sec):** Set the duration of time the sensor must wait before designating a room as vacant.
- **Range:** Use the slider to adjust the detection range.

- **Sensitivity:** Use the slider to adjust the sensitivity.
- List of load controllers associated with the occupancy sensor component.

> **NOTE:** Tap the Identify icon ⓘ to identify a device. A presence detector flashes its LED.

Photo Sensor Component

Navigate to the PhotoSensor component configuration page for the presence detector.



- **Name:** Select the **Name** field to edit the name of the photo sensor component.

  > **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

- **Photocell Type:** Choose **Closed Loop** or **Open Loop** mode.

  > **NOTES:** Zūm Link presence detectors only have **Closed Loop** mode. Analog sensors connected to a load controller can function in **Closed Loop** or **Open Loop** mode.
  >
  > - Open-Loop mode senses natural light.
  > - Closed-Loop mode senses natural and artificial light.

- **Live Adjustments:** Select **Edit** to make live adjustments to the **Sensor Minimum Change** or the **Custom Report Period**. If any changes are made, select **Apply** to save and return to the **PhotoSensor** page.
    - **Sensor Minimum Change (1–65535) UNITS:** The minimum amount of light level change detected by the photosensor before it sends data back to the load controller.

      > **NOTE:** Sensor Minimum Change range for Closed-Loop mode is (10–100) Units.

    - **Custom Report Period (0.1–10) s:** Set how frequently photosensor light reading data is sent. This overrides any Closed-Loop or Open-Loop mode default settings.

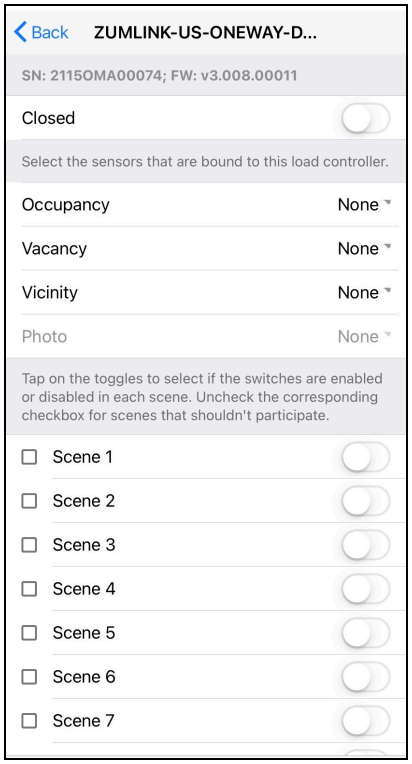
  > **CAUTIONS:**
  >
  > - Calibrate daylighting before making any live adjustments. For details, refer to Calibrate Daylighting Settings on page 296.
  > - Make live adjustments during daylight hours.

- List of load controllers associated with the photo sensor component.

Load Controller Component

Navigate to the load controller component configuration page for the desired presence detector.

> **NOTE:** Applicable for ZUMLINK-IR-QUATTRO-DLS-RLY, ZUMLINK-DT-QUATTRO-DLS-RLY, ZUMLINK-US-QUATTRO-DLS-RLY, ZUMLINK-IR-QUATTRO-HD-DLS-RLY, ZUMLINK-US-HALLWAY-DLS-RLY, and ZUMLINK-US-ONEWAY-DLS-RLY models.

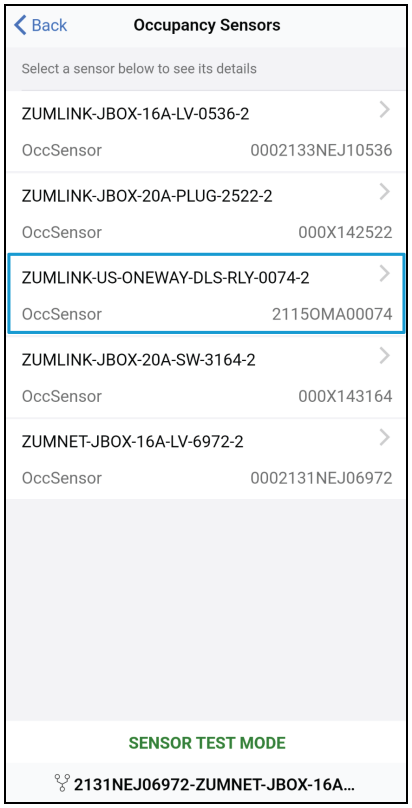


- **Closed:** Tap the toggle for closed-loop sensing.
- **Occupancy:** Assign the occupancy mode to a chosen load controller.
- **Vacancy:** Assign the vacancy mode to a chosen load controller.
- **Vicinity:** Assign the vicinity mode to a chosen load controller.
- **Scenes:** Tap the toggle to enable or disable the switch in each scene. Uncheck the corresponding box for scenes that should not participate.

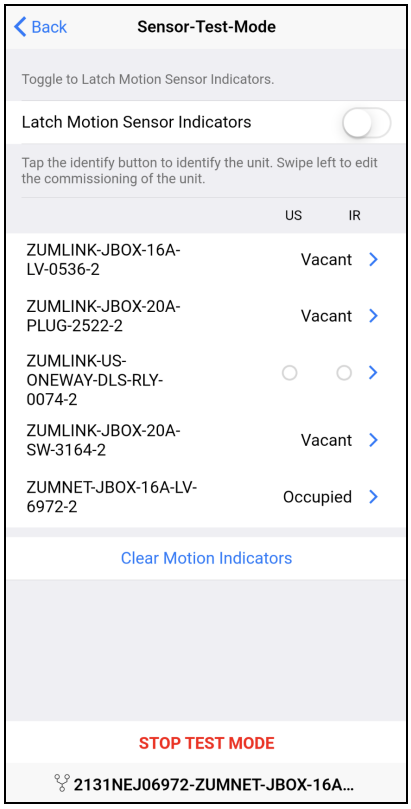
Sensor Test Mode

Use **Sensor Test Mode** to view a presence detector's status, and easily edit a presence detector's settings after they are installed. To access the Sensor Test Mode from the Zūm app Main Screen, tap **Configuration** and tap **Occupancy Sensors**. A list of occupancy sensor components displays, including the occupancy sensor components for load controllers and presence detectors.

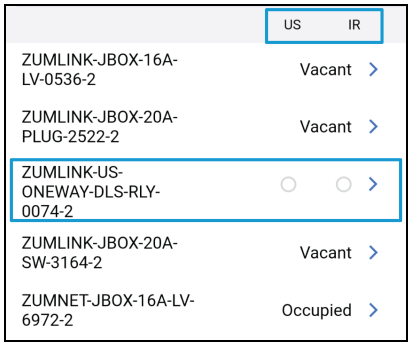
In this example, the occupancy sensor component for the presence detector is the ZUMLINK-US-ONEWAY-DLS-RLY-0074-2. The other occupancy sensors listed are for load controllers.



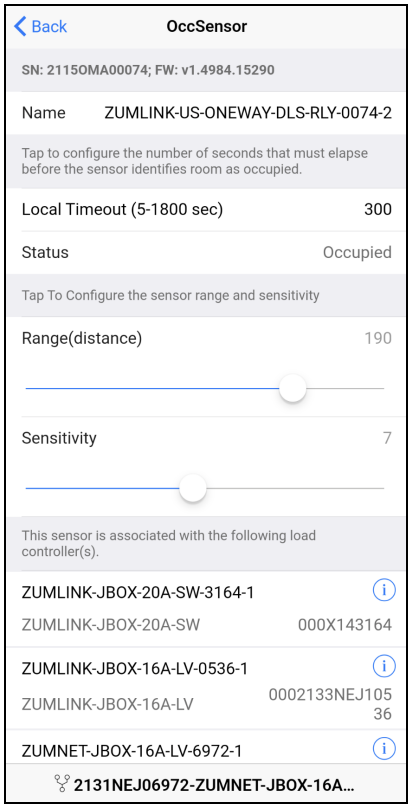
To enter test mode, tap **Sensor Test Mode** at the bottom of the screen. The same list of sensors displays. To exit test mode, tap **Stop Test Mode**.



Sensor Test Mode allows users to view real-time status and US and PIR sensor technology feedback. This screen enables users to make adjustments and confirm the expected detection sensitivities. For presence detectors, the radio button indicates whether the Ultrasonic or Infrared technology triggered. For nonsystem presence detectors, the room status is identified as Occupied or Vacant.



Tap > next to the presence detector to adjust the Name, Timeout, Range, and Sensitivity, as well as review the room Status and connected loads. Refer to Adjust Ultrasonic Sensitivity on page 339 for best practices on adjusting sensitivity.



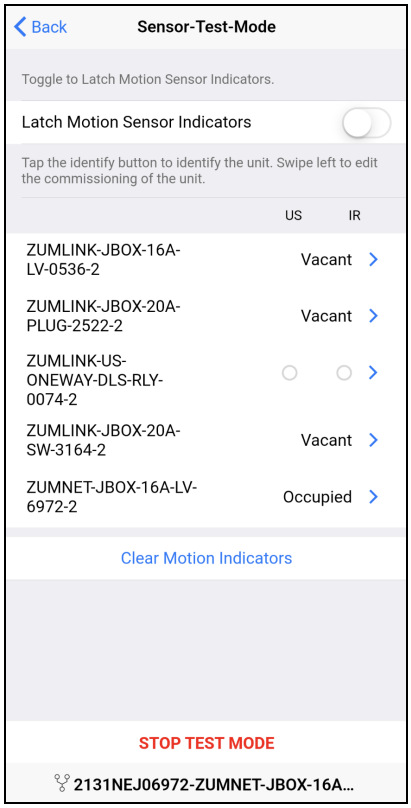
Adjust Ultrasonic Sensitivity

You can adjust the Ultrasonic (US) sensitivity in US and Dual Technology (DT) presence detectors. Passive Infrared (PIR) sensitivity is fixed and cannot be adjusted in PIR or DT presence detectors.

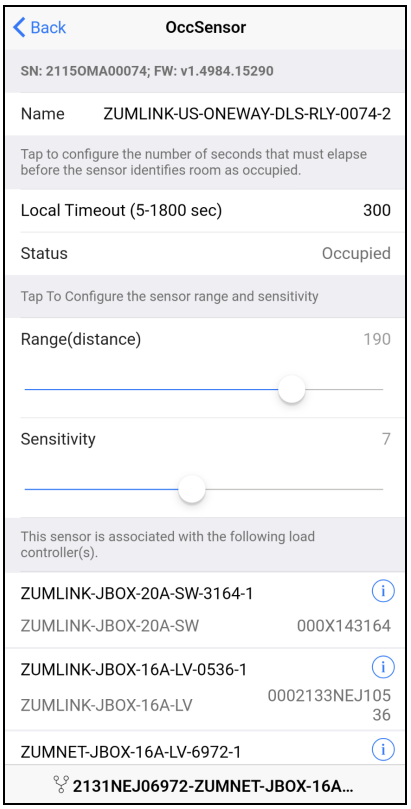
1. Occupy the space where the US or DT presence detector is installed, and access Sensor Test Mode in the Zūm app. Refer to Sensor Test Mode on page 337.
2. In the Zūm app, locate the desired presence detector(s) in the list and tap **Sensor Test Mode** to begin the test.

3. Move around the room and observe the behavior of the US and IR radio buttons.

> **NOTE:** The radio buttons light momentarily to identify the presence detector and technology triggered. Use the **Latch Motion Sensor Indicators** toggle to retain the radio button with the last motion detected. The **Clear Motion Indicator** button resets the radio buttons.



4. If the presence detector does not trigger enough or triggers too much, press > next to the presence detector to make adjustments to the sensitivity.



5. Move the Sensitivity or Range slider to the desired position.
6. To test the new setting, select < Back to return to Sensor Test Mode.
7. Repeat the process from step 3 until the desired sensitivity is attained.

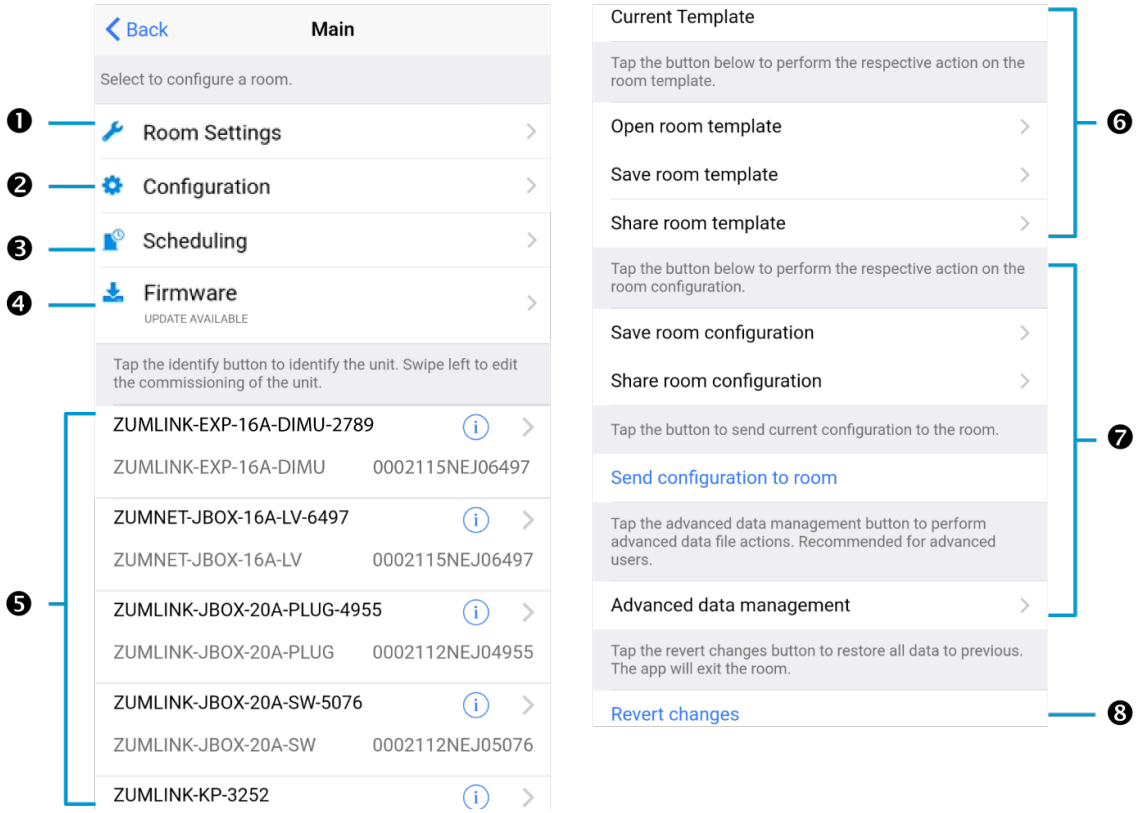
Integration Module with Standalone Timeclock Zūm App Configuration

The following sections describe Zūm app configuration for Integration Modules (ZUMLINK-JBOX-IO and ZUMLINK-DIN-IO). Configuring the Integration Module requires three main steps:

1. Synchronize the date, time, and location. Refer to Synchronize the Date, Time, and Location on page 345.
2. Start scheduling. Refer to Scheduling on page 352.
3. Send the new configuration to the space. Refer to Send the Configuration on page 380.

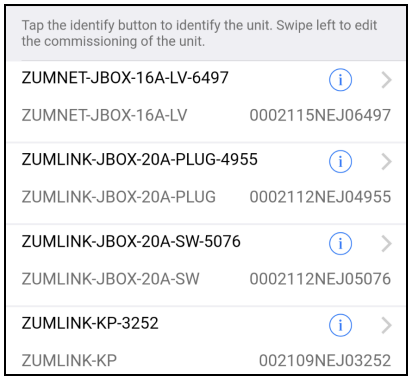
Zūm App Main Screen

From the **Nearby Rooms** screen, tap the desired room to open the **Main** screen. The following sections describe the actions available for each area of the **Main** screen.



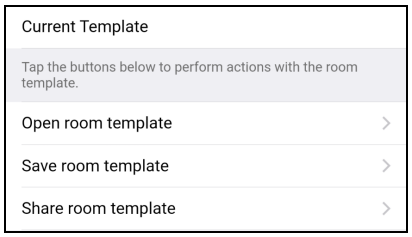
NOTE: The numbers below correspond with the numbers in the **Main** screen diagram.

1. **Room Settings:** Edit the Room Name, PIN, Floor ID, Zone ID, and Network information.
2. **Configuration:** Edit the room logic to view the current state of the room.
    - **Occupancy Sensors:** View details for the connected sensor(s) or edit the sensor name.
    - **Photo Sensors:** View details for the connected sensor(s) or edit the sensor name.
    - **Load Controllers:** Identify and view details for the connected load controller(s).
    - **Scenes:** View and edit room scenes: Scene 1 - Scene 16. When editing the scene, tap the Identify icon ⓘ to identify the load controller. The load controller emits a sound and flashes the Link LED. The connected loads also flash.
    - **Keypads:** Identify and view details for the connected keypad(s). Edit the keypad name and assign the button layout.
    - **Load Shedding:** Adjust the slider to set the maximum light levels. Load shedding can also be configured through Demand Response on the ZUML-HUB4 Web Interface. For more information, refer to Configure the Demand Response and Alarm Modes on page 396.
    - **Load/Sensor Groups:** Create groups within the room.
    - **DALI Controllers:** Address drivers, create DALI groups, assign drivers, and identify drivers.
    - **Current Scene:** Displays the current room scene.
    - **Occupancy Status:** Displays occupied or vacant. If any area of the room is occupied, then the status is Occupied. When all areas of the room are vacant, the status is Vacant.
3. **Scheduling:** Appears only when an Integration Module is discovered in the room. Configure date and time, schedules, events, and holidays. For more information, refer to Integration Module with Standalone Timeclock Zūm App Configuration on page 342.
4. **Firmware:** To update firmware, refer to Update Firmware with the Zūm App on page 285.
5. **List of devices:** Identify a device and edit the commissioning settings

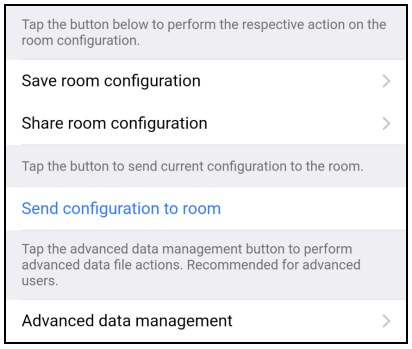


    - Tap the Identify icon ⓘ to identify a device. A load controller emits a sound and the Link LED flashes. The connected loads also flash. A keypad flashes its LED.
    - Tap the device to edit or review the device details: Edit Name. Review the Model, Serial Number, Status, and edit the device settings.

6. **Current Template Settings:** Choose Open room template, Save room template, or Share room template.

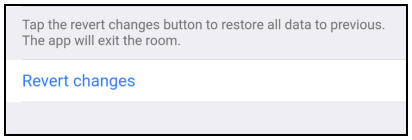


7. **Configuration Data:**
   - **Save room configuration:** Save the room configuration data in the space.
   - **Share room configuration:** Share the room configuration data in the space.
   - **Send configuration to room:** Send room logic changes made in the app to the room.
   - **Advanced data management:** Review the Map, Logic, and Settings of the data currently loaded. Load, save or share new Map, Logic, or Settings data.



> **NOTE:** Changes made in the app are not sent to the room until they are deployed using the Send configuration to room button.

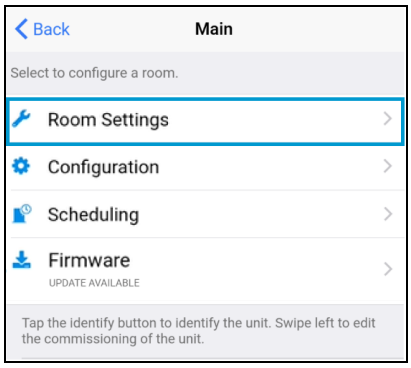
8. **Revert changes:** Restore all non-deployed changes made since launching the app.



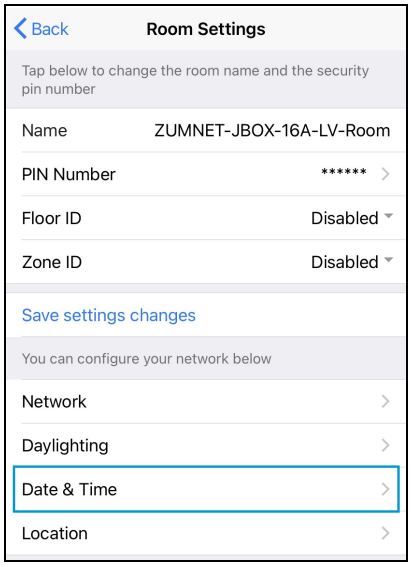
Synchronize the Date, Time, and Location

To synchronize a mobile device with the Zūm space:

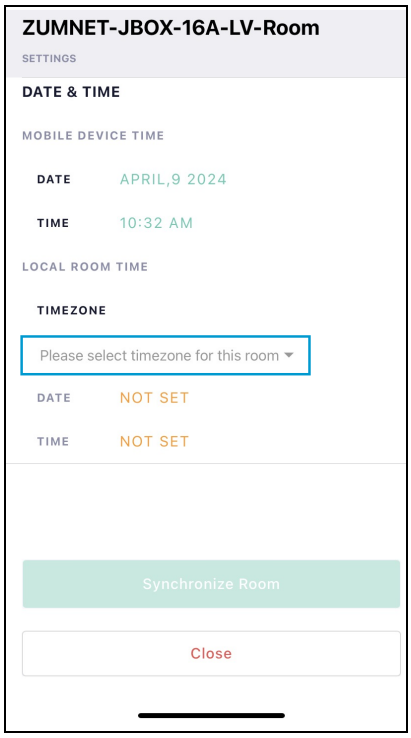
1. Select **Room Settings** on the App Main screen.



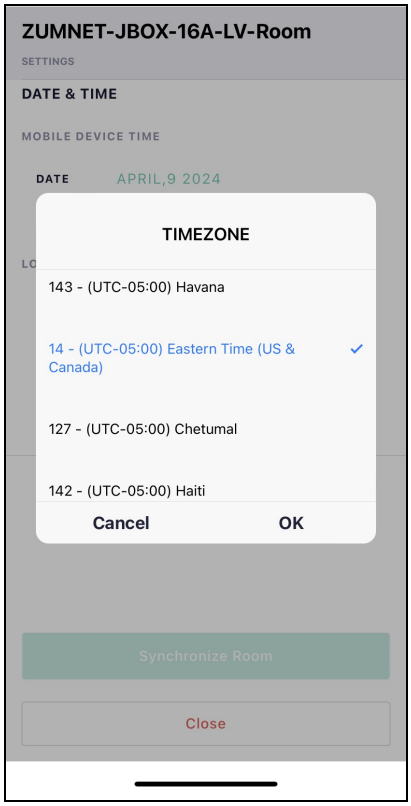
2. Select **Date & Time**.



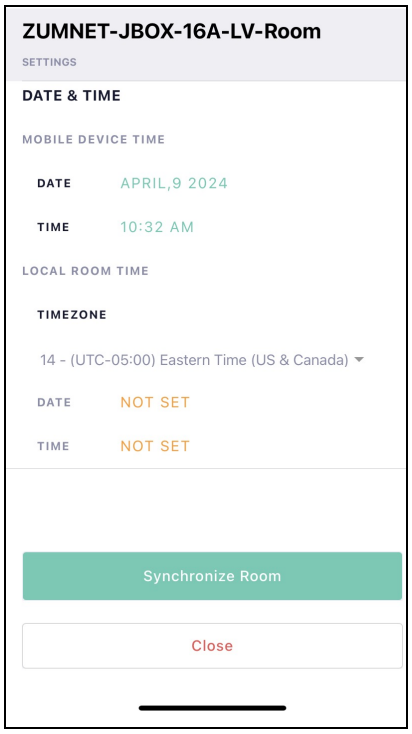
3. Select the timezone for the Zūm space.



4. Select **OK**.

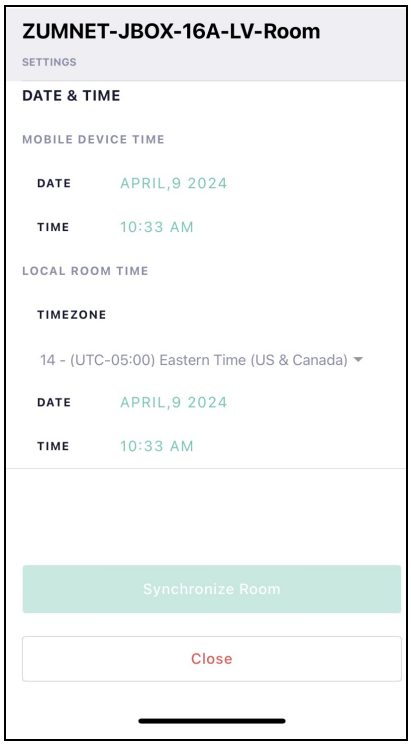


5. Select **Synchronize Room**.

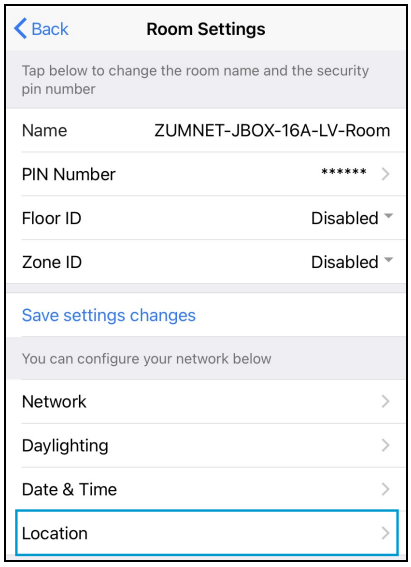


NOTE: The mobile device should be located near the Zūm space being configured. However, if the mobile device is in a different location, then it is acceptable for the timezones of the Zūm space and the mobile device to be different.

6. Select **Close** to return to **Room Settings**.

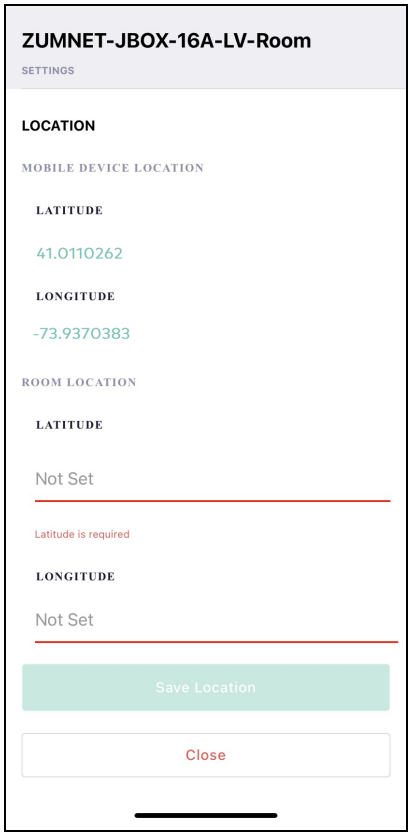


7. Select **Location**.



8. Select **Synchronize Location** or enter the latitude and longitude of the Zūm space.

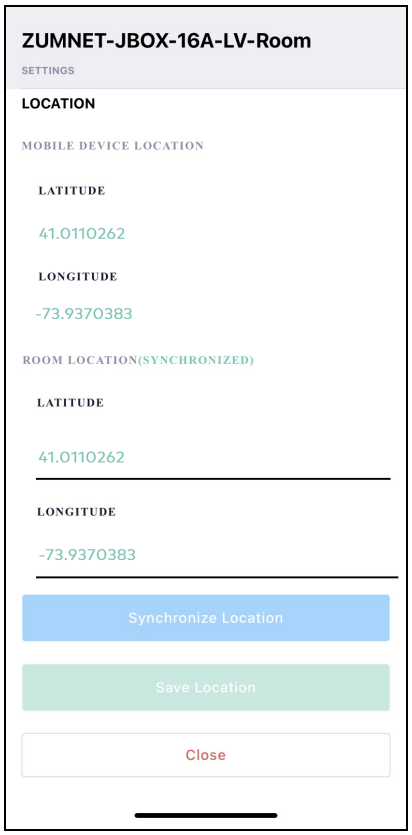
   If the mobile device and the Zūm space are in the same location, select **Synchronize Location**. If the mobile device is in a different location than the Zūm space, manually enter the latitude and longitude of the Zūm space.



9. Select **Save Location**.

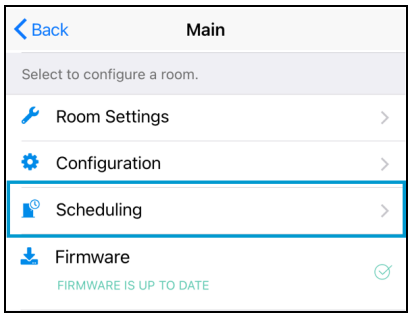


10. Select **Close**.

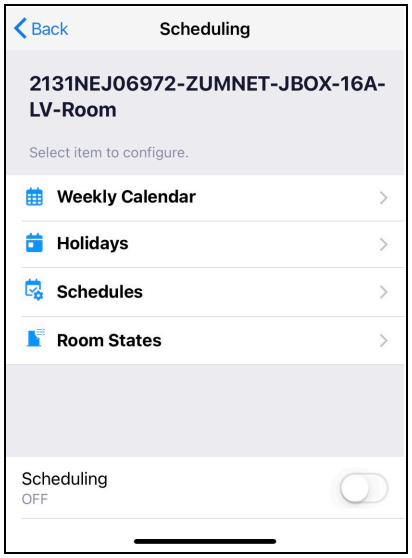


Scheduling

Apply schedules, events, and room states to a Zūm space. From the Main screen, select **Scheduling**.

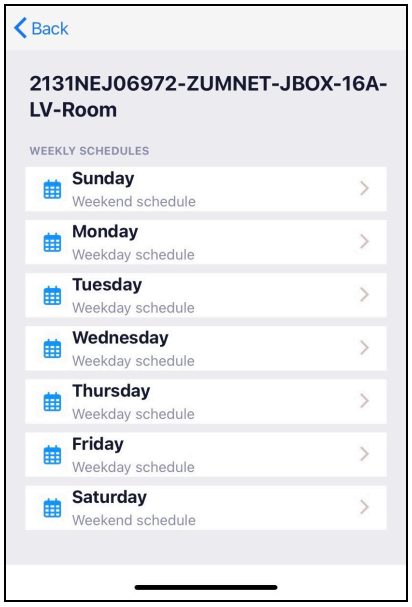


Four options are available: **Weekly Calendar**, **Holidays**, **Schedules**, and **Room States**.

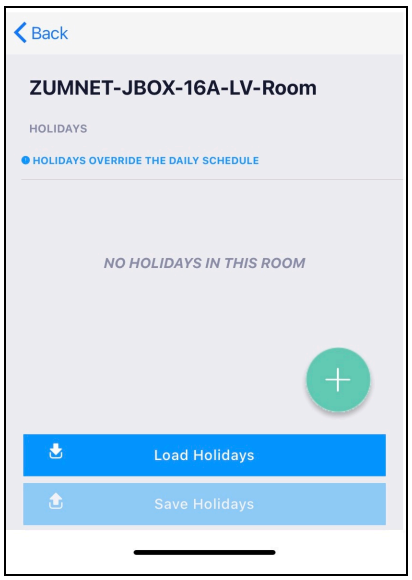


- **Weekly Calendar:** Access Daily schedules for each day of the week. Use custom or preconfigured **Schedules** and **Room States** to control the room automatically.
    - Preconfigured schedules include **Weekend** and **Weekday** schedules. Custom **Schedules** can also be created through a Daily Schedule.
    - **Weekend** schedules are already assigned to the Daily Schedules **Saturday** and **Sunday**.
    - **Weekday** schedules are already assigned to the Daily Schedules **Monday**, **Tuesday**, **Wednesday**, **Thursday**, and **Friday**.
    - **Morning** and **Evening** preconfigured **Room States** are already assigned to each day schedule.
    - Preconfigured and custom **Schedules** and **Room States** can also be accessed in the **Schedules** and **Room States** options.

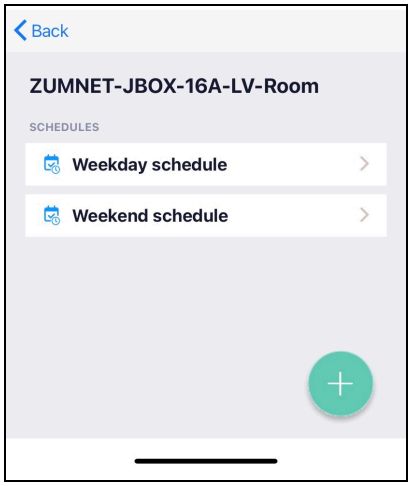
> **NOTE:** Custom **Schedules** and **Room States** can be created through configuring any Daily Schedules.



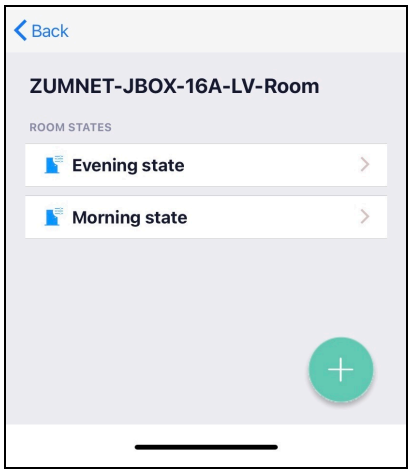
- **Holidays:** Create new **Holidays**, save a holiday list file to send to another space, or upload a saved holiday list file. There are no preconfigured **Holidays**. Create up to 500 **Holidays**. **Holidays** override the Daily Schedule.



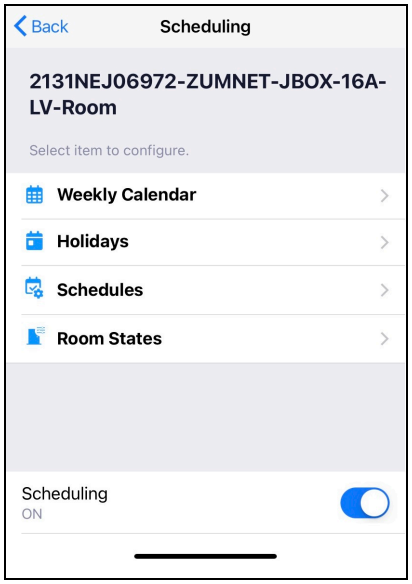
- **Schedules:** Access preconfigured and custom **Schedules**. Create up to 12 custom **Schedules**.



- **Room States:** Access preconfigured and custom **Room States**. **Room States** describe device behavior triggered by a **Schedule**. Create up 100 custom **Room States**.



To start scheduling, select the **Scheduling** toggle.

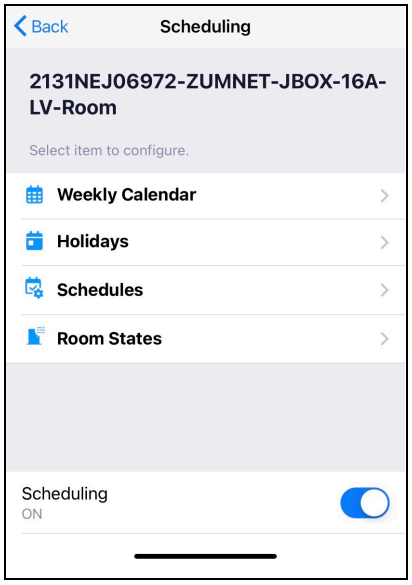


Edit an Existing Schedule

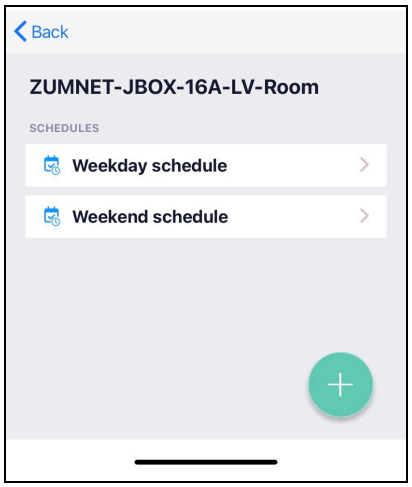
Default **Schedules** include **Weekday** and **Weekend** schedules. To access them and any custom schedules, navigate to the **Schedules** option.

To edit a schedule:

1. Ensure the **Scheduling** toggle is selected and then select **Schedules**.

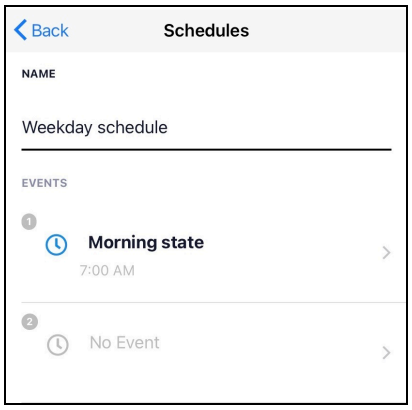


2. Select a schedule.



3. Begin entering information.
    - To change the Schedule name, type in the **Name** field.

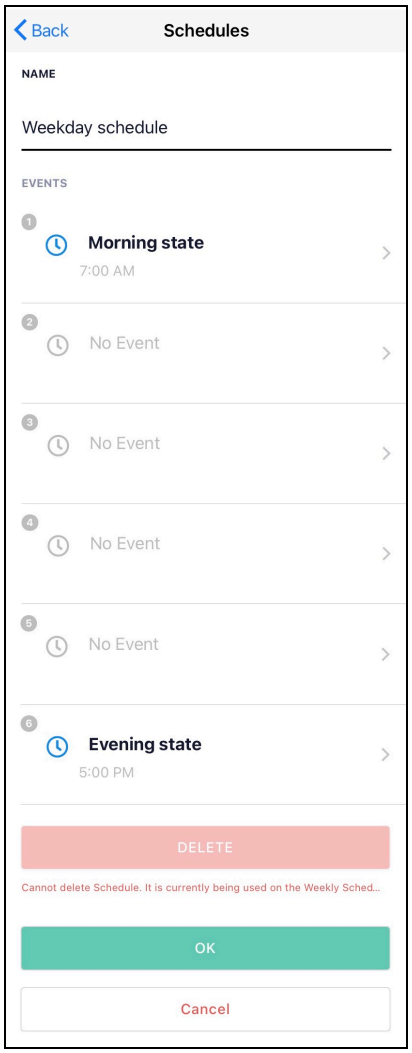
      > **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

    - Add an Event the Schedule. Refer to Edit or Add an Event on page 359.

      > **NOTE**: **Events** must be listed in chronological order.

4. To delete a **Schedule** that is no longer needed, select **Delete**. If the **Schedule** is already assigned a **Daily Schedule**, then it cannot be deleted. Unassign it and then it can be deleted.
5. Select **OK** to save changes and return to **Schedules**.

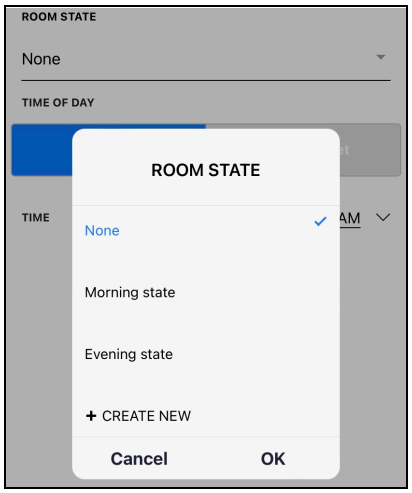

Back
Schedules
NAME
Weekday schedule
EVENTS
1
Morning state
7:00 AM
2
No Event
3
No Event
4
No Event
5
No Event
6
Evening state
5:00 PM
DELETE
Cannot delete Schedule. It is currently being used on the Weekly Sched...
OK
Cancel

Edit or Add an Event

Schedule up to six events for one day. Each event is triggered in the order it is listed. Ensure the events are listed chronological order.

To edit or add an event:

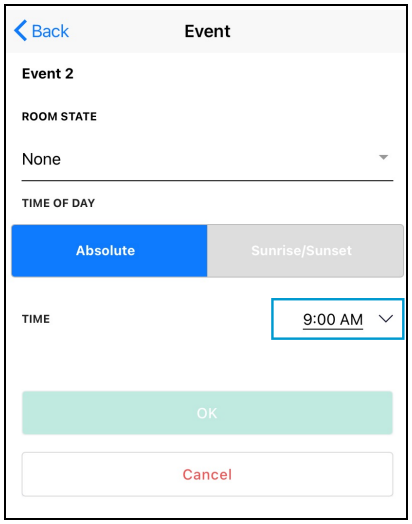
1. Select a **Room State** from the drop-down menu and select **OK**.



> **NOTE:** There is an option in the drop-down menu to create a new **Room State**. If a new **Room State** is required, select **CREATE NEW** and follow the remaining steps in Add or Edit a Room State on page 366.

2. Select a time to trigger the event: **Absolute** or **Sunrise/Sunset**.
   - **Absolute:** Use Absolute time to set a specific time to trigger an event. **Absolute** is selected by default.

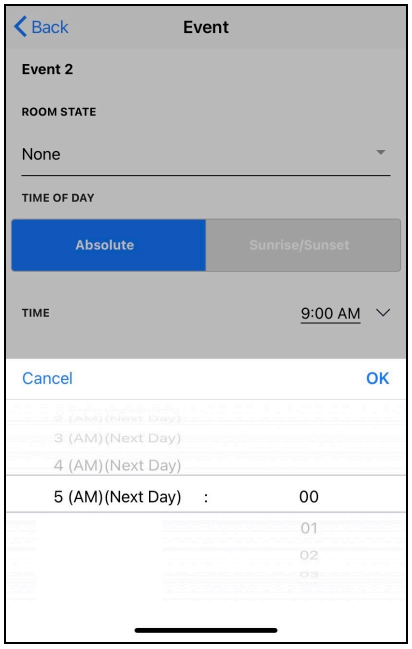
     To set an **Absolute** time, select the default time.



     a. Scroll through the hours to the desired hour. Hours range from **12 (Midnight)** to **5 (AM) (Next Day)**.
     Example: On the Monday Schedule, an event that begins at **5 (AM) (Next Day)** will actually start at 5 AM on Tuesday.

     b. Scroll through the minutes. Minutes range from **00** to **59**.

     c. Select **OK**.



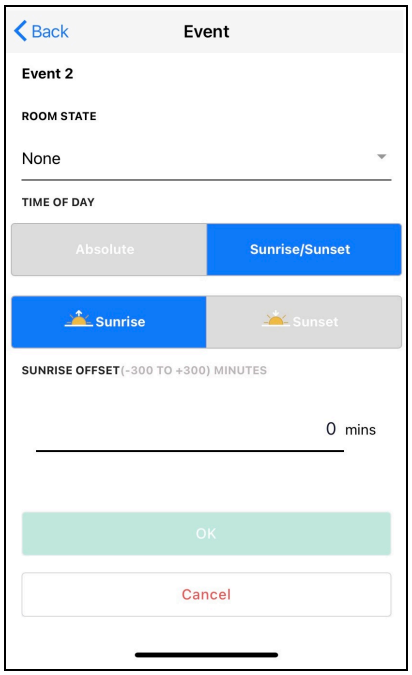
- **Sunrise/Sunset:** Select **Sunrise/Sunset** to use the astronomical clock to trigger events. Events occur at a time relative to sunrise or sunset (calculated by date and time zone).

  Select **Sunrise** for a morning event or **Sunset** for an evening event.

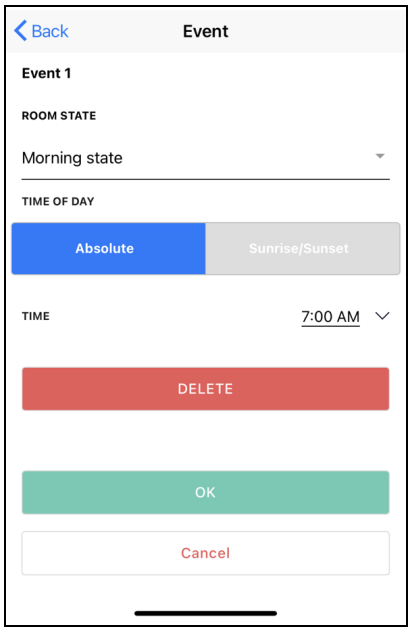
  If necessary enter a desired offset. The offset can be up to 300 minutes before or after sunrise or sunset.

  Offset examples:

  - Event starting two hours before sunrise: -120 minutes.
  - Event starting two hours after sunset: 120 minutes.

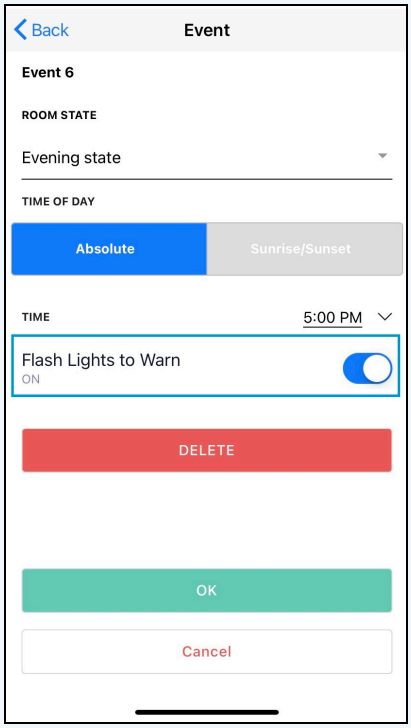


3. To delete an event that is no longer needed, select **Delete**.



4. Select **OK** to save changes and return to the schedule.

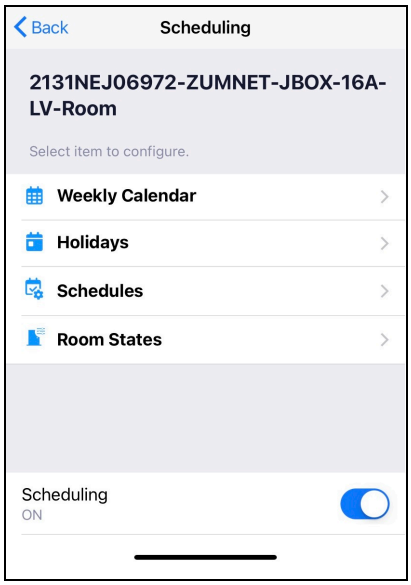
NOTE: Event 6 has an additional option. When selected, the **Flash Lights to Warn** toggle enables lights to flash a warning five minutes before the final event is scheduled to occur. If a button on a keypad is pressed during the five-minute warning period, the button press acts as a snooze function and delays **Event 6** by two hours.



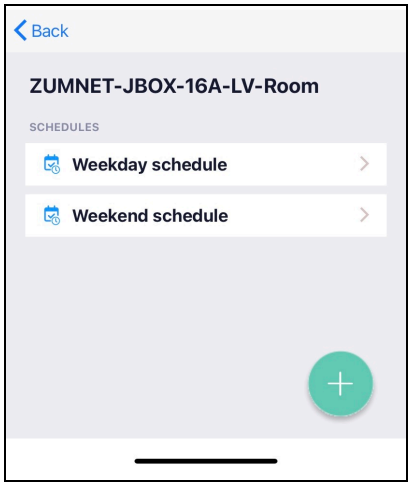
Create a New Schedule

Create up to 12 new **Schedules**. To add a custom **Schedule**:

1. Ensure the **Scheduling** toggle is selected and then select **Schedules**.

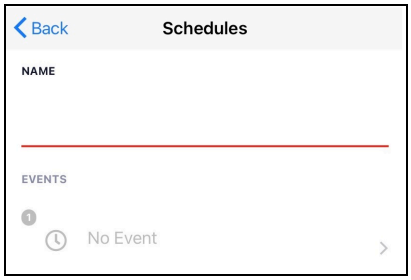


2. Select the add button (+) to create a new **Schedule**.



3. Type the Schedule name in the **Name** field.

> **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

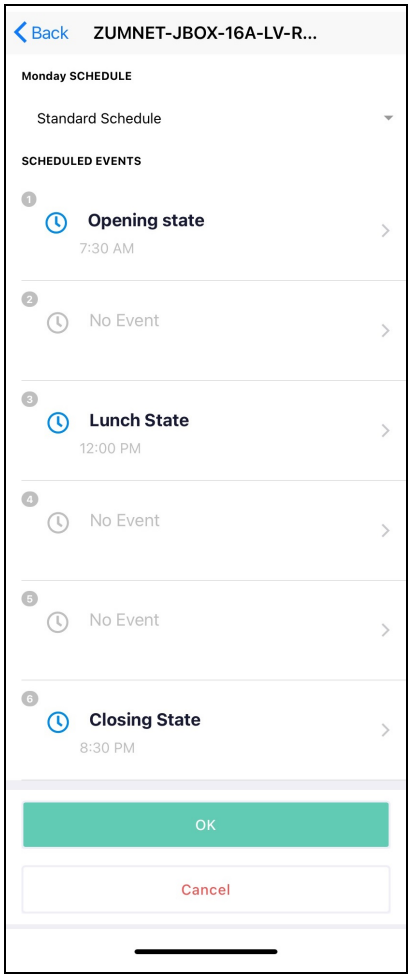


4. Select **OK** to save the Schedule name.
5. Select an **Event** slot to add an **Event**. The **Event** screen opens. Refer to Edit or Add an Event on page 359.

   > **NOTE**: **Events** must be listed in chronological order.

6. Select **OK** to save changes and return to **Schedules**.

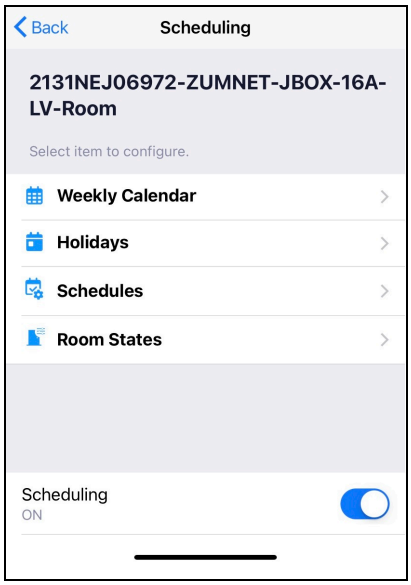
Sample Schedule



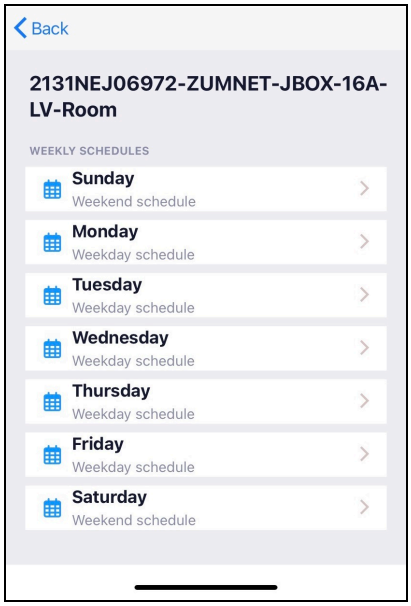
Change a Schedule

To change the Schedule of an existing Daily Schedule:

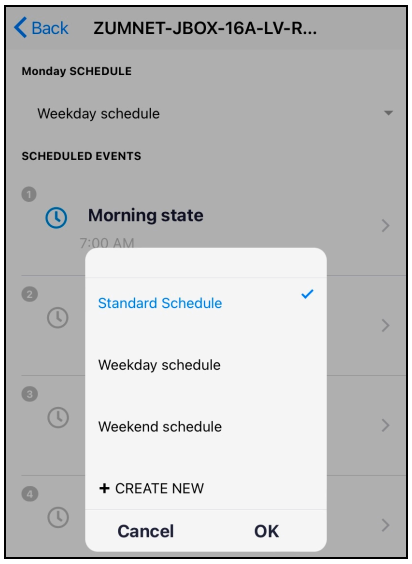
1. Ensure the **Scheduling** toggle is selected and then select **Weekly Calendar**.



2. Select a day schedule.



3. Select a **Schedule** from the drop-down menu and select **OK**.



> **NOTE:** There is an option in the drop-down menu to create a new **Schedule**. If a new schedule is required, select **CREATE NEW** and follow the remaining steps in Create a New Schedule on page 363.

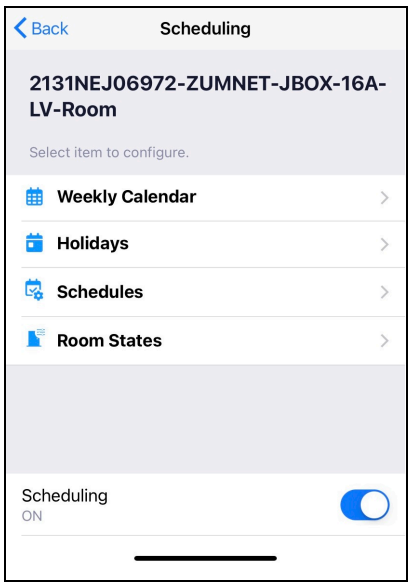
4. Select **OK** to save changes and return to the day schedule.

Add or Edit a Room State

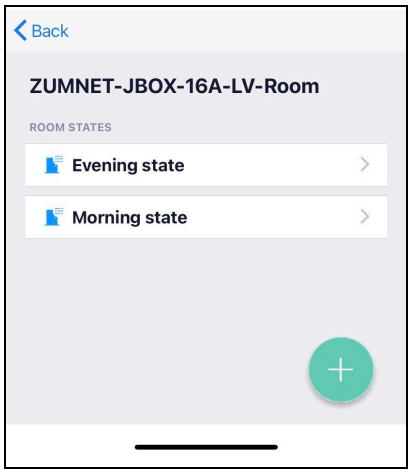
Default **Room States** include **Morning** and **Evening** schedules. Create up to 100 custom **Room States**. To access default and custom **Room States**, navigate to the **Room States** option.

To edit a room state:

1. Ensure the **Scheduling** toggle is selected and then select **Room States**.



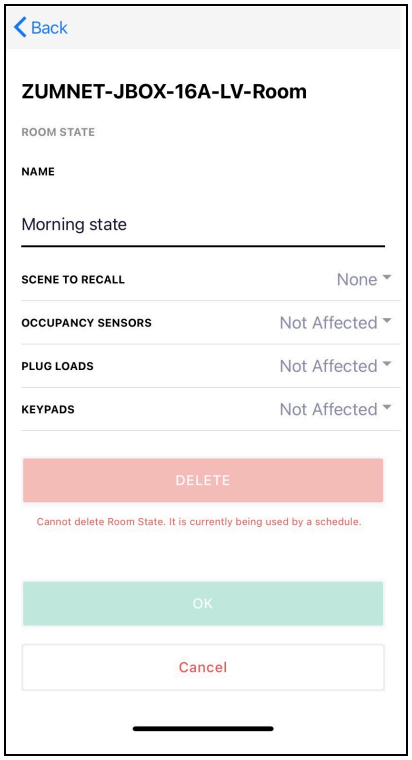
2. Select a room state or select the add button (+) to create a new **Room State**.



3. Begin entering information.
    - **Name:** Edit or type a new **Room State** name.

      > **NOTE:** Valid characters: a–z A–Z 0–9 _ - () . and space

    - **Scene to Recall:** Select Scene 1–16 or **None**.
    - **Occupancy Sensors:** Select **Enabled** to allow occupancy sensing, **Disabled** to turn off occupancy sensing functionality, or **Unaffected** to use the setting of the previous event.
    - **Plug Loads:** Select **Enabled** to use the plug loads, **Disabled** to turn off plug load functionality, or **Unaffected** to use the setting of the previous event.
    - **Keypads:** Select **Enabled** to use the keypads, **Disabled** to turn off keypad functionality, or **Unaffected** to use the setting of the previous event.

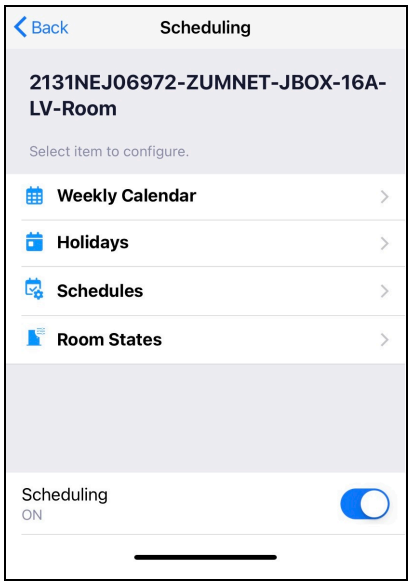


4. Delete a **Room State**. If the **Room State** is already assigned a **Schedule**, then it cannot be deleted. Unassign it and then it can be deleted.
5. Select **OK** to save changes and return to **Room States**.

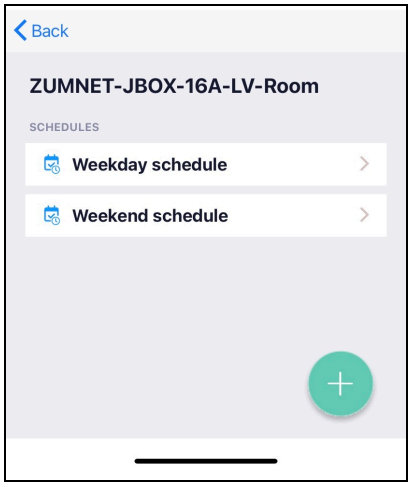
Assign a Room State

To assign a **Room State** to an existing schedule:

1. Ensure the **Scheduling** toggle is selected and then select **Schedules**.

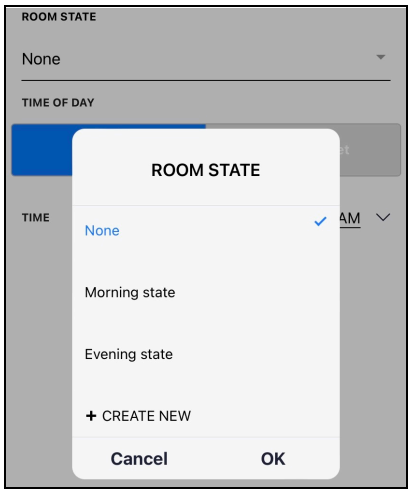


2. Select a schedule to edit.



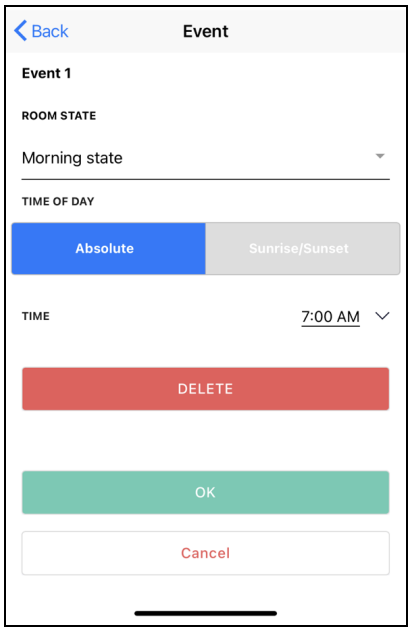
3. Select an Event to edit.

4. Select a **Room State** from the drop-down menu and select **OK**.



> **NOTE:** There is an option in the drop-down menu to create a new **Room State**. If a new **Room State** is required, select **CREATE NEW** and follow the remaining steps in Add or Edit a Room State on page 366.

5. Select **OK** to save changes in the event and return to the schedule.



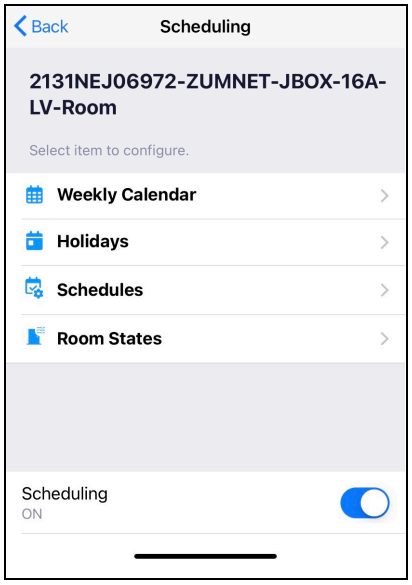
6. Select **OK** to save changes and return to **Schedules**.

Create a Holiday

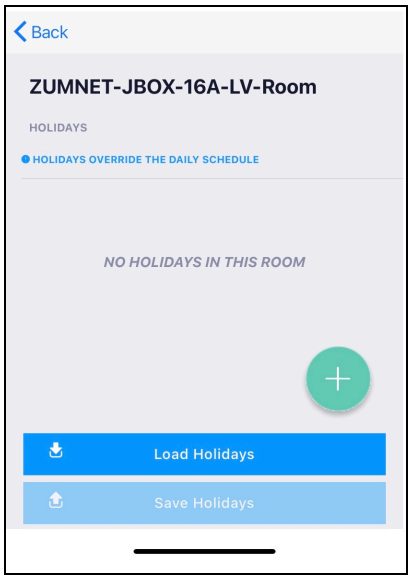
Create up to 500 **Holidays**. **Holidays** override the Daily Schedule.

To create a new **Holiday**:

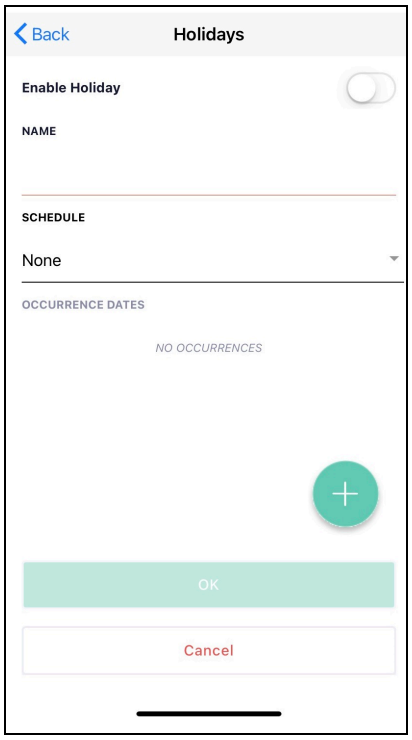
1. Ensure the **Scheduling** toggle is selected and then select **Holidays**.



2. Select the add button (+) to create a new **Holiday**.



3. Begin entering information.

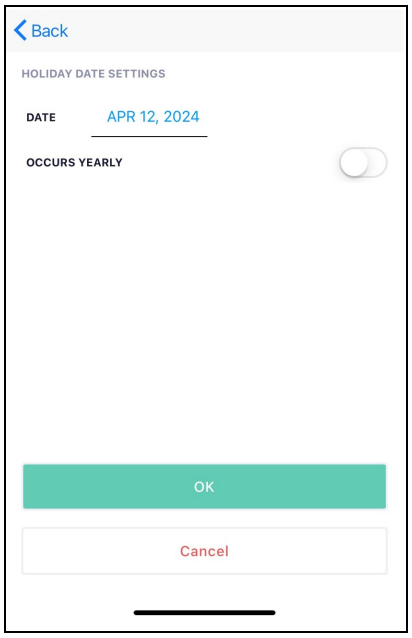


- **Enable Holiday:** Select the **Enable Holiday** toggle to make it active in the holiday list.
- **Name:** Type the **Holiday** name.

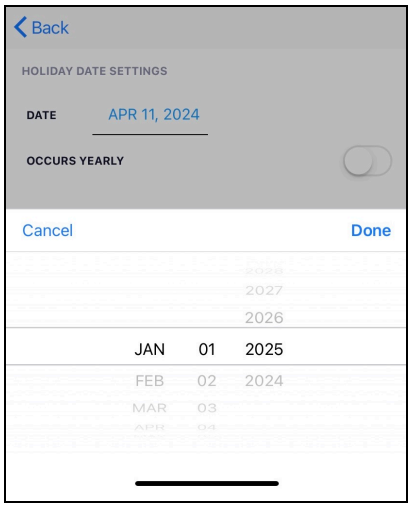
  > **NOTE:** Valid characters: ' a–z A–Z 0–9 _ - () . and space

- **Schedule:** Select a schedule the **Holiday** belongs to.

- Add button (+): Access the date configuration screen.



  - **Date:** Select the default date to change it.
    a. Scroll through the months to select the desired month. Months range from January (**JAN**) to December (**DEC**).
    b. Scroll through the days to select the desired day. Days range from **1** to **30**.
    c. Scroll through the years to select the desired year. Years range from the current year through the next ten years.
    d. Select **Done**.



  - **Occurs Yearly:** Select the **Occurs Yearly** toggle if it is a yearly holiday.

> **NOTE:** A **Holiday** can have multiple occurrences. Select **OK** to save the occurrence, select the add button (+) again to create a new occurrence.

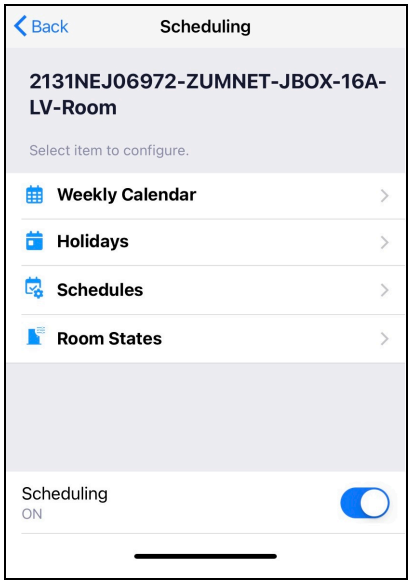
- Select **OK** to save the date, close the date configuration screen, and return to the holiday.

4. Select **OK** to save and return to **Holidays**.

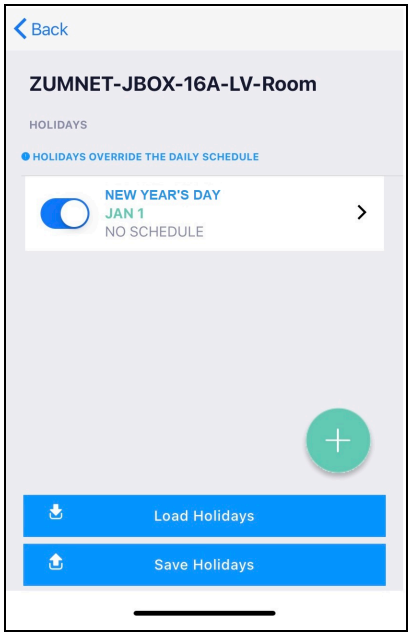
Edit a Holiday

To edit a **Holiday**:

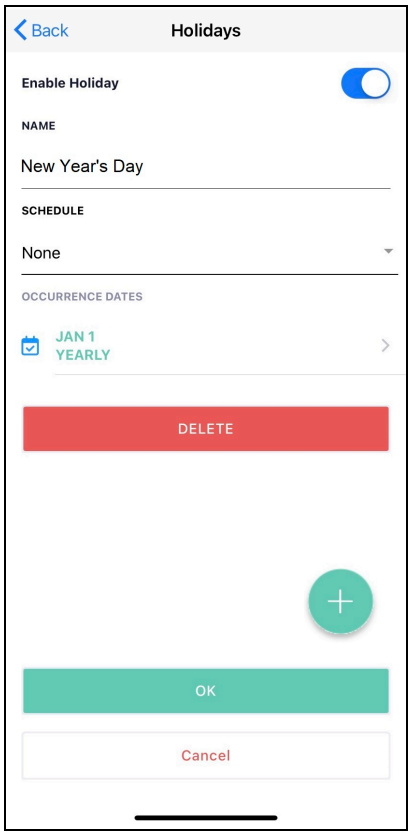
1. Ensure the **Scheduling** toggle is selected and then select **Holidays**.



2. Select the **Holiday**.



3. Edit the **Holidays** fields. Refer to Create a Holiday on page 371.

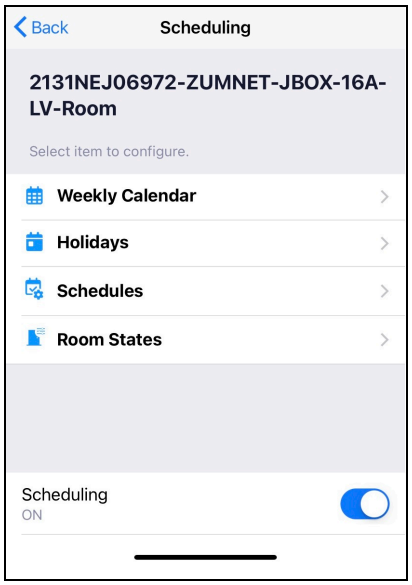


4. Select **OK** and return to **Holidays**.

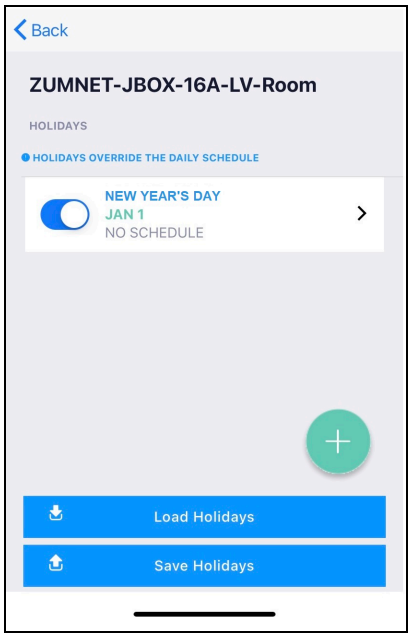
Delete a Holiday

To delete a **Holiday**:

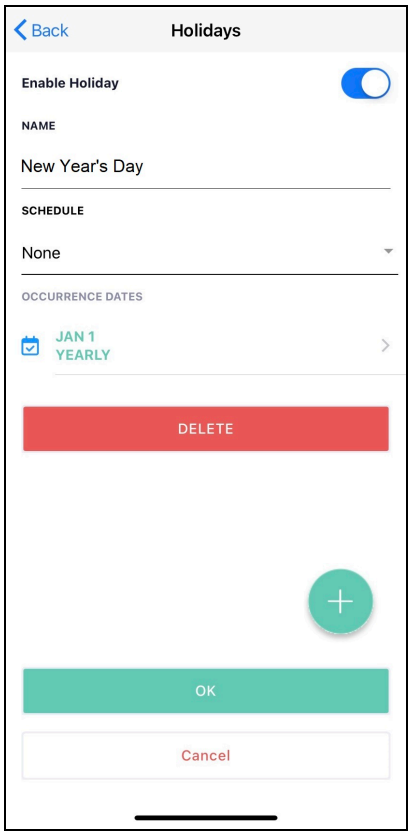
1. Ensure the **Scheduling** toggle is selected and then select **Holidays**.



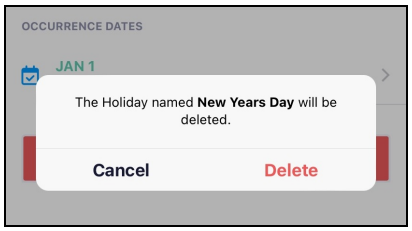
2. Select the **Holiday**.



3. Select **Delete**.



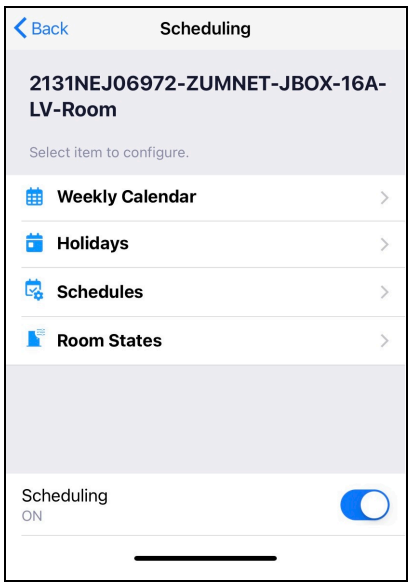
4. Select **Delete** and return to **Holidays**.



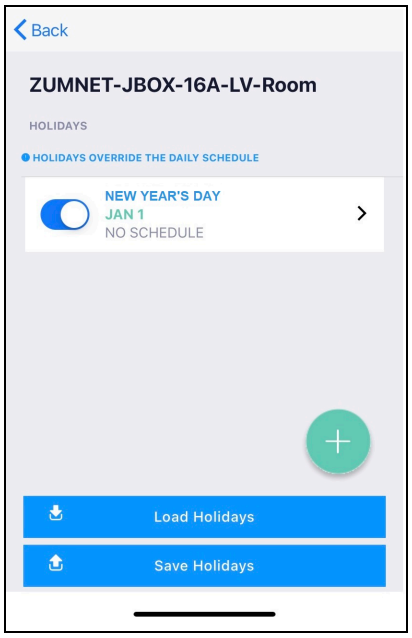
Save Holiday File

To save a set of **Holidays** to use in another Zūm space:

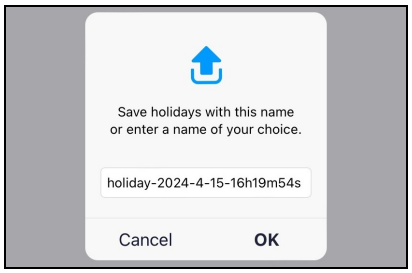
1. Ensure the **Scheduling** toggle is selected and then select **Holidays**.



2. Select **Save Holidays**.



3. Use the suggested file name or change the name, and select **OK**.

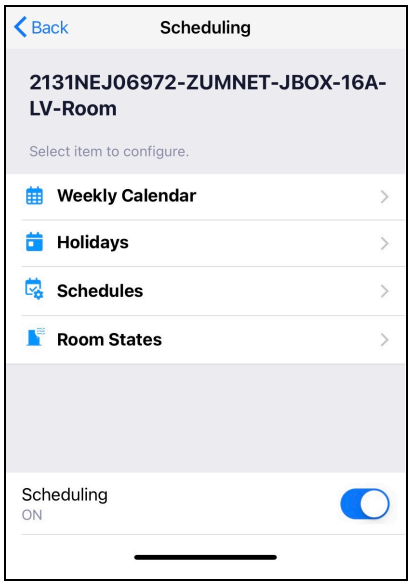


4. Select a location to save the file.
5. Select **Save** and return to **Holidays**.

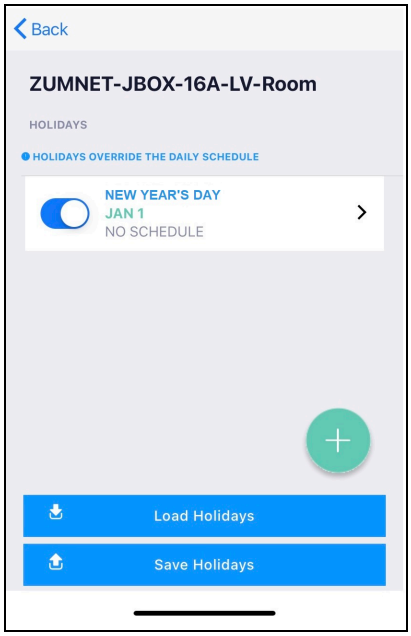
Load a Holiday File

To load a set of **Holidays** created for a different Zūm space:

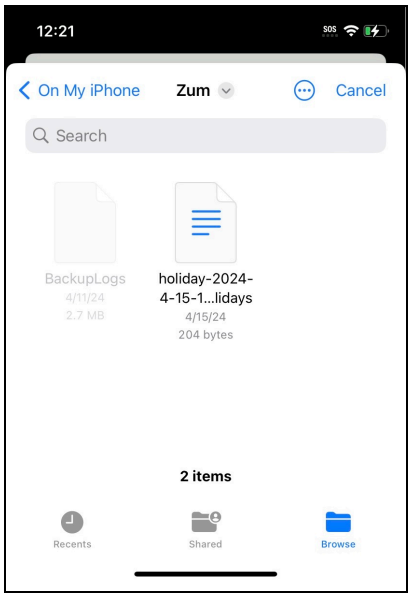
1. Ensure the **Scheduling** toggle is selected and then select **Holidays**.



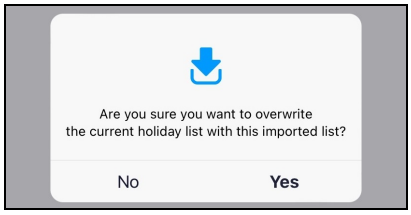
2. Select **Load Holidays**.



3. Review the list of recent files or navigate to where the **Holiday** file was saved.



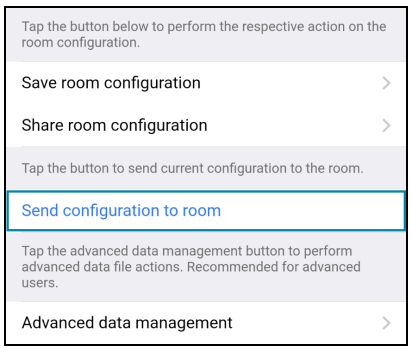
4. Select the desired file.
5. Select **Yes** to import the list and return to **Holidays**.



Send the Configuration

To send the configuration to the Zūm space:

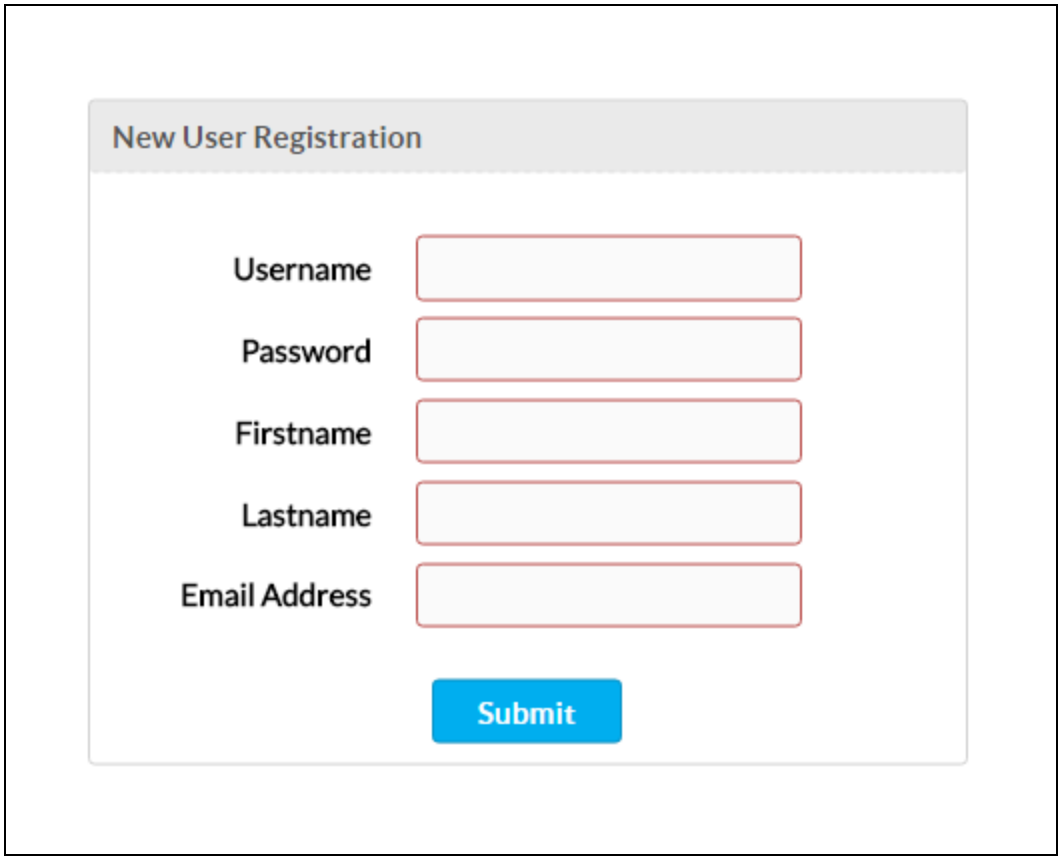
1. Navigate back to the Main screen.
2. Select **Send configuration to room**.



A confirmation window opens stating that the app will disconnect from the room. Select **OK** to continue or **Cancel** to close without sending the configuration. The Retrieving Data Map screen displays.

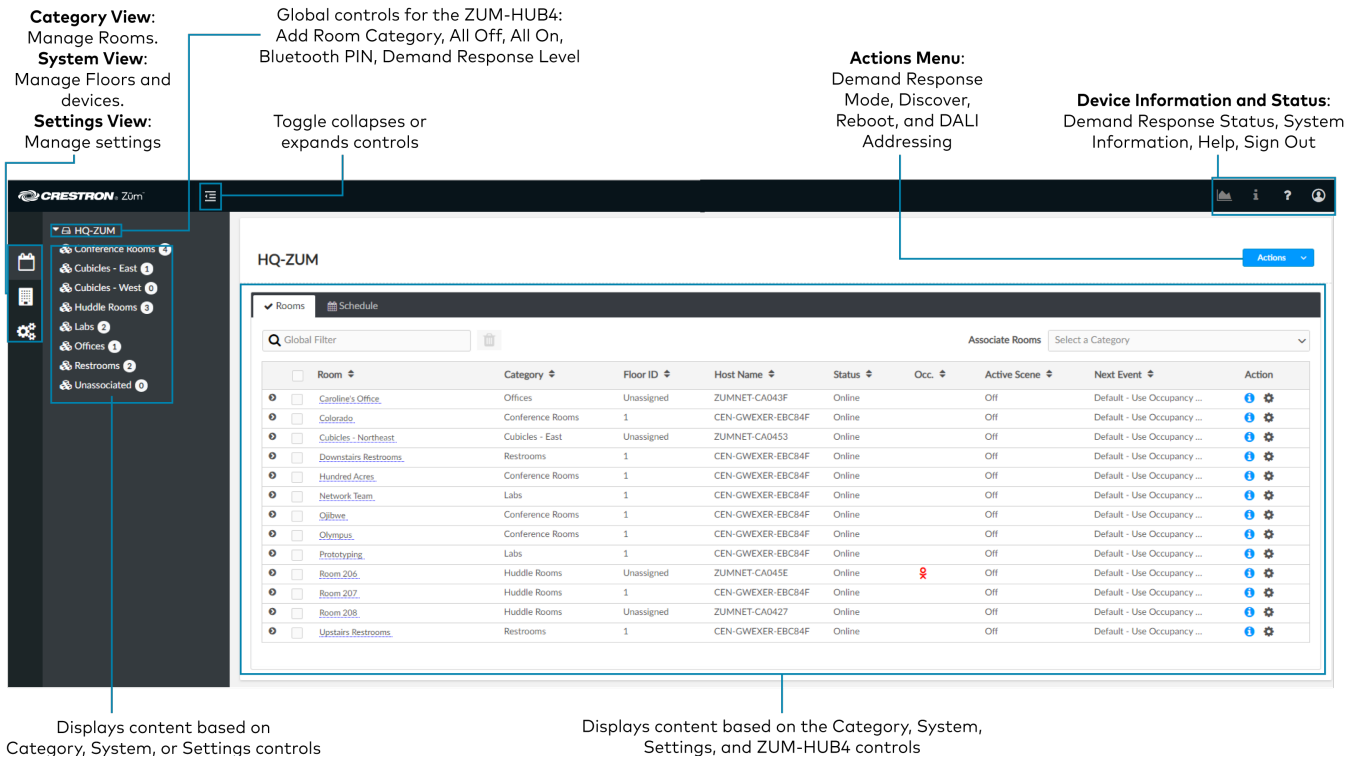
Hub Web Interface

The ZUM-HUB4 is configured using the web interface. Connect to the device by entering the device host name into a web browser. The host name is comprised of "ZUM-HUB4-" followed by the entire MAC address (for example, ZUM-HUB4-00107FCA1112)"ZUM-FL-" and the last 8 digits of the MAC address (for example, ZUM-FL-7F8764BF). The **New User Registration** screen is displayed during the first connection. Enter the user's **Username**, **Password**, **Firstname**, **Lastname**, and **Email Address**, and then select **Submit**.



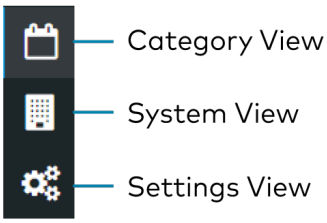
Web Interface Overview

The web interface gives users the ability to configure room behavior globally across the ZUM-HUB4, by Room Category, by Floor, and by Room.



Category View, System View, and Settings View

The web interface has three configuration sections: Category View to manage Rooms, System View to manage Floors and devices, and Settings View to manage settings.



Category View

The Category View lists room categories and rooms (in the **Rooms** tab) that have been discovered by the ZUM-HUB4. Room Categories are intended to be groupings of all rooms that are a similar type (for example, office or conference rooms) to provide easy monitoring and control. Rooms that have not been assigned to a Room Category are kept in the **Unassociated** category. Select the **Schedule** tab to edit default behavior for Day Patterns, Room States and Holidays.

- Manage Rooms on page 401
- Manage Room Categories

- Set the Bluetooth PIN on page 393
- Configure the Demand Response and Alarm Modes on page 396
- Schedule Room Behavior on page 407

System View

The System View lists Floors and rooms (in the **Rooms** tab) that are discovered by the ZUM-HUB4. Use the Hardware Management tab to view and edit device information, such as assigning a device to a floor.

- Manage Floors on page 417
- Set the Bluetooth PIN for a Floor on page 394
- Set the Demand Response Level for a Floor on page 398
- Manage Devices on page 418

Settings View

The Settings View manages the settings for the ZUM-HUB4, Users, External Control, and Commissioning. The Settings tab is open by default.

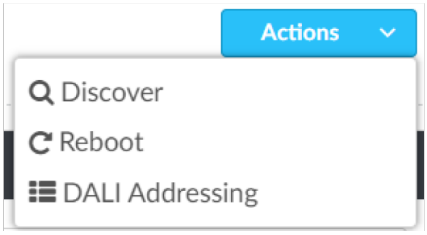
- Manage Settings on page 423
- Manage Users on page 430
- Manage External Controls on page 432
- Manage Commissioning on page 435

Global Settings and Actions for the ZUM-HUB4

Apply settings that effect all devices discovered by the ZUM-HUB4 regardless of the room, room category, or floor the device is assigned.

ZUM-HUB4 actions:

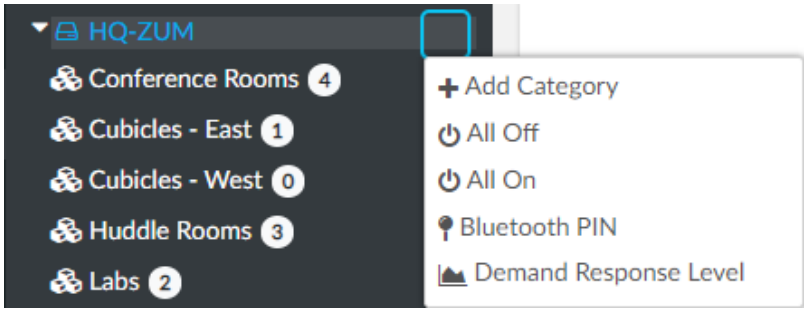
- Configure Demand Response and Alarm Mode on page 396
- Discover Rooms on page 386
- Restart ZUM-HUB4 on page 440
- DALI Addressing on page 387



ZUM-HUB4 controls:

- Add a Room Category on page 389
- Turn On/Off All Discovered Devices on page 391

- Set the Bluetooth PIN for All Discovered Devices on page 393
- Set the Demand Response Level for All Discovered Devices on page 396

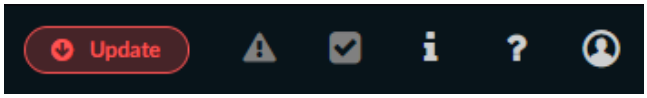


Navigation Toggle

Select the toggle icon to collapse or the Category View, System View, Setting Views, and the global ZUM-HUB4 settings.

Device Information and Status

View the Demand Response status, system alerts, help information, or sign out of the web interface. Refer to Review Device Information and Status on page 438.



Web Interface Configuration

After using the Zūm app to setup Zūm spaces and logging into web interface, configure the ZUM-HUB4:

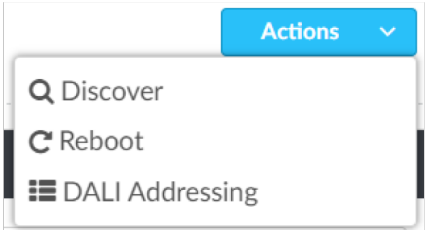
Related topics:

- Zūm App Configuration on page 284
- Hub Web Interface on page 381

Discover Rooms

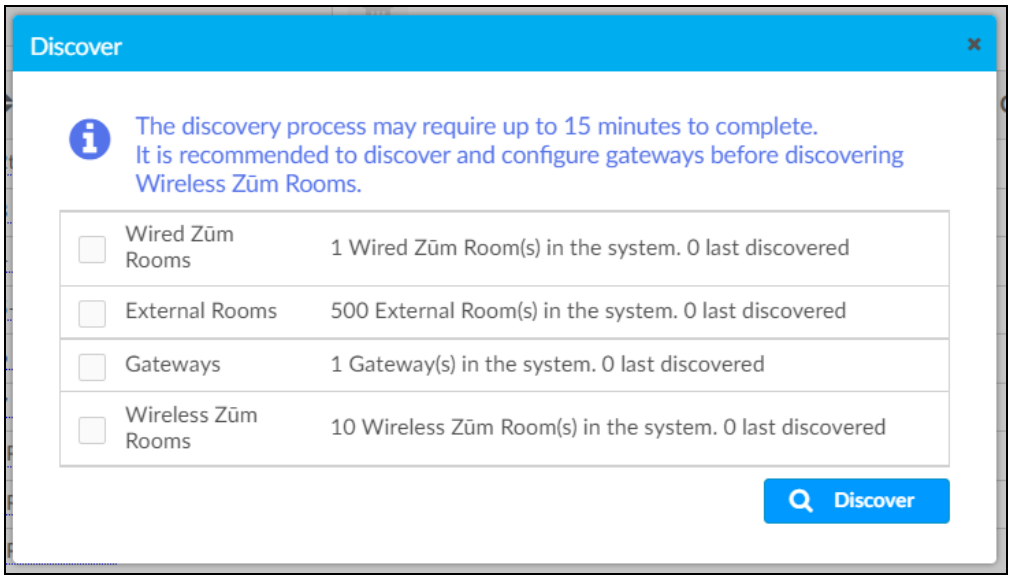
To discover rooms:

1. Select the **Actions** menu



2. Select **Discover**. The Discover window opens.
3. Select the type of rooms you want to discover.
4. Select **Discover** to Discover rooms or close the window.

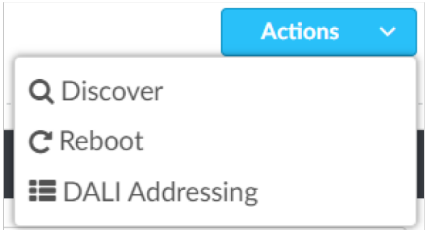
   During the discover process, a **Stop** button displays as an option to stop discovering.



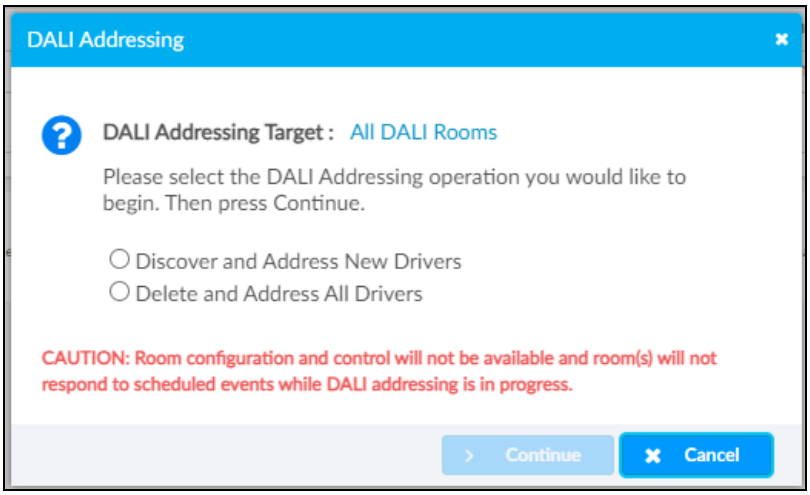
DALI Addressing

To discover rooms:

1. Select the **Actions** menu



2. Select **DALI Addressing**

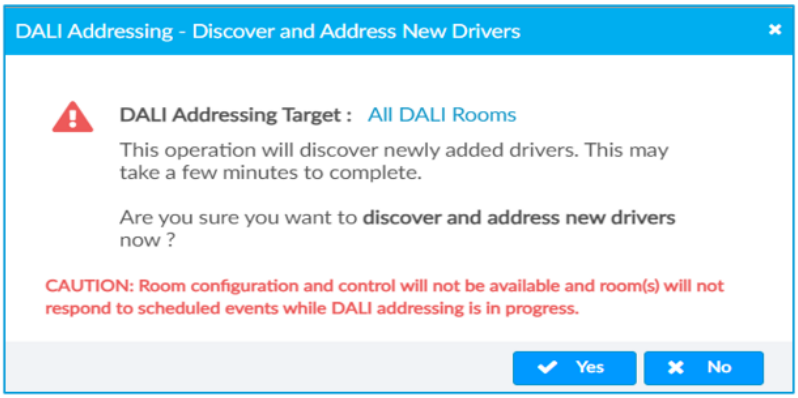


3. Select the desired operation and select **Continue**. A confirmation window opens.

   CAUTION: Room configuration and control will not be available and room(s) will not respond to scheduled events while DALI addressing is in progress.

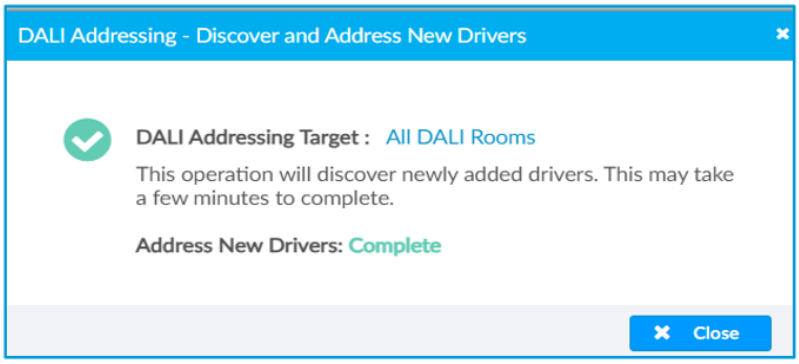
   - Discover and Address New Drivers
   - Delete and Address All Drivers

4. Select **Yes** to continue or **No** to go back to the DALI Addressing window.



5. When addressing is complete, select **Close**. DALI rooms will restart. During the restart, the rooms will not be accessible on the Zūm app.

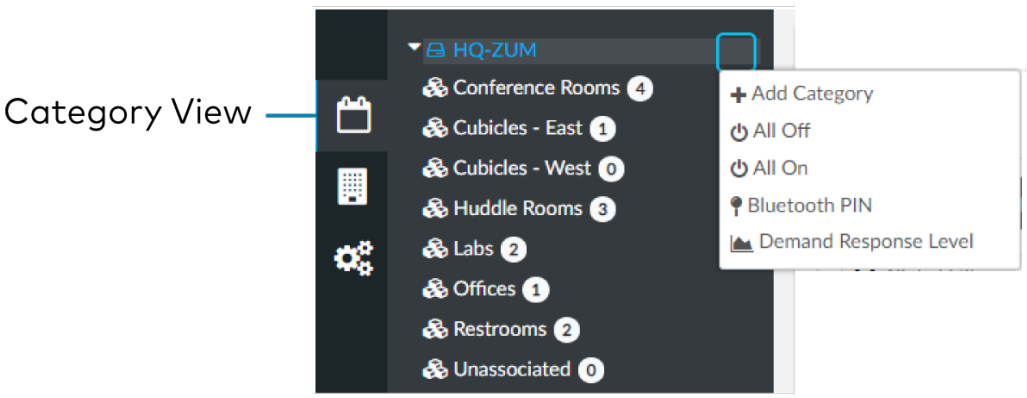
> **NOTE:** Any errors in DALI Addressing are reported in **System Information**. For more information, refer to Review Device Information and Status on page 438.



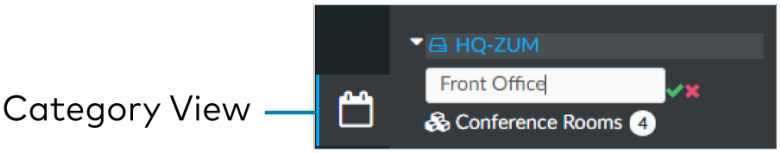
Add a Room Category

To create a room category:

1. Select the menu beside the ZUM-HUB4.



2. Select **Add Category**.
3. Type the name of the Room Category.
4. Select the green check icon to save the Room Category or the red x icon to cancel.

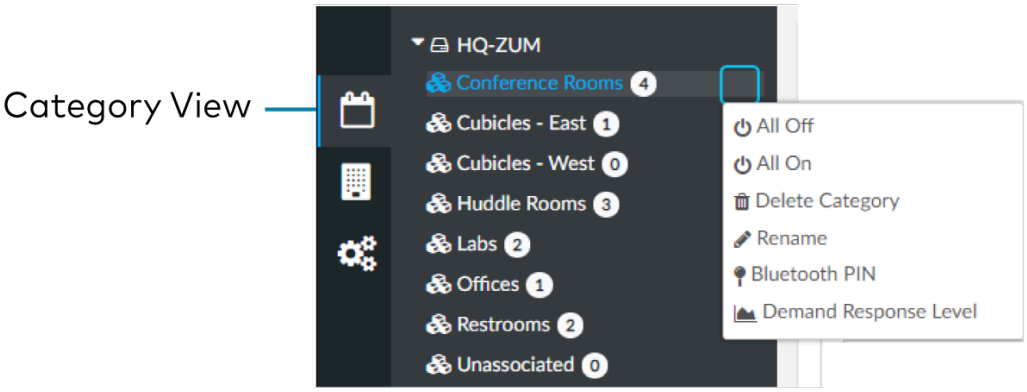


For more information about Room Categories, refer to Manage Room Categories.

Rename a Room Category

Room Category names can be renamed to provide a clear description of the connected rooms. To rename the Room Category name:

1. Select the menu beside the Room Category name.



2. Select **Rename**.
3. Select the green check icon to save the Room Category or the red x icon to cancel.

For more information about Room Categories, refer to Manage Room Categories.

Turn Rooms On or Off

Control a room by turning on/off the all rooms, all rooms in a Room Category, all rooms on a Floor, or by choosing a lighting scene for a specific room.

This section provides the following information:

- Turn On/Off All Discovered Devices on page 391
- Turn On/Off a Room Category on page 391
- Turn On/Off a Floor on page 392
- Turn On/Off a Room on page 392

Turn On/Off All Discovered Devices

To turn all devices on/off:

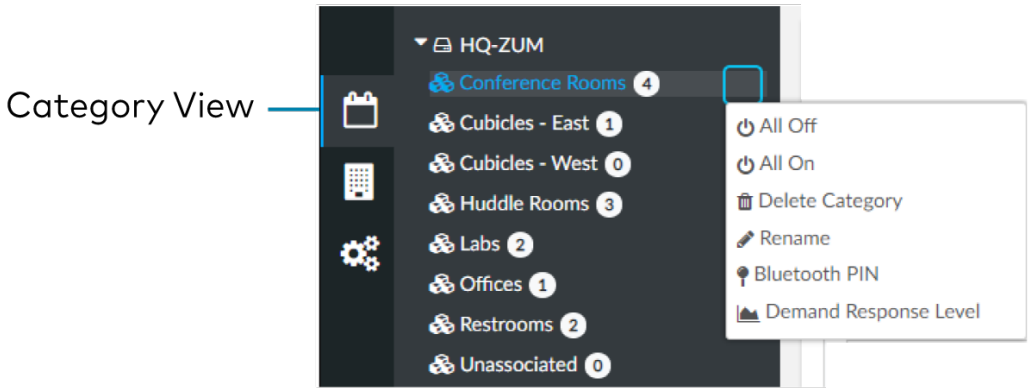
1. Open the **Category View**.
2. Select the menu beside the ZUM-HUB4.
3. Select **All Off** or **All On**.



Turn On/Off a Room Category

To turn all devices on/off in a Room Category:

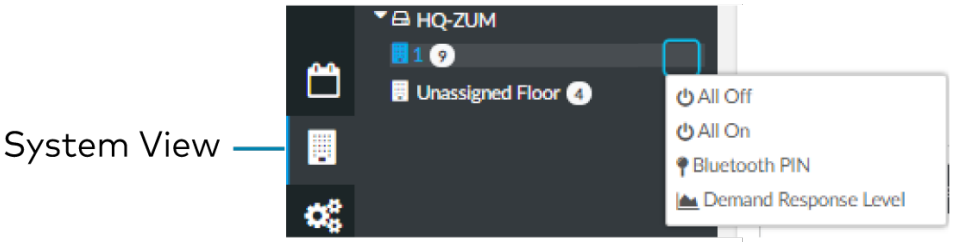
1. Open the **Category View**.
2. Select the menu beside the Room Category name.
3. Select **All Off** or **All On**.



Turn On/Off a Floor

To turn all devices on/off on a Floor:

1. Open the **System View**
2. Select the menu beside the Floor name.
3. Select **All Off** or **All On**.



Turn On/Off a Room

You can turn a specific room on/off using the Control Room window, but this option provides more detailed settings. Refer to Control Devices in a Room on page 404.

Set the Bluetooth PIN

The Bluetooth PIN enables a mobile device with the Zūm app to connect to the Zūm Wired Keypad or the Zūm Network Bridge. The Bluetooth PIN can be set for all discovered devices, all devices in a Room Category, all devices on a Floor, or all devices in a Room.

NOTES:

- Once a Bluetooth PIN is set for a device, it remains until manually changed. For example, if a device moves to a different room or floor, the Bluetooth PIN does not automatically inherit the PIN set for the new location. The device keeps the PIN previously set.
- For Primary load controllers running firmware 3.6.18 and higher, the default PIN is 246800. For firmware lower than 3.6.18, the default PIN is 2468.

This section provides the following information:

- Set the Bluetooth PIN for All Discovered Devices on page 393
- Set the Bluetooth PIN for a Room Category on page 393
- Set the Bluetooth PIN for a Room on page 394
- Set the Bluetooth PIN for a Floor on page 394

Set the Bluetooth PIN for All Discovered Devices

To set the Bluetooth PIN for all devices:

1. Open the **Category View**.
2. Select the menu beside the ZUM-HUB4.
3. Select **Bluetooth PIN**.
4. Set the PIN (0 to 9999).



5. Select the green check icon to save the PIN or the red x icon to cancel.

Set the Bluetooth PIN for a Room Category

To set the Bluetooth PIN for devices in a Room Category:

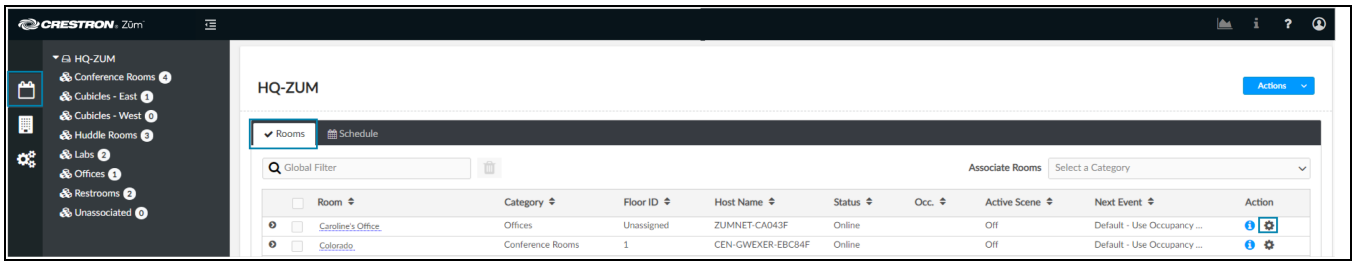
1. Open the **Category View**.
2. Select the menu beside the Room Category name.
3. Select **Bluetooth PIN**.
4. Set the PIN (0 to 9999).



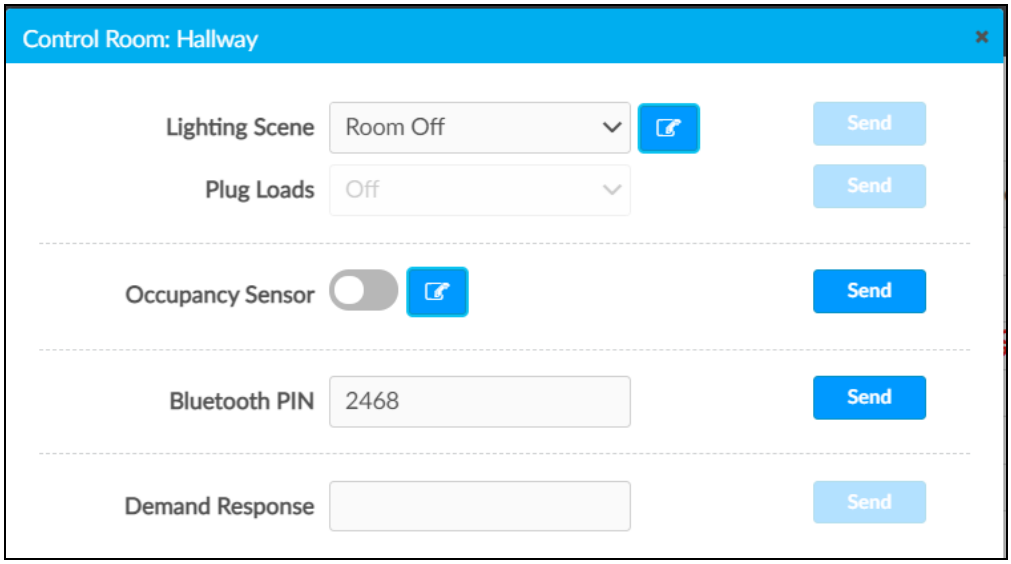
5. Select the green check icon to save the PIN or the red x icon to cancel.

Set the Bluetooth PIN for a Room

To set the Bluetooth PIN for devices in a Room:



1. Open the **Category View** and the **Room** tab.
2. Select the gear icon to open the Control Room window.



3. For Bluetooth PIN, set the PIN (0 to 9999).
4. Select **Send** to send changes to the room, or close the Control Room window to discard unsaved changes.

Set the Bluetooth PIN for a Floor

To set the Bluetooth PIN for devices on a floor:

1. Open the **System View**.
2. Select the menu beside the Floor name.
3. Select **Bluetooth PIN**.

4. Set the PIN (0 to 9999).



5. Select the green check icon to save the PIN or the red x icon to cancel.

Configure the Demand Response and Alarm Modes

The Demand Response (also referred to as Load Shedding on the Zūm App) and Alarm modes are used in emergency situations to override the current load settings in the room when configured with a GLS-SIM device. Demand Response controls reduce the load levels when the GLS-SIM receives a demand response command from the utility company. Alarm mode controls the load levels whenever an alarm, such as a fire alarm, is triggered.

Demand Response mode and Alarm mode can be manually controlled by accessing the **Override Configuration** section of the Settings View. (Refer to Override Configuration on page 427.) Demand Response levels can be set for all discovered devices, all devices in a Room Category, all devices on a Floor, or all devices in a Room.

> **NOTE:** Once a Demand Response level is set for a device, the level will not change based on inheritance settings. For example, if a device moves to a different room or floor, the Demand Respond level does not automatically inherit the level set for the new location.

This section provides the following information:

- Configure Demand Response and Alarm Mode on page 396
- Set the Demand Response Level for All Discovered Devices on page 396
- Set the Demand Response Level for a Room Category on page 397
- Set the Demand Response Level for a Room on page 397
- Set the Demand Response Level for a Floor on page 398
- View Demand Response Mode Status and Alarm Mode Status on page 399

Configure Demand Response and Alarm Mode

To configure Demand Response mode and Alarm mode, refer to Override Configuration on page 427.

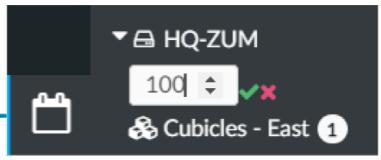
Set the Demand Response Level for All Discovered Devices

To set the Demand Response Level for all devices:

1. Open the **Category View**.
2. Select the menu beside the ZUM-HUB4.
3. Select **Demand Response** Level.



4. Set the light level (0 to 100).

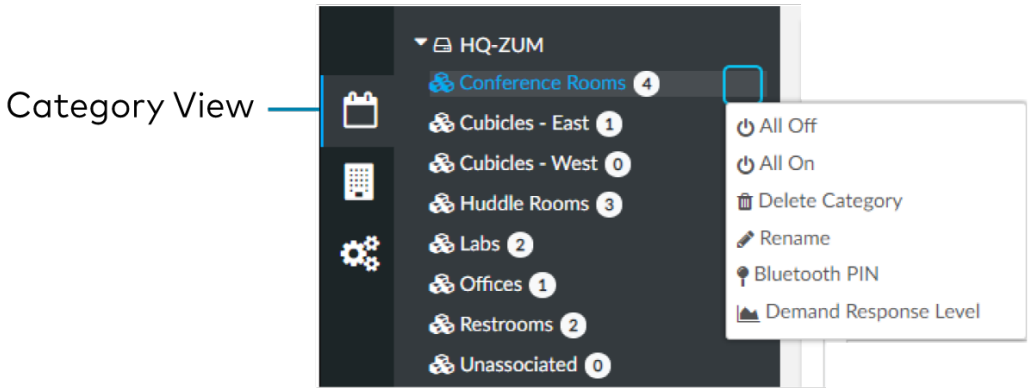


5. Select the green check icon to save the level or the red x icon to cancel.

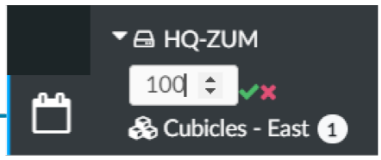
Set the Demand Response Level for a Room Category

To set the Demand Response Level for devices in a Room Category:

1. Open the **Category View**.
2. Select the menu beside the Room Category name.
3. Select **Demand Response** Level.



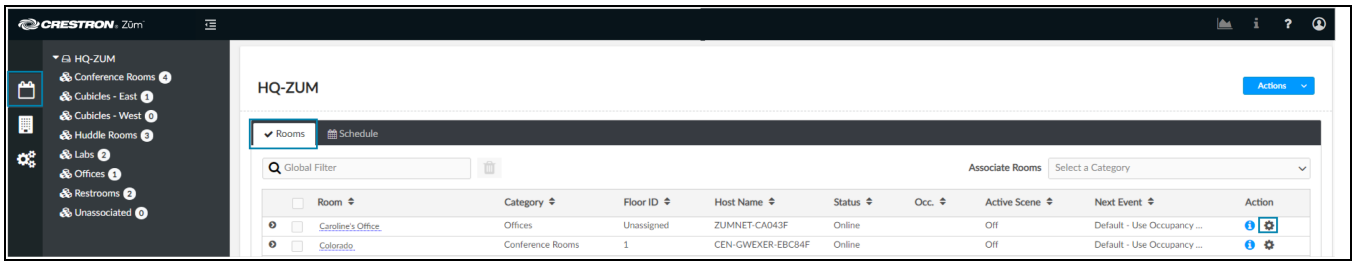
4. Set the light level (0 to 100).



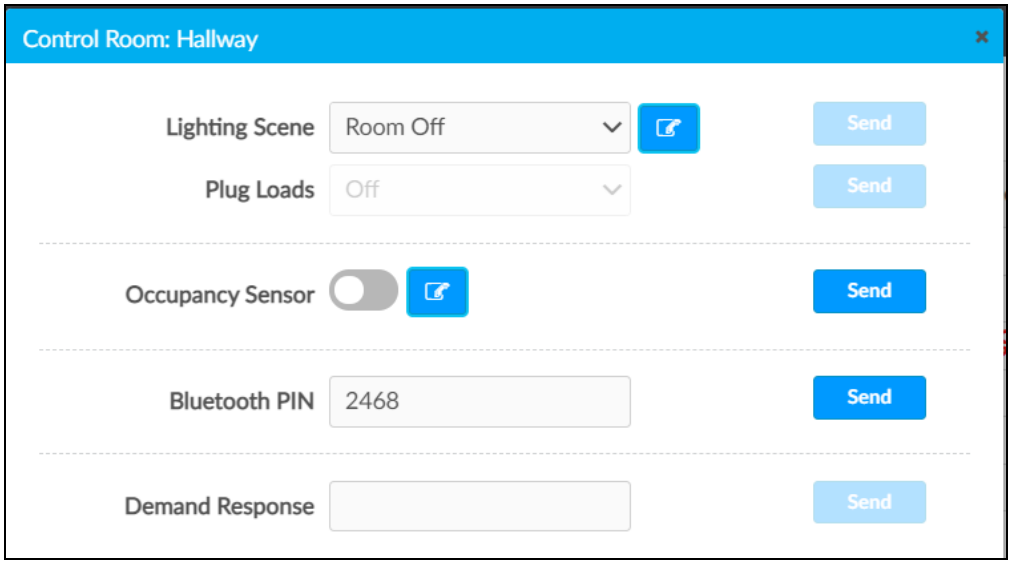
5. Select the green check icon to save the level or the red x icon to cancel.

Set the Demand Response Level for a Room

To set the Demand Response Level for devices in a Room:



1. Open the **Category View** and the **Rooms** tab.
2. Select the gear icon to open the Control Room window.

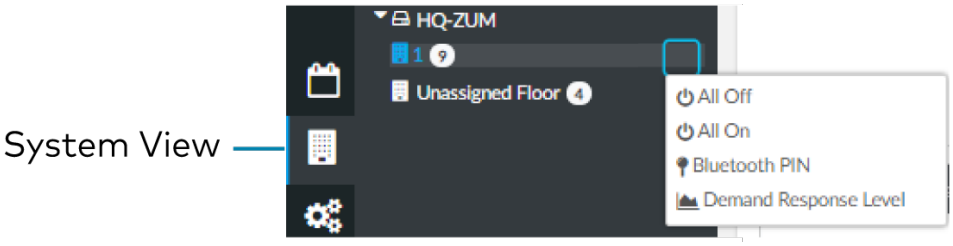


3. For Demand Response, set the level (0 to 100).
4. Select **Send** to send changes to the room, or close the Control Room window to discard unsaved changes.

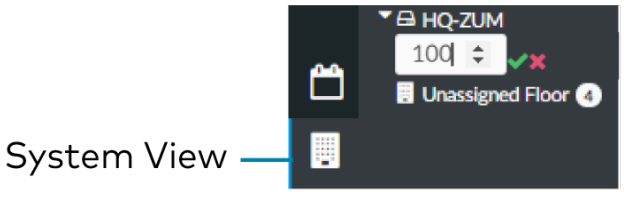
Set the Demand Response Level for a Floor

To set the Demand Response Level for devices on a Floor:

1. Open the **System View**.
2. Select the menu beside the Floor name.
3. Select **Demand Response** Level.



4. Set the light level (0 to 100).



5. Select the green check icon to save the level or the red x icon to cancel.

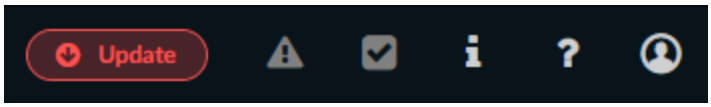
View Demand Response Mode Status and Alarm Mode Status

To view the status of Demand Response mode and Alarm mode, refer to Review Device Information and Status on page 438.

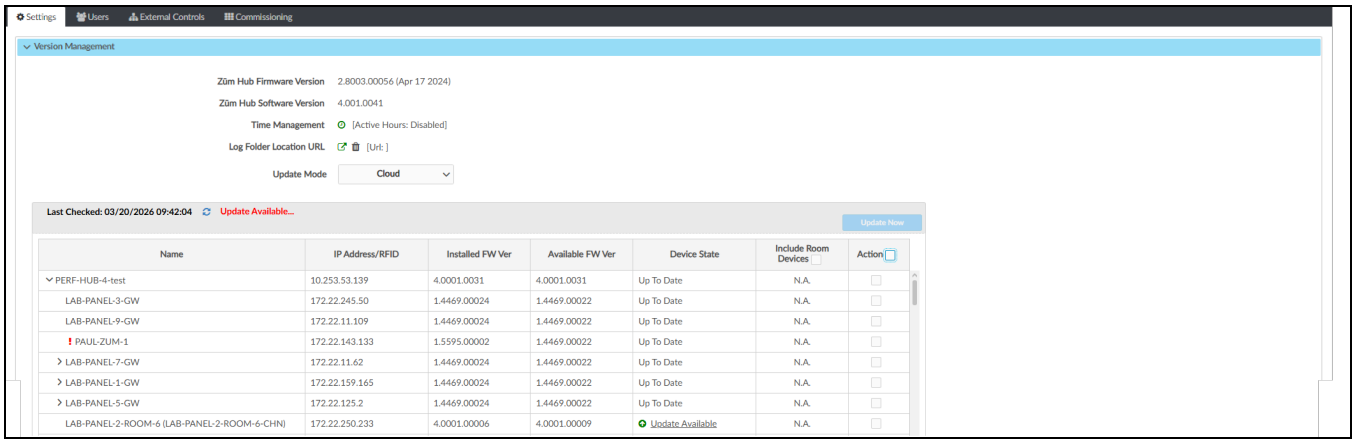
Update Devices

Update the ZUML-HUB4 or the connected devices using the **Version Management** section. **Version Management** is located in the Settings View under the **Settings** tab. **Version Management** can also be accessed by selecting the red **Update** button in the Device Information and Status toolbar. **Update** only displays when an update is available for the ZUM-HUB4 or the connected devices.

For more information using the Device Information and Status toolbar, refer to Review Device Information and Status on page 438.



For more information using the Settings View, refer to Manage Settings on page 423.



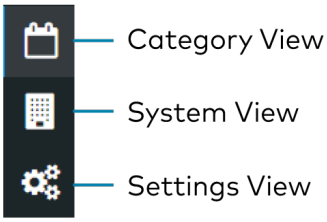
Version Management

To update devices from the Settings View:

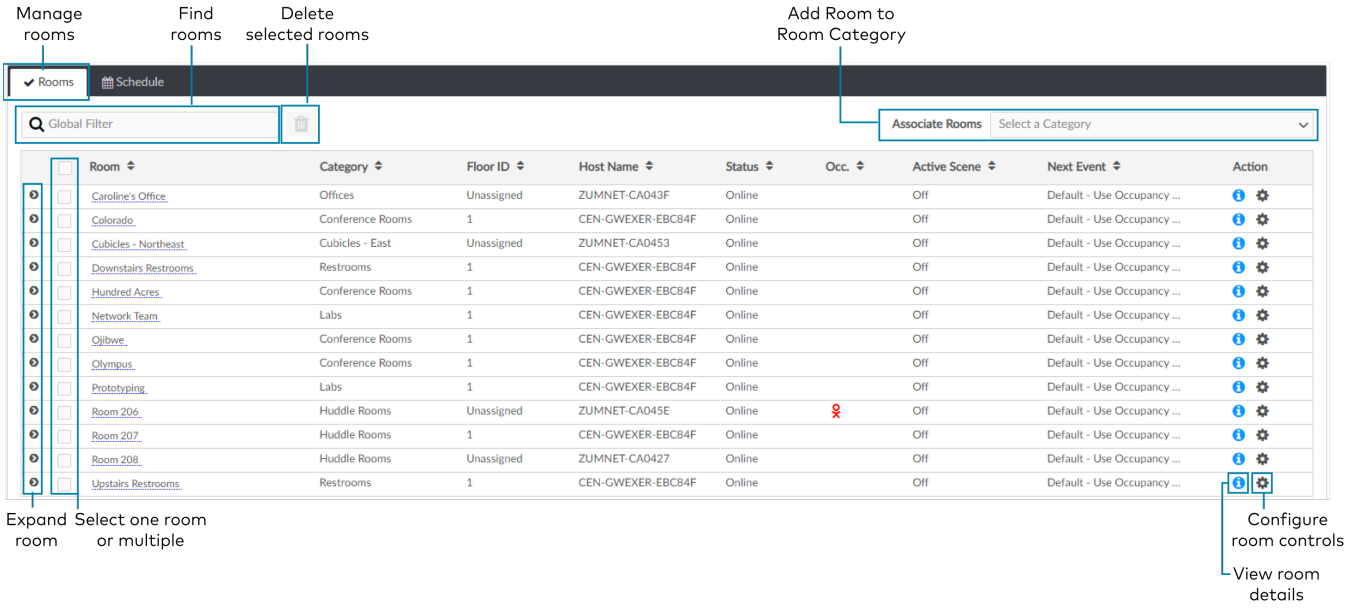
1. Open **Settings View**.
2. Select **Settings**.
3. Select **Version Management**.
4. From Update Method, select **Cloud** or **Removeable Media**.
5. If using removeable media, insert the device.
6. Check the box in the **Action** column for the devices whose firmware you want to update, or check the select all box beside **Action** to update all devices.
7. Select **Update Now**.

Manage Rooms

The **Rooms** tabs lists the Rooms discovered by the ZUM-HUB4 or the rooms assigned to a selected Room Category. Use the **Rooms** tab search for a room, delete rooms, reassign room categories, edit a room name, view room details, or control a room. Access the Rooms tab through either the Category View or the System View tabs.

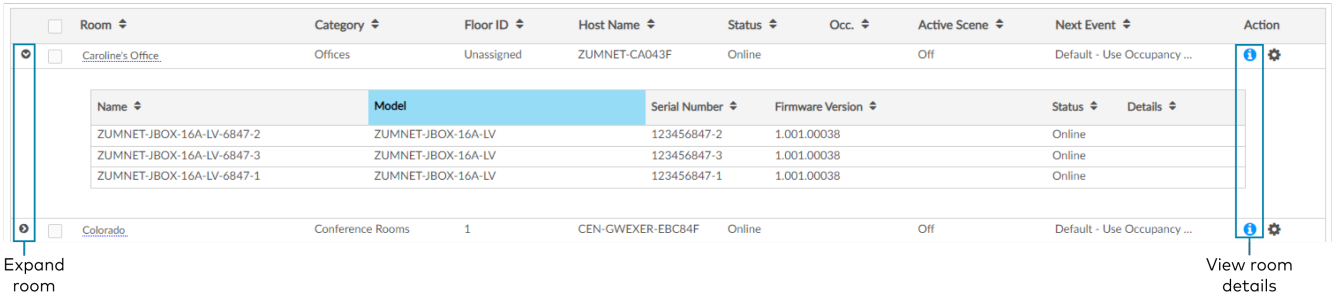


Rooms must be discovered by the ZUM-HUB4 before performing any procedure in this section. Refer to Discover Rooms on page 386.



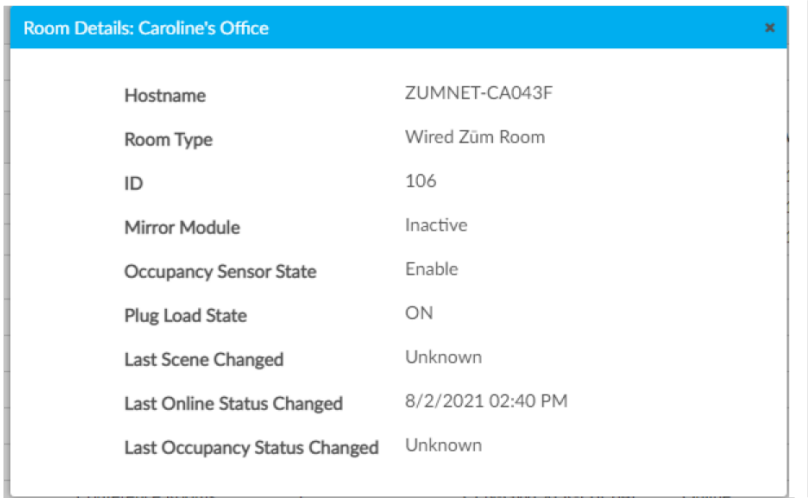
Review Rooms

The Room list displays room information including built-in components.

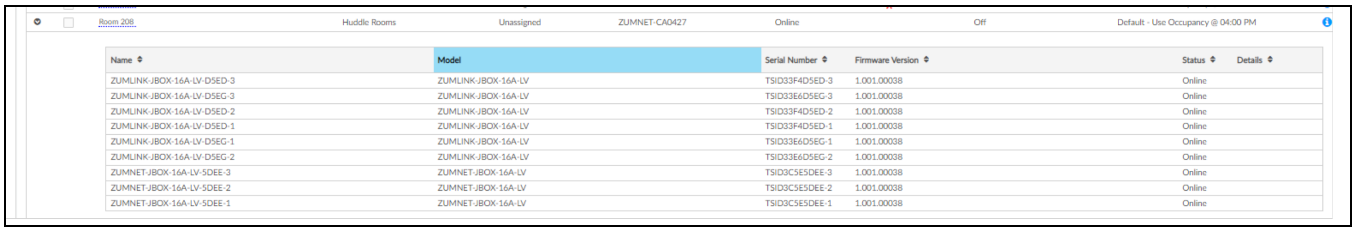


- Room: Displays the room name
- Category: Displays the Room Category

- Floor ID: Displays the Floor ID. The Floor ID can be set in the Hardware Management tab of the Systems View. A Floor ID cannot be assigned to an External Room.
- Host Name: Displays the Host Name of room's main device.
- Status: Displays the room status Online of Offline.
- Occ: Identifies a room with an Occupancy Sensor. The Occupancy sensor symbols ( ) displays when occupancy is detected.
- Active Scene: Displays the current Scene.
- Next Event: Displays the upcoming event.
- Information ( ): Displays room details.
    - Hostname: Displays the Hostname.
    - Room Type: Wired, Wireless, or External room
    - ID: Displays the IP ID for a Wired room, the RF ID for a Wireless room, and the Module ID for an External room
    - Mirror Module: Indicates whether the room is associated with a Mirror Room
    - Occupancy Sensor State: Displays if the Occupancy Sensor is Enabled or Disabled
    - Plug Load State: Displays if the Plug Load is ON or OFF
    - Last Scene Changed: Displays the date and time of the last Scene change.
    - Last Online Status Changed: Displays the date and time of the last Online Status change
    - Last Occupancy Status Changed: Displays the date and time of the last Occupancy Status change



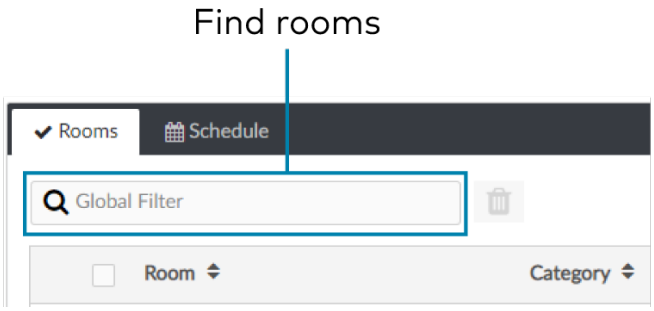
Select the right arrow button to expand the room to display information regarding the components. The Name, Model, Serial Number, Firmware Version, and Status of the devices are defined.



Find a Room on the ZUM-HUB4

For a ZUM-HUB4 that has a large number of rooms, use the search feature to find a room name. To search for a room:

1. Select the ZUM-HUB4 or a Room Category.
2. Type in the Global Filter search bar. The filter populates results matching content in any of the table fields (Room, Category, Floor ID, Host Name, Status, Occ., Active Scene, or Next Event).

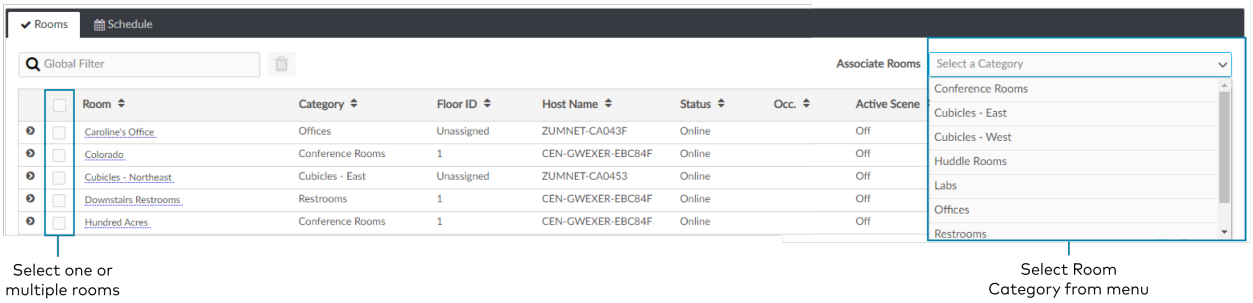


3. Select the desired room name.

Add a Room to a Room Category

To move a room to a different Room Category:

1. Select the ZUM-HUB4 or a Room Category.
2. Select the desired room or rooms.
3. Select the **Associate Rooms** menu.
4. Select the desired Room Category.



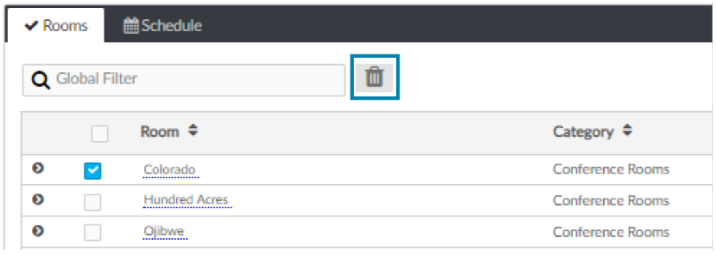
5. A confirmation dialog opens. Select **Yes** to add the room(s) the Room Category or **No** to cancel.

Delete a Room

To delete a room:

1. Select the ZUM-HUB4 or a Room Category.
2. Select the desired room or rooms.

3. Select the trashcan icon to delete the room.

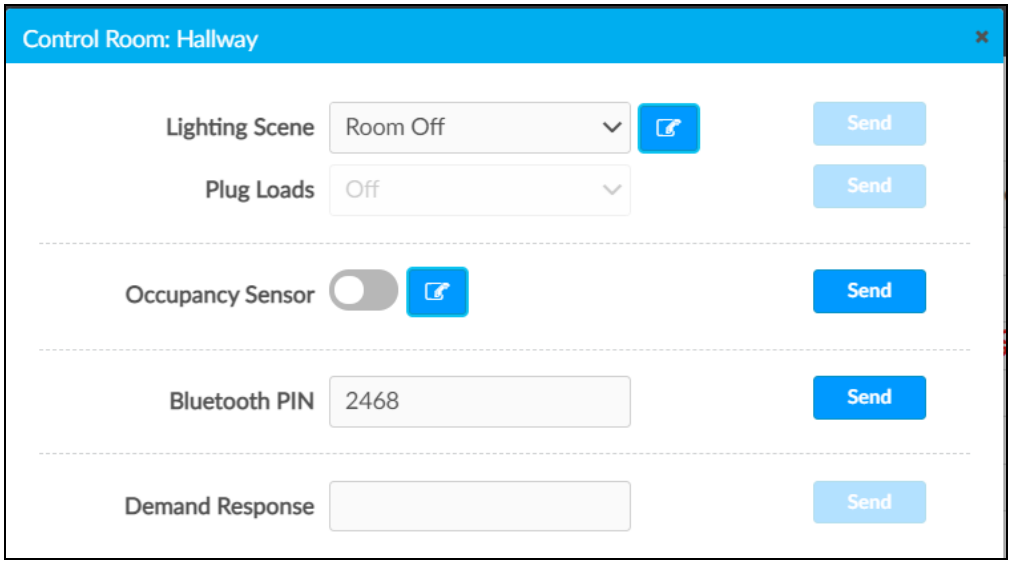


4. A confirmation dialog opens. Select **Yes** to add the room(s) the Room Category or **No** to cancel.

Control Devices in a Room

Open the Control Room window to select a Lighting Scene, change the state of Plug Loads, enable or disable the occupancy sensor, set the Bluetooth PIN, or set the Demand Response level for a specific room.

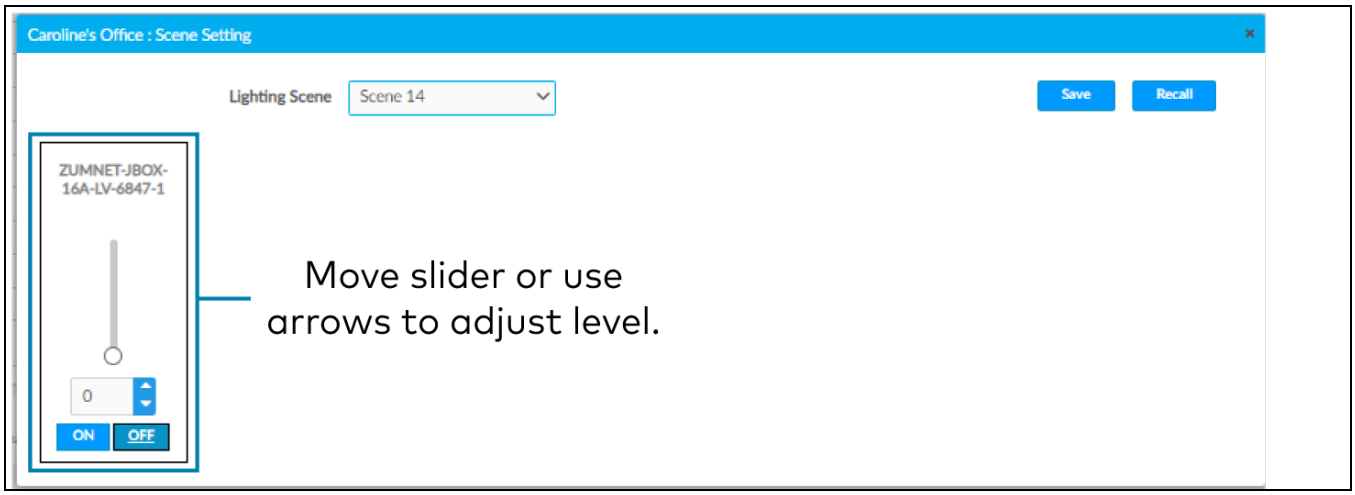
1. Select the ZUM-HUB4 or a Room Category.
2. For the desired room, select the gear icon to open the Control Room options.



Lighting Scene

To select the Lighting Scene set in the Room:

1. Select a Lighting Scene from the drop-down menu.
2. Select the edit button to access the devices in the room.
3. To edit the light levels, move the slider or use the arrows. For switches, select **ON** or **OFF**.
4. Select **Send** to send changes to the room, or close the Control Room to discard unsaved changes.



Plug Loads

This setting is only active for rooms with a Plug Load Controller.

1. Select **On** or **Off** from menu to turn the load on or off.
2. Select **Send** to send changes to the room, or close the Control Room to discard unsaved changes.

Occupancy Sensor

To enable or temporarily disable occupancy sensing:

1. Select the toggle to enable or temporarily disable occupancy sensing.

   When disabling occupancy sensing, set the amount of time the occupancy sensor is disabled. The sensor may be disabled for up to 1,415 minutes or approximately 23 hours.

2. Select **Send** to send changes to the room, or close the Control Room to discard unsaved changes.

Bluetooth PIN

Set the Bluetooth PIN for Bluetooth devices in a room.

1. Set the PIN (0 to 9999)
2. Select **Send** to send changes to the room, or close the Control Room to discard unsaved changes.

Refer to Set the Bluetooth PIN on page 393 for more information.

Demand Response Level

Set the Demand Response Level for devices in a room.

1. Set the level (0 to 100).
2. Select **Send** to send changes to the room, or close the Control Room to discard unsaved changes.

Refer to Configure the Demand Response and Alarm Modes on page 396 for more information.

Control Mirror Room or External Room Modules

Mirror Rooms modules allow users to view and control a Zūm space with a non Zūm control processor. External Rooms modules allow users to incorporate non Zūm devices into a Zūm space and control them as if they were Zūm devices. Mirror Room modules and External Rooms modules report device level information through custom programming.

To control External Rooms and the devices in them, follow the procedures in Control Devices in a Room on page 404. For more information, refer to Manage External Controls on page 432.

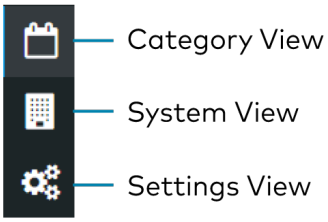
Schedule Room Behavior

> **NOTE:** To define whether a Zūm space follows the Hub schedule or the local Zūm space schedule, refer to Schedule Mode on page 426.

The Schedule tab displays and allows you to edit the device calendar, Day Patterns, Room States, Holidays, and the astronomical clock. The calendar displays a color-coded month view that identifies the Day Pattern that is assigned for each day of the month. The calendar is used to view and change which Day Pattern is set on a given day.

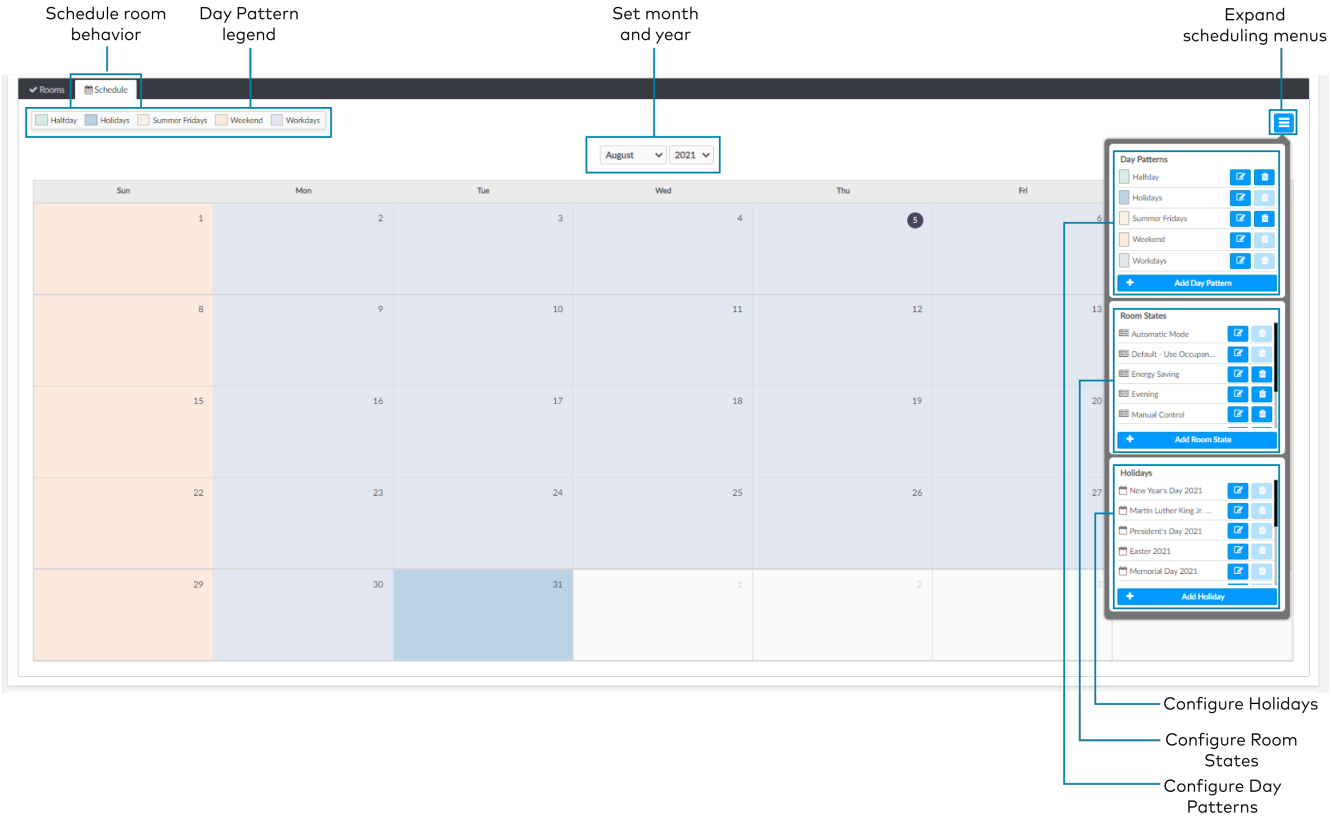
By default, weekdays are assigned the Workday Day Pattern and weekends are assigned the Weekend Day Pattern. Holidays that are enabled in Holidays on page 415 are added to the calendar automatically. Refer to the Day Pattern legend to match the color with the associated Day Pattern. To assign a Day Pattern:

1. Open the Category View.



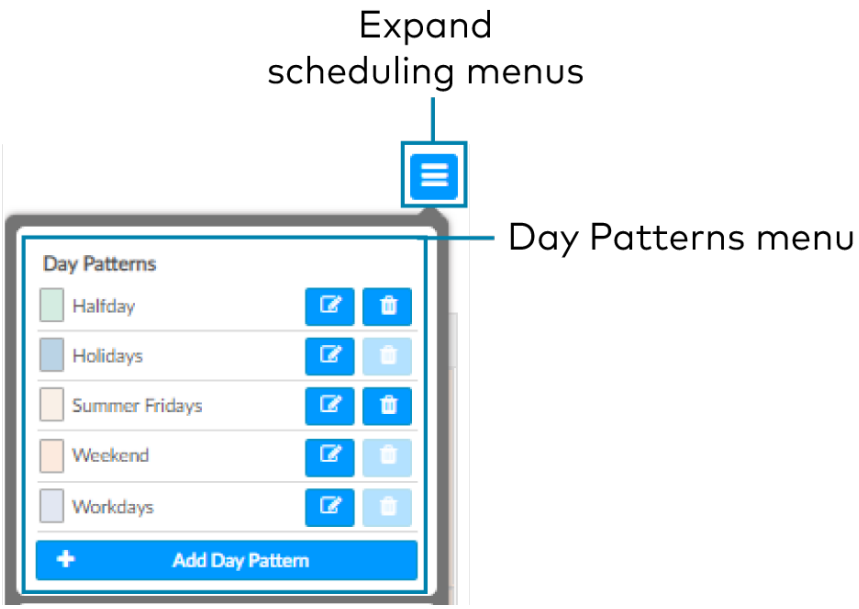
2. Select the **Schedule** tab.
3. Select the desired date in the calendar. If necessary, change the month and year using the drop-down menus, and then select the desired date.

   A menu displays a list of the available Day Patterns.
4. Select the desired Day Pattern.



Day Patterns

A Day Pattern consists of various Room States that are assigned throughout the day. Each category can be assigned a different schedule of room states in a given day pattern. To access the Day Patterns menu, select the Schedule tab, and then select the hamburger menu ☰ to expand the scheduling menus.



Add Day Patterns

Select **Add Day Pattern** and enter the desired Day Pattern name. Select the check icon to save the name, or select the x icon to cancel.

Delete Day Pattern

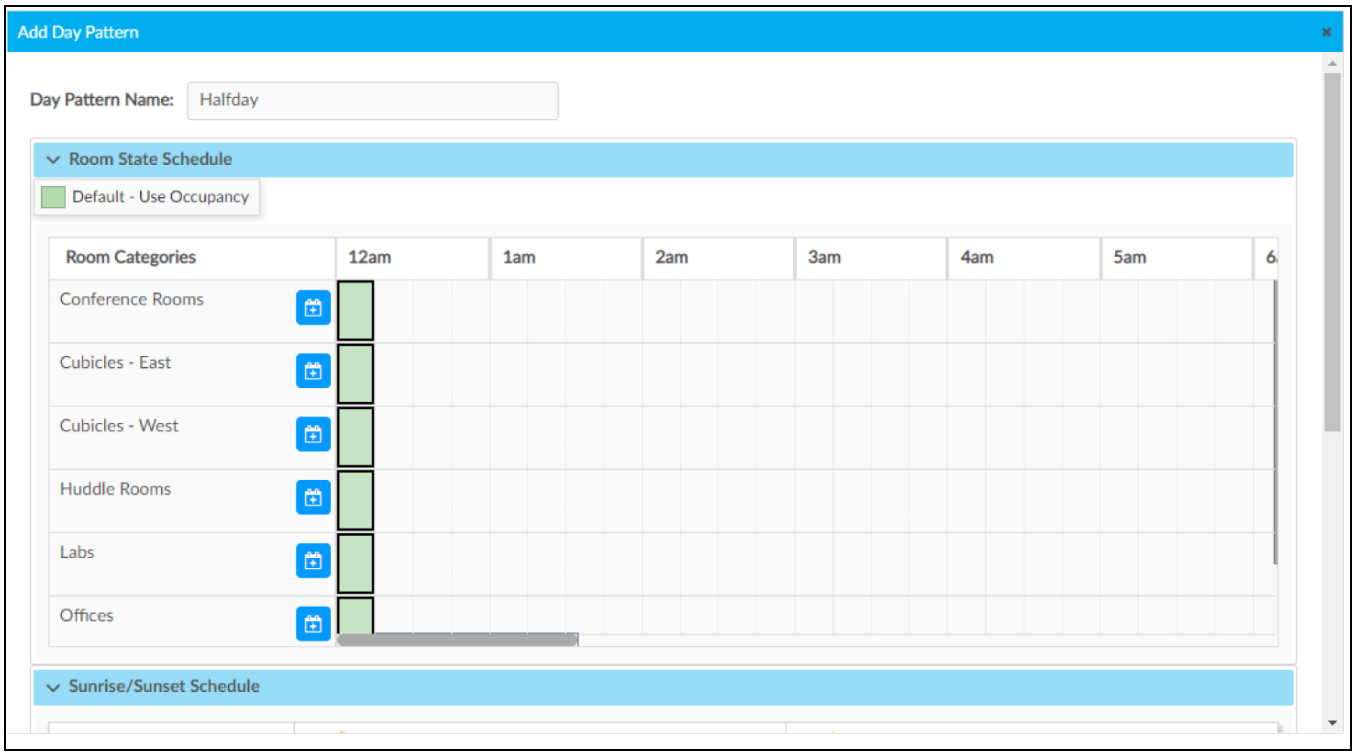
To delete a Day Pattern:

1. Select the trashcan icon to delete a Day Pattern. A Confirmation window opens.
2. Select **Yes** to delete the Day Pattern, or select **No** to keep the Day Pattern.

> **NOTE:** A Default Day Pattern (such as Holidays, Weekend, and Workdays) cannot be deleted.

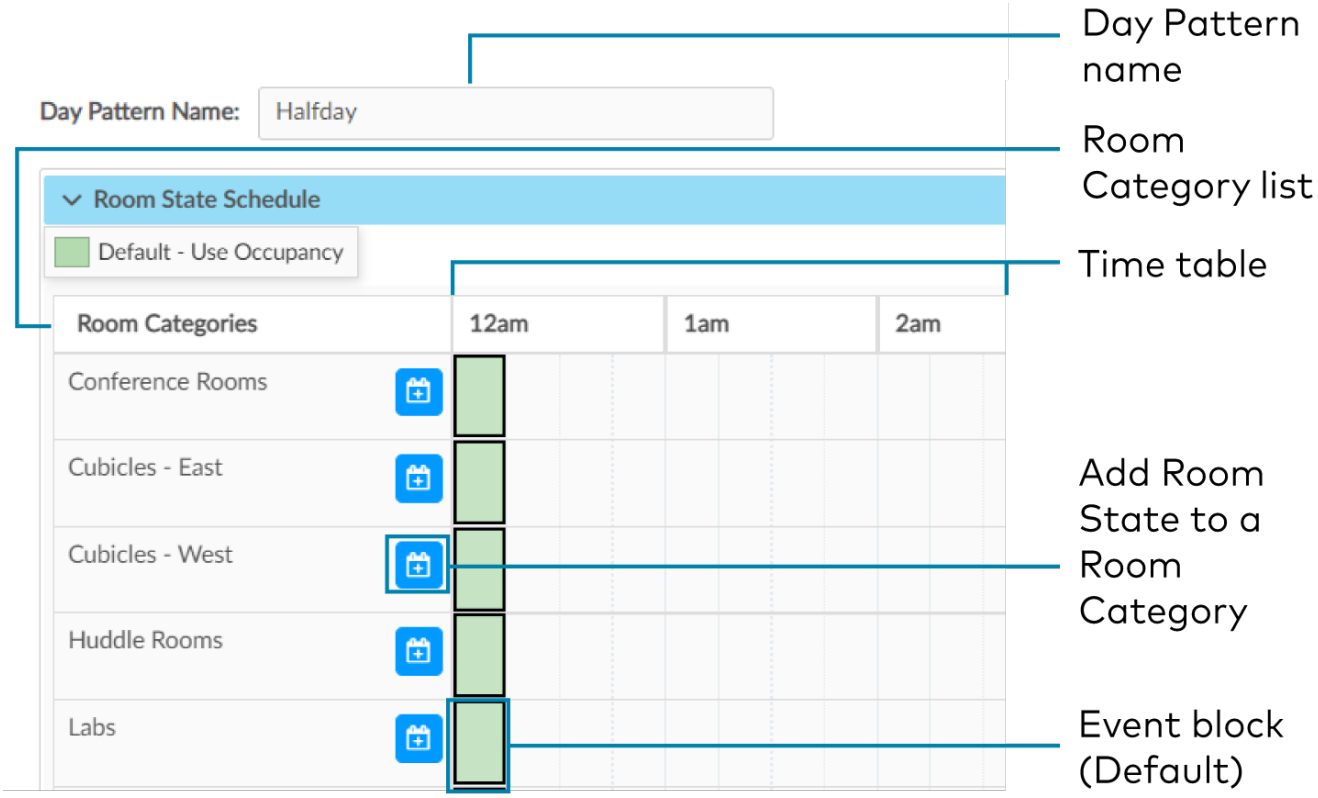
Configure Day Patterns

After adding a Day Pattern, the **Add Day Pattern** window opens. Alternatively, selecting the edit button beside a Day Pattern opens the **Edit Day Pattern** window. These windows display two menus: Room State Schedule and Sunrise/Sunset Schedule. The Room State Schedule opens by default.



Room State Schedule

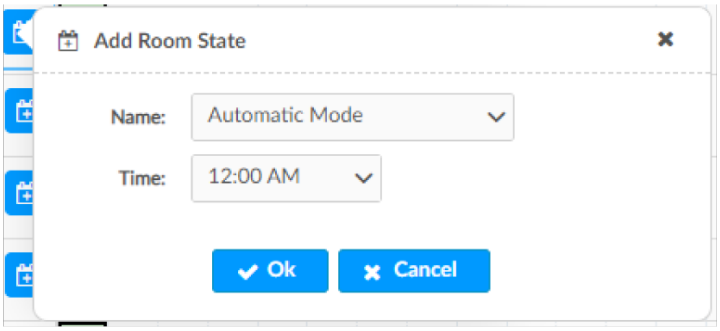
Use the Room State Schedule window to modify the pattern of Room States in each Category for the selected Day Pattern.



To add a Room State to a Room Category:

1. Select the calendar button to add a Room State. The **Add Room State** window opens.
2. Select the desired Room State from the Name drop-down menu. The default Room State selections are examples of possible Room State applications and can be edited as needed.
    - Automatic Mode
    - Default - Use Occupancy
    - Energy Saving
    - Manual Control
    - Morning Turn Off
    - Morning Turn On
    - Sweep Off
3. Select the desired Room State start time from the Time drop-down menu: 12 AM - 11:45 PM.

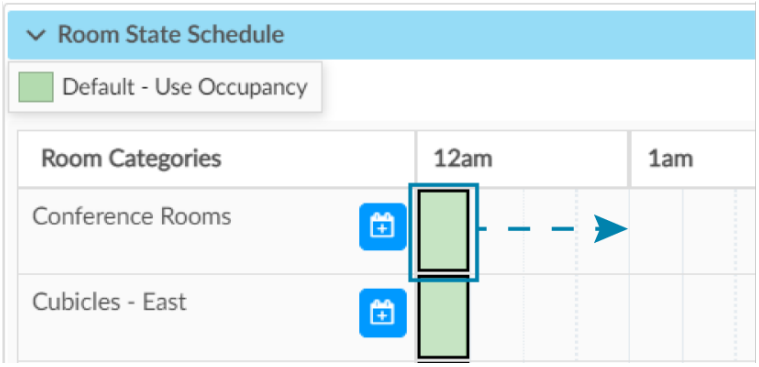
4. Select **Ok** to save the room state or **Cancel** to close the window without saving.



To edit a default or custom event block:

- Change the assigned Room State:
  1. Select an event block to open a dialog box.
  2. Select the edit button and choose a new Room State from the drop-down menu.
  3. Select **Ok** to save the changes or **Cancel** to close the window without saving.
- Change the assigned time:

  Select and drag the event block to the desired time within the time table.

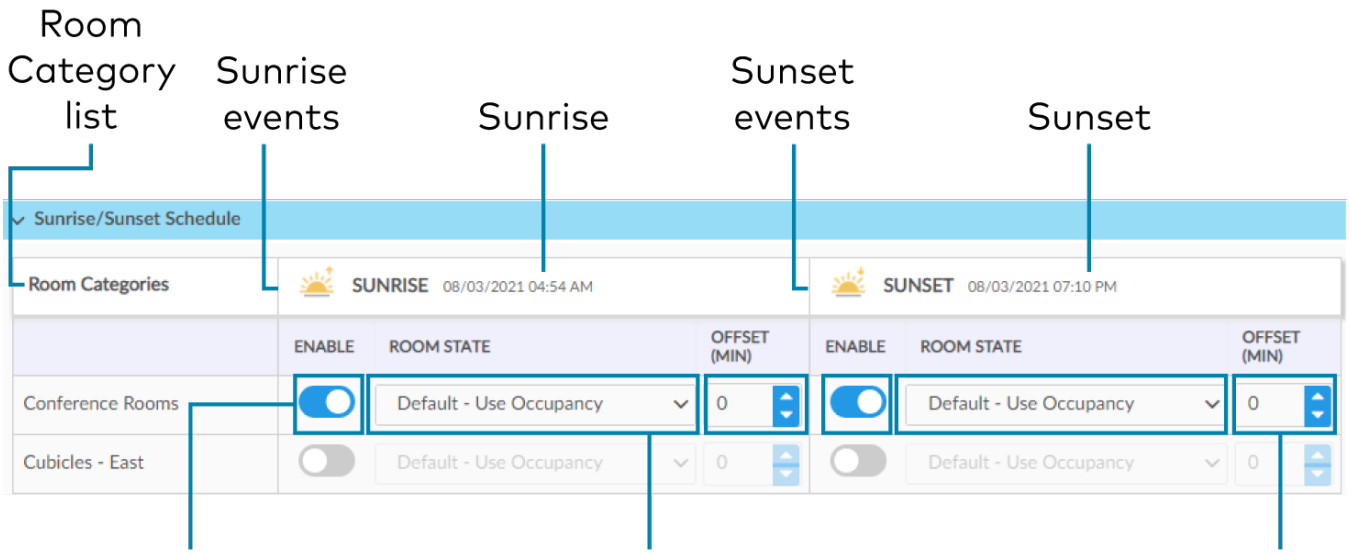


Click and drag the event block to the desired time along the time table.

Sunrise/Sunset Schedule

The ZUM-HUB4 determines sunrise and sunset based on the location set in Location on page 424 settings. The Sunrise/Sunset Schedule assigns a Room State to a Room Category based on the Day Pattern and the sunrise or sunset. Only one Sunrise event and one Sunset event can be set for a Room Category per day. To assign Room States based on the sunrise or sunset:

1. Expand the Sunrise/Sunset Schedule menu.
2. Locate the Room Category.
3. Adjust the settings in the Sunrise events column and/or the Sunset events column.
   - **ENABLE:** Select the **ENABLE** toggle to allow sunrise or sunset to trigger an event.
   - **ROOM STATE:** Select the a Room State from the drop-down menu.
   - **OFFSET (MIN):** If necessary, set an offset duration in minutes. The offset can be positive so the Room State occurs after sunrise or sunset or negative so that the Room State occurs before sunrise or sunset.



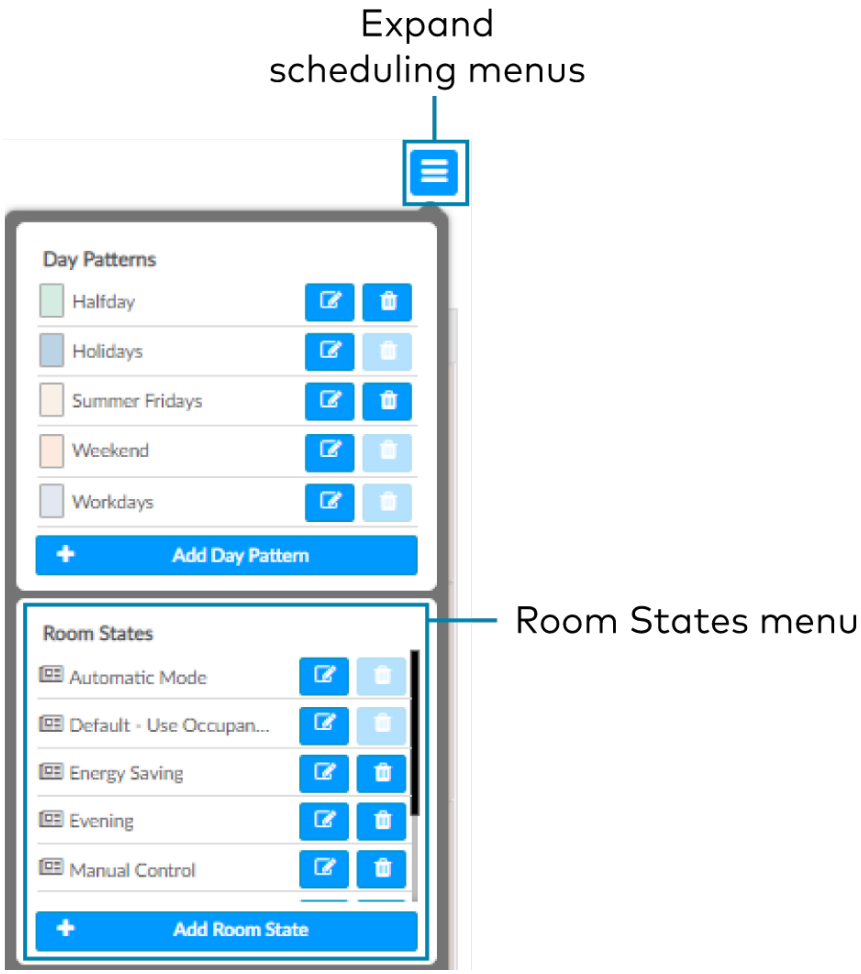
ENABLE: Allow sunrise or sunset determine the Room State start time.

ROOM STATE: Select a Room State for the sunrise or sunset event.

OFFSET (MIN): Set offset duration (-300 minutes to +300 minutes).

Room States

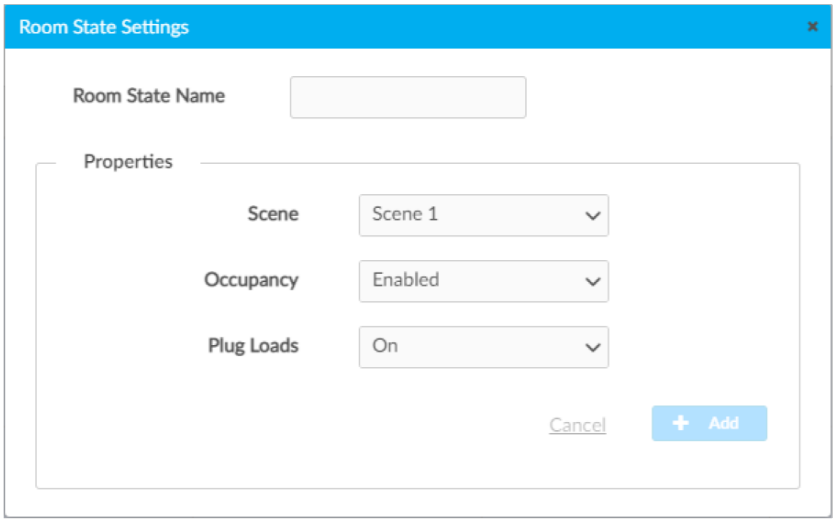
A Room State is both a set of events as well as a set of behaviors for a Room Category. It identifies the lighting scene that is recalled, the functionality of the occupancy sensor and the plug load controllers. To access the Room States menu, select the **Schedule** tab and select the hamburger menu to expand the scheduling menus.



Configure a Room State

Select **Add Room State** to add a new Room state or the edit button to edit an existing Room State. The **Room State Settings** window opens. To configure a Room State in the **Room State Settings** window:

1. Enter or edit the name of the desired Room State in the **Room State Name** filed.
2. Configure the Properties:
   - **Scene:** Select Scene 1– 16, **None**, or **Room Off**.
   - **Occupancy:** Select **Enabled** to allow occupancy sensing, **Disabled** to turn off occupancy sensing functionality, or **Unaffected** to use the setting of the previous event.
   - **Plug Loads:** Select **On** to turn on the Plug loads, **Off** to turn off the Plug Load functionality, or **Unaffected** to use the setting of the previous event.
3. Select **Cancel** to close the window without saving, or **Add** to add the Room State.



Delete a Room State

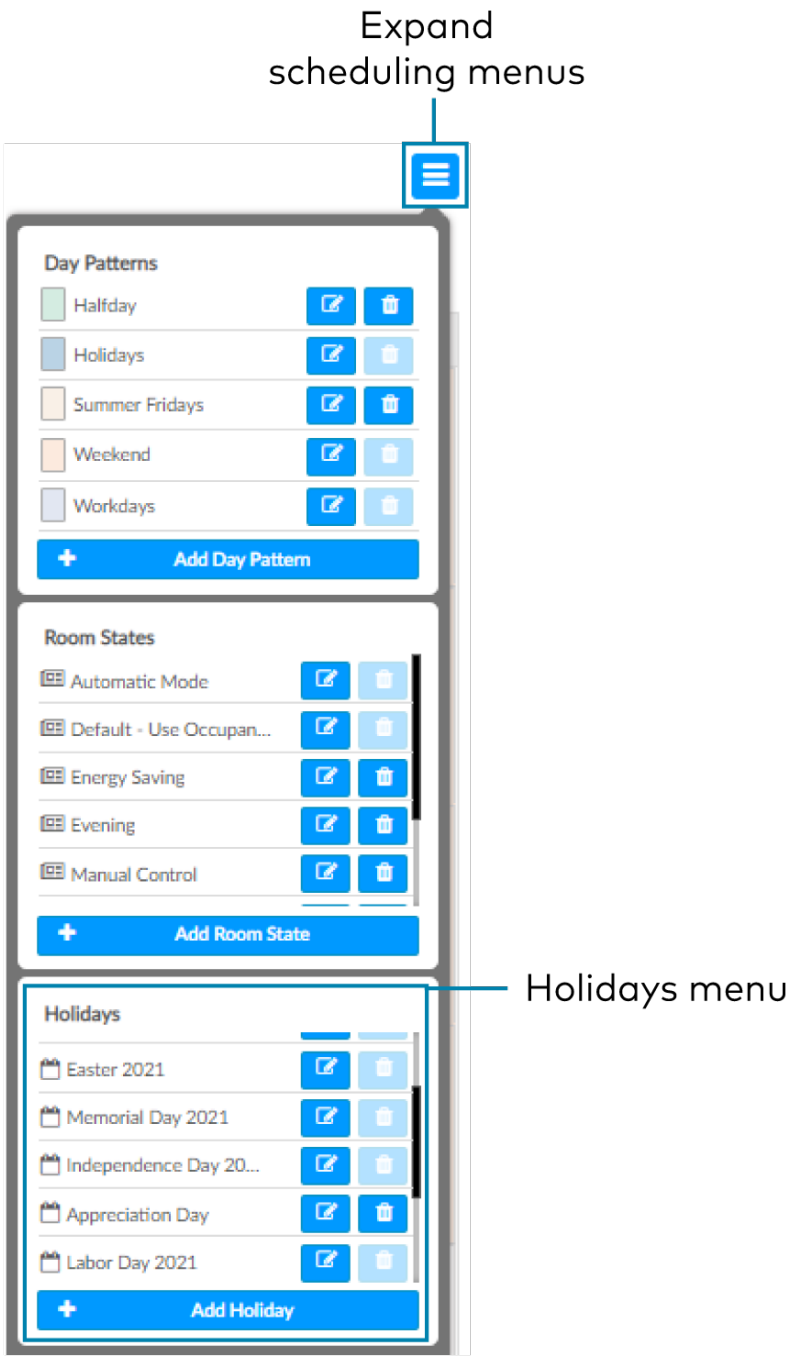
To delete a Room State:

1. Select the trashcan icon to delete a Room State. A confirmation window opens.
2. Select **Yes** to delete the Room State, or select **No** to keep the Day Pattern.

> **NOTE:** A Default Room State (such as Automatic Mode and Default - Use Occupancy) cannot be deleted.

Holidays

The Holidays menu allows you to create a new holiday and to edit the holiday properties. Holidays that are enabled are automatically added to the calendar in the **Schedule** tab. To access the Holidays menu, select the **Schedule** tab, and then select the hamburger menu to expand the scheduling menus.



Add Holidays

Select **Add Holiday** and type the desired Holiday name. Select the check icon to save the name, or select the x icon to cancel.

Delete a Holiday

To delete a Holiday:

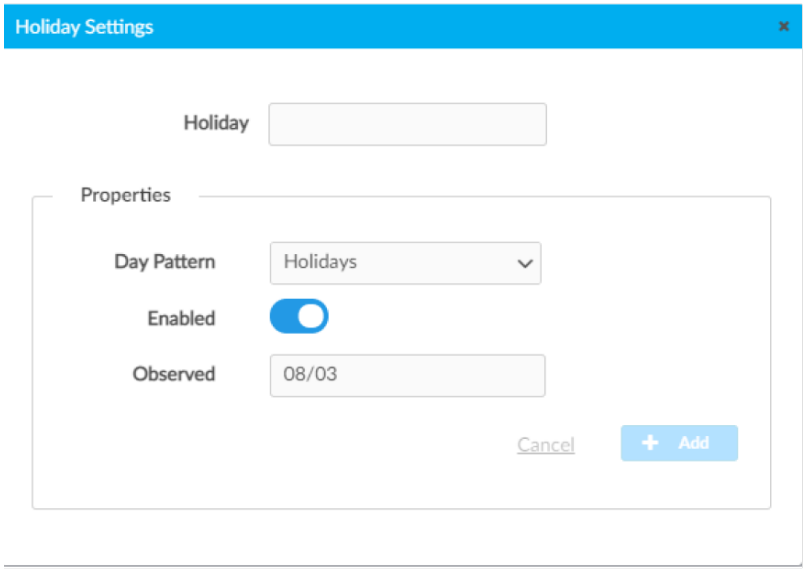
1. Select the trashcan icon to delete a Holiday. A confirmation window opens.
2. Select **Yes** to delete the Holiday, or select **No** to keep the Holiday.

> **NOTE:** A default Holiday cannot be deleted.

Configure Holidays

After adding a Holiday, the **Holiday Settings** window opens. Alternatively, selecting the edit button beside a Holiday opens the **Edit Holiday Settings** window. These windows display the Holiday settings. To configure Holidays in the **Holiday Settings** window:

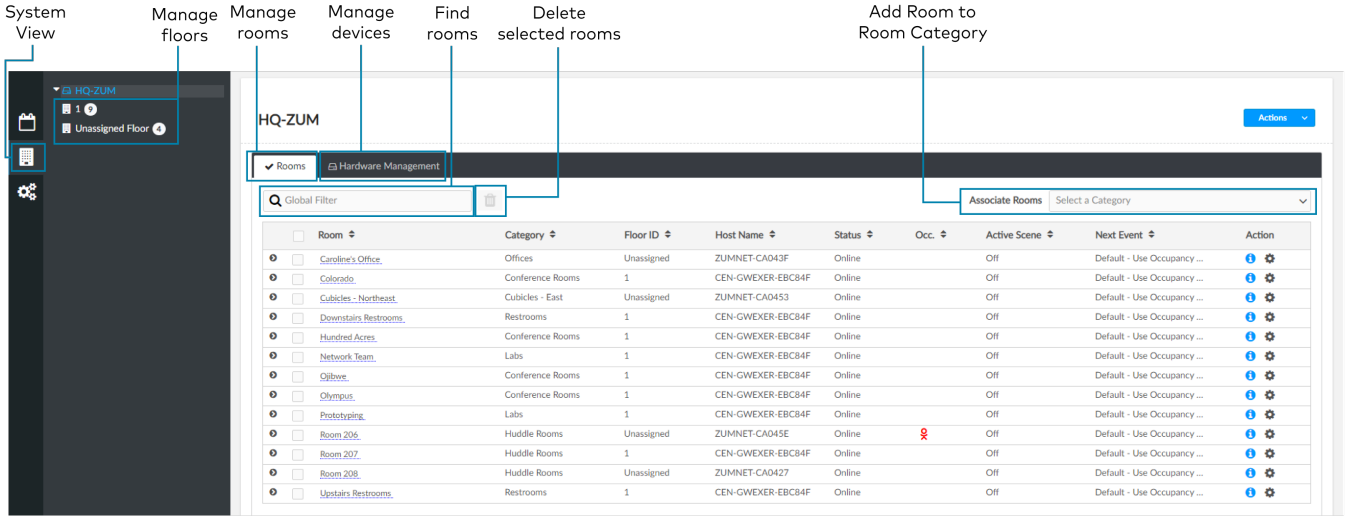
1. Enter or edit the name of the desired Holiday in the **Holiday** field.
2. Configure the Properties:
   - **Day Pattern:** By default, the Holiday Day Pattern is selected
   - **Enabled:** By default, the Enabled toggle is on. Turn the toggle off to prevent the holiday from appearing in the calendar on the **Schedule** tab. When the toggle is off, the default Day Pattern is applied instead.
   - **Observed:** Select a date to observe the holiday.
3. Select **Add** to add the Holiday or **Cancel** to close the window.



Manage Floors

Rooms must be discovered by the ZUM-HUB4 before performing any procedure in this section. Refer to Discover Rooms on page 386. Access Floors in the System View. To manage a Floor, refer to the following information:

- Turn On/Off a Floor on page 392
- Set the Bluetooth PIN for a Floor on page 394
- Set the Demand Response Level for a Floor on page 398
- Manage Rooms on page 401
- Manage Devices on page 418



Manage Devices

In the System View, manage devices in the Hardware Management tab. Devices are divided into two categories: **Wired** and **Wireless**. Expand the Wireless menu to view and edit wireless devices. Expand the Wired menu to view and edit wired devices.

Rooms must be discovered by the ZUM-HUB4 before performing any procedure in this section. Refer to Discover Rooms on page 386.

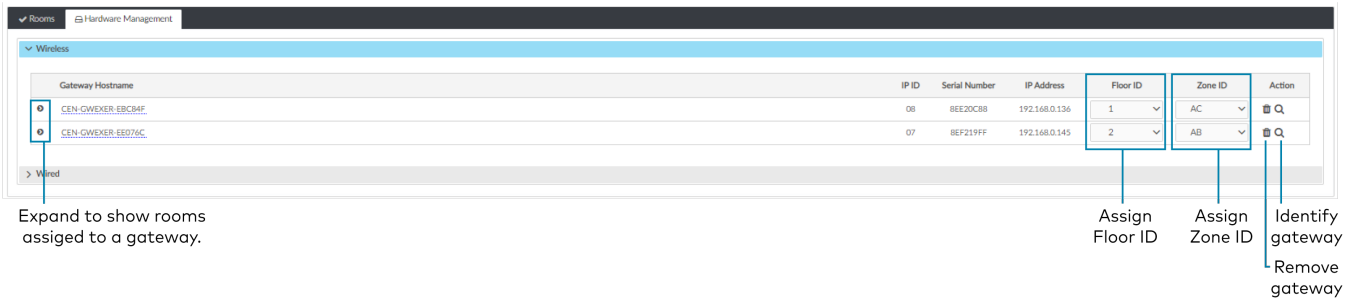


Wireless Devices

Access wireless gateways in the **Hardware Management** tab and expand the **Wireless** menu. View information about the gateway, assign Floor or Zone IDs, and identify or remove a gateway. To view, move, and delete the rooms assigned to the gateway, refer to Review Rooms Assigned to a Gateway on page 419.

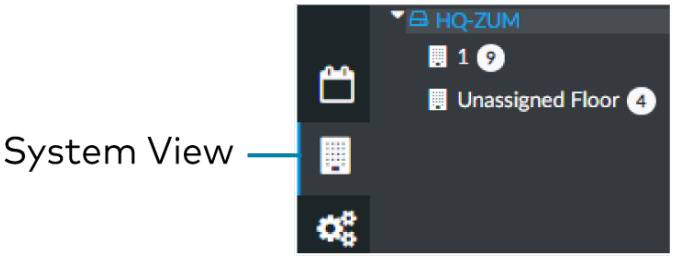
Information about the gateway:

- Gateway Hostname: Displays the gateway's name.
- IP ID: Displays the gateway's IP ID.
- Serial Number: Displays the gateway's serial number.
- IP Address: Displays the gateway's IP address.
- Floor ID: Refer to Assign a Floor ID to a Gateway on page 419.
- Zone ID: Refer to Assign a Floor ID to a Gateway on page 419.
- Action: Refer to Identify a Gateway on page 419 and Remove a Gateway on page 419.



Assign a Floor ID to a Gateway

Assigning a Floor ID to a gateway helps gateways discover wireless devices with the matching Floor ID. Set a device's Floor ID in the Zūm app before discovering the devices on the ZUM-HUB4. The Floor ID drop-down menu options are numbers -40 to + 200 and Disabled. The Floor ID can be negative to indicate a floor below ground or positive to indicate a level above ground. Disabled categorizes the gateway to Unassigned Floor.



Assign a Zone ID to a Gateway

To designate different areas of a floor as a zone, assign a gateway a Zone ID. Assigning a Zone ID to a gateway helps gateways discover wireless devices with the matching Zone ID. Set a device's Zone ID in the Zūm app before discovering the devices on the ZUM-HUB4. The Zone ID drop-down menu options are letter groupings AA to AZ and BA to BF.

Identify a Gateway

To identify a gateway, select the magnifying glass icon. The SETUP LED on the gateway flashes.

Remove a Gateway

To delete a gateway, select the trashcan icon. A confirmation window opens. Select **Yes** to delete the gateway or **No** to keep the gateway.

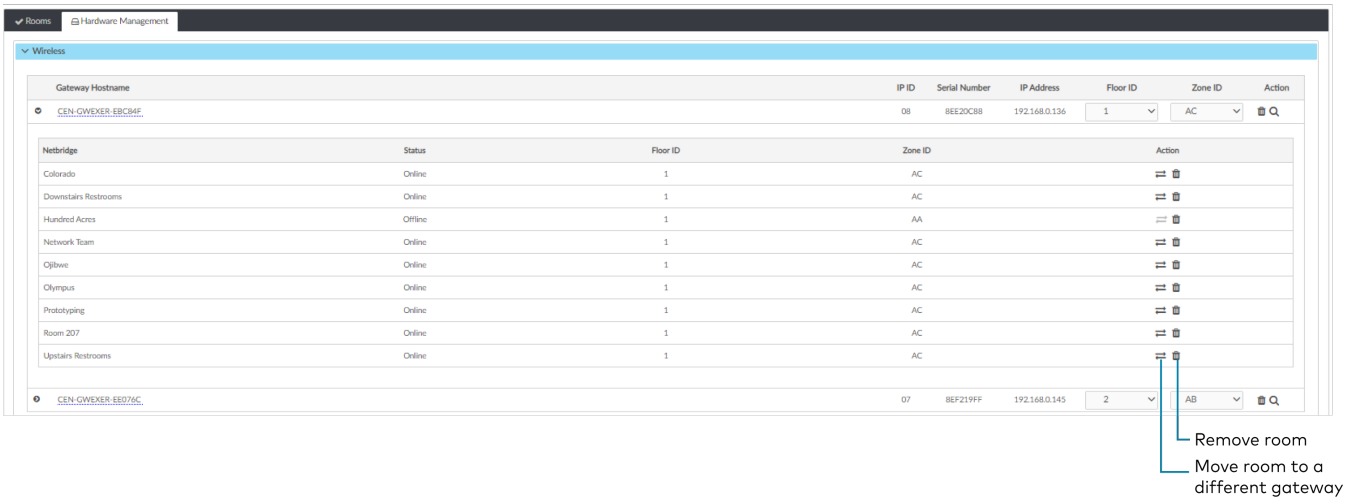
Review Rooms Assigned to a Gateway

Select the right carat icon next to a gateway to view its assigned rooms:

- **Netbridge:** Lists assigned rooms.
- **Status:** Displays Online or Offline to show the device status.
- **Floor ID:** Inherits the Floor ID assigned to the gateway.
- **Zone ID:** Inherits the Zone ID assigned to the gateway
- **Action:** Move a room to a different gateway or remove a room.
    - Select the move icon to move a room. The Move window opens.
        - Select the desired gateway from the drop-down menu.
        - Select **Move** to move the room or **Cancel** to close the window without moving the room.

          > **NOTE:** Moving a room to a gateway with different a Floor ID or Zone ID changes the room's Floor ID or Zone ID to match the new gateway.

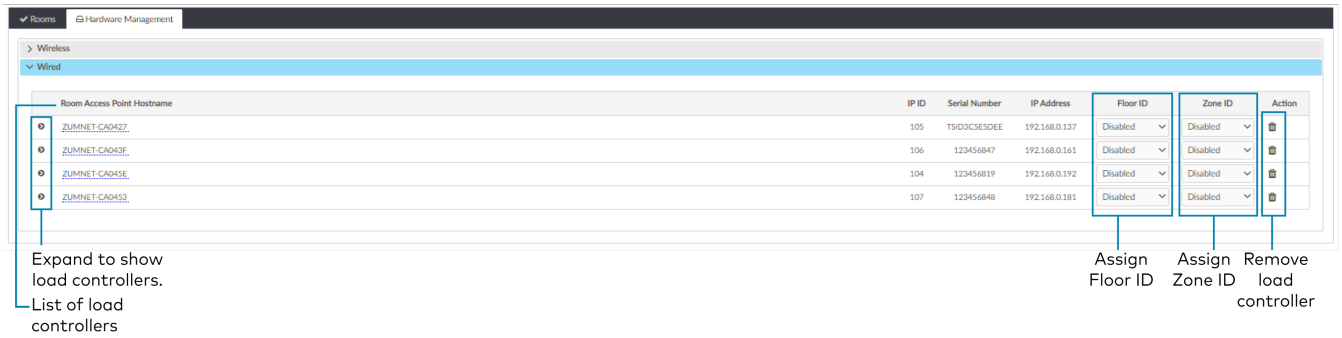
    - Select the trashcan icon to remove a room. A confirmation window opens. Select **Yes** to delete the room or **Cancel** to close the window without deleting the room.



Wired Devices

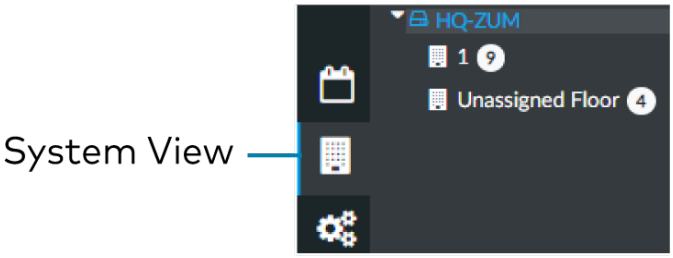
Access wired Room Access Points in the **Hardware Management** tab and expand the **Wired** menu. A Room Access Point (RAP) is the main device in the room. View information about the RAP, assign Floor or Zone IDs, or remove an RAP. To view devices connected to RAP, refer to Review RAP Components on page 421.

- **Room Access Point Hostname:** Displays the main device's name.
- **IP ID:** Displays the main device's IP ID.
- **Serial Number:** Displays the main device's serial number.
- **IP Address:** Displays the main device's IP address.
- **Floor ID:** Refer to Assign a Floor ID to an RAP on page 421.
- **Zone ID:** Refer to Assign a Zone ID to an RAP on page 421.
- **Action:** Refer to Remove a RAP on page 421.



Assign a Floor ID to an RAP

Assigning a Floor ID to a load controller adds a floor to the Floor list. The Floor ID drop-down menu options are numbers -40 to + 200 and Disabled. The Floor ID can be negative to indicate a floor below ground or positive to indicate a level above ground. Disabled categorizes the load controller to Unassigned Floor.



Assign a Zone ID to an RAP

To designate different areas of a floor as a zone, assign a load controller a Zone ID. The Zone ID drop-down menu options are letter groupings AA to AZ and BA to BF.

Remove a RAP

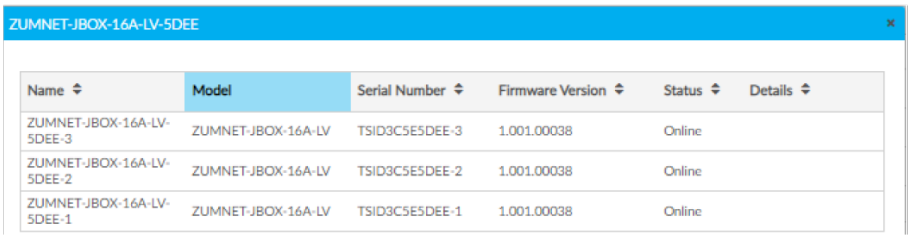
To delete a load controller, select the trashcan icon . A confirmation window opens.Select **Yes** to delete the load controller or **No** to keep the load controller.

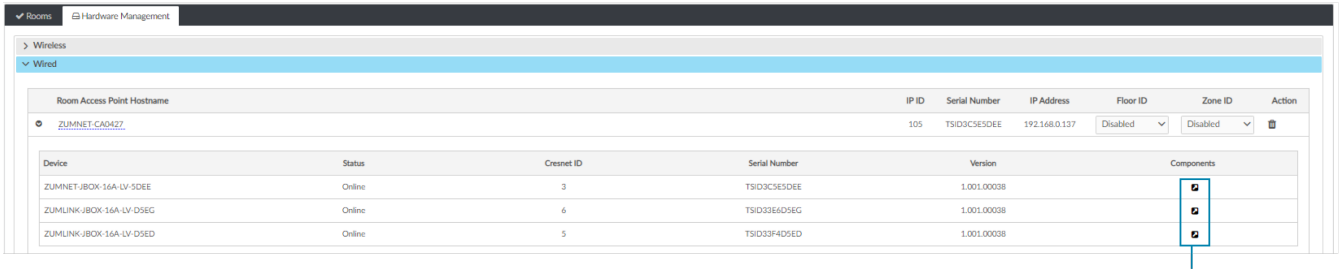
Review RAP Components

Select the right carat icon next to a load controller to view connected devices.

- **Device:** Displays child devices connected to the parent load controller.
- **Status:** Displays Online or Offline to show the child device's status.
- **Cresnet ID:** Displays the child device's Cresnet® control network ID.
- **Serial Number:** Displays the child device's serial number.
- **Version:** Displays the child device's current firmware version.

- **Components:** Select the components icon to view the child device components. Components displays the internal functions of a load controller, such as the internal occupancy sensors, photocell, and load controller, as well as other devices connected to the device, such as a keypad.
    - Name: For internal components, the name of the component is the device name plus the suffix "-1," "-2," or "-3."
        - -1: Load Controller component: Controls the connected loads.
        - -2: Occupancy sensor component: Uses occupancy to control the connected loads.
        - -3: Photocell component: Uses ambient light to control the connected loads.
        - Change the component name by using the Zūm App.
    - Model: Displays the device model.
    - Serial Number: Displays the component's serial number.
    - Firmware Version: Displays the component's firmware version.
    - Status: Displays Online or Offline to show the component's status.





Manage Settings

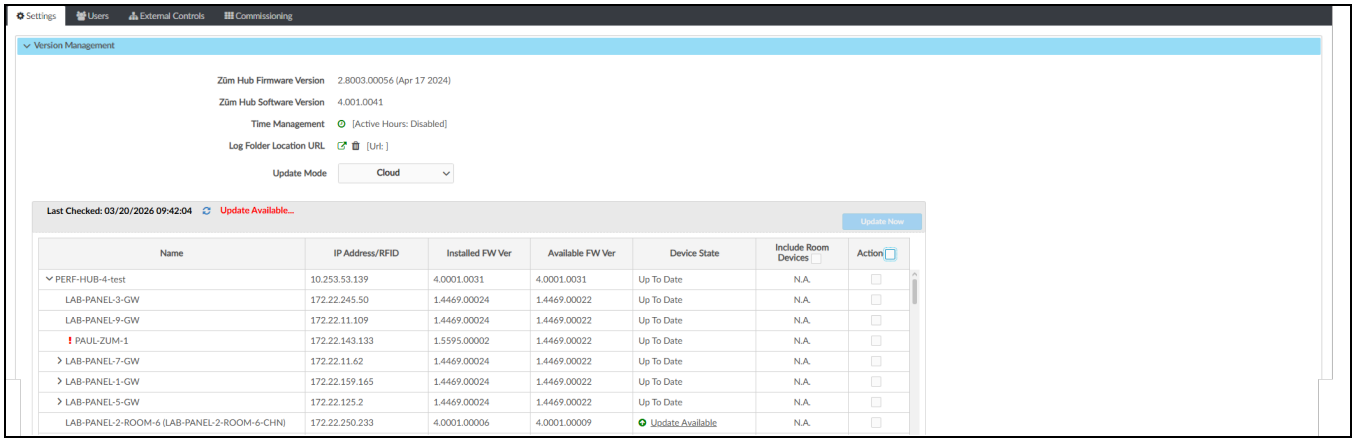
Access **Settings** in the Settings View. The **Settings** tab displays and allows you to edit the firmware, system time and location, network configuration, security configuration, and Crestron services.



Version Management

Allows you to check for firmware updates for the ZUM-HUB4 and connected devices. Firmware updates for battery powered devices may take up to 24 hours. To update firmware:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **Version Management**.
4. From Update Method, select **Cloud** or **Removeable Media**.
5. If using removeable media, insert the device.
6. Check the box in the **Action** column for the devices whose firmware you want to update, or check the select all box beside **Action** to update all devices.
7. Select **Update Now**.



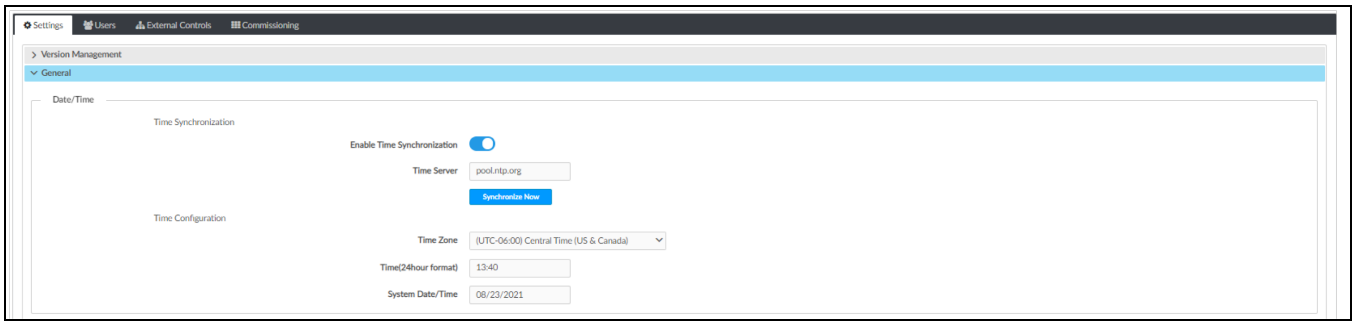
General

Displays the date, time, and time zone. To change the date and time:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **General**.
4. Enter new values in the fields.
5. Select the save changes button Save Changes to save the changes or the revert button Revert to discard changes.

   > **NOTE:** Changing these settings requires an immediate system restart.

   A confirmation windows opens. Select **Yes** to restart or **No** to close the window.



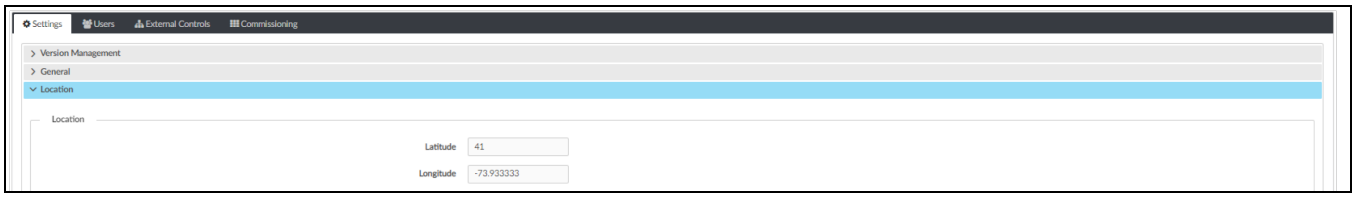
Location

Displays the location (latitude and longitude). Accurate location ensures the Sunrise/Sunset Schedule displays the correct sunrise and sunset times. To change the location:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **Location**.
4. Enter new values in the fields.
5. Select the save changes button Save Changes to save the changes or the revert button Revert to discard changes.

   > **NOTE:** Changing these settings requires an immediate system restart.

   A confirmation windows opens. Select **Yes** to restart or **No** to close the window.



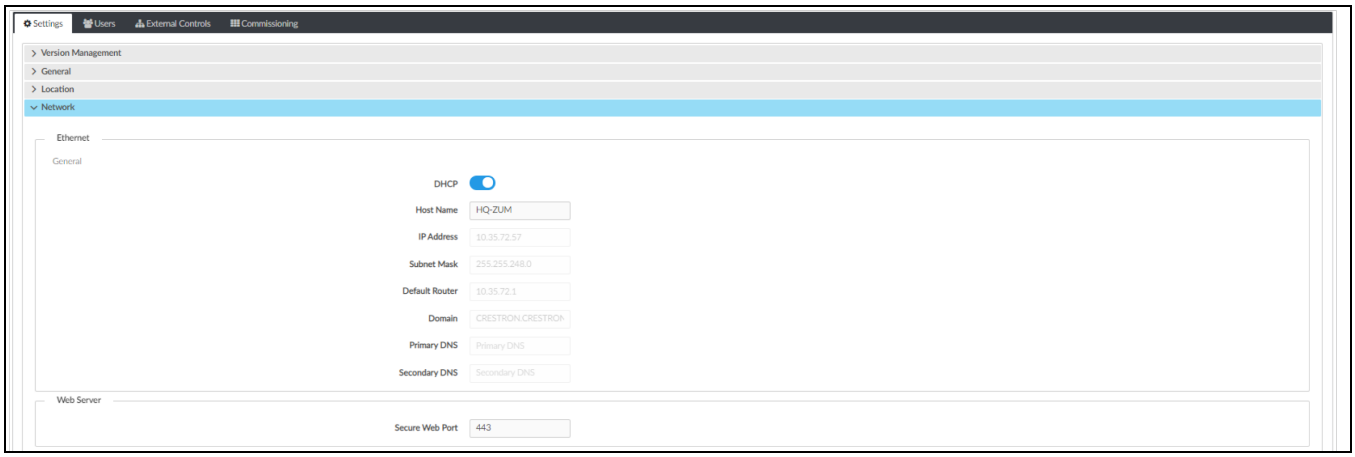
Network

Displays the Ethernet settings. To change the Ethernet settings:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **Network**.
4. Enter new values in the fields. Some fields are not available if DHCP is turned on.
5. Select the save changes button Save Changes to save the changes or the revert button Revert to discard changes.

   > **NOTE:** Changing these settings requires an immediate system restart.

   A confirmation windows opens. Select **Yes** to restart or **No** to close the window.

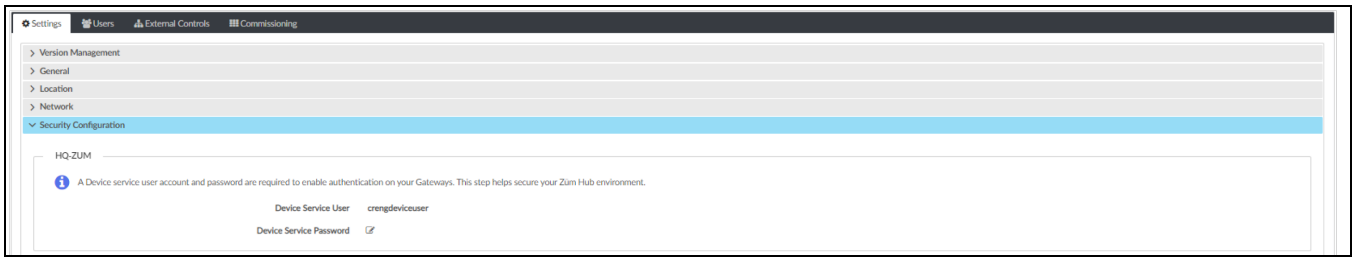


Security Configuration

Allows the user to change the device service password. To edit the password:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **Security Configuration**.
4. Select the edit button to add new values in the fields.
5. Select the save changes button Save Changes to save the changes or the revert button Revert to discard changes.

   A confirmation windows opens. Select **Yes** to restart or **No** to close the window.



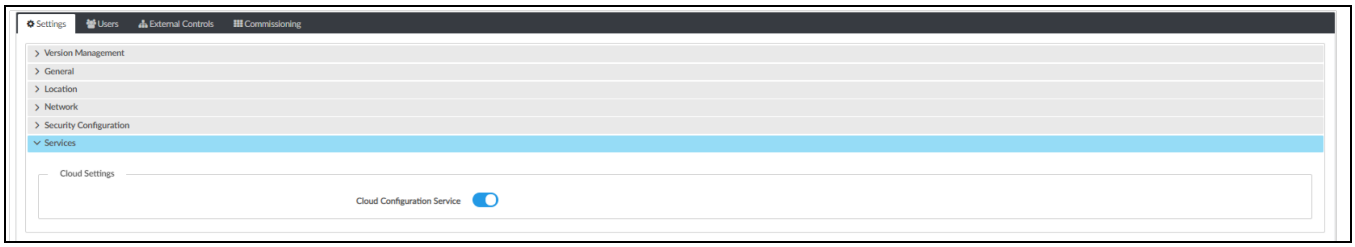
Services

Displays Cloud Settings. To turn Cloud Configuration Service on or off:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **Services**. Cloud Configuration Service is on by default.
4. To turn off Cloud Configuration Service, turn off the toggle.
5. Select the save changes button Save Changes to save the changes or the revert button Revert to discard changes.

   > **NOTE:** Changing these settings requires an immediate system restart.

   A confirmation windows opens. Select **Yes** to restart or **No** to close the window.



Schedule Mode

Defines whether a Zūm space follows the Hub schedule or the local Zūm space schedule.

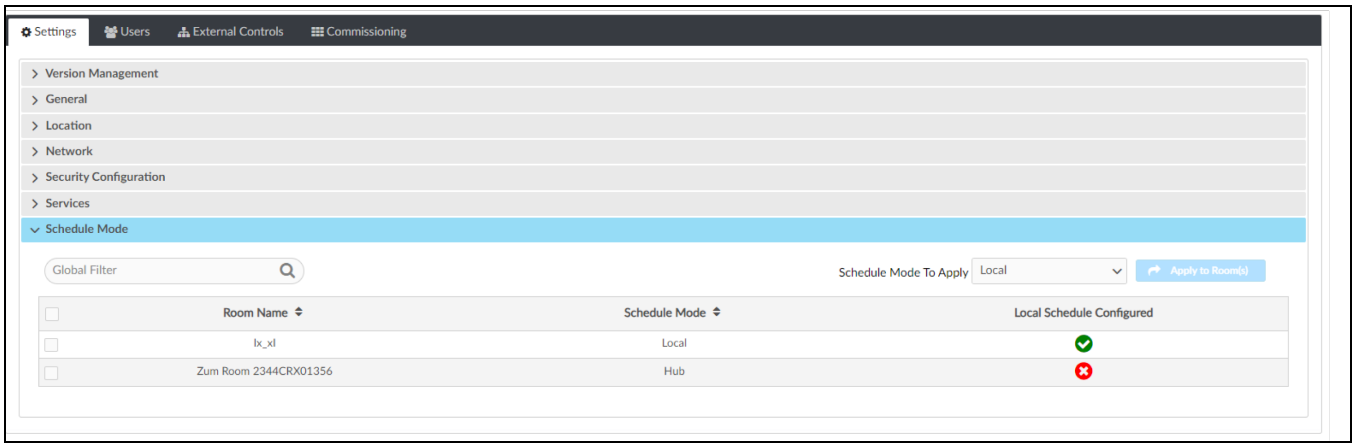
A Zūm space can follow a local schedule if that space has an Integration Module configured with a local schedule created through the Zūm mobile app. This Zūm space will have a green check icon present in the **Local Schedule Configured** column.

A Zūm space cannot follow a local schedule if that space does not have an Integration Module, or it has an Integration Module but a local schedule has not been created through the Zūm mobile app. This Zūm space will have a red x icon present in the **Local Schedule Configured** column.

> **NOTE:** To configure an Integration Module and create a local schedule via the Zūm mobile app, refer to Integration Module with Standalone Timeclock Zūm App Configuration on page 342.

To set a Zūm space to follow the Hub schedule or the local Zūm space schedule:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **Schedule Mode**.
4. Select one or more rooms to apply the Schedule Model.
5. In the **Schedule Model To Apply** drop-down menu, select **Hub** or **Local**.
6. Select **Apply to Rooms(s)** to send the configuration to the room space.

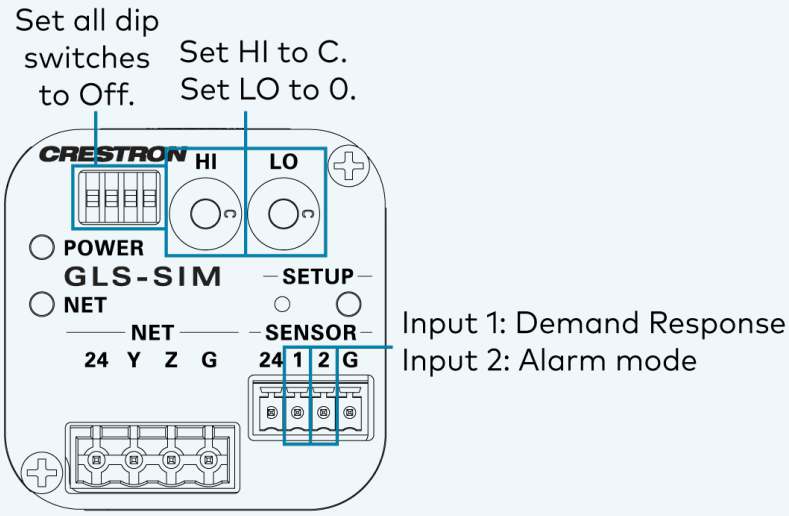


Override Configuration

Expand the **Override Configuration** accordion to configure Demand Response and Alarm modes. To manually trigger Demand Response and Alarm modes, use the test buttons. Refer to Test or Trigger a Demand Response Signal on page 428 and Test or Trigger an Alarm Mode Signal on page 429.

To automatically trigger Demand Response and Alarm modes, use a use a contact closure signal to a GLS-SIM connected to the Zūm system. To set Demand Response levels, refer to Configure the Demand Response and Alarm Modes on page 396.

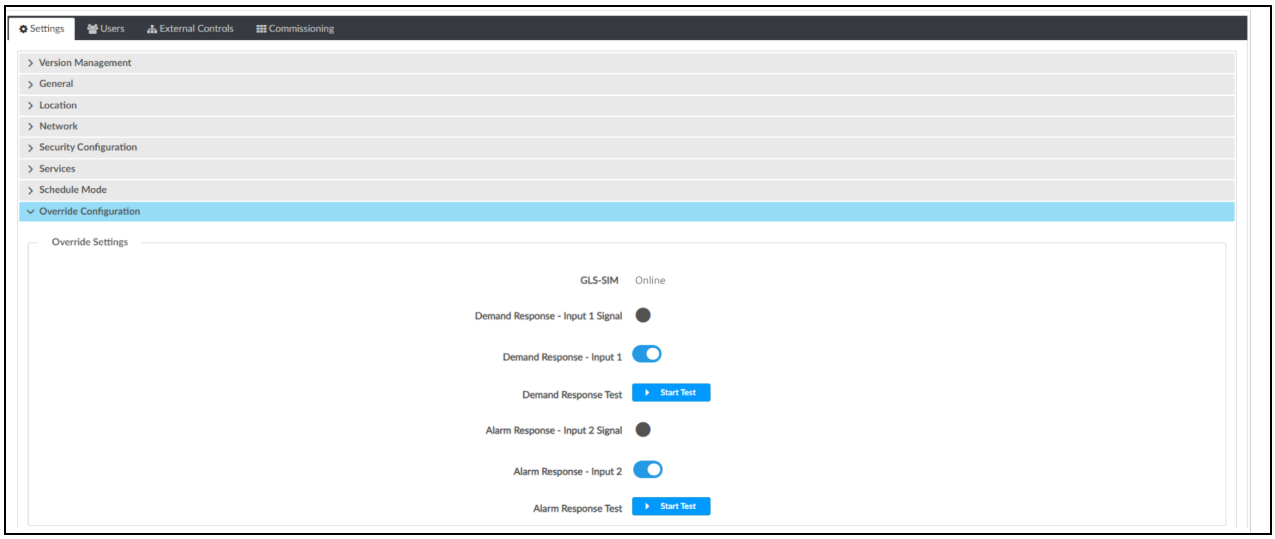
NOTE: When using the GLS-SIM, set all the dip switches to **Off**, set **HI** to **C**, and set **LO** to **0**. For more information about GLS-SIM settings, refer to the GLS-SIM manual.



To access **Override Configuration**:

1. Open **Settings View**.
2. Select **Settings**.

3. Select **Override Configuration**.



- **GLS-SIM**: Reports if the GLS-SIM is **Offline** or **Online**.
  If a GLS-SIM is not connected or the settings on the GLS-SIM are incorrect, **Offline** displays.
- **Demand Response - Input 1 Signal:** The indicator reports if a Demand Response signal is received through input 1 on the GLS-SIM.
  If a signal is present, the indicator turns green.
- **Demand Response - Input 1:** Enables or disables Demand Response mode.
- **Demand Response Test:** Tests the Demand Response signal.
- **Alarm Response - Input 2 Signal:** The indicator reports if a Alarm Response signal is received through input 2 on the GLS-SIM.
  If a signal is present, the indicator turns green.
- **Alarm Response - Input 2:** Enables or disables Alarm Response mode.
- **Alarm Response Test:** Tests the Alarm Response signal.

Enable or Disable Demand Response Mode

By default, the Demand Response mode is enabled. To disable Demand Response mode, select the **Demand Response - Input 1** toggle. It may take up to 10 seconds for the **Demand Response - Input 1 Signal** indicator to respond.

Test or Trigger a Demand Response Signal

To test or manually trigger the Demand Response signal, select **Start Test** for the **Demand Response Test**. The Demand Response controls will be triggered for any associated load levels based on its configured settings. The UI does not provide any feedback from the test. While the test is in progress:

- The Demand Response status turns green.
  For more information on the Demand Response status, refer to Review Device Information and Status on page 438.
- Load levels adjust based on its configured settings
- **Stop Test** displays, replacing **Start Test**.
- The test must be stopped manually.

To stop the test while it is running, select **Stop Test**.

Enable or Disable Alarm Mode

By default, the Alarm mode is enabled. To disable Alarm mode, select the **Alarm Response - Input 2** toggle. It may take up to 10 seconds for the **Alarm Response - Input 2 Signal** indicator to respond.

Test or Trigger an Alarm Mode Signal

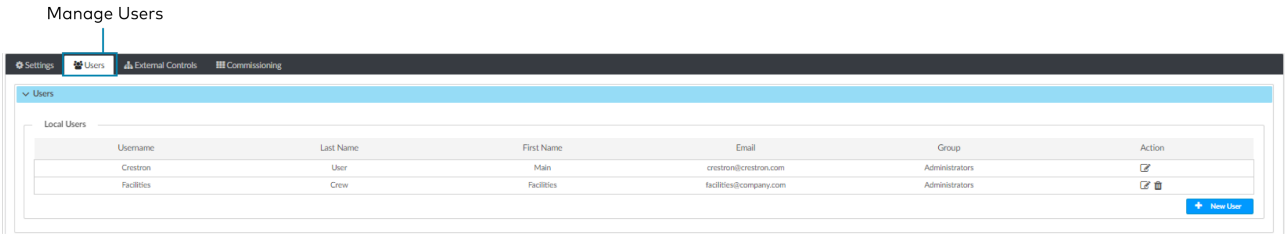
To test or manually trigger the Alarm mode signal, select **Start Test** for the **Alarm Response Test**. The Alarm mode controls will be triggered for any associated load levels based on its configured settings. The UI does not provide any feedback from the test. While the test is in progress:

- The Alarm Mode status turns green.
  For more information on the Alarm Mode status, refer to Review Device Information and Status on page 438.
- Load levels adjust based on its configured settings.
- **Stop Test** displays, replacing **Start Test**.
- The test must be stopped manually.

To stop the test while it is running, select **Stop Test**.

Manage Users

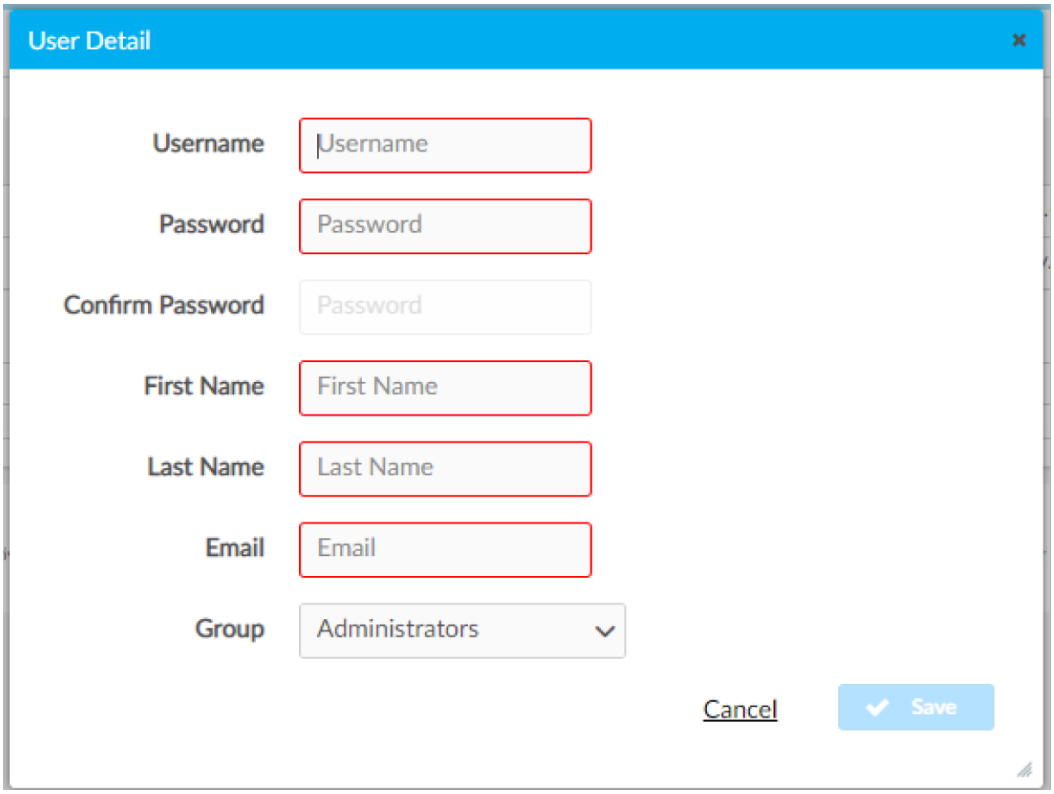
Access Users in the Settings View. The Users tab shows a list of all users and allows you to create new users and modify or delete existing users. The username must be 3 to 15 characters and are permitted to use uppercase letters (A–Z, lowercase letters (a–z), digits (0–9), and special characters (- ( ) + [ ] . _). The password must be 8 to 12 characters is required to contain at least one uppercase letters (A–Z), lowercase letters (a–z), digits (0–9), and special characters (#?!@$%^&*-).



Create a New User

To create a new User:

1. Open **Settings View**.
2. Select **Users**.
3. Select the new user button + New User.
4. Enter the user details.
5. Select **Save** to save the new user or **Cancel** to exit without creating a new user.



Configure an Existing User

To configure an existing User:

1. Open **Settings View**.
2. Select **Users**.
3. Select the edit button next to the user.
4. Update the user details.
5. Select **Save** to save the changes or **Cancel** to exit without saving the changes.

Delete an Existing User

To delete an existing User:

1. Open **Settings View**.
2. Select **Users**.
3. Select the trashcan icon next to the user.
4. Select **Yes** to delete the user or **No** to cancel without deleting the user.

External Users

For External Rooms to successfully connect, create a User and select **ExternalUser** from the Group drop-down menu. The Username and Password must match the credentials used for the SIMPL+® software module.

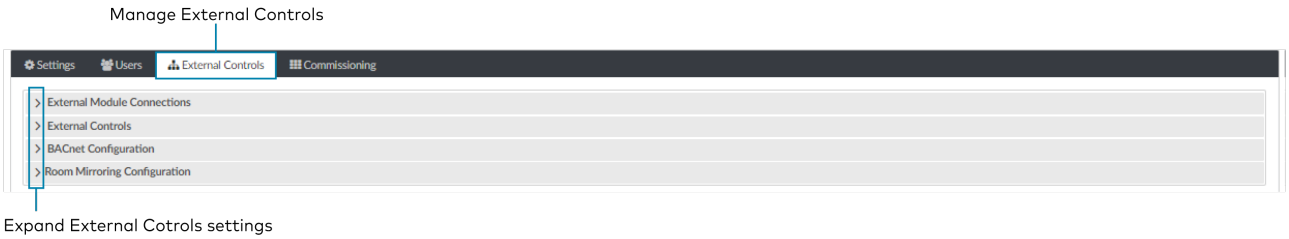
NOTES:

- SIMPL+® software modules are provided for use in commissioning a Crestron control system to work with the ZUM-HUB4. The software modules run within the control system program and provide virtual connections for all the necessary intersystem control signals. A separate dedicated module is required for each external and mirrored room. Control systems are limited in the number of modules supported, ranging from 0 to 2001000 depending on the model. For further assistance, please contact Crestron Commercial Lighting Support via email at clclighting@crestron.com or by calling 855-644-7643.
- Other Crestron control systems must be commissioned to provide the control logic required to communicate and operate as part of the Zūm network. Once integrated, each external room effectively becomes a part of the Zūm ecosystem.

Manage External Controls

Access External Controls in the Settings View. Use the External Controls tab to manage External Room settings. External Rooms provide the ability to integrate third-party devices into a Zūm lighting control system. To create a User for External Rooms, refer to External Users on page 431. To control External Room or Mirror Room modules, refer to Control Mirror Room or External Room Modules on page 405.

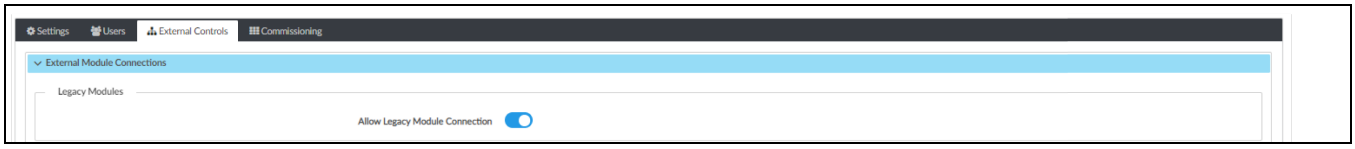
SIMPL+® software modules are provided for use in commissioning a Crestron control system to work with the ZUM-HUB4. The software modules run within the control system program and provide virtual connections for all the necessary intersystem control signals. A separate dedicated module is required for each external and mirrored room. Control systems are limited in the number of modules supported, ranging from 0 to 2001000 depending on the model. For further assistance, please contact Crestron Commercial Lighting Support via email at clclighting@crestron.com or by calling 855-644-7643.



External Module Connections

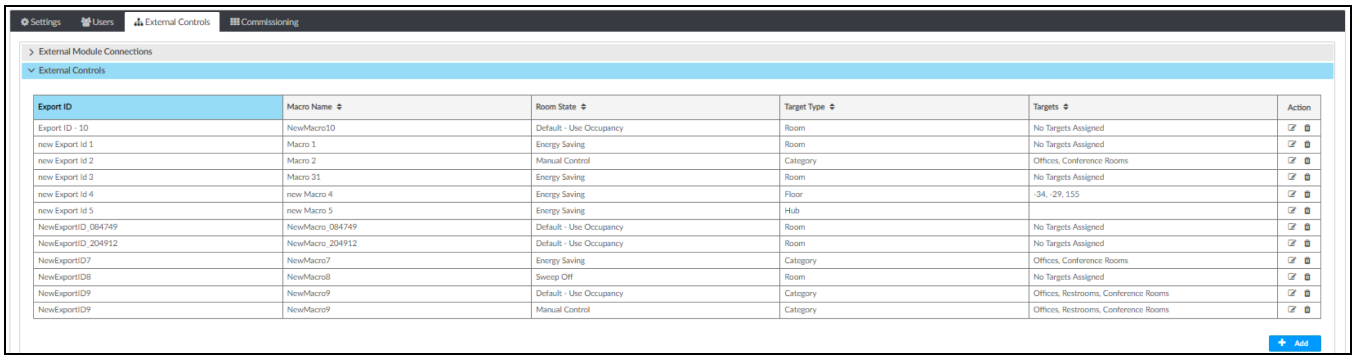
To allow or prevent older versions of module to be used:

1. Open **Settings View**.
2. Select the **External Controls** tab and expand the **External Module Connections** menu.
3. Use the toggle to turn **Allow Legacy Module Connection** on or off.



External Controls

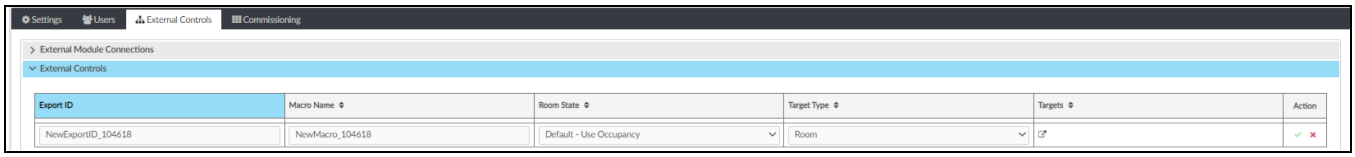
Access External Controls in the Settings View. Use the **External Controls** menu to add, edit, or delete a macro.



Add Macro

To add a new macro:

1. Open **Settings View**.
2. Select the **External Controls** tab and expand the **External Controls** menu.
3. Select the add button + Add. A new row appears.
4. Configure the macros settings:
    - Enter the Export ID.
    - Enter the Macro Name.
    - Select a Room State.
    - Target Type: Room Category, Room Floor, or Hub.
    - Enter Targets.
5. Select the check icon to save or the x icon to cancel.



Edit Existing Macro

To edit an existing macro:

1. Open **Settings View**.
2. Select the **External Controls** tab and expand the **External Controls** menu.
3. Select the edit button .
4. Enter new values in the fields.
5. Select the check icon to save or the x icon to cancel.

Delete Existing Macro

To delete an existing macro:

1. Open **Settings View**.
2. Select the **External Controls** tab and expand the **External Controls** menu.
3. Select the trashcan icon. A confirmation window opens.
4. Select **Yes** to delete the macro or **No** to cancel.

BACnet Configuration

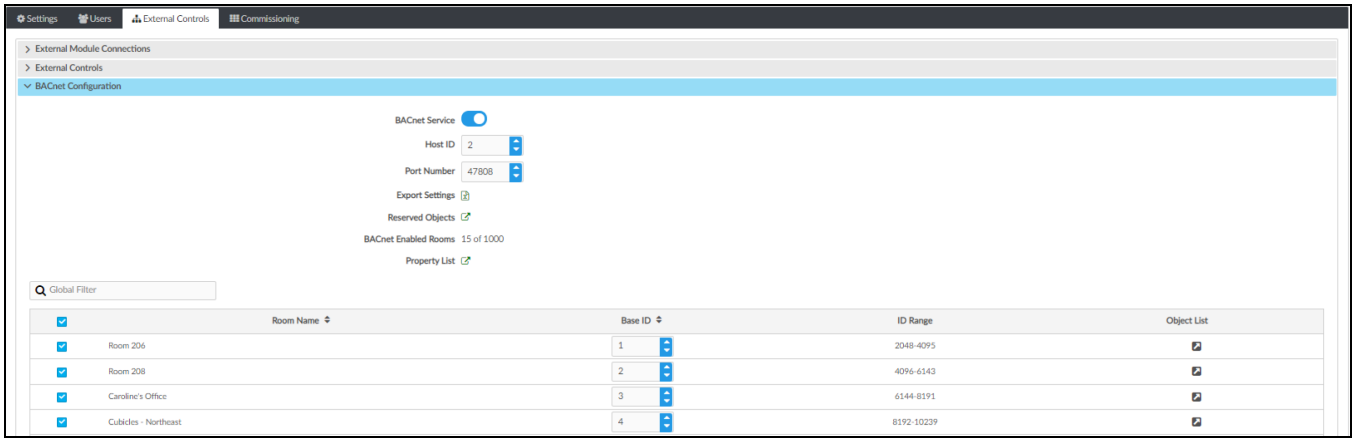
The BACnet tab displays the system settings to establish a connection with the BMS (building management system). To configure BACnet service:

1. Open **Settings View**.
2. Select the **External Controls** tab and expand the **BACnet Configuration** menu.

3. Configure the BACnet settings:

> **NOTE:** Use the search to find a specific room.

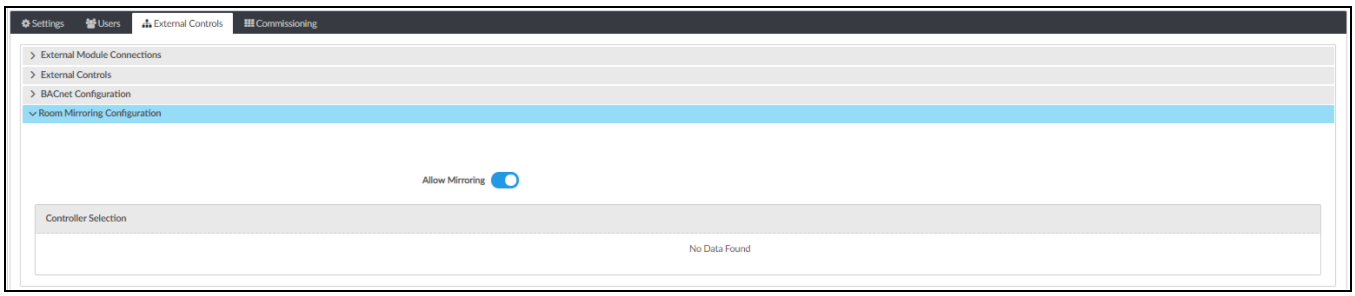
- BACnet Service: Click the toggle to turn the BACnet service on or off.
- Host ID: The ID that the ZUM-HUB4 uses when communicating with the BACnet system.
- Port Number: The port number that is used when communicating with the BACnet system.
- Export Settings: Export the BACnet settings to a CSV (comma separated value) file.
- Reserved Objects: Display objects that send signals to the ZUM-HUB4.
- BACnet Enabled Rooms: The number of rooms with BACnet.
- Property List: Allows users to select which objects are enabled for all rooms.
- Room Name: The name of the room.
- Base ID: Orders the device in the system and assigns the object IDs.
- ID Range: The range of Object IDs that the room can use.
- Object List: Displays a list of all Object IDs, Object Names, and Object Types within the selected room. A blue checkmark indicates objects that are enabled.



Room Mirroring Configuration

Room Mirroring allows an external processor to send or receive information from an existing Zūm room.

1. Open **Settings View**.
2. Select the **External Controls** tab and expand the **Room Mirroring Configuration** menu.
3. Use the toggle to turn **Allow Mirroring** on or off .



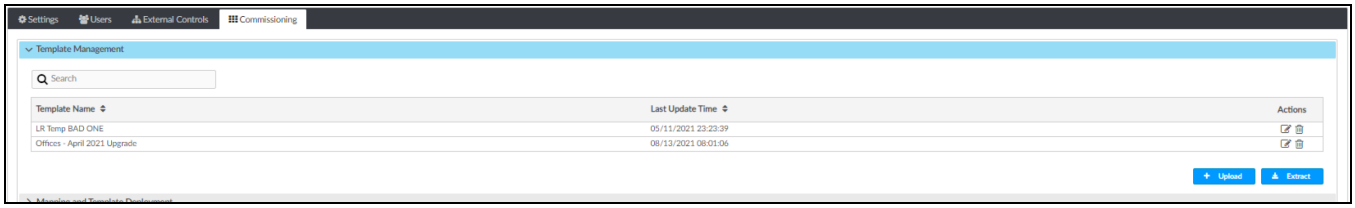
Manage Commissioning

Access Commissioning in the Settings View. Use the Commissioning tab to manage, map, and deploy, room templates. To create a new template, use the Zūm app.



Template Management

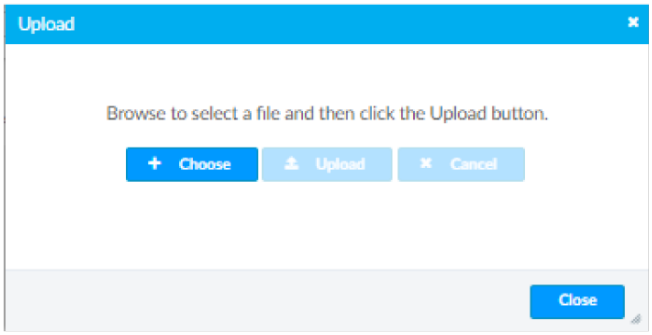
Upload a new template or search, extract, edit, or delete an existing template.



Add a New Template

To add a new room template:

1. Open **Settings View**.
2. Select the **Commissioning** tab and expand the **Template Management** menu.
3. Select **Upload**. The Upload window opens.
4. Select **Choose** to browse for a new template.
5. Select the template.
6. Select **Upload** to add the template to the **Template Management** menu, **Cancel** to choose a different template, or **Close** to close the window without adding a new template.



Edit Template Name

To edit an existing template name:

1. Open **Settings View**.
2. Select the **Commissioning** tab and expand the **Template Management** menu.
3. If necessary, use the **Search** bar to find a room template.

4. Select the edit button .
5. Type the new name.
6. Select **Save** to save the new name or **Cancel** to close the window without saving a new name.

Delete Existing Template

To delete an existing template:

1. Open **Settings View**.
2. Select the **Commissioning** tab and expand the **Template Management** menu.
3. If necessary, use the **Search** bar to find a room template.
4. Select . A confirmation window opens.
5. Select **Yes** to delete the template or **Cancel** to close the window.

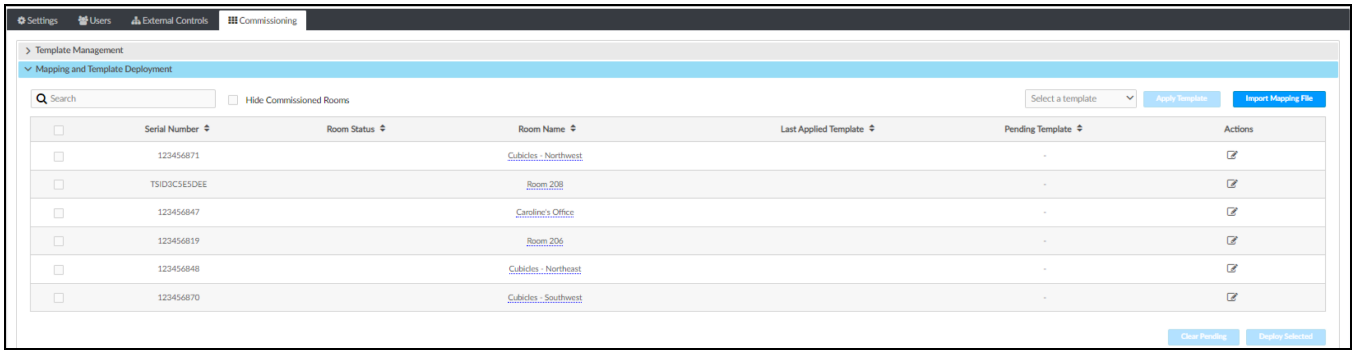
Extract Template

To extract a room template from another room:

1. Open **Settings View**.
2. Select the **Commissioning** tab and expand the **Template Management** menu.
3. If necessary, use the **Search** bar to find a room template.
4. Select **Extract**. The Extract Template window opens.
5. Select a room.
6. Select **Extract** to extract the template or **Cancel** to close the window.

Mapping and Template Deployment

Use Mapping and Template Deployment to apply and deploy templates to rooms and to import mapping files.



Apply and Deploy Templates.

To apply and deploy a template:

1. Open **Settings View**.
2. Select the **Commissioning** tab and expand the **Mapping and Template Deployment** menu.
3. Select a room or multiple rooms. If necessary, use the **Search** bar to find a room.
4. From the **Select a template** drop-down menu, choose the desired template.
5. Select **Apply Template**. When the template is successfully applied, the template is now pending.

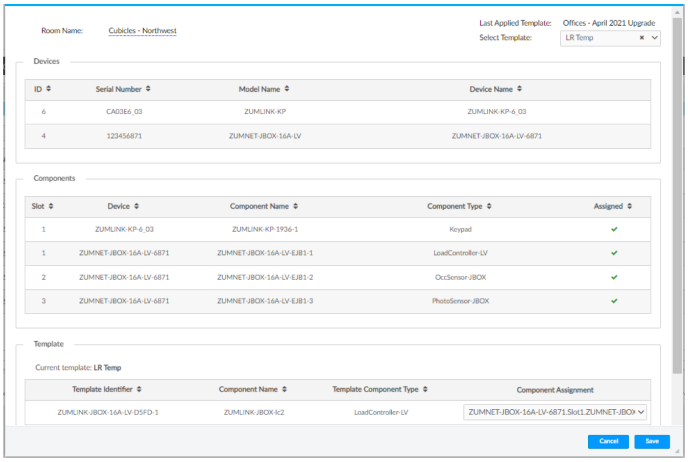
6. Select **Deploy Selected** to deploy the template to the rooms or **Clear Pending** to remove the template from the rooms.

Edit Template Assignment

To edit a template assignment:

1. Open **Settings View**.
2. Select the **Commissioning** tab and expand the **Mapping and Template Deployment** menu.
3. Select the edit button beside the desired room. If necessary, use the **Search** bar to find the room. A window opens.
4. From the **Select Template** drop-down menu, choose the desired template.

   The remaining data specifies the room information, the devices and components affected, and the selected template details.
5. Select **Save** to reassign the room template or **Cancel** to close the window without saving.

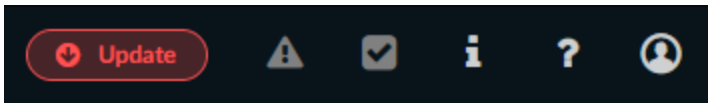


Import Mapping File

Access Import Mapping File in the Settings View. Open the Commissioning tab and expand the **Mapping and Template Deployment** menu. If a mapping file has been created in an external file, use the **Import Mapping File** button to navigate to the mapping and import the file.

Review Device Information and Status

View the Demand Response status, system alerts, help information, or sign out of the web interface.



Update Devices

When updates to the ZUM-HUB4 or the connected devices are available,  appears in the Device Information and Status toolbar. Select **Update** to navigate to the **Version Management** section of the Settings View. To update devices from the Settings View:

1. Open **Settings View**.
2. Select **Settings**.
3. Select **Version Management**.
4. From Update Method, select **Cloud** or **Removeable Media**.
5. If using removeable media, insert the device.
6. Check the box in the **Action** column for the devices whose firmware you want to update, or check the select all box beside **Action** to update all devices.
7. Select **Update Now**.

Alarm Mode Status



Alarm Mode On



Alarm Mode Off

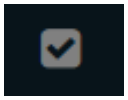


Alarm Mode Test

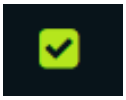
Demand Response Status



Demand Response On



Demand Response Off

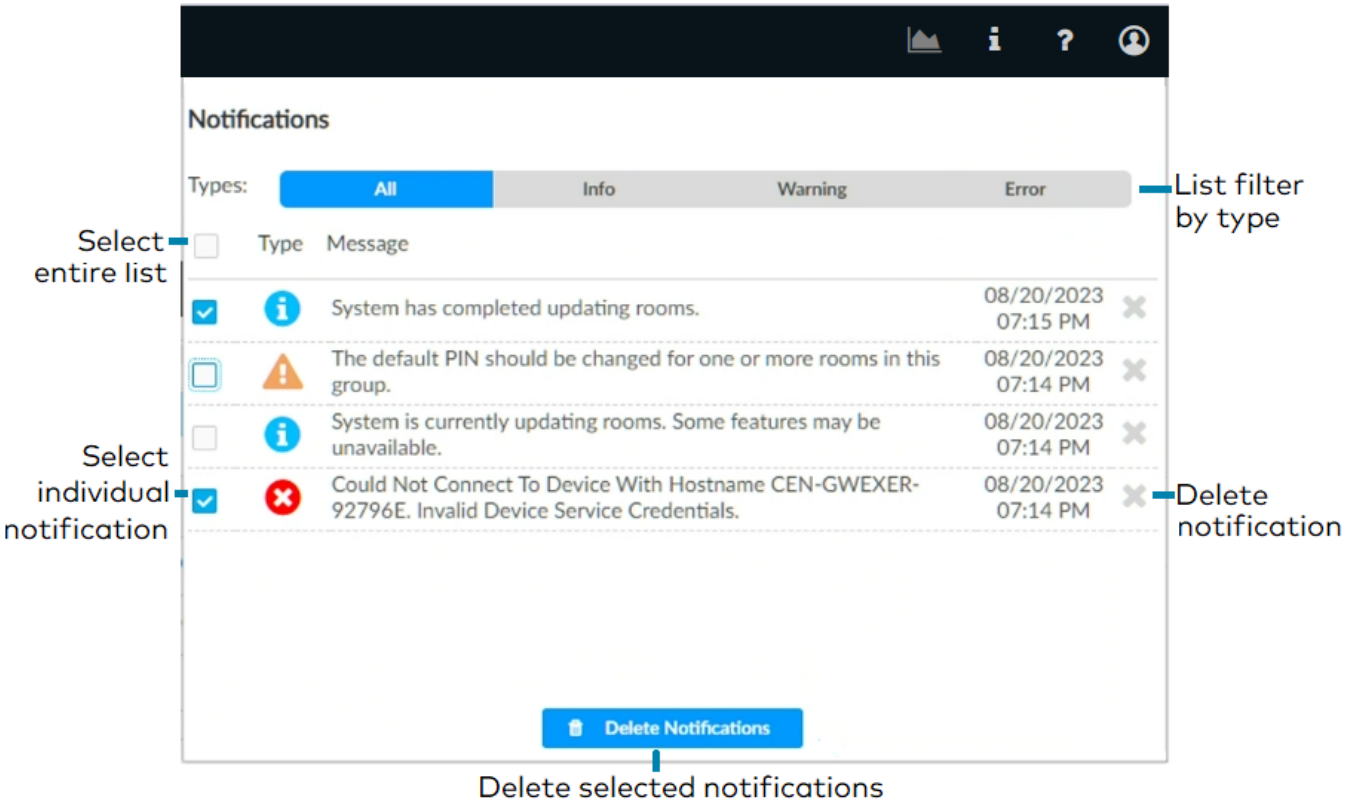


Demand Response Test

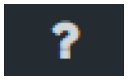
System Information



System notifications are categorized as information, warnings, or errors. Notifications can be viewed all at once or in their respective categories. Each notification is displayed for 24 hours and up to 100 notifications can be viewed at a time. Each notification after 100 will replace the oldest notification. For example, when notification 101 displays, notification 1 is removed. Delete a single notification by selecting the **X** to the right of the notification. Alternatively, delete one or more notifications by selecting the check box to the left of the notification and clicking **Delete Notifications**.

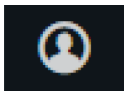


Help



Select to view the help file.

Sign Out

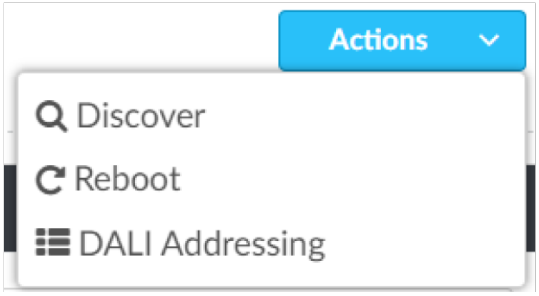


Select to bring up the **Sign Out** dialog box. Select **Sign Out** to sign out of the ZUM-HUB4.

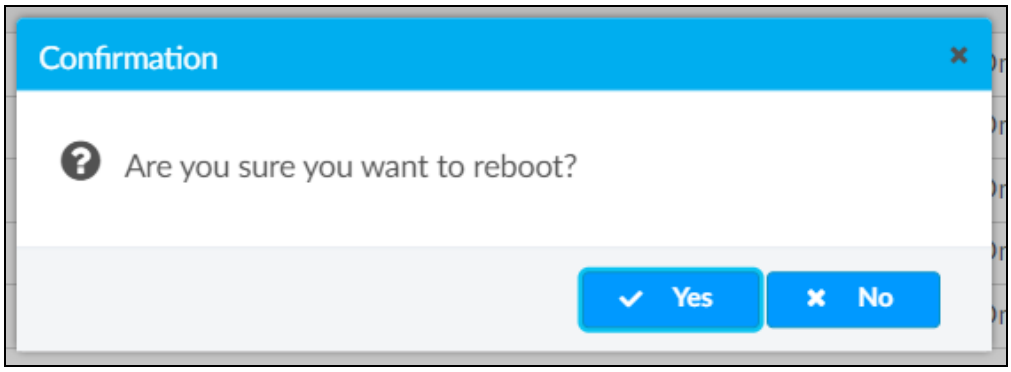
Restart ZUM-HUB4

To restart the ZUM-HUB4:

1. Select the **Actions** menu



2. Select **Reboot**. The Confirmation window opens.



3. Select **Yes** to restart or **No** to close the window without restarting.

Wired Field Guide

The following sections provide best practices for setting up a Zūm Wired space.

- Load Controllers
  - ZUMNET-JBOX-16A-LV and ZUMNET-JBOX-DALI Wiring
    - ZUMNET-JBOX-16A-LV
    - ZUMNET-JBOX-DALI
  - ZUMLINK-JBOX-16A-LV, ZUMLINK-JBOX-20A-SW, ZUMLINK-JBOX-20A-PLUG, and ZUMLINK-EXP-16A-DIMU
    - ZUMLINK-JBOX-16A-LV
    - ZUMLINK-JBOX-20A-SW
    - ZUMLINK-JBOX-20A-PLUG
    - ZUMLINK-EXP-16A-DIMU
- Keypad and Buttons
  - ZUMLINK-KP-R
  - ZUMLINK-BTN2
  - ZUMLINK-BTN4
  - ZUMLINK-BTN6
  - ZUMLINK-BTN8
- Zūm Link Presence Detectors
  - ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY
  - ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY
  - ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY
  - ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY
  - ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY
- Nonsystem Standalone Wall Box Controllers
- ZUML Hub Kits
  - ZUML Hub Kits
    - ZUML-HUB4
    - ZUML-CENCN-SWPOE-5
    - ZUML-HUB4-SWPOE-5
  - ZUML-HUB4-SWPOE-26
  - ZUML-SWPOE-26
- Power Supply

    - ZUMLINK-JBOX-PSU
- PoE Switch
    - CEN-SWPOE-5AC
- Integration Module with Standalone Timeclock
    - ZUMLINK-JBOX-IO
- Cables
- Terminations
- Build a Space
- Network a System
- Best Practices
- Typical Zūm Wired Applications
    - Wiring Key
    - ZUMNET-JBOX-16A-LV
    - ZUMNET-JBOX-DALI
    - ZUMLINK-JBOX-16A-LV
    - ZUMLINK-JBOX-20A-SW
    - ZUMLINK-JBOX-20A-PLUG
    - ZUMLINK-EXP-16A-DIMU
    - ZUMLINK-KP
    - Presence Detectors
    - ZUMLINK-JBOX-PSU
    - CEN-SWPOE-5AC
    - ZUMLINK-JBOX-IO
    - Emergency Override
    - Standalone Space
    - Networked Space, Multiple Rooms
    - Networked Space, Small
    - Networked Space, Large
    - Daisy Chain Rooms
    - Daisy Chain CEN-SWPOE-5AC for Multiple Floors

Load Controllers

Illustrations for the Zūm wired load controllers are provided below. Refer to Zūm Wired Load Controller Installation on page 166 for details.

ZUMNET-JBOX-16A-LV and ZUMNET-JBOX-DALI Wiring

(2) ZUMNET ports

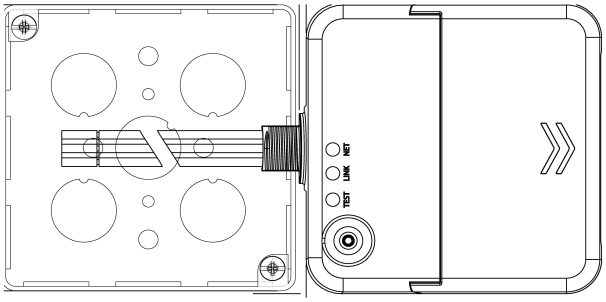
(2) ZUMLINK ports (85mA Zūm Link power)

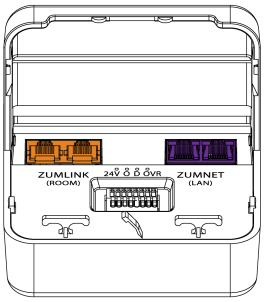
(1) 24V sensor power terminal (85mA max)

(1) Analog sensor input

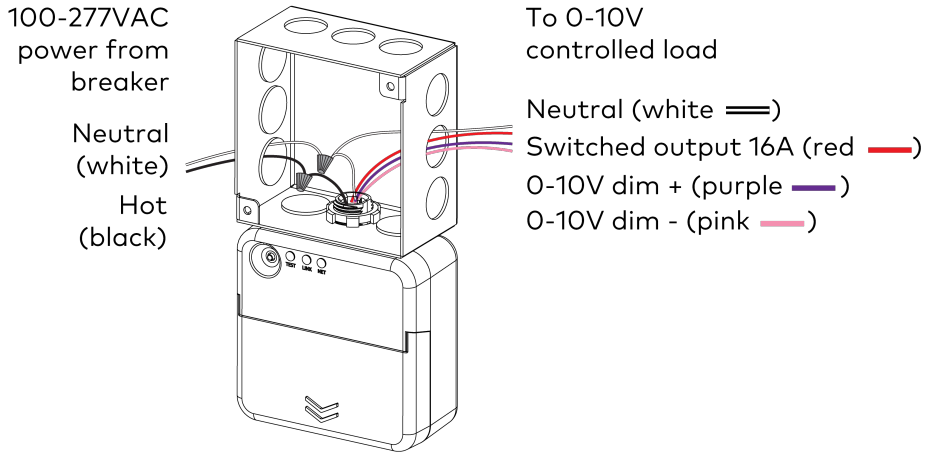
(1) Daylight sensor input

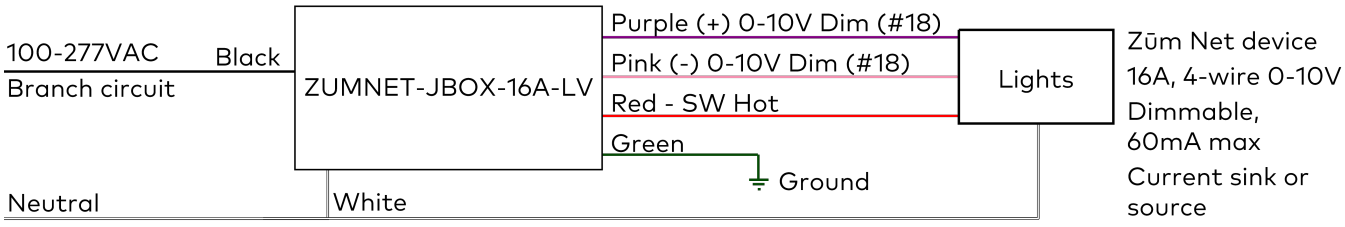
(1) Override input



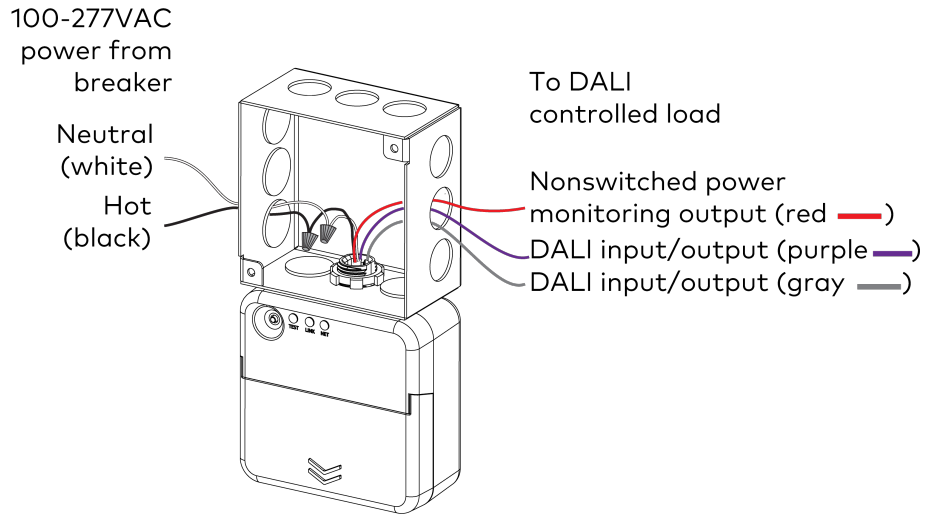


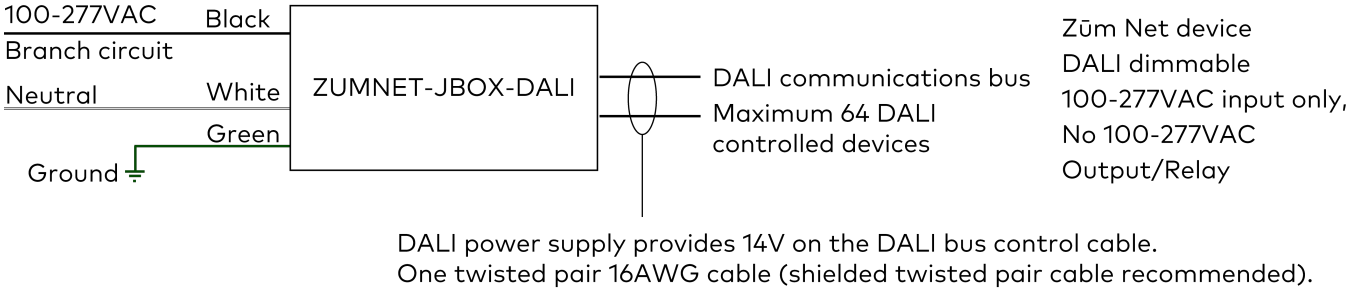
ZUMNET-JBOX-16A-LV





ZUMNET-JBOX-DALI

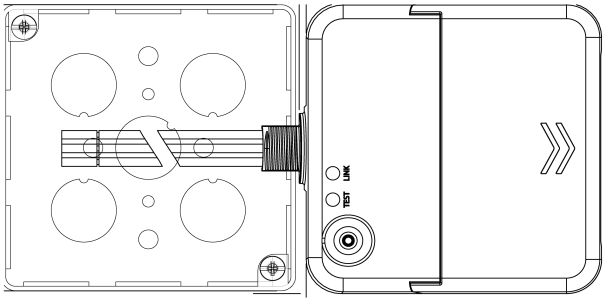


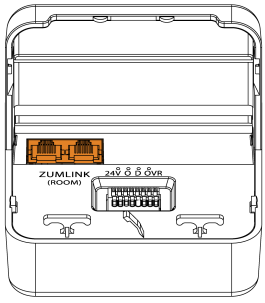


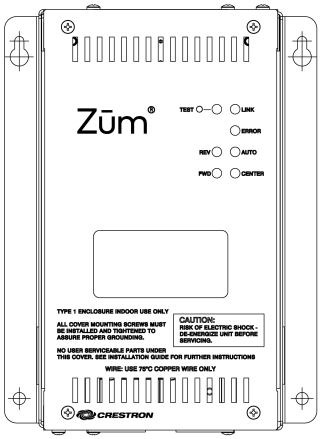
DALI power supply provides 14V on the DALI bus control cable.
One twisted pair 16AWG cable (shielded twisted pair cable recommended).

ZUMLINK-JBOX-16A-LV, ZUMLINK-JBOX-20A-SW, ZUMLINK-JBOX-20A-PLUG, and ZUMLINK-EXP-16A-DIMU

- (2) ZUMLINK ports (85mA Zūm Link power)
- (1) 24V sensor power terminal (85mA max)
- (1) Analog sensor input
- (1) Daylight sensor input
- (1) Override input

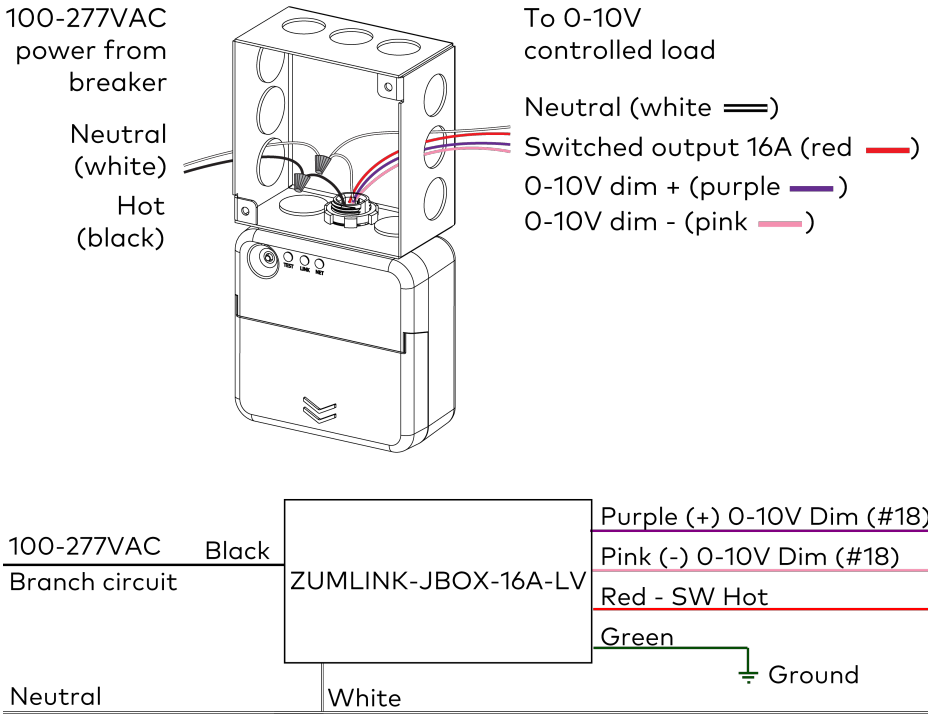




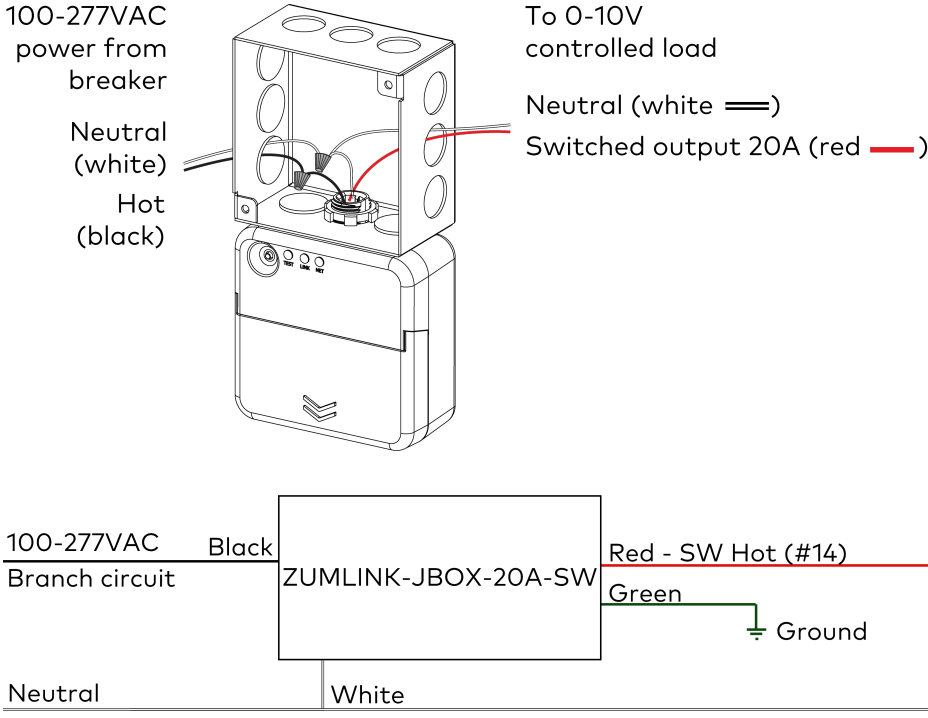


ZUMLINK-EXP-16A-DIMU

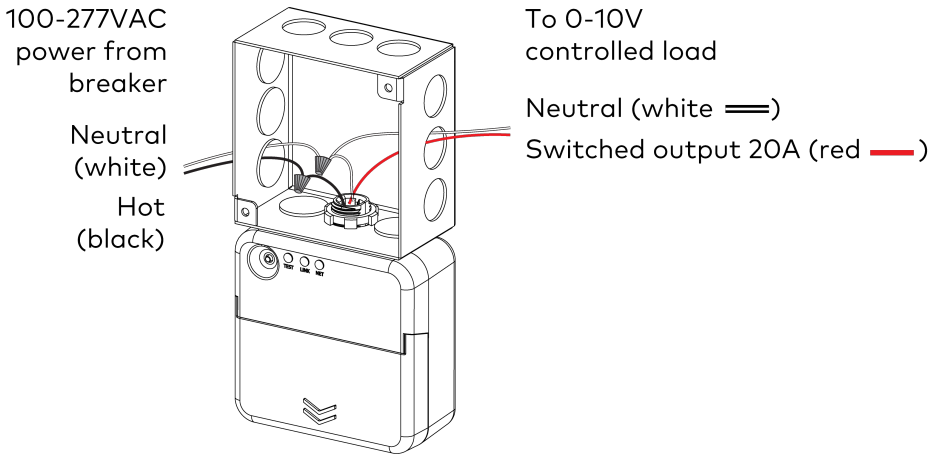
ZUMLINK-JBOX-16A-LV

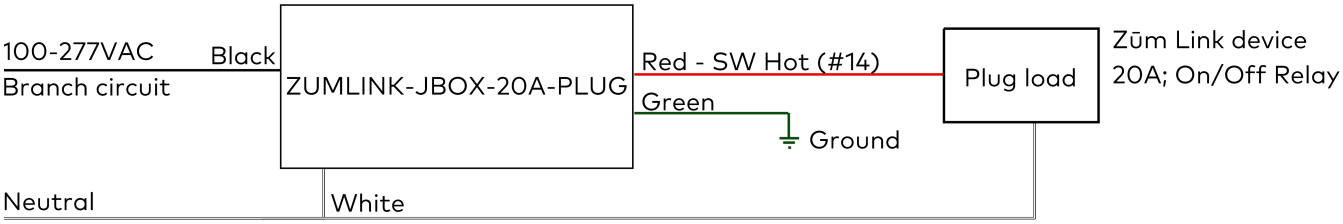


ZUMLINK-JBOX-20A-SW



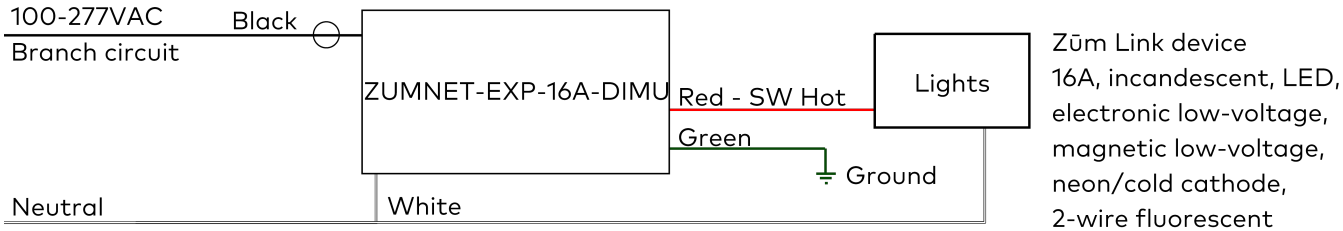
ZUMLINK-JBOX-20A-PLUG





ZUMLINK-EXP-16A-DIMU

> **NOTE:** The ZUMLINK port does not produce Zūm Link power.

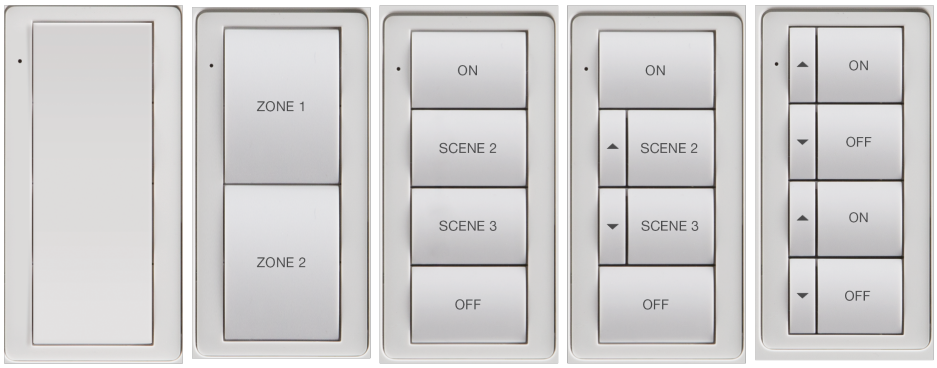


Keypad and Buttons

Illustrations for the Zūm wired keypad and button trees are provided below.

For more information, refer to Keypad Specifications on page 100, Rocker and Button Tree Specifications on page 148, Zūm Wired Keypad Installation on page 183, and Rocker and Button Tree Installation on page 228.

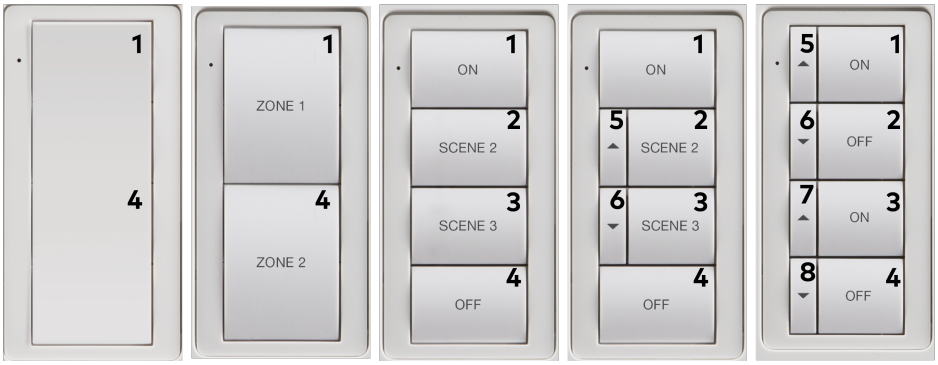
Keypad and Button Trees



ZUMLINK-KP-R-W	ZUMLINK-KP-R-W + ZUMLINK-BTN2-W	ZUMLINK-KP-R-W + ZUMLINK-BTN4-W	ZUMLINK-KP-R-W + ZUMLINK-BTN6-W	ZUMLINK-KP-R-W + ZUMLINK-BTN8-W

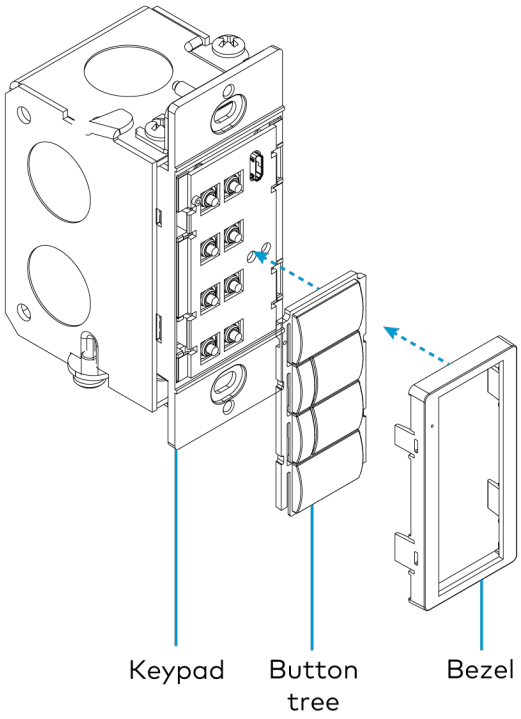
Button Positions

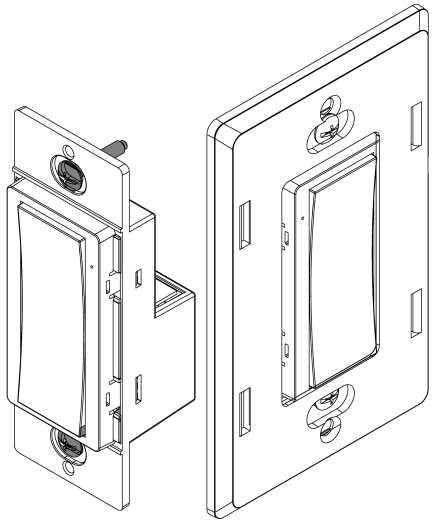
ZUMLINK-BTNR	ZUMLINK-BTN2	ZUMLINK-BTN4	ZUMLINK-BTN6	ZUMLINK-BTN8



ZUMLINK-KP-R

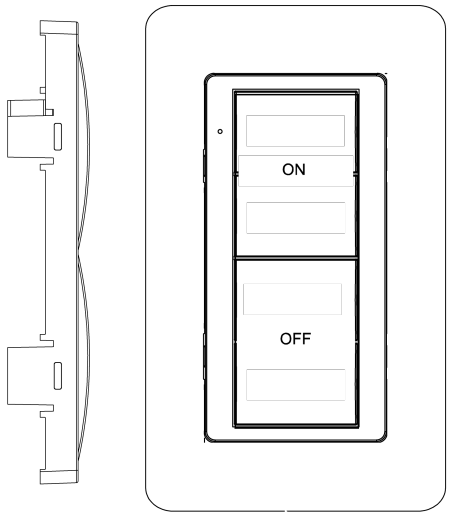
- Single rocker switch
- Default keypad assembly
- (2) ZUMLINK ports
- 5mA Zūm Link power
- Faceplate not included





ZUMLINK-BTN2

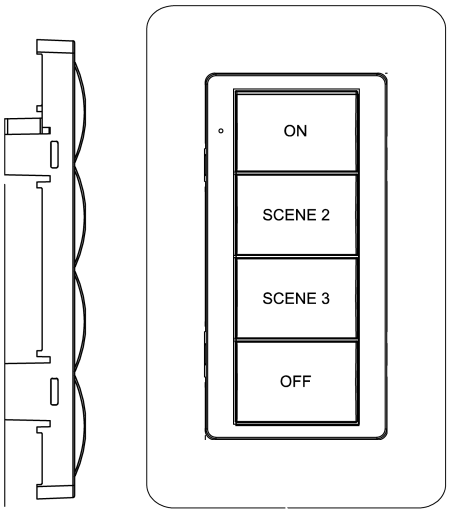
Two button tree and bezel attaches to ZUMLINK-KP-R.



Pad-printed ZUMLINK-BTN2 shown. Faceplate not included.

ZUMLINK-BTN4

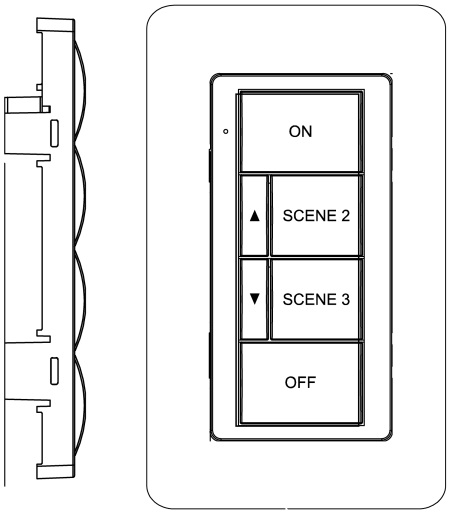
Four button tree and bezel attaches to ZUMLINK-KP-R.



Pad-printed ZUMLINK-BTN4 shown. Faceplate not included.

ZUMLINK-BTN6

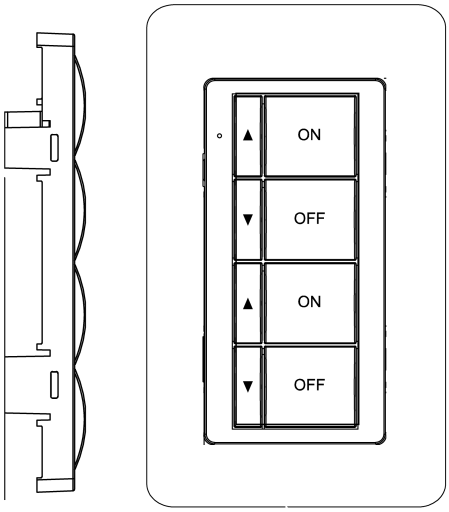
Six button tree and bezel attaches to ZUMLINK-KP-R.



Pad-printed ZUMLINK-BTN6 shown. Faceplate not included.

ZUMLINK-BTN8

Eight button tree and bezel attaches to ZUMLINK-KP-R.



Pad-printed ZUMLINK-BTN8 shown. Faceplate not included.

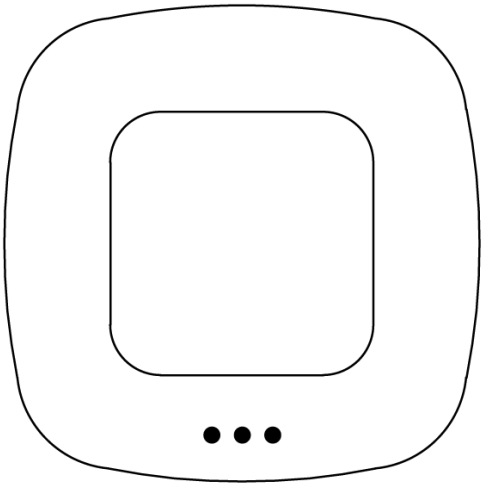
Zūm Link Presence Detectors

CAUTION: When the daylight sensor component is in use, the presence detector counts as two devices in the space limitation.

Fore more information, refer to Presence Detector Specifications on page 102 and Presence Detectors Installation on page 190.

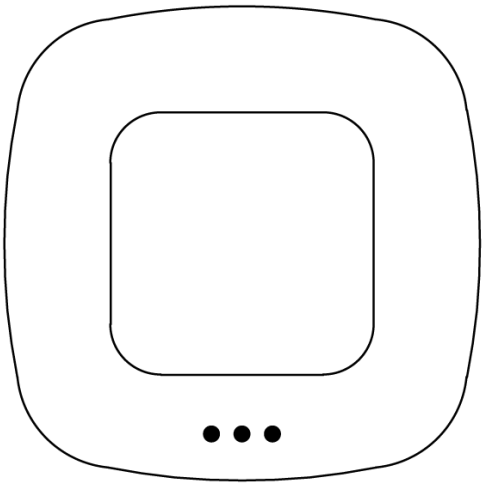
ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 17 mA
- Passive Infrared (PIR)
- Presence maximum: 30 x 30 ft (900 sq ft)
- Radial maximum 30 x 30 ft (900 sq ft)
- Tangential maximum: 46 x 46 ft (2,116 sq ft)
- Light level setting: 10–1,000 lux (1–100 fc)



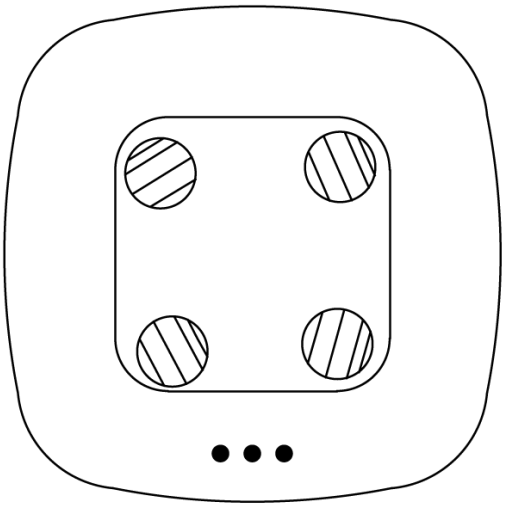
ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 17 mA
- Passive Infrared (PIR)
- Presence maximum: 50 x 50 ft (2,500 sq ft)/ 15 x 15. m (225 sq m)
- Light level settings: 10–1,000 lux (1–100 fc)



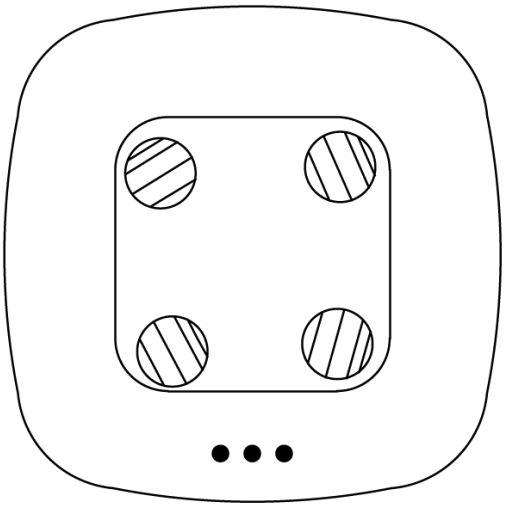
ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 28 mA
- Passive Infrared (PIR) and Ultrasonic (US) 40 kHz
- US presence
  Maximum: 40 x 30 fct (1,200 sq ft)/ 12 x 9 m (108 sq m)
- PIR presence
  Maximum: 50 x 40 ft (2,000 sq ft)/ 15 x 12 m (180 sq m)
- Light level setting: 10–1,000 lux (1–100 fc)



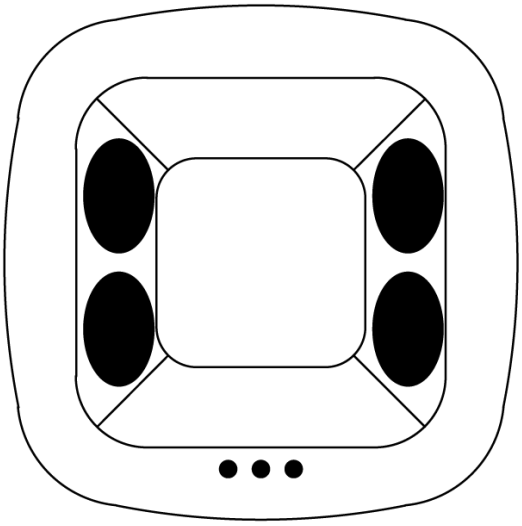
ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 28 mA
- Ultrasonic (US) 40 kHz
- Presence maximum: 40 x 50 ft (2,000 sq ft)/ 12 x 15 m (180 sq m)
- Light level setting: 10–1,000 lux (1–100 fc)

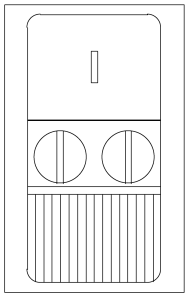


ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 28 mA
- Ultrasonic (US) 40 kHz
- Maximum: 50 x 20 ft (1,000 sq ft)/ 15 x 6 m (90 sq m)
- Minimum: 40 x 20 ft (800 sq ft)/ 12 x 6 m (72 sq m)
- Light level setting: 10–1,000 lux (1–100 fc)

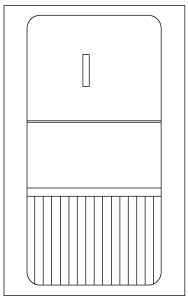


Nonsystem Standalone Wall Box Controllers



GLA-DT-WLS-1

- Single button ON/OFF
- 120/230/277VAC, 50/60 HZ
- Passive Infrared (PIR) and Ultrasonic (US) 40 kHz
- Occupancy or vacancy modes



GLA-IR-WLS-1

- Single button ON/OFF
- 120/230/277VAC, 50/60 HZ
- Passive Infrared (PIR)
- Occupancy or vacancy modes

ZUML Hub Kits

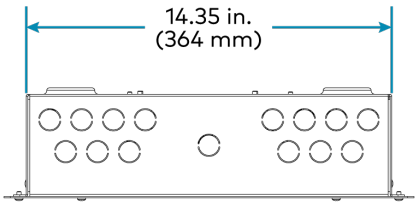
Below are illustrations for the Zūm networking and integration.

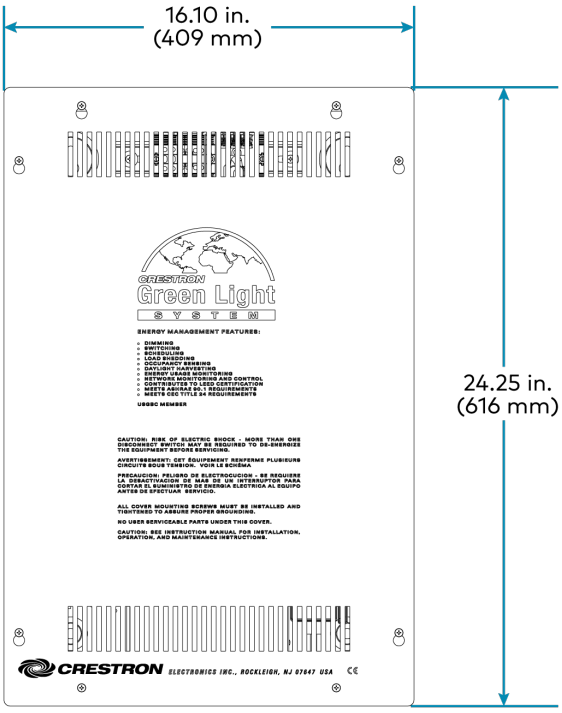
ZUML Hub Kits

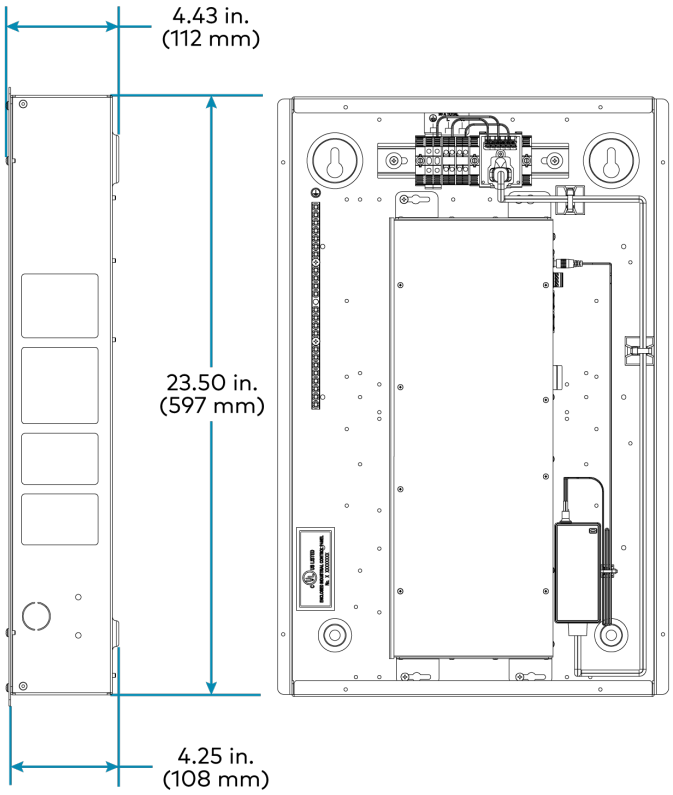
- 4 available PoE ports
- Support up to 30 gateways when utilizing distribution hubs
- Support up to 1,000 Zūm spaces when utilizing distribution hubs and gateways
- Provides dynamic scheduling

ZUML-HUB4

Main power: 100–240VAC

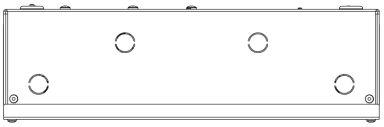


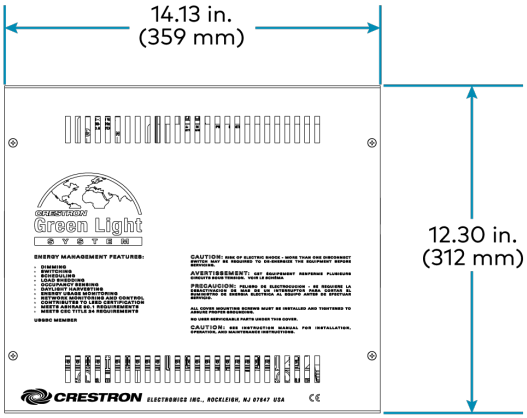


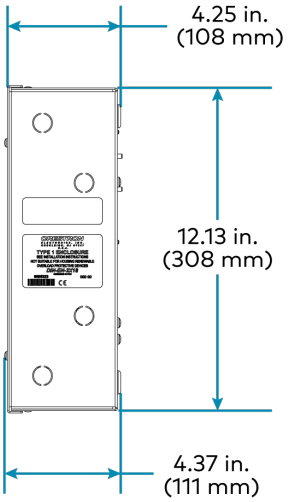


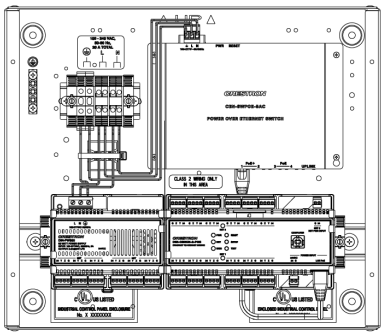
ZUML-CENCN-SWPOE-5

Main power: 100–277VAC



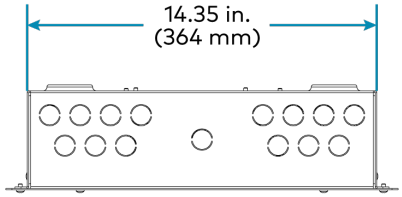


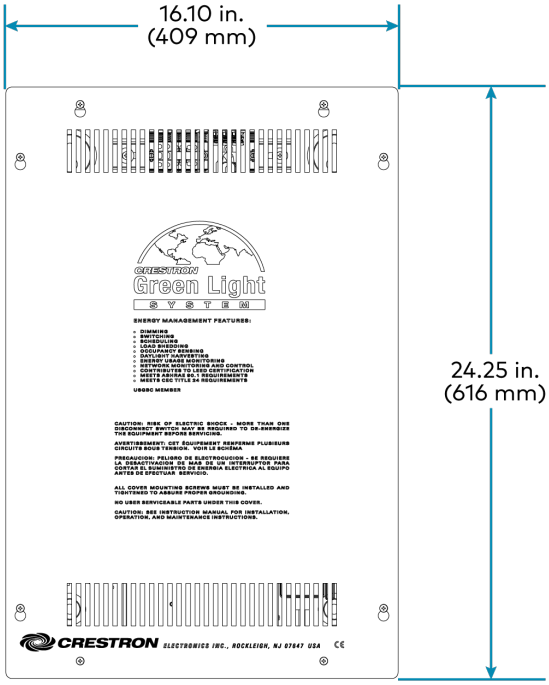


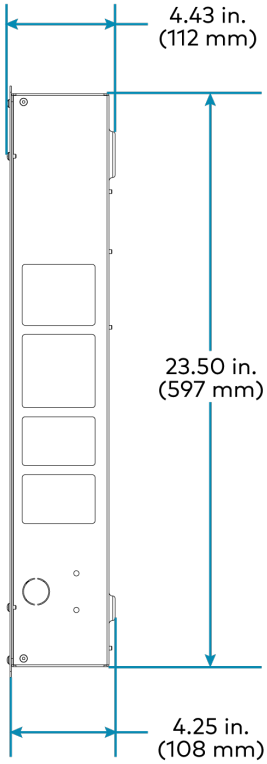


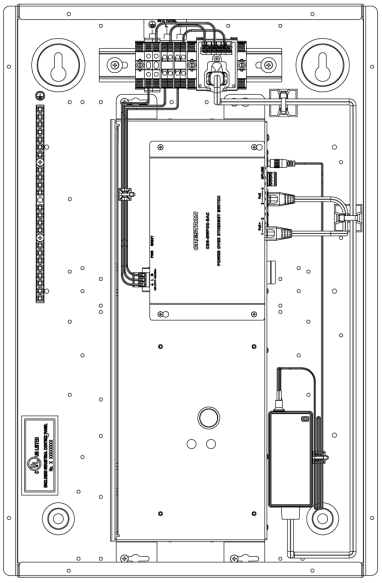
ZUML-HUB4-SWPOE-5

Main power: 100–240VAC



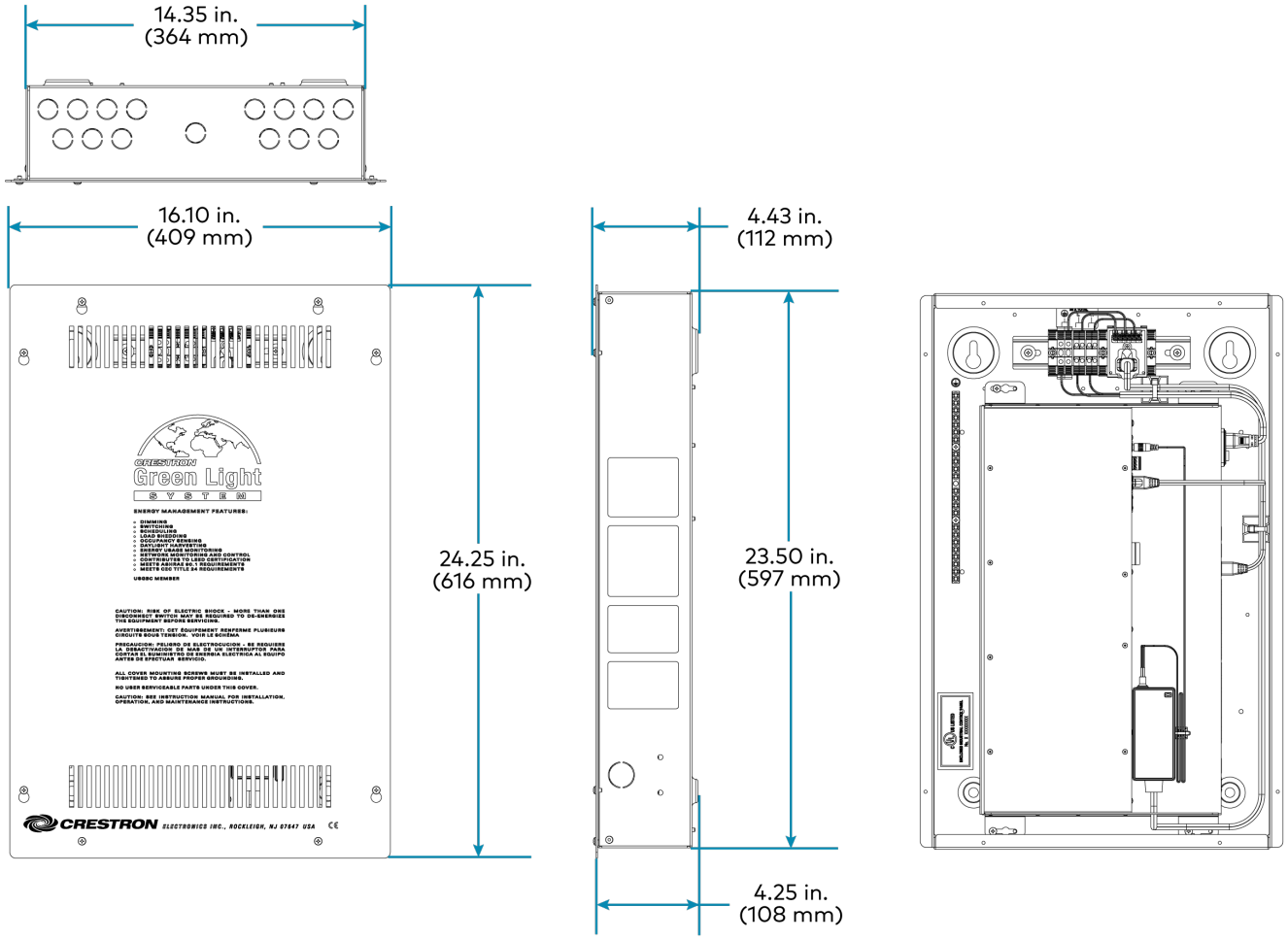






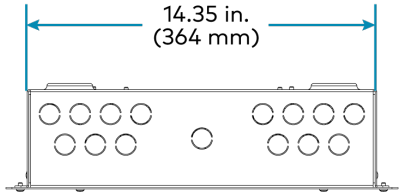
ZUML-HUB4-SWPOE-26

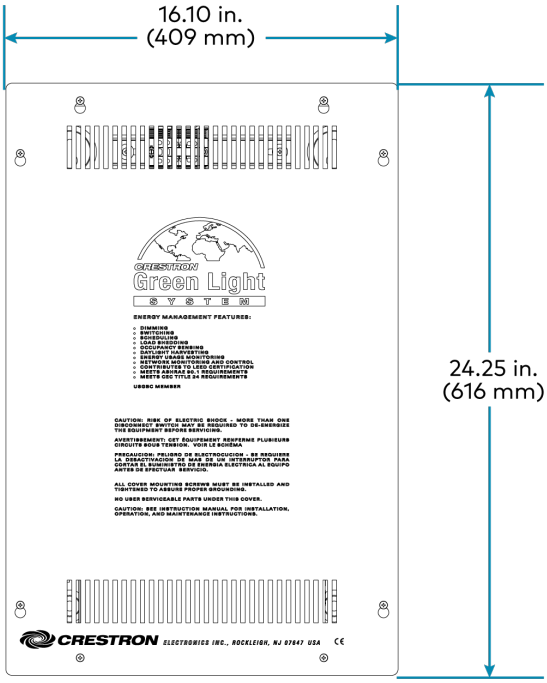
Main power: 100–240VAC

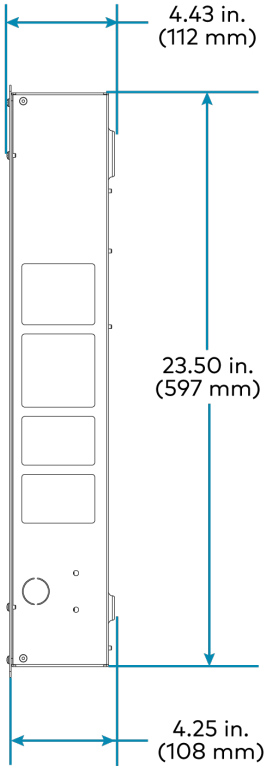


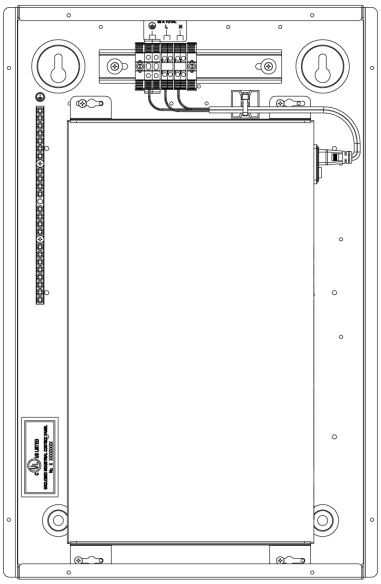
ZUML-SWPOE-26

Main power: 100–240VAC







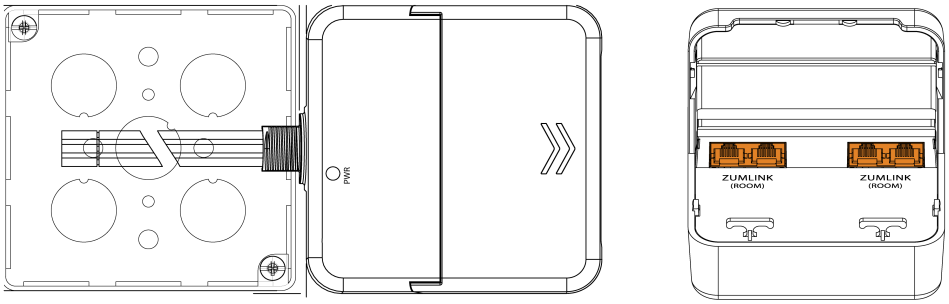


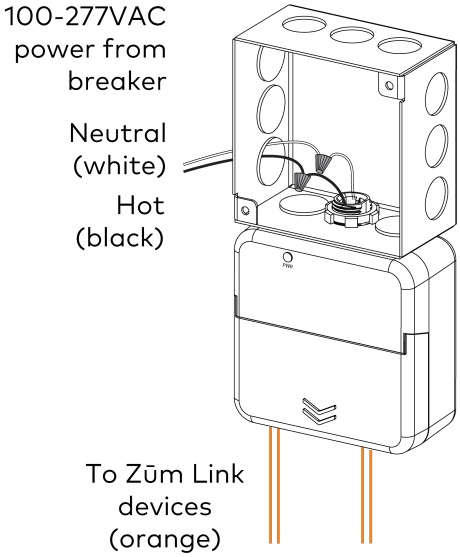
Power Supply

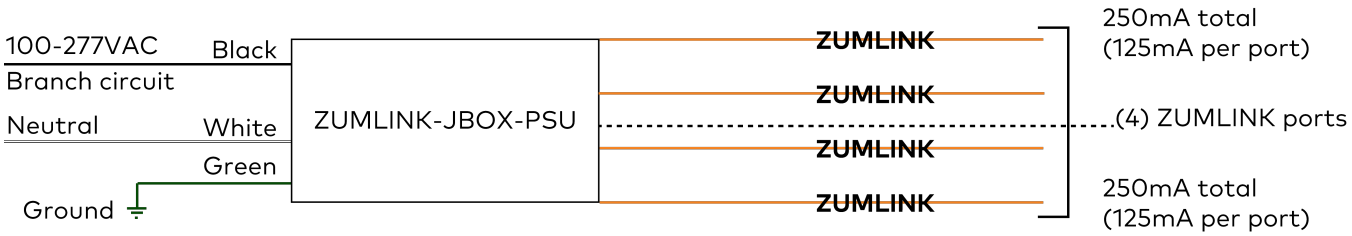
Illustrations for the Zūm wired power supply are provided below. Refer to Power Supply Installation on page 209 for details.

ZUMLINK-JBOX-PSU

(4) Zūm Link ports (250mA Zūm Link power total per side)



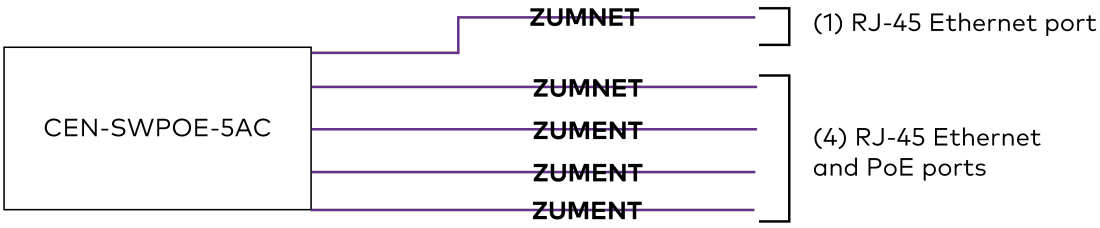




PoE Switch

Illustrations for the PoE switch are provided below.

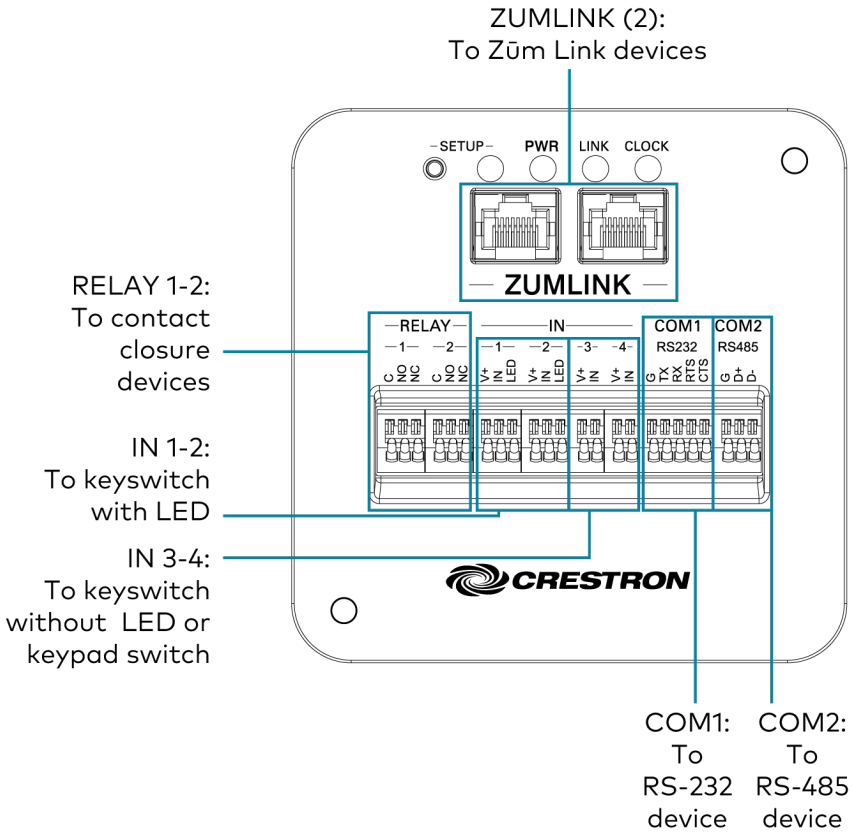
CEN-SWPOE-5AC



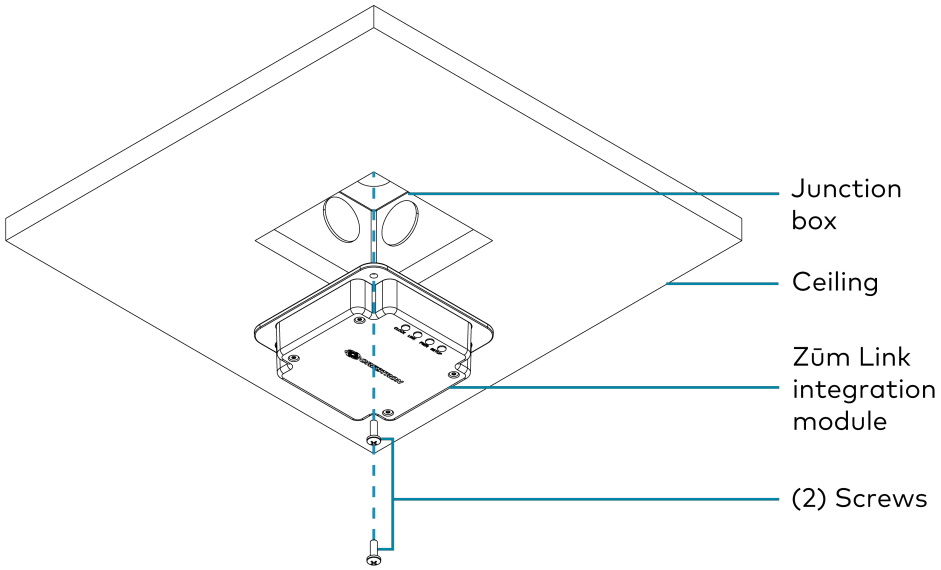
Integration Module with Standalone Timeclock

Illustrations for the Zūm wired integration module with standalone timeclock are provided below. Refer to Integration Module with Standalone Timeclock Installation on page 220 for details.

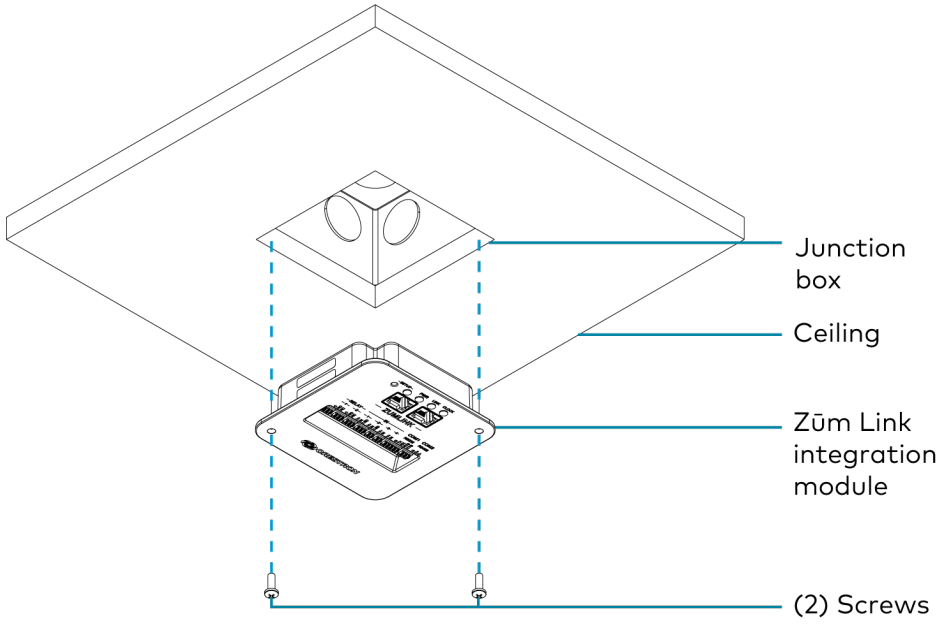
ZUMLINK-JBOX-IO



Integration Module with LEDs Facing Out



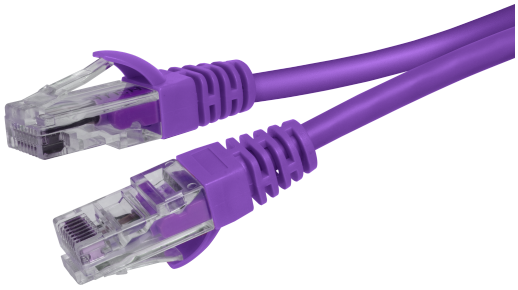
Integration Module with Connections Facing Out



Cables

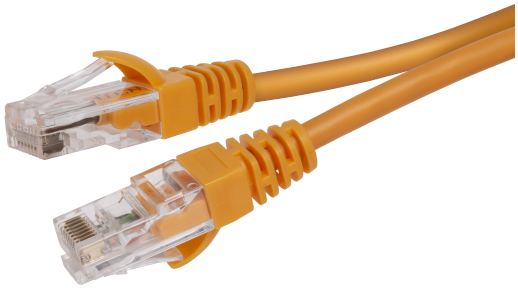
CBL-CAT5E-ZUMNET-P

- Preterminated CAT5E
- RS485
- Plenum rated
- Substitution option: CAT5E to CAT7 cable is compatible with the T865B configuration



CBL-CAT5E-ZUMLINK-P

- Preterminated CAT5E
- RS485
- Plenum rated
- Substitution option: CAT5E to CAT7 cable is compatible with the T865B configuration



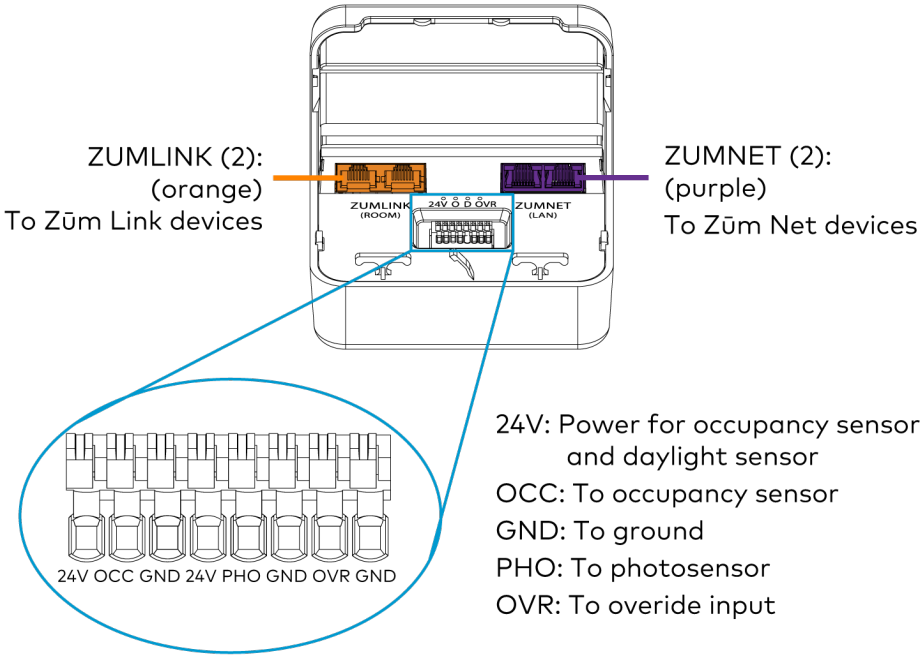
For Nonsystem Sensors

- 18 AWG recommended
- Solid core
- Stripped to 0.25–0.375 in. (6–9 mm)

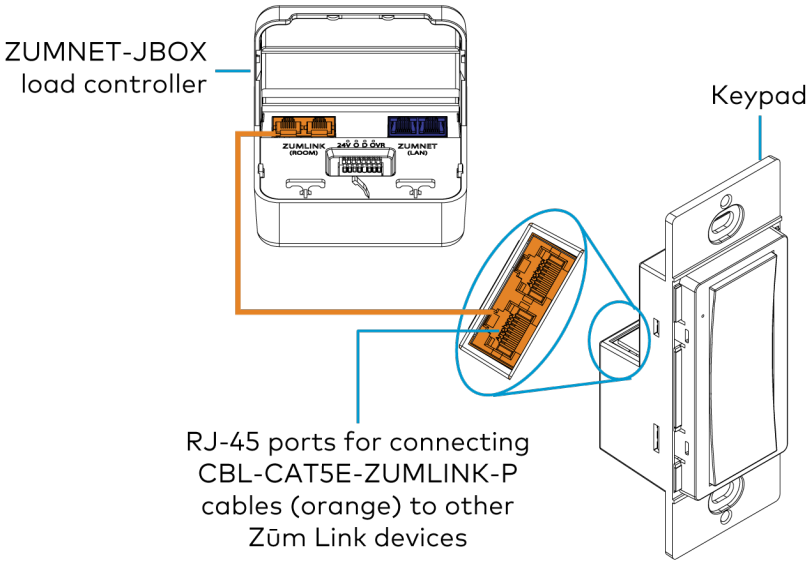


Terminations

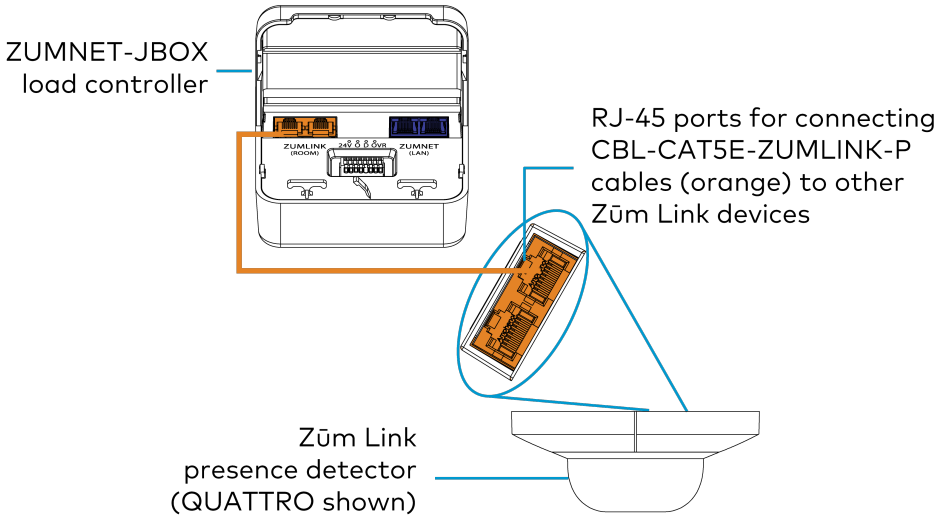
Zūm Net Load Controller



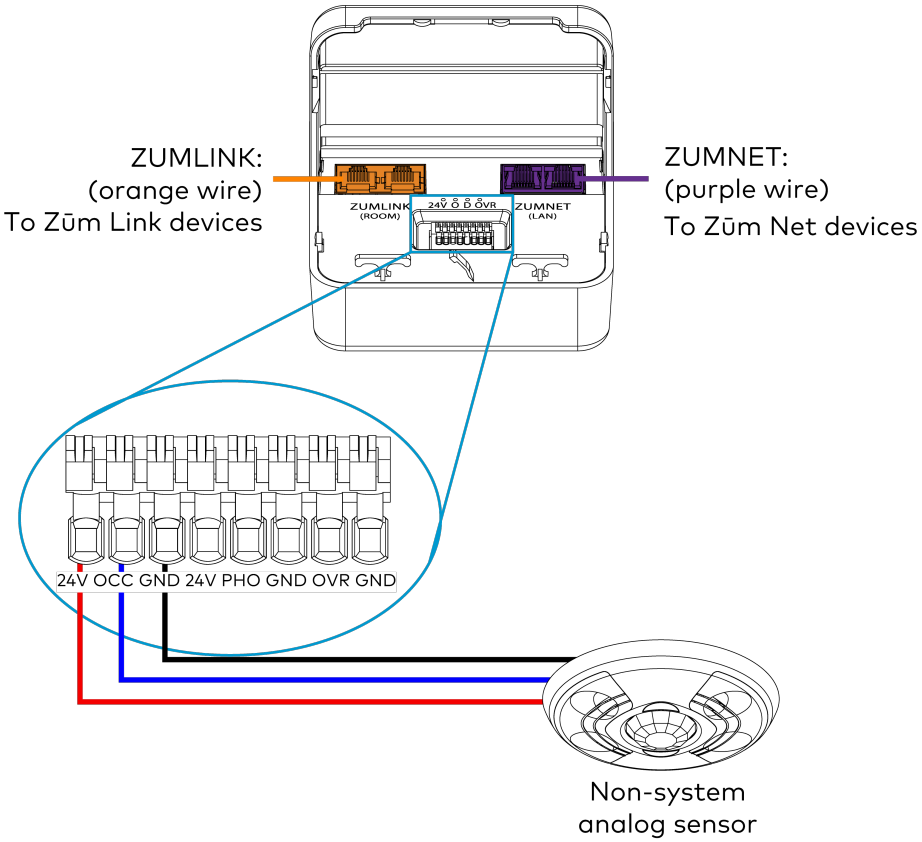
Zūm Net Load Controller to Keypad



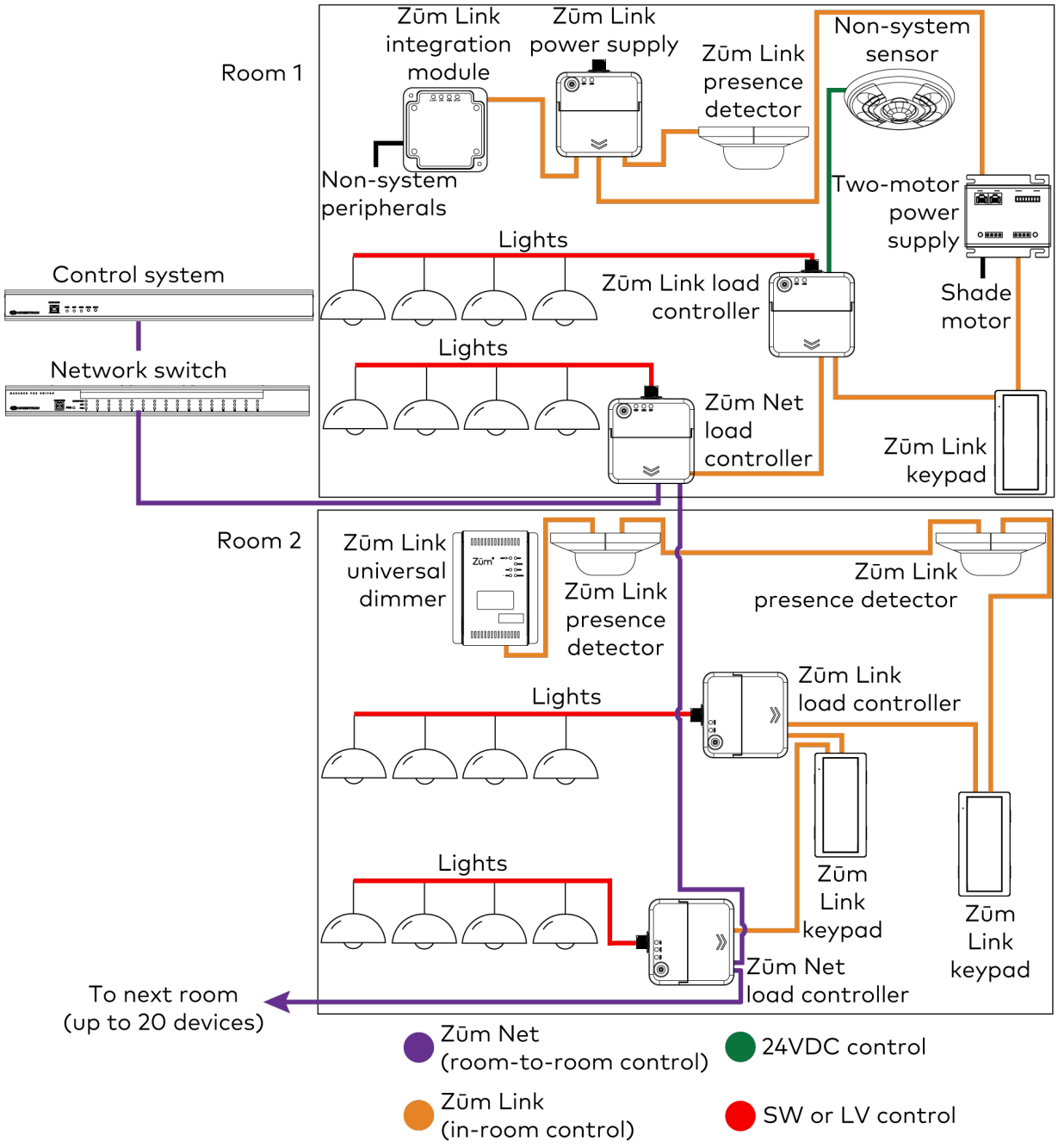
Zūm Net Load Controller to Presence Detector



Zūm Net Load Controller to Nonsystem Analog Sensor



Zūm Wired System Diagram



NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

Build a Space

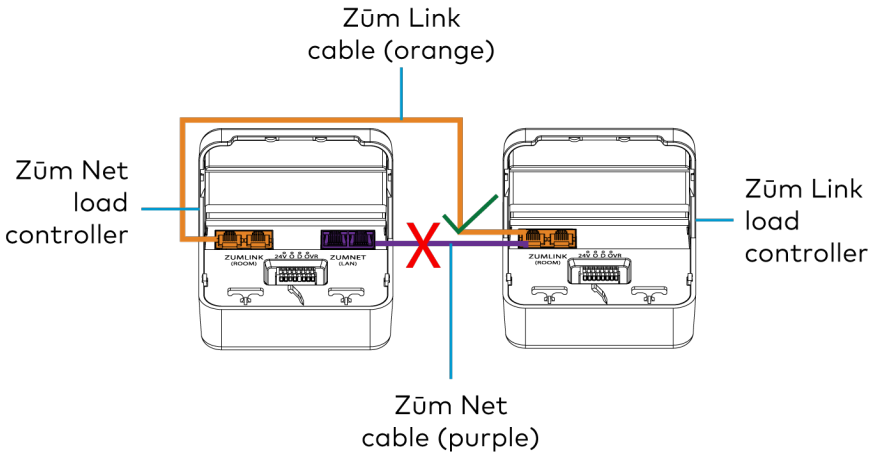
- Requires one Zūm load controller per space
  Multiple Zūm Net devices can be used in the space but only one Zūm Net device will be the primary room controller.
- Maximum Zūm Wired devices and components per space:
  - 8 Zūm Wired devices when ZUMNET-JBOX-DALI is the only load type
  - 15 Zūm Wired devices when Zūm JBOX devices are the only load type
  - 32 Zūm Wired devices when custom programming or Zūm DIN devices are used
  - 32 zones or DALI groups
  - 16 keypads
  - 4 daylight inputs
- Each JBOX load controller outputs 85mA Zūm Link power
  - Stack up to 8 load controllers
  - Maximum mA cumulative draw of 750mA (0.75A)
  - JBOX power supply provides 2 x 125mA outputs per segment (2 segments, 250mA per segment)
- Each JBOX load controller outputs 85mA of analog sensor power
  - Power does NOT stack
  - Maximum of 8 occupancy sensors per load controller input
  - Additional power by Steinel power pack GLA-TR-100 (sold separately)
- Distance limitations:
  - 500 ft from Zūm Net to Zūm Link device
  - 500 ft from Zūm Link to Zūm Link device
  - 1,000 ft cumulative per run

Network a System

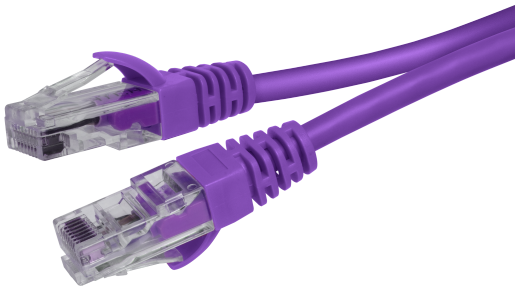
- Requires one Zūm Net load controller per space is required to network the system.
- Up to 1,000 Zūm Net devices per Hub
  Nine BACnet objects maximum per space
- Daisy chain up to 20 Zūm Net load controllers on a single cable run
- Distance limitations for Zūm Net devices:
  - 328 ft from hub to Zūm Net device
  - 328 ft between Zūm Net devices
  - 6,560 ft cumulative per run
- Distance limitations for Zūm Link devices:
  - 500 ft from Zūm Net device to Zūm Link device
  - 500 ft between Zūm Link devices
  - 1,000 ft cumulative per run
- Three network switch limit between Hub and Zūm Net device

Best Practices

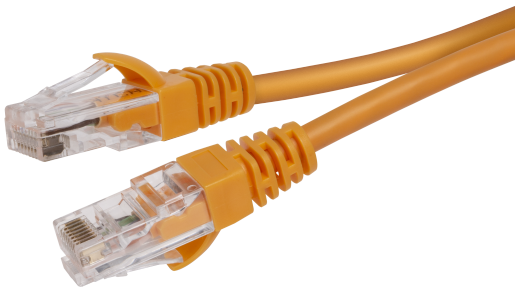
- Do **NOT** connect standard Ethernet ports on network-based devices to the orange Zūm Link ports on Zūm Link or Zūm Net devices. Also, do **NOT** connect the purple Zūm Net ports on Zūm Net devices to the orange Zūm Link ports on Zūm Link devices. These connections may damage network devices.



- Only use preterminated, color-coded Crestron cables.
  - CBL-CAT5E-ZUMNET-P



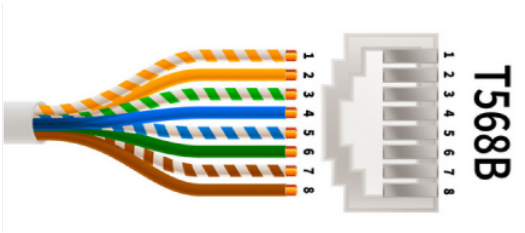
  - CBL-CAT5E-ZUMLINK-P



- Use cable lengths that allow for appropriate service loops at the end of cable runs.



- Terminate all Ethernet cables according to T568B.



- Use appropriate hooks and mounting practices for Ethernet cabling.



- Run Crestron cables at 90° to all high voltage cables.



Typical Zūm Wired Applications

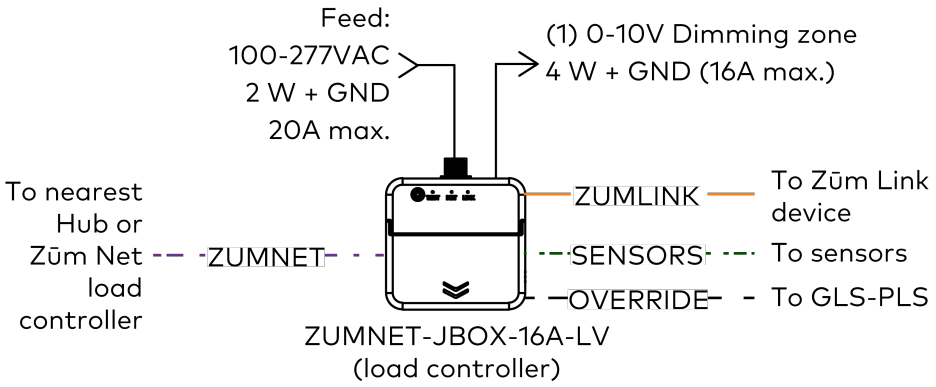
Illustrations for typical Zūm wired applications are provided below.

> **NOTE:** Refer to Build a Space on page 471 for design considerations and limitations when designing a Zūm Wired system.

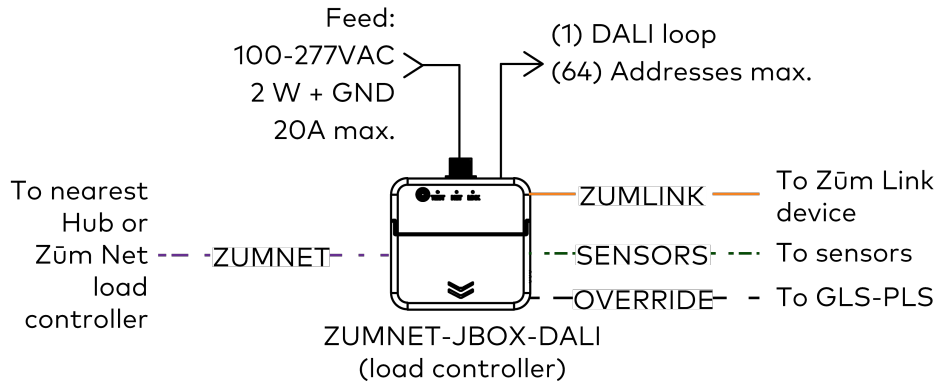
Wiring Key

ZUMLINK	CBL-CAT5E-ZUMLINK-P or CAT5e equivalent
ZUMNET	CBL-CAT5E-ZUMNET-P or CAT5e equivalent
SENSORS	CRESNET or equivalent (1) Pair 18AWG (1) Twisted pair 22AWG
OVERRIDE	(1) Twisted pair 18AWG (1) Shield

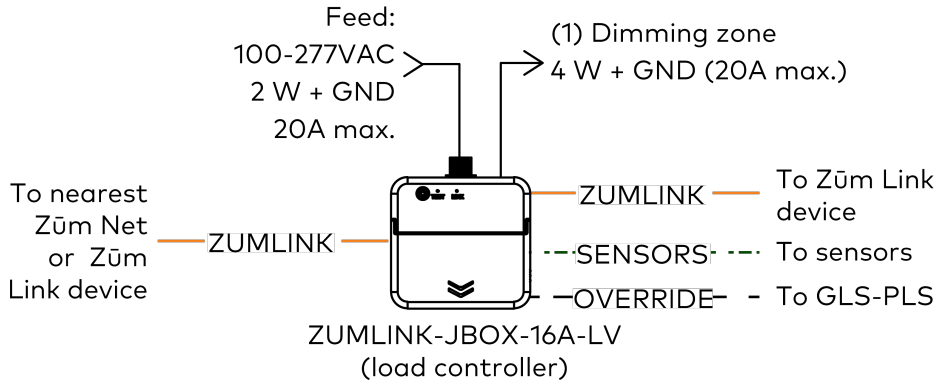
ZUMNET-JBOX-16A-LV



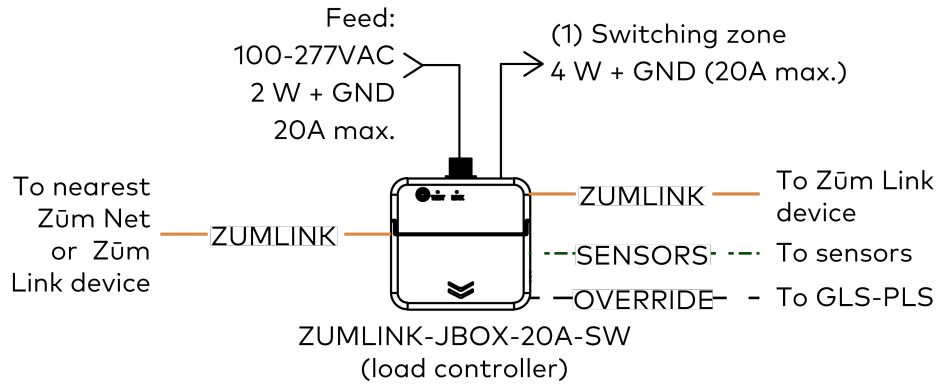
ZUMNET-JBOX-DALI



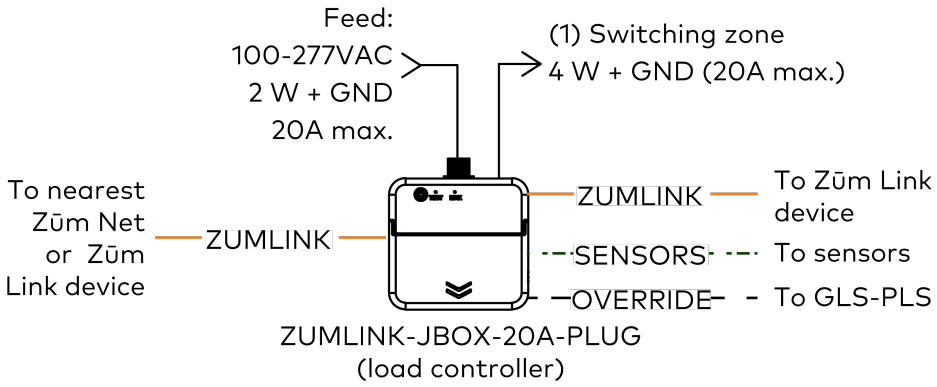
ZUMLINK-JBOX-16A-LV



ZUMLINK-JBOX-20A-SW

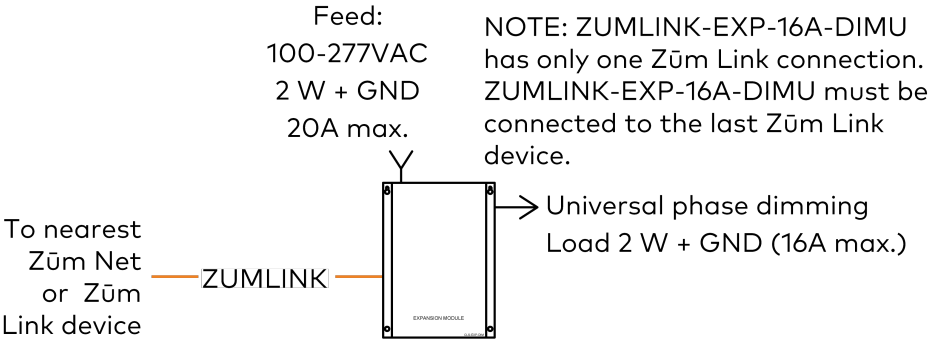


ZUMLINK-JBOX-20A-PLUG



ZUMLINK-JBOX-20A-PLUG
(load controller)

ZUMLINK-EXP-16A-DIMU



ZUMLINK-EXP-16A-DIMU
(lighting controller)

ZUMLINK-KP



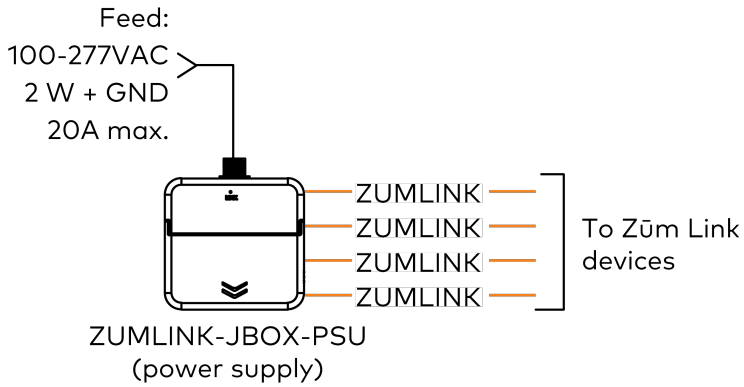
ZUMLINK-KP-R
ZUMLINK-BTNx
(keypad)

Presence Detectors

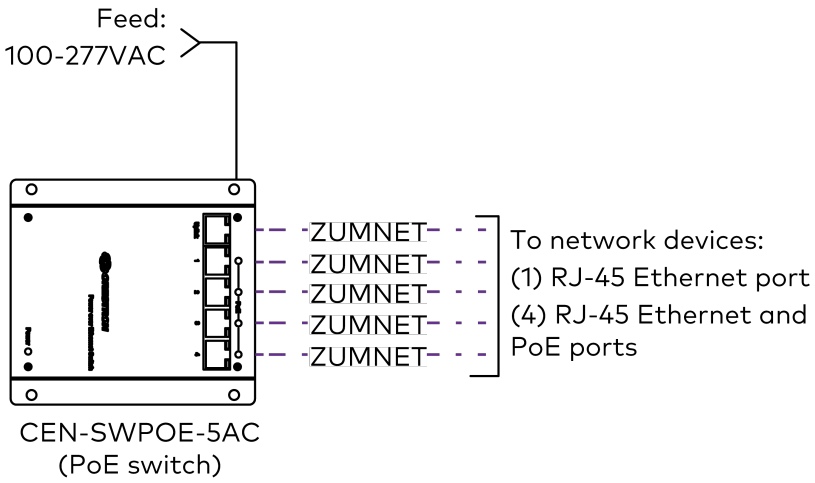


ZUMLINK-IR-QUATTRO-HD-DLS
(presence detector)

ZUMLINK-JBOX-PSU



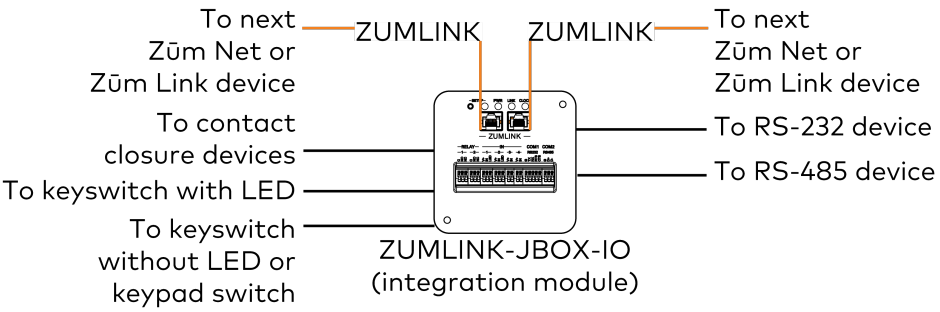
CEN-SWPOE-5AC



Do not excede 328 ft from control processor to Zūm Net device or between Zūm Net devices

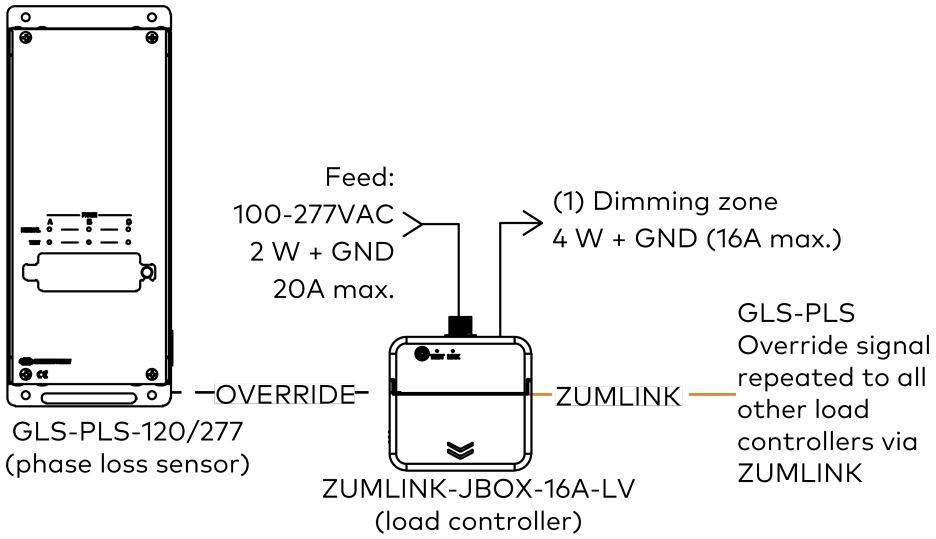
Do not excede 20 Zūm Net daisy-chained devices on each Zūm Net run

ZUMLINK-JBOX-IO



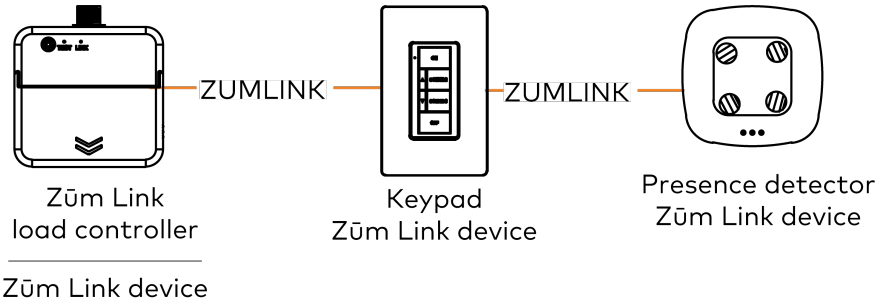
Emergency Override

Feeds:
120V-208 or 277-480 VAC from breaker panel
(overcurrent protection by installer)
3PH 4 W normal power



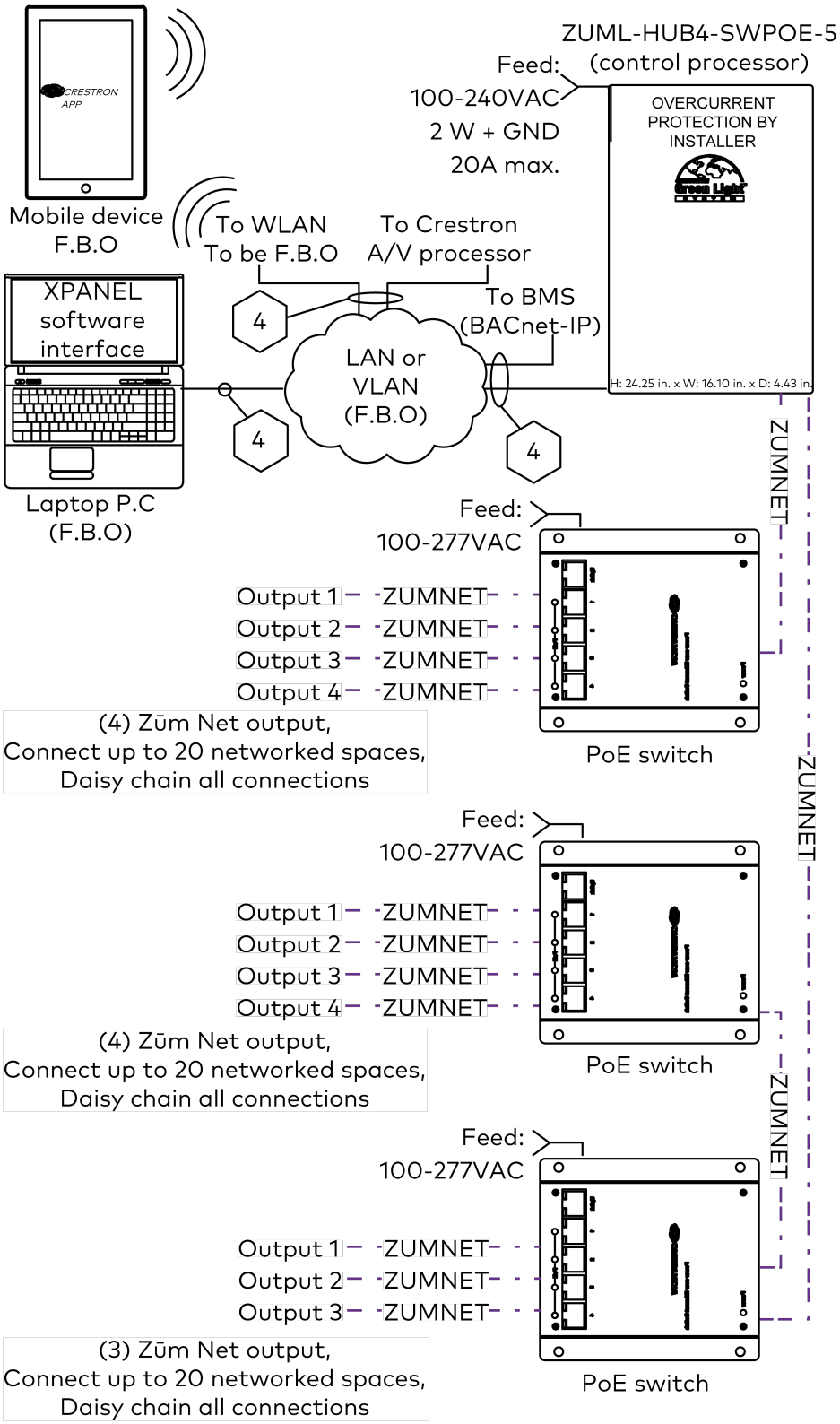
Connect the GLS-PLS to the first Zūm Net or Zūm Link load controller OVR terminal. The Override signal is then carried to all other load controllers via ZUMLINK communication. During power loss, the Override signal passes through any powerless/normal load controllers to trigger them to enter emergency mode.

Standalone Space

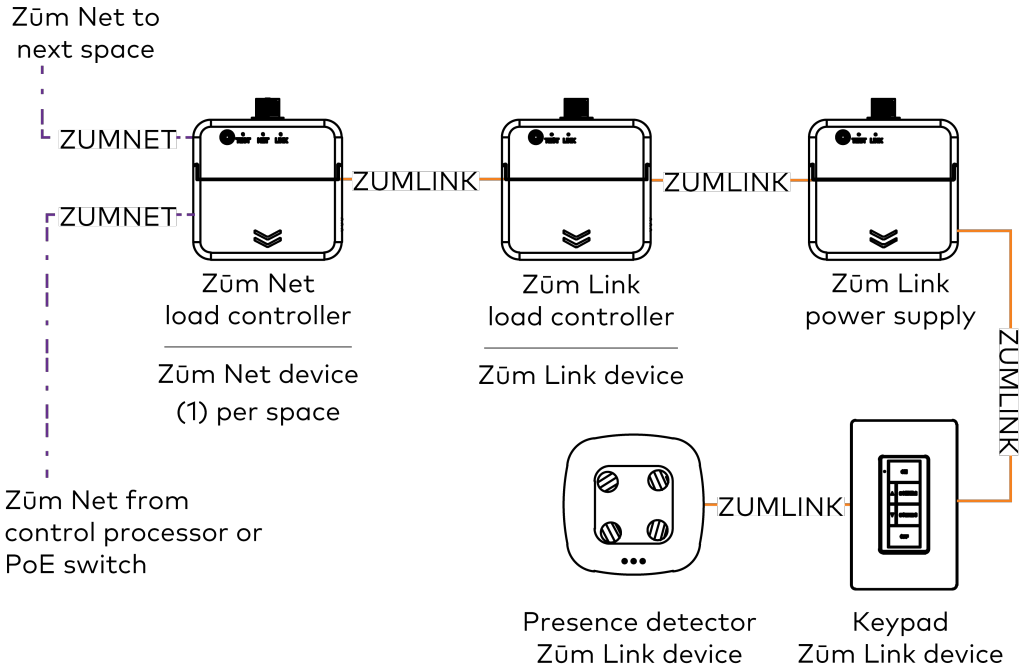


Expandable up to 32 Zūm Link devices (dependent on load types)
500 ft maximum between AC powered Zūm Link devices

Networked Space, Multiple Rooms



Networked Space, Small



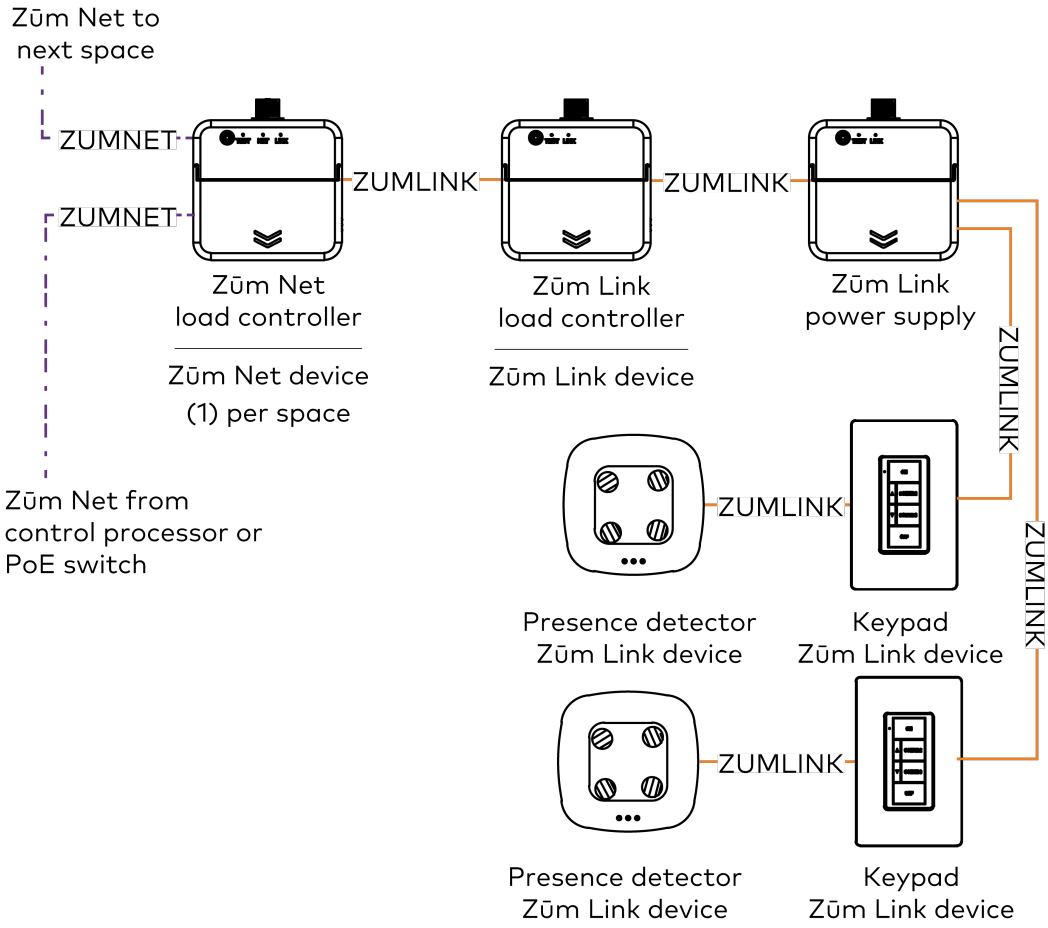
Expandable up to 31 Zūm Link devices (dependent on load types)

500 ft maximum between AC powered Zūm Link devices

Do not exceed 328 ft from control processor to Zūm Net device or between Zūm Net devices

Do not exceed 20 Zūm Net daisy-chained devices on each Zūm Net run

Networked Space, Large



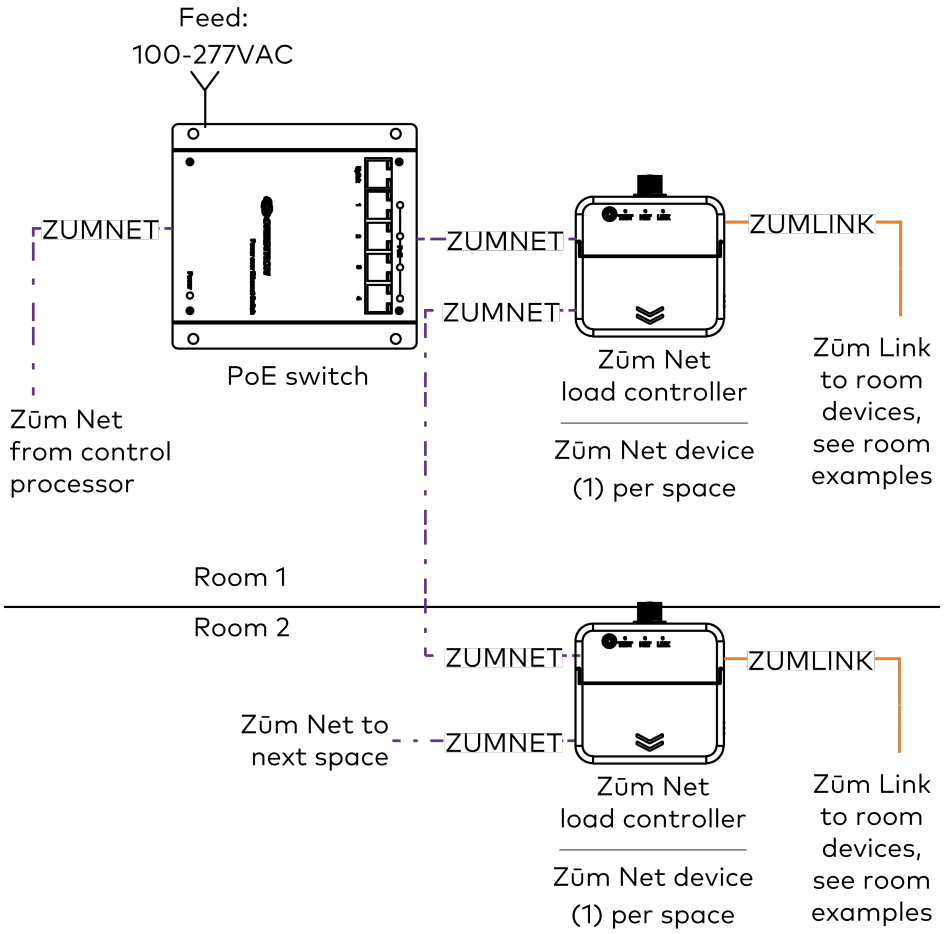
Expandable up to 31 Zūm Link devices (dependent on load types)

500 ft maximum between AC powered Zūm Link devices

Do not exceed 328 ft from control processor to Zūm Net device or between Zūm Net devices

Do not exceed 20 Zūm Net daisy-chained devices on each Zūm Net run

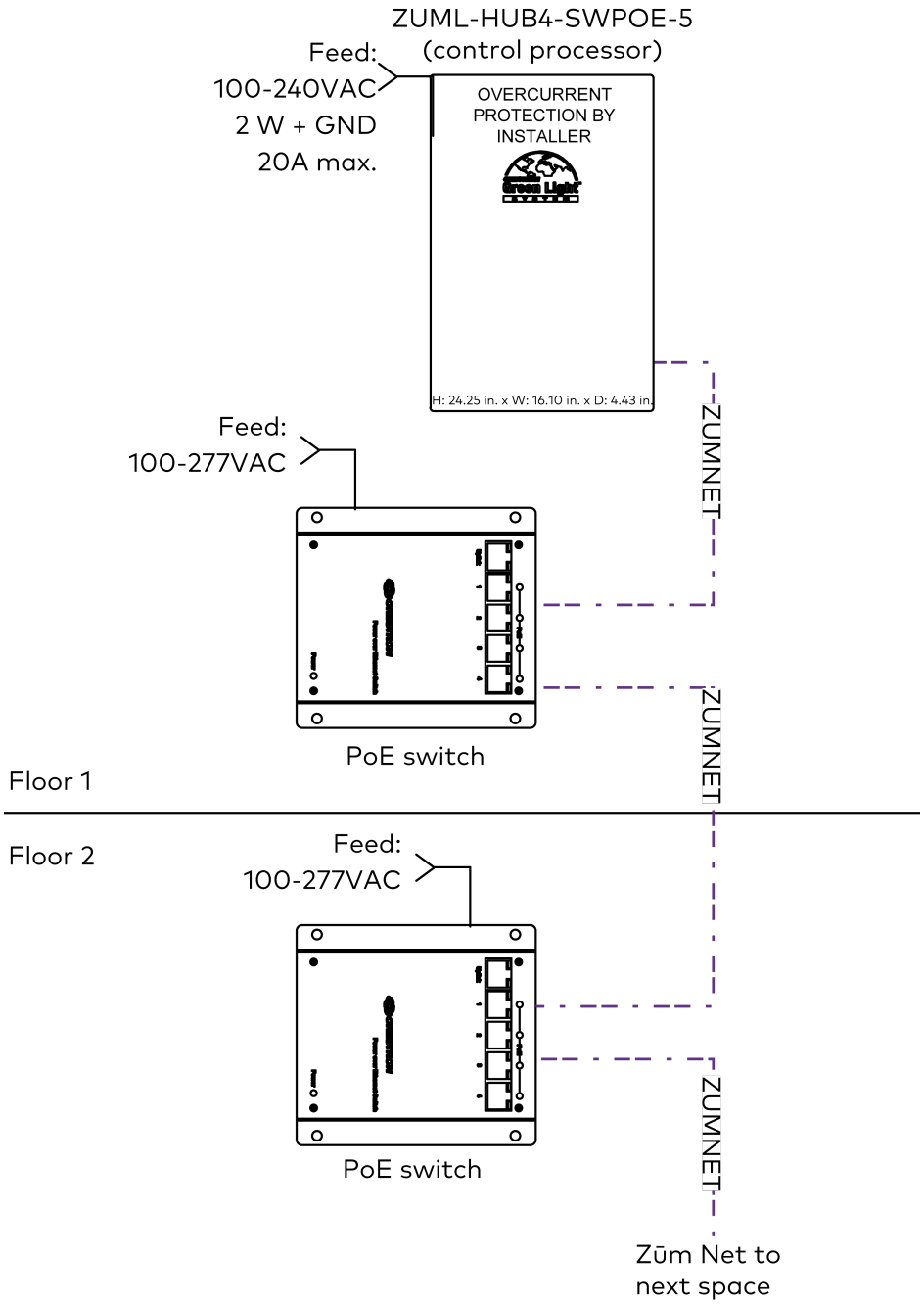
Daisy Chain Rooms



Do not exceed 328 ft from control processor to Zūm Net device or between Zūm Net devices

Do not exceed 20 Zūm Net daisy-chained devices on each Zūm Net run

Daisy Chain CEN-SWPOE-5AC for Multiple Floors



Do not exceed 328 ft from control processor to Zūm Net device or between Zūm Net devices

Do not exceed 20 Zūm Net daisy-chained devices on each Zūm Net run

DIN Rail Field Guide

The following sections provide best practices for setting up a Zūm wired DIN rail space.

- Load Controllers
  - Zūm Net
    - ZUMNET-DIN-DLI
    - ZUMNET-DIN-16A-LV
  - Zūm Link
    - ZUMLINK-DIN-16A-LV
    - ZUMLINK-DIN-20A-SW
    - ZUMLINK-DIN-20A-PLUG
    - ZUMLINK-DIN-DIMU
- Power Supply
  - ZUMLINK-DIN-PSU
- Integration Module with Standalone Timeclock
  - ZUMLINK-DIN-IO
- Zūm Link Presence Detectors
  - ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY
  - ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY
  - ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY
  - ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY
  - ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY
- Keypad and Buttons
  - ZUMLINK-KP-R
  - ZUMLINK-BTN2
  - ZUMLINK-BTN4
  - ZUMLINK-BTN6
  - ZUMLINK-BTN8
- Zūm Wired RJ-45 Splitter
- Networking and Integration
  - Distribution Panels
    - CEN-SWPOE-5AC
    - ZUML-CENCN-SWPOE-5

        - ZUML-SWPOE-26
    - Control Processor Panels
        - ZUML-HUB4
        - ZUML-HUB4-SWPOE-5
        - ZUML-HUB4-SWPOE-26
    - ZUM-HUB4 - Zūm Start-Up
    - SW-HUB4-PROG - Custom Program Start-Up
- Zūm Wired Device Notes
    - Space Limitations
- Typical Zūm DIN Rail Applications
    - Zūm DIN Rail System Diagram
    - Build Sheet
    - Riser

Load Controllers

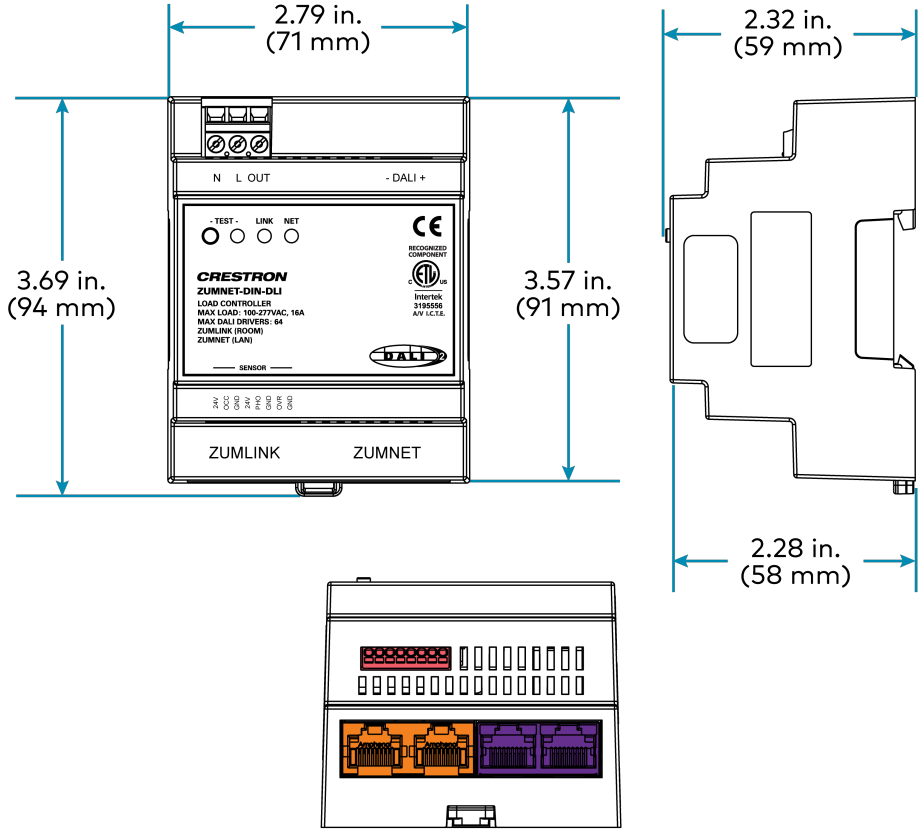
Illustrations for the Zūm wired DIN rail zone controllers are provided below.

For more information, refer to Load Controller Specifications on page 65 and Zūm Wired DIN Rail Installation on page 152.

Zūm Net

The ZUMNET-DIN-DLI and ZUMNET-DIN-16A-LV zone controllers have the same dimensions.

- Height 3.69 in. (94 mm)
- Width 2.79 in. (71 mm)
- Depth 2.32 in. (59 mm)



ZUMNET-DIN-DLI

Line Voltage

- 100–277VAC, 50/60 HZ
- 16A switch rating, switched only line
- Does not supply power to Zūm Link bus
- Zūm Link power consumption: 190mA

DALI Inputs

- DALI input (DA+) and output (DA-)
- DALI bus power supply: MAX 0.17A, guaranteed

Terminal Inputs

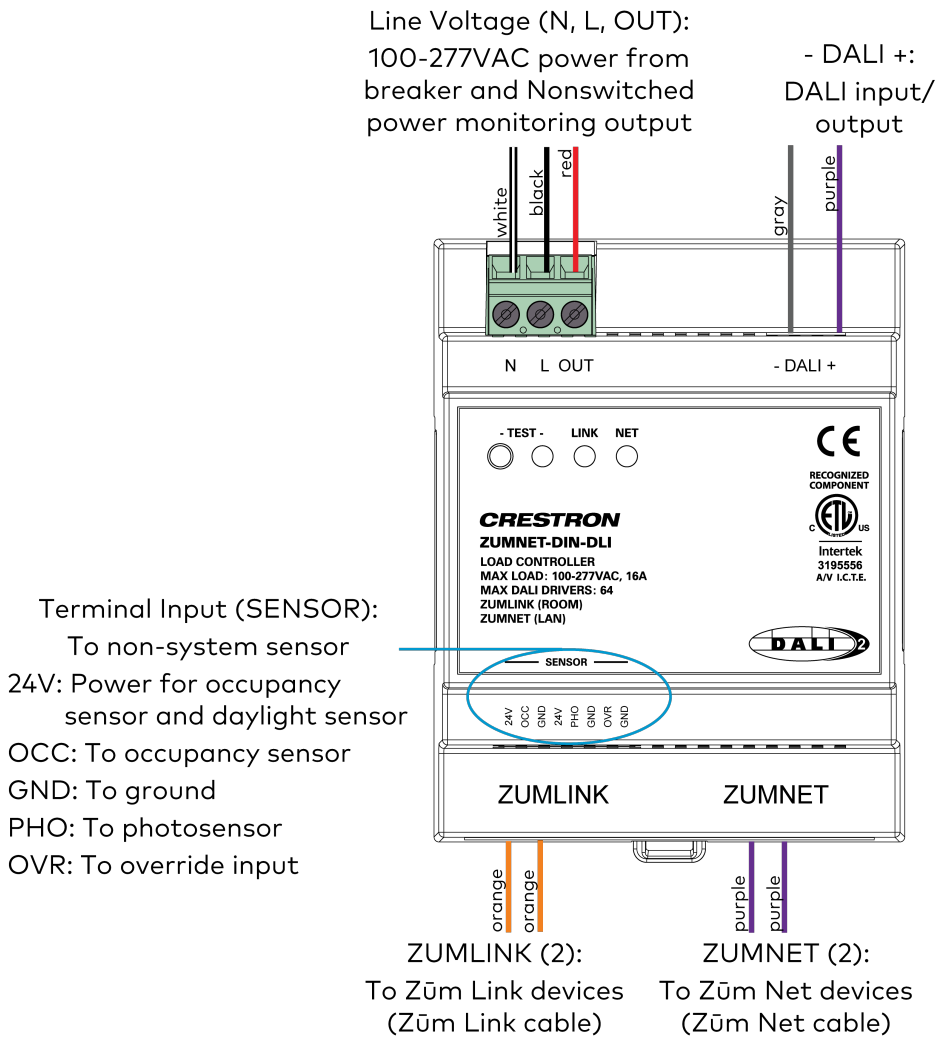
- OCC: Occupancy input (24V, OCC, GND)
- PHO: Photosensor input (24V, PHO, GND)
- OVR: Override input (OVR, GND)

Zūm Link Ports

- (2) RJ-45 ports
- Zūm Link device connection

Zūm Net Ports

- (2) RJ-45 ports
- Input for control system or Zūm Net device



ZUMNET-DIN-16A-LV

Line Voltage

- 100–277VAC, 50/60 HZ
- 16A switch rating, switched only line
- Does not supply power to Zūm Link bus
- Zūm Link power consumption: 120mA

0–10V Input

- 0–10VDC dimming control output
- 60mA maximum sink or source

Terminal Inputs

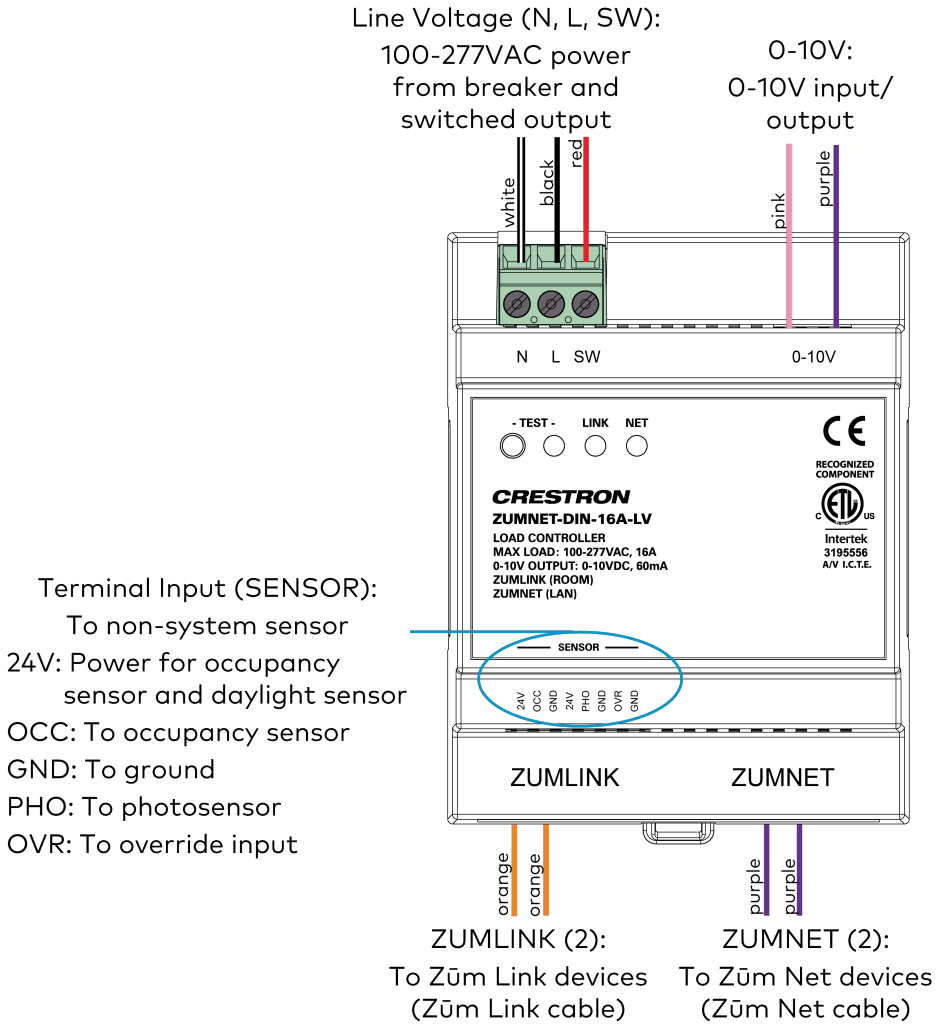
- OCC: Occupancy input (24V, OCC, GND)
- PHO: Photosensor input (24V, PHO, GND)
- OVR: Override input (OVR, GND)

Zūm Link Ports

- (2) RJ-45 ports
- Zūm Link device connection

Zūm Net Ports

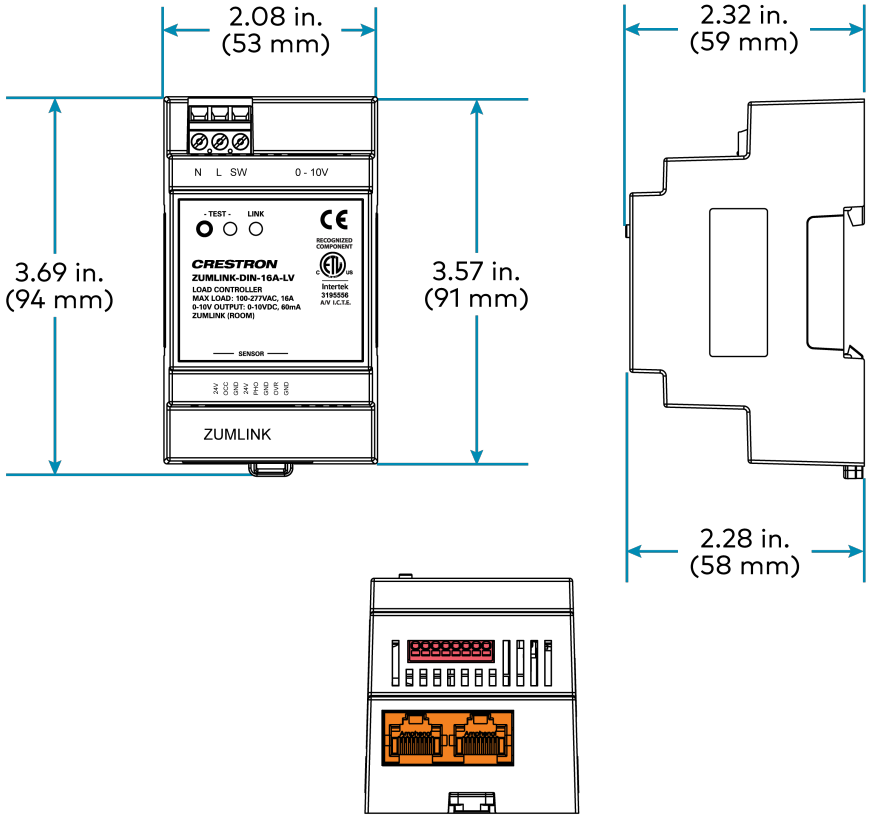
- (2) RJ-45 ports
- Input for control system or Zūm Net device



Zūm Link

The ZUMLINK-DIN-16A-LV, ZUMLINK-DIN-20A-SW, ZUMLINK-DIN-20A-PLUG, and ZUMLINK-DIN-DIMU zone controllers have the same dimensions.

- Height 3.69 in. (94 mm)
- Width 2.08 in. (53 mm)
- Depth 2.32 in. (59 mm)



ZUMLINK-DIN-16A-LV

Line Voltage

- 100–277VAC, 50/60 HZ
- 16A switch rating, switched only line
- Does not supply power to Zūm Link bus
- Zūm Link power consumption: 100mA

0–10V Input

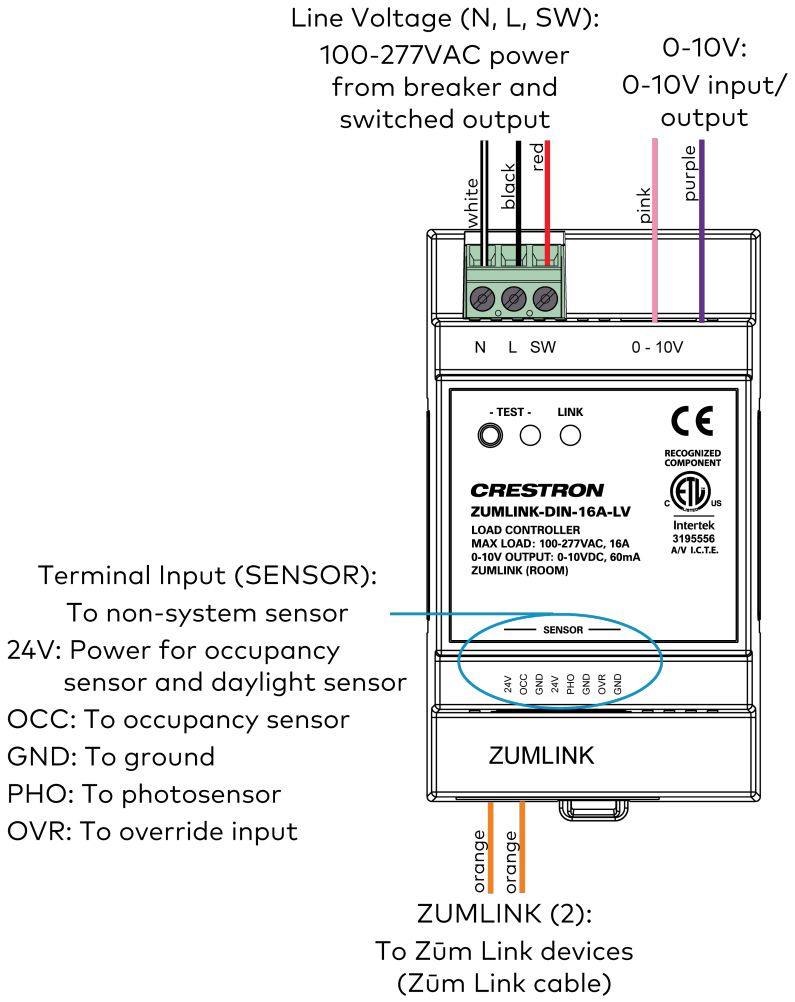
- 0–10VDC dimming control output
- 60mA maximum sink or source

Terminal Inputs

- OCC: Occupancy input (24V, OCC, GND)
- PHO: Photosensor input (24V, PHO, GND)
- OVR: Override input (OVR, GND)

Zūm Link Ports

- (2) RJ-45 ports
- Zūm Link device connection



ZUMLINK-DIN-20A-SW

Line Voltage

- 100–277VAC, 50/60 HZ
- 20A switch rating, switched only line
- Does not supply power to Zūm Link bus
- Zūm Link power consumption: 50mA

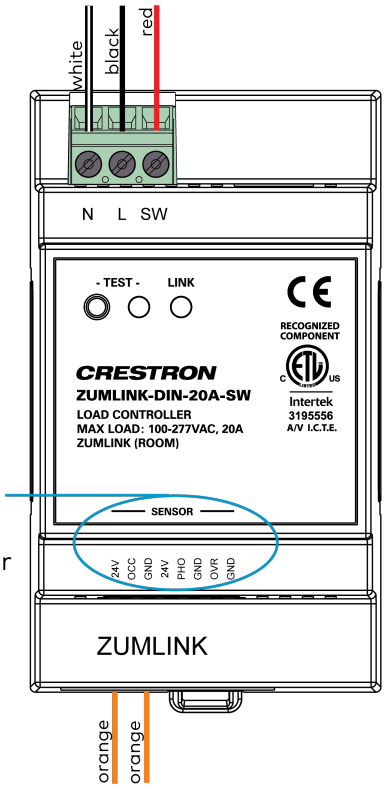
Terminal Inputs

- OCC: Occupancy input (24V, OCC, GND)
- PHO: Photosensor input (24V, PHO, GND)
- OVR: Override input (OVR, GND)

Zūm Link Ports

- (2) RJ-45 ports
- Zūm Link device connection

Line Voltage (N, L, SW):
100-277VAC power
from breaker and
switched output



Terminal Input (SENSOR):
To non-system sensor
24V: Power for occupancy sensor and daylight sensor
OCC: To occupancy sensor
GND: To ground
PHO: To photosensor
OVR: To override input

ZUMLINK (2):
To Zūm Link devices
(Zūm Link cable)

ZUMLINK-DIN-20A-PLUG

Line Voltage

- 100–277VAC, 50/60 HZ
- 20A switch rating, switched only line
- Does not supply power to Zūm Link bus
- Zūm Link power consumption: 50mA

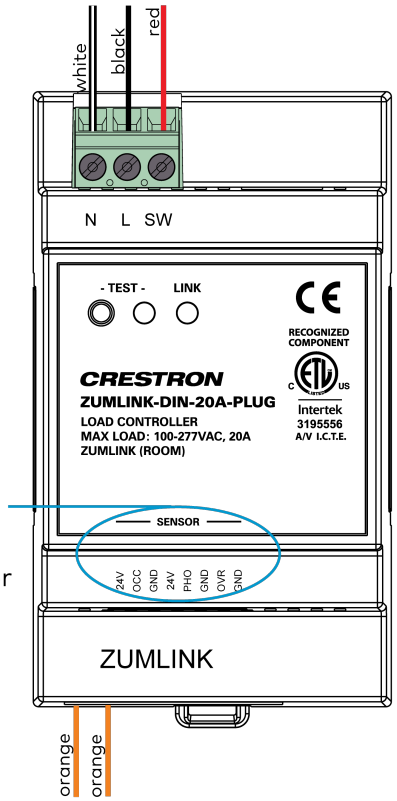
Terminal Inputs

- OCC: Occupancy input (24V, OCC, GND)
- PHO: Photosensor input (24V, PHO, GND)
- OVR: Override input (OVR, GND)

Zūm Link Ports

- (2) RJ-45 ports
- Zūm Link device connection

Line Voltage (N, L, SW):
100-277VAC power
from breaker and
switched output



Terminal Input (SENSOR):
To non-system sensor
24V: Power for occupancy
sensor and daylight sensor
OCC: To occupancy sensor
GND: To ground
PHO: To photosensor
OVR: To override input

ZUMLINK (2):
To Zūm Link devices
(Zūm Link cable)

ZUMLINK-DIN-DIMU

Line Voltage

- 100–277VAC, 50/60 HZ
- Load rating: 500 W/500VA @120VAC; 1,000 W/1,000VA @277VAC
- Does not supply power to Zūm Link bus
- Zūm Link power consumption: 50mA

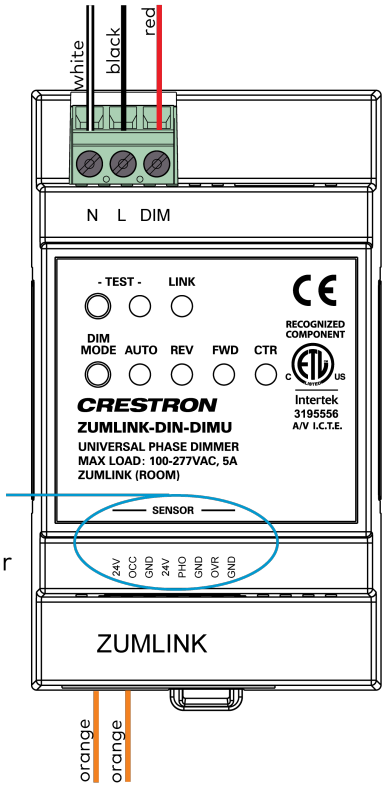
Terminal Inputs

- OCC: Occupancy input (24V, OCC, GND)
- PHO: Photosensor input (24V, PHO, GND)
- OVR: Override input (OVR, GND)

Zūm Link Ports

- (2) RJ-45 ports
- Zūm Link device connection

Line Voltage (N, L, DIM):
100-277VAC power
from breaker and
dimming output



Terminal Input (SENSOR):
To non-system sensor
24V: Power for occupancy sensor and daylight sensor
OCC: To occupancy sensor
GND: To ground
PHO: To photosensor
OVR: To override input

ZUMLINK (2):
To Zūm Link devices
(Zūm Link cable)

Power Supply

Illustrations for the Zūm wired DIN rail power supply are provided below.

For more information, refer to ZUMLINK-DIN-PSU Product Specifications on page 131 and Zūm Wired DIN Rail Installation on page 152.

ZUMLINK-DIN-PSU

The power supply is 4M wide on a DIN rail and provides power down Zūm Link bus.

Dimensions

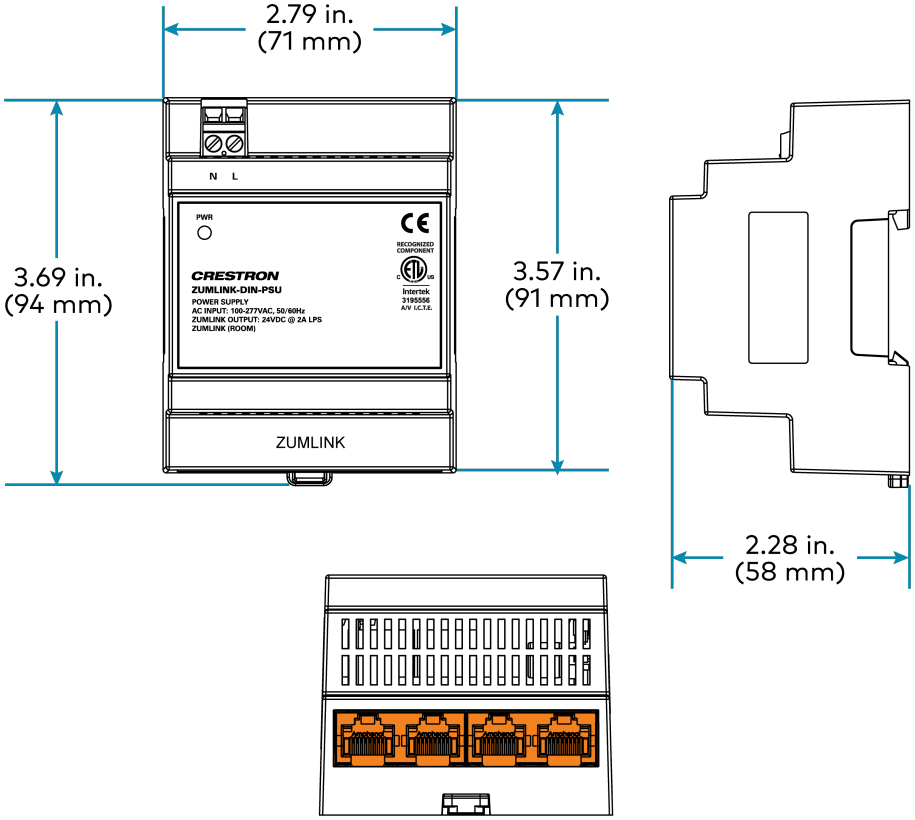
- Height 3.69 in. (94 mm)
- Width 2.79 in. (71 mm)
- Depth 2.28 in. (58 mm)

Power

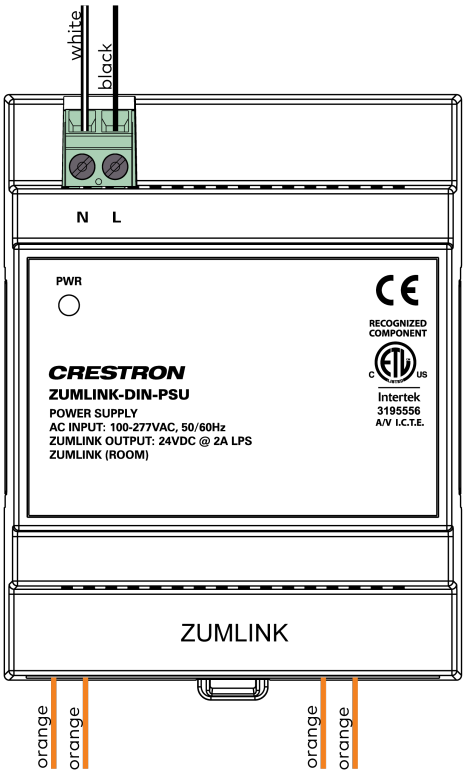
- AC input: 100–277VAC, 50/60 HZ
- Zūm Link distribution:
  - (4) RJ-45 ports
  - 1,000mA max per left pair
  - 1,000mA max per right pair
  - 2,000mA max per module (when using ZUMLINK-SPLTR-RJ45)
- Power output only. No communication is distributed through ports

Zūm Link Ports

- (4) RJ-45 ports
- Zūm Link device connection


2.79 in.
(71 mm)
3.69 in.
(94 mm)
3.57 in.
(91 mm)
N L
PWR
CRESTRON
ZUMLINK-DIN-PSU
POWER SUPPLY
AC INPUT: 100-277VAC, 50/60Hz
ZUMLINK OUTPUT: 24VDC @ 2A LPS
ZUMLINK (ROOM)
RECOGNIZED COMPONENT
Intertek
3195556
ZUMLINK
2.28 in.
(58 mm)

LIne Voltage (N, L):
100-277VAC power
from breaker



ZUMLINK (4):
To Zūm Link devices
(Zūm Link cable)

Integration Module with Standalone Timeclock

Illustrations for the Zūm wired DIN rail integration module with standalone timeclock are provided below.

For more information, refer to ZUMLINK-DIN-PSU Product Specifications on page 131 and Zūm Wired DIN Rail Installation on page 152.

ZUMLINK-DIN-IO

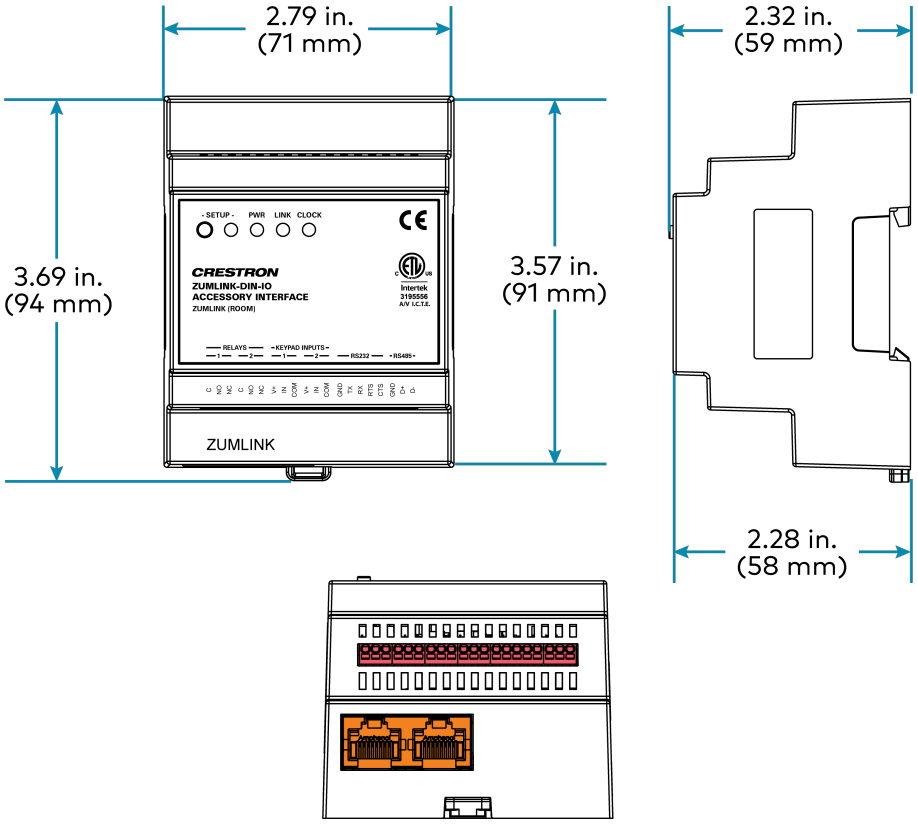
The integration module provides astronomical timeclock and time date settings for standalone spaces. It is 4M wide on a DIN rail and is powered through the Zūm Link bus (80mA).

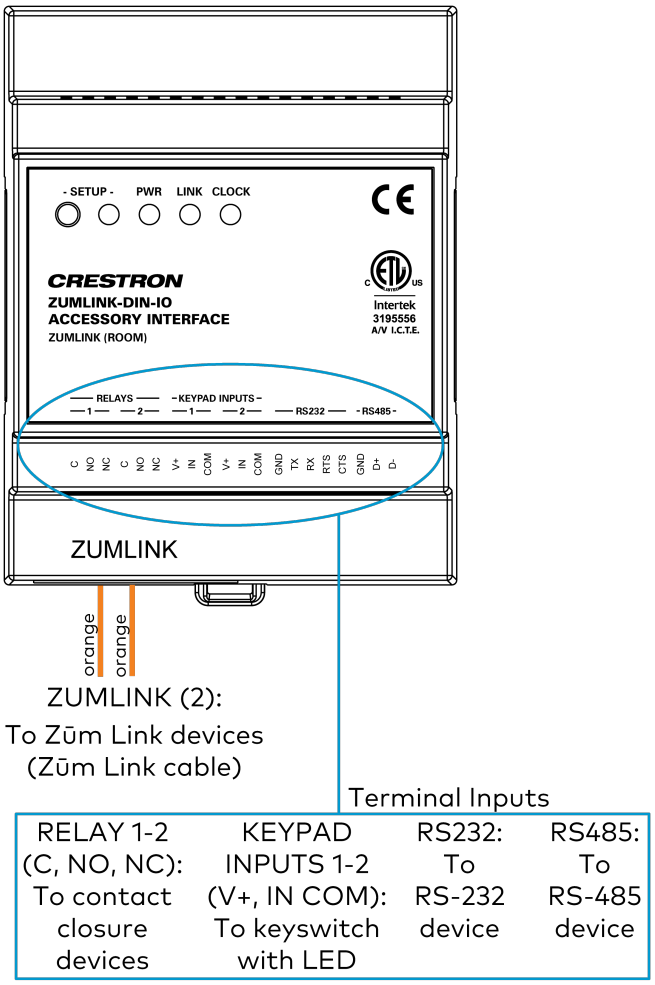
Dimensions

- Height 3.69 in. (94 mm)
- Width 2.79 in. (71 mm)
- Depth 2.32 in. (59 mm)

IO Inputs

- Require custom programming
- C, NO, NC RELAY: (2) 3-pin relays, 30VAC/VDC 1A
- V+, IN, COM INPUTS: (2) 3-pin terminal input relays with keyswitch LED support
- RS-232: (1) 5-pin terminal block (GND, TX, RX, RTS, CTS)
- RS-485: (1) 3-pin terminal block (GND, D+, D-)


2.79 in.
(71 mm)
3.69 in.
(94 mm)
3.57 in.
(91 mm)
2.32 in.
(59 mm)
2.28 in.
(58 mm)
- SETUP -
PWR
LINK
CLOCK
CRESTRON
ZUMLINK-DIN-IO
ACCESSORY INTERFACE
ZUMLINK (ROOM)
Intertek
3195556
A/V I.C.T.E.
RELAYS
KEYPAD INPUTS
RS232
RS485
ZUMLINK



ZUMLINK (2):
To Zūm Link devices
(Zūm Link cable)

Terminal Inputs

RELAY 1-2 (C, NO, NC): To contact closure devices	KEYPAD INPUTS 1-2 (V+, IN COM): To keyswitch with LED	RS232: To RS-232 device	RS485: To RS-485 device

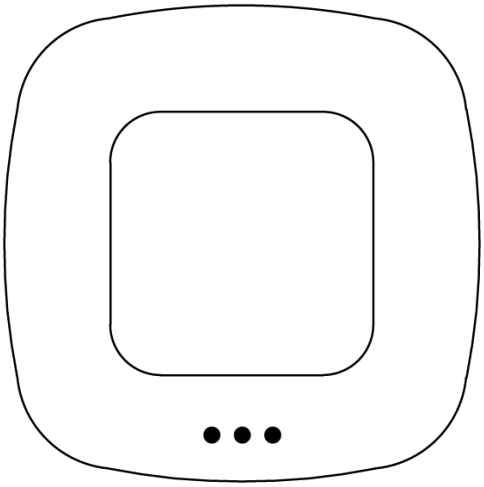
Zūm Link Presence Detectors

CAUTION: When the daylight sensor component is in use, the presence detector counts as two devices in the space limitation.

Fore more information, refer to Presence Detector Specifications on page 102 and Presence Detectors Installation on page 190.

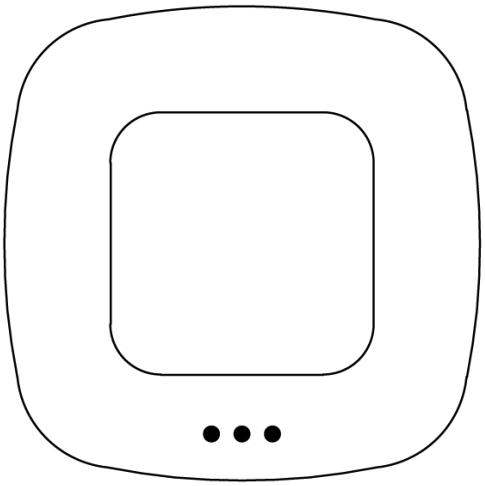
ZUMLINK-IR-QUATTRO-DLS and ZUMLINK-IR-QUATTRO-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 17 mA
- Passive Infrared (PIR)
- Presence maximum: 30 x 30 ft (900 sq ft)
- Radial maximum 30 x 30 ft (900 sq ft)
- Tangential maximum: 46 x 46 ft (2,116 sq ft)
- Light level setting: 10–1,000 lux (1–100 fc)



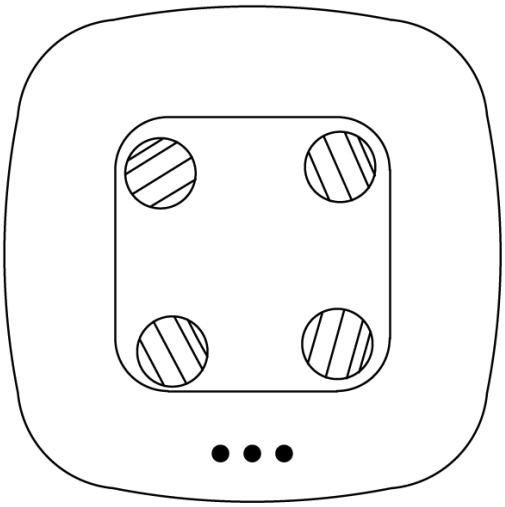
ZUMLINK-IR-QUATTRO-HD-DLS and ZUMLINK-IR-QUATTRO-HD-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 17 mA
- Passive Infrared (PIR)
- Presence maximum: 50 x 50 ft (2,500 sq ft)/ 15 x 15. m (225 sq m)
- Light level settings: 10–1,000 lux (1–100 fc)



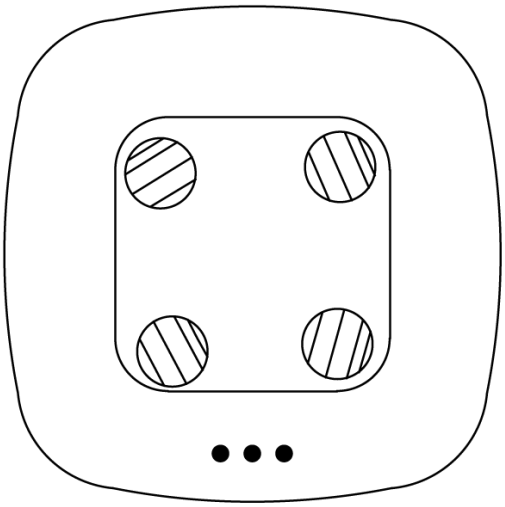
ZUMLINK-DT-QUATTRO-DLS and ZUMLINK-DT-QUATTRO-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 28 mA
- Passive Infrared (PIR) and Ultrasonic (US) 40 kHz
- US presence
  Maximum: 40 x 30 fct (1,200 sq ft)/ 12 x 9 m (108 sq m)
- PIR presence
  Maximum: 50 x 40 ft (2,000 sq ft)/ 15 x 12 m (180 sq m)
- Light level setting: 10–1,000 lux (1–100 fc)



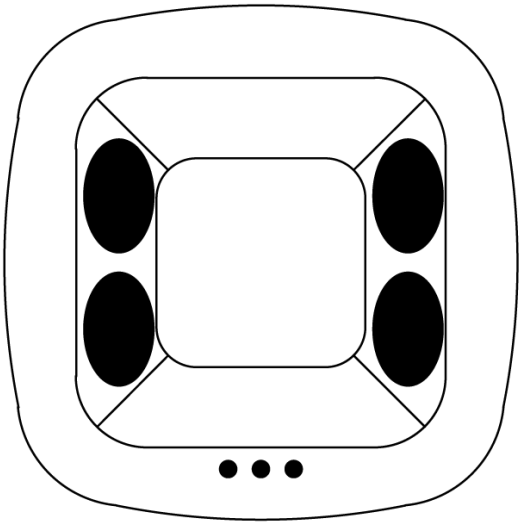
ZUMLINK-US-QUATTRO-DLS and ZUMLINK-US-QUATTRO-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 28 mA
- Ultrasonic (US) 40 kHz
- Presence maximum: 40 x 50 ft (2,000 sq ft)/ 12 x 15 m (180 sq m)
- Light level setting: 10–1,000 lux (1–100 fc)



ZUMLINK-US-HALLWAY-DLS and ZUMLINK-US-HALLWAY-DLS-RLY

- Control output: 1A @ 30VAC/VDC
- RLY HVAC dry contacts: 1A @ 30VAC/VDC
- Maximum current consumption: 28 mA
- Ultrasonic (US) 40 kHz
- Maximum: 50 x 20 ft (1,000 sq ft)/ 15 x 6 m (90 sq m)
- Minimum: 40 x 20 ft (800 sq ft)/ 12 x 6 m (72 sq m)
- Light level setting: 10–1,000 lux (1–100 fc)

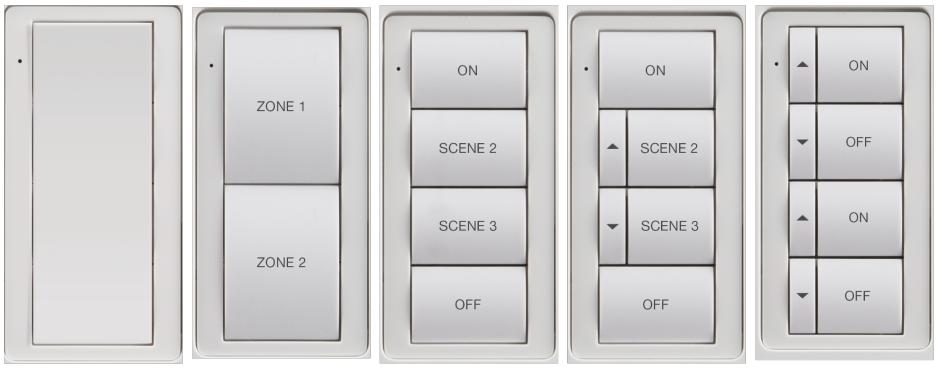


Keypad and Buttons

Illustrations for the Zūm wired keypad and button trees are provided below.

For more information, refer to Keypad Specifications on page 100, Rocker and Button Tree Specifications on page 148, Zūm Wired Keypad Installation on page 183, and Rocker and Button Tree Installation on page 228.

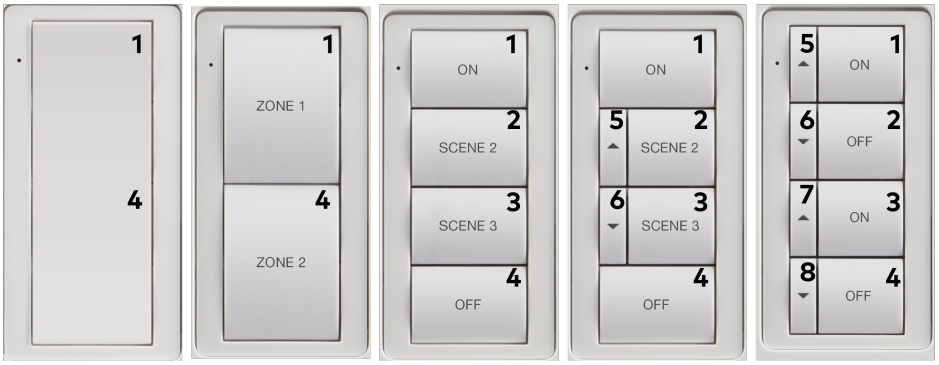
Keypad and Button Trees



ZUMLINK-KP-R-W	ZUMLINK-KP-R-W + ZUMLINK-BTN2-W	ZUMLINK-KP-R-W + ZUMLINK-BTN4-W	ZUMLINK-KP-R-W + ZUMLINK-BTN6-W	ZUMLINK-KP-R-W + ZUMLINK-BTN8-W

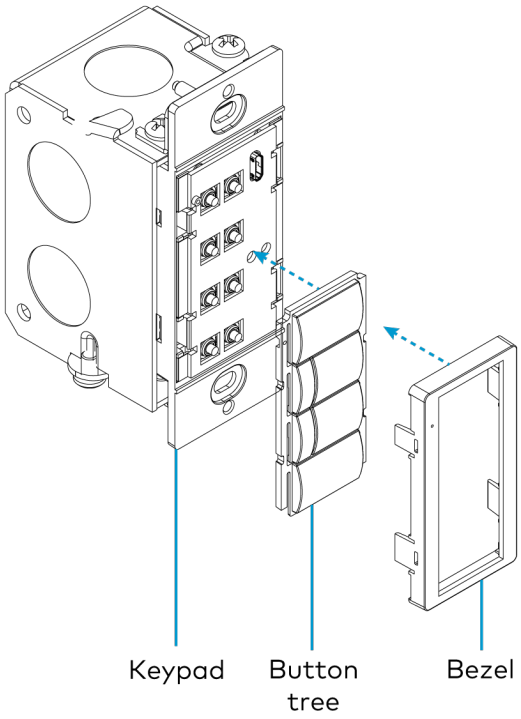
Button Positions

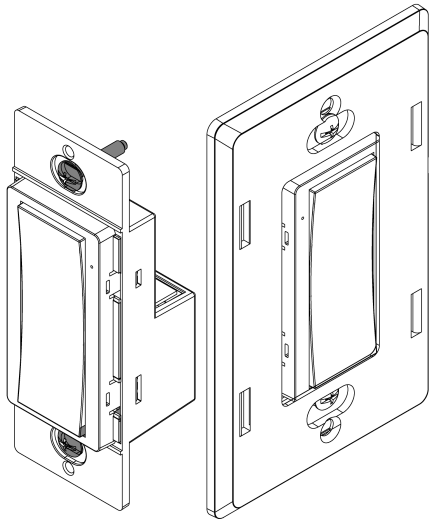
ZUMLINK-BTNR	ZUMLINK-BTN2	ZUMLINK-BTN4	ZUMLINK-BTN6	ZUMLINK-BTN8



ZUMLINK-KP-R

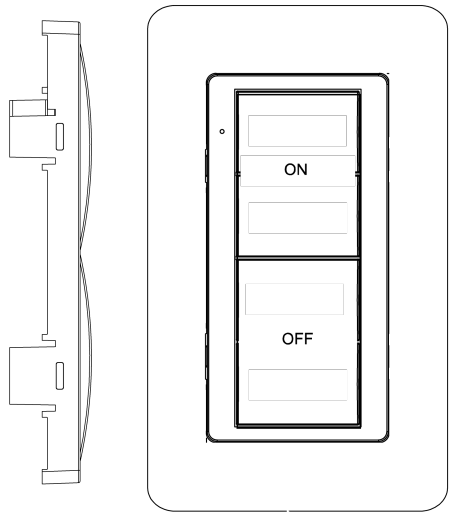
- Single rocker switch
- Default keypad assembly
- (2) ZUMLINK ports
- 5mA Zūm Link power
- Faceplate not included





ZUMLINK-BTN2

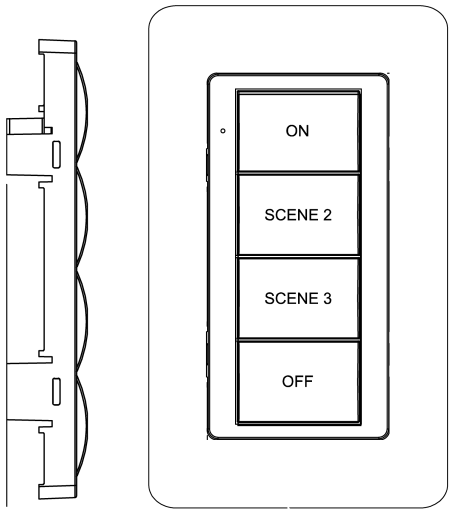
Two button tree and bezel attaches to ZUMLINK-KP-R.



Pad-printed ZUMLINK-BTN2 shown. Faceplate not included.

ZUMLINK-BTN4

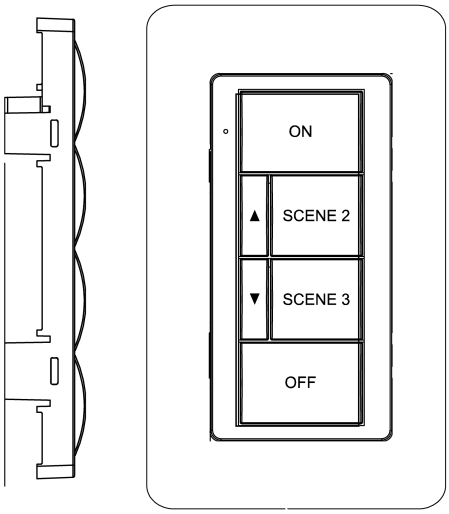
Four button tree and bezel attaches to ZUMLINK-KP-R.



Pad-printed ZUMLINK-BTN4 shown. Faceplate not included.

ZUMLINK-BTN6

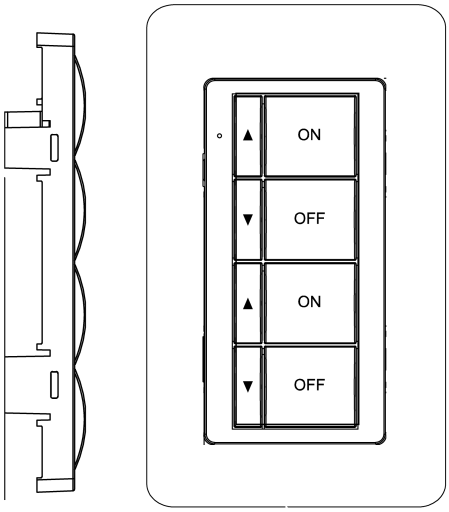
Six button tree and bezel attaches to ZUMLINK-KP-R.



Pad-printed ZUMLINK-BTN6 shown. Faceplate not included.

ZUMLINK-BTN8

Eight button tree and bezel attaches to ZUMLINK-KP-R.

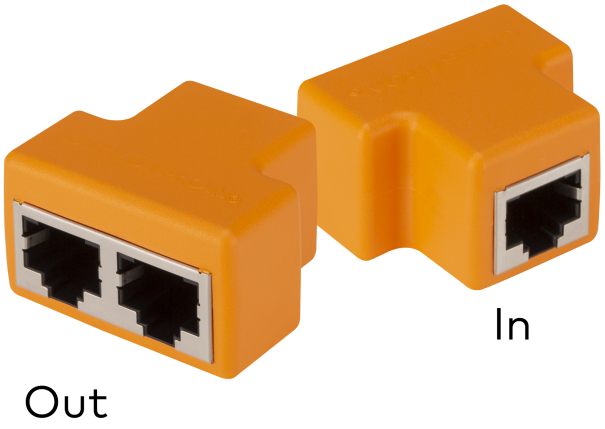


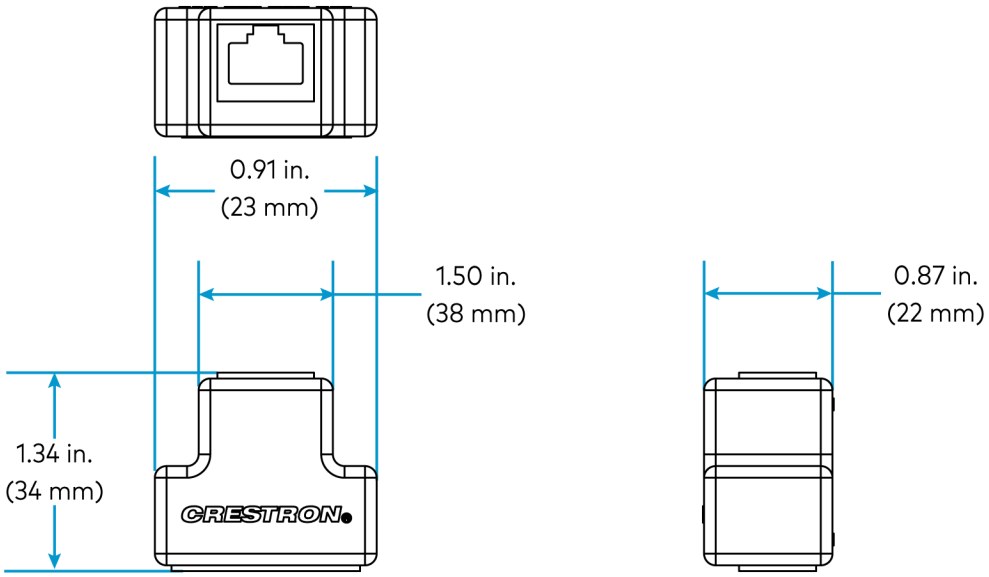
Pad-printed ZUMLINK-BTN8 shown. Faceplate not included.

Zūm Wired RJ-45 Splitter

The ZUMLINK-SPLTR-RJ45 can be used with ZUMLINK-DIN-PSU to merge Zūm Link bus power.

Pushes 2,000mA down a single bus.





Networking and Integration

Illustrations for Zūm networking and integration are provided below.

Distribution Panels

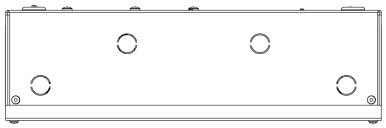
CEN-SWPOE-5AC

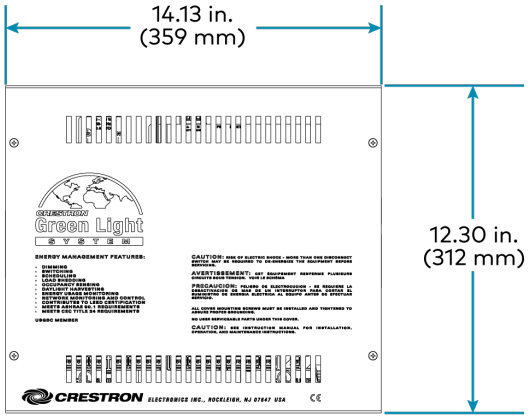


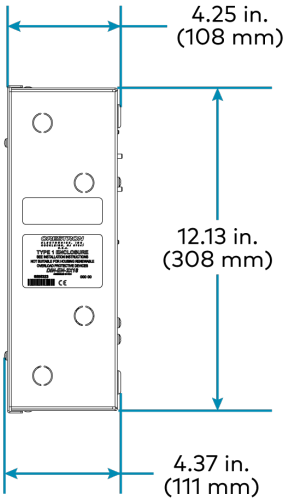
- 120 VAC, 50/60 HZ
- JBOX, DIN Rail, surface mountable
- 5 available PoE ports
- Height: 4.72 in. (120 mm)
- Width: 7.34 in. (187 mm)
- Length: 1.85 in. (47 mm)

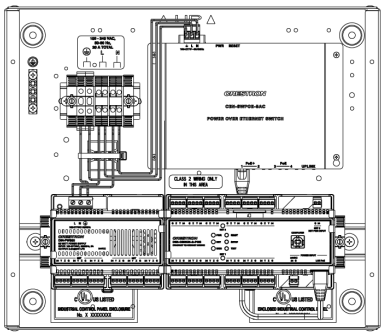
ZUML-CENCN-SWPOE-5

- 120 VAC, 50/60 HZ
- Cresnet expansion
- 4 available PoE ports
- Height: 12.30 in. (312 mm)
- Width: 14.13 in. (359 mm)
- Length: 4.37 in. (111 mm)



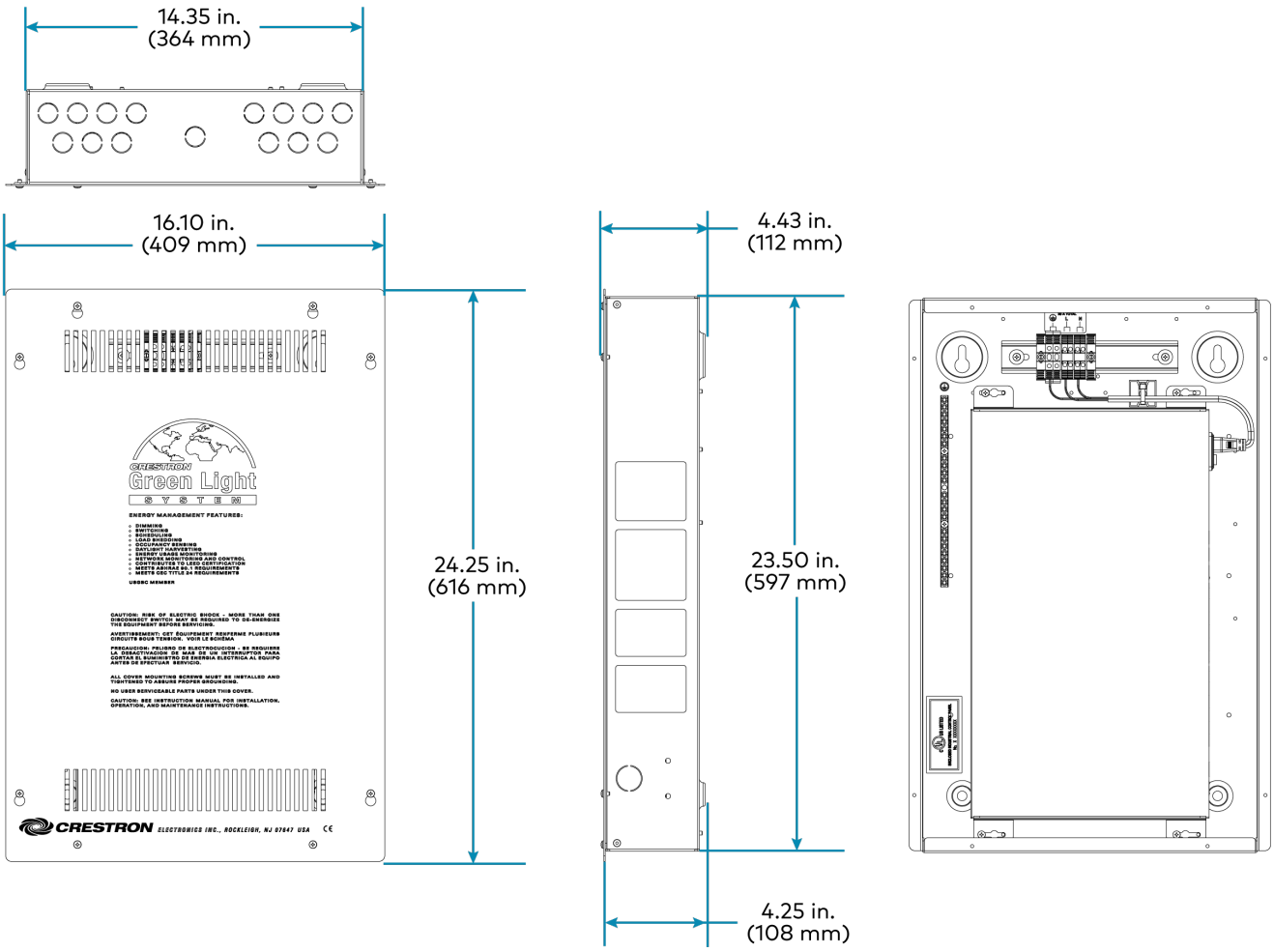






ZUML-SWPOE-26

- 120 VAC, 50/60 HZ
- 23 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)

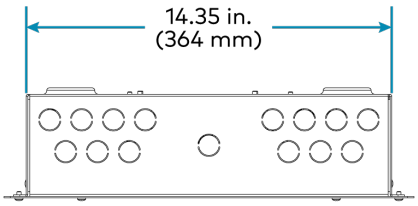


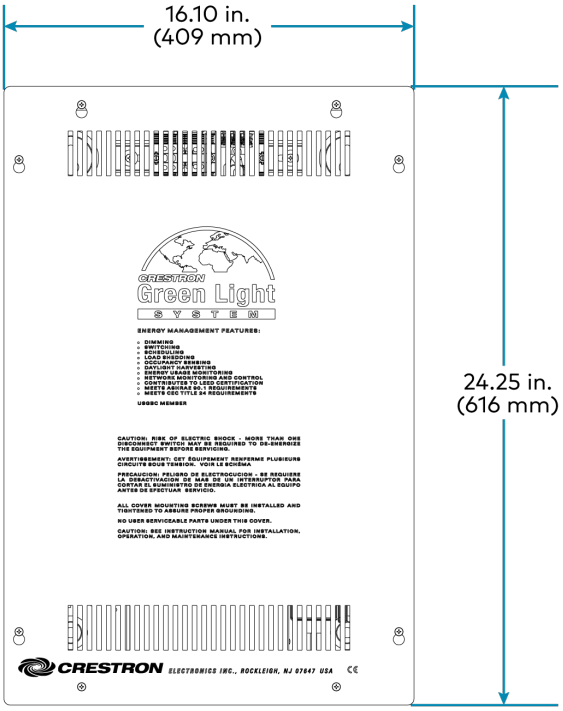
Control Processor Panels

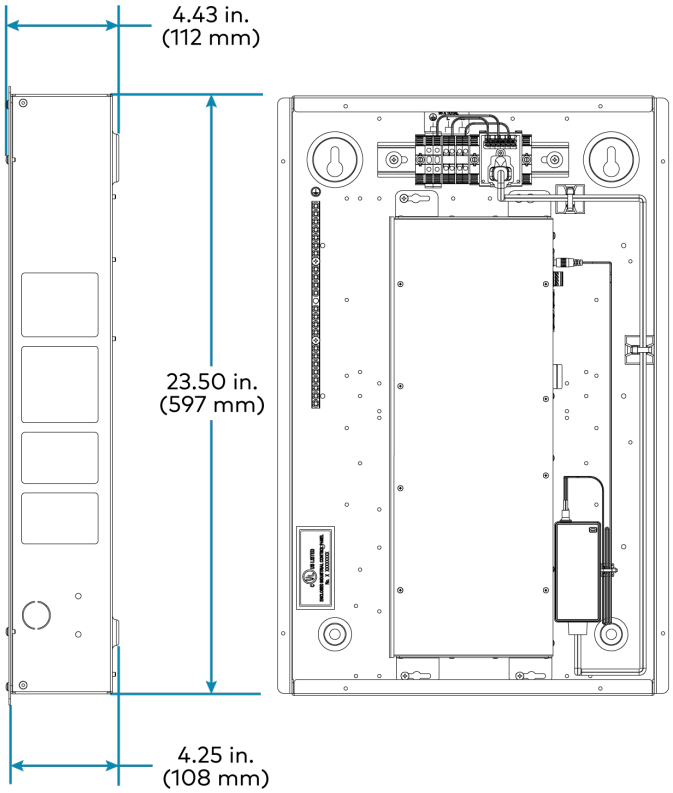
- 4 available PoE ports
- Support up to 30 gateways when utilizing distribution hubs
- Support up to 1,000 Zūm spaces when utilizing distribution hubs and gateways
- Provides dynamic scheduling

ZUML-HUB4

- 120 VAC, 50/60 HZ
- ZUM-HUB4
- 0 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)

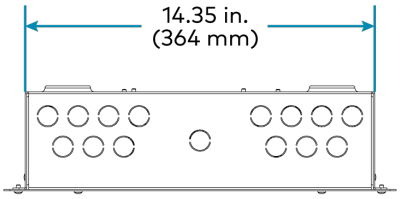

14.35 in.
(364 mm)

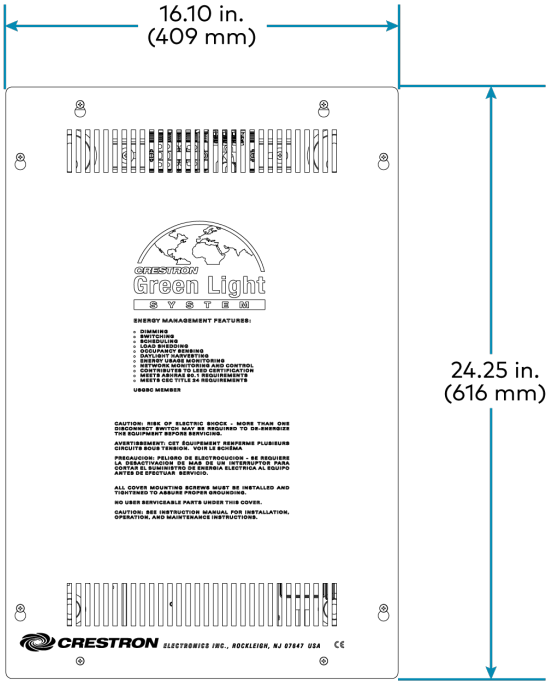

16.10 in.
(409 mm)
24.25 in.
(616 mm)
CRESTRON
Green Light
SYSTEM
ENERGY MANAGEMENT FEATURES:
CRESTRON ELECTRONICS INC., ROCKLEIGH, NJ 07647 USA

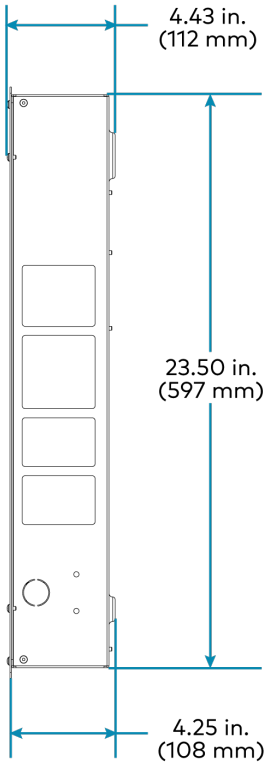

4.43 in.
(112 mm)
23.50 in.
(597 mm)
4.25 in.
(108 mm)

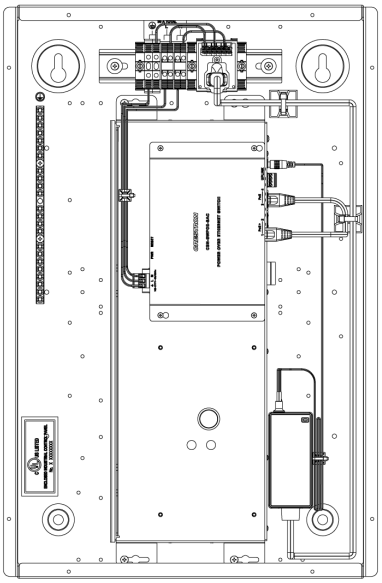
ZUML-HUB4-SWPOE-5

- 120 VAC, 50/60 HZ
- ZUM-HUB4
- 4 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)



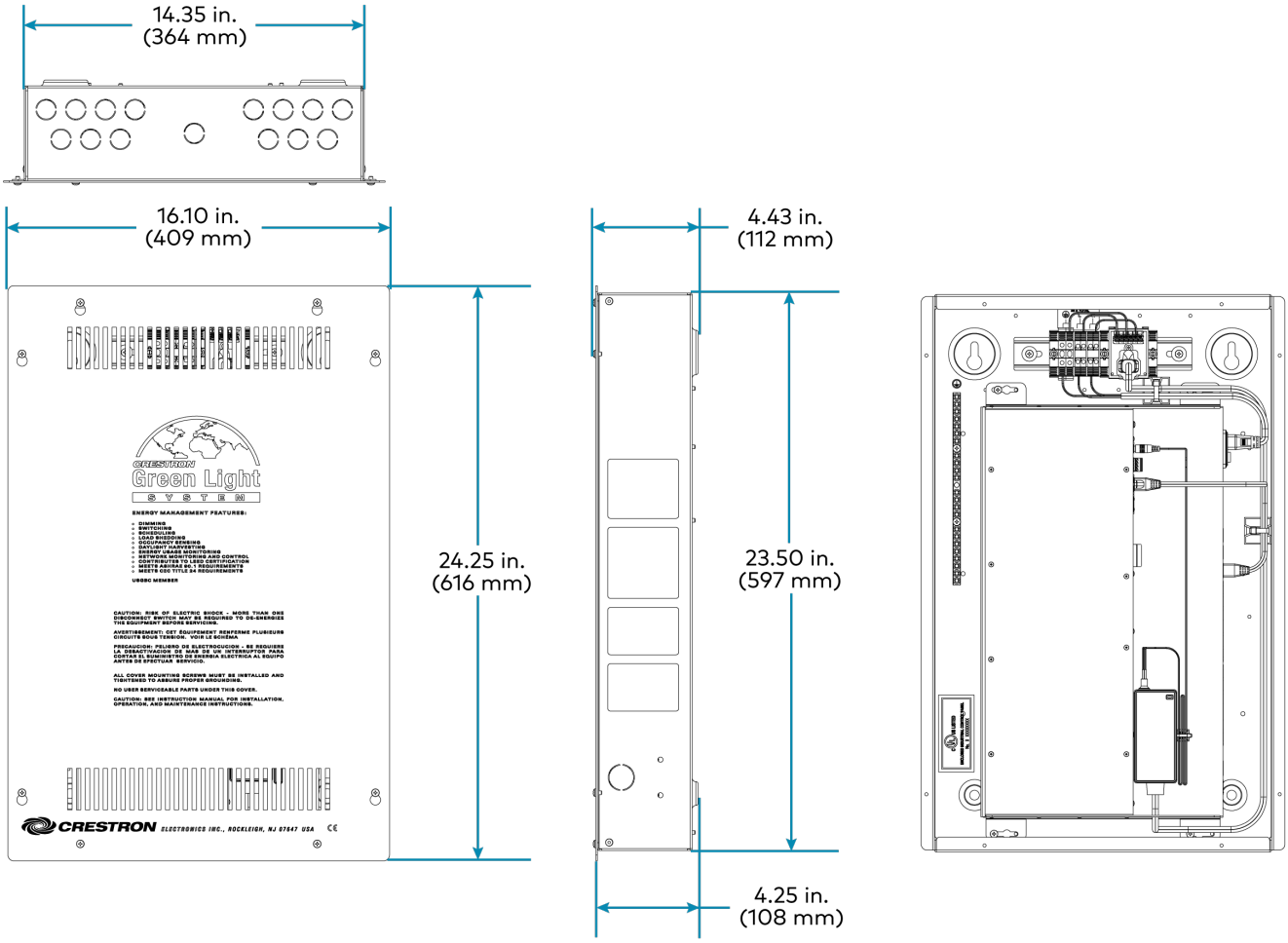






ZUML-HUB4-SWPOE-26

- 120 VAC, 50/60 HZ
- ZUM-HUB4
- 23 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)



ZUM-HUB4 - Zūm Start-Up

The ZUM-HUB4 enables centralized management for Zūm commercial lighting systems of up to 1,000 rooms with an Ethernet switch across Zūm wired, Zūm wireless, and external spaces using distribution panels.

- Provides web-based user interface for easy configuration, control, scheduling, and monitoring
- Time clock for room lighting automation and sensing behavior

- Daisy-chain up to 20 Zūm Net wired load controllers (sold separately) via their built-in Zūm Net ports for room-to room communication
- Use with an Ethernet switch (sold separately) to support multiple Zūm Net daisy-chains up to 1,000 rooms
- Control Zūm spaces with the Zūm Hub software and a Custom program (not both)
- BACnet communication supports control for up to 9,000 BACnet objects
- Configure Zūm spaces via the Zūm App

SW-HUB4-PROG - Custom Program Start-Up

The SW-HUB4-PROG is a software license that activates the custom program slot on the ZUM-HUB4 control system.

- 100 max. Ethernet devices (or custom programmed Zūm Net devices) devices across both LAN and Control Subnet ports
- 200 max. Cresnet devices (or custom programmed Zūm Link devices) controlled/addressed from the Custom Program

  > **NOTE:** Cresnet devices connected to a Zūm Net load controller or DIN-CENCN-2 do not count toward the 200 max. Cresnet devices.

- Control Zūm spaces with the Zūm Hub software or a Custom program (not both)
- Custom program slot supports 10,000 BACnet points (customizable)

Maxed system capabilities using SW-HUB4-PROG

Ethernet Device Type	# of devices downstream per Ethernet device	Max # of Ethernet Devices	Max # of Cresnet Devices	Total Max System Device count
ZUMNET	31	100	200	3,200 Devices
DIN-CENCN-2	40	100	200	4,200 Devices

Zūm Wired Device Notes

- A networked system requires a Zūm Net device in the space.
- Connect up to 1,000 Zūm Net devices per hub.
- Up to nine BACnet objects are allotted per space.
- Daisy chain up to 20 Zūm Net devices together.
- Distance limitation for Zūm Net devices:
    - 328 ft from hub to Zūm Net
    - 328 ft between Zūm Net devices
    - 6,560 ft cumulative per run
- Distance limitation for Zūm Link devices:
    - 500 ft from Zūm Net to Zūm Link device
    - 500 ft from Zūm Link to Zūm Link device
    - 1,000 ft cumulative per run
- Connect up to 3 network switches max between hub to a Zūm Net device

Space Limitations

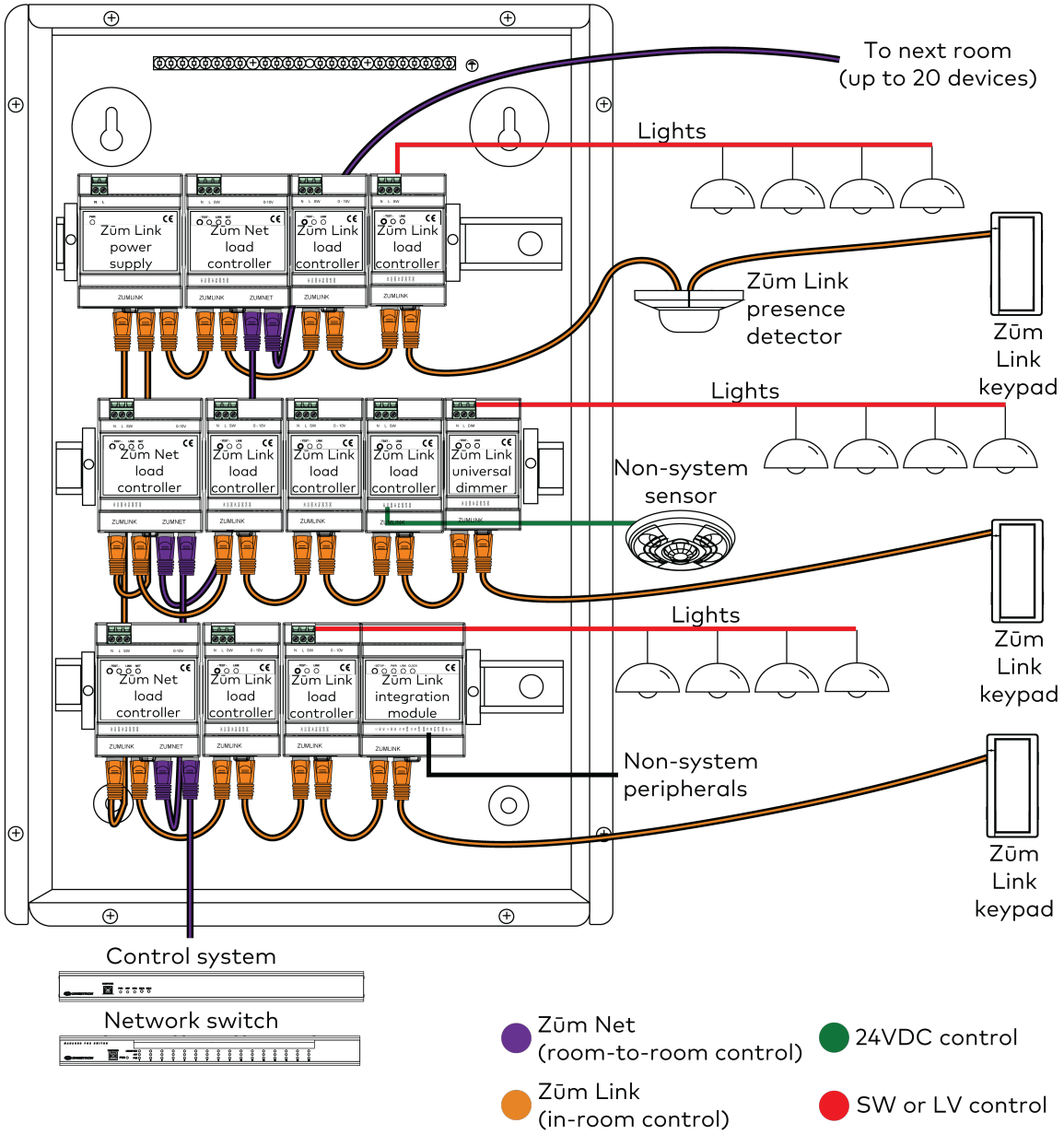
- One Zūm Net device per space
  Multiple Zūm Net devices can be used in 1 space, but only one Zūm Net device will be the primary controller.
- Up to 32 Zūm devices per space
- Up to 32 zones or DALI groups
- Up to 16 keypads
- Up to four daylight inputs

Typical Zūm DIN Rail Applications

Illustrations for typical Zūm wired DIN rail applications are provided below.

> **NOTE:** Refer to Zūm Wired Device Notes on page 519 for design considerations and limitations.

Zūm DIN Rail System Diagram

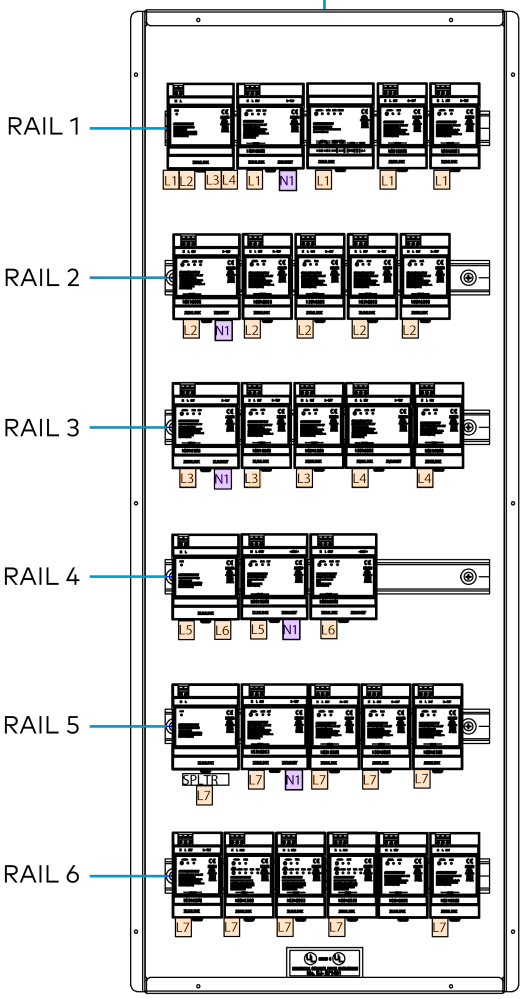


NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to 328 ft (100 m) between Zūm Net devices) with purple CBL-CAT5E-ZUMNET-P RJ-45 cables (sold separately).
- Do not exceed three network switches between a ZUM-HUB4 and a Zūm Net device.
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired load controller.

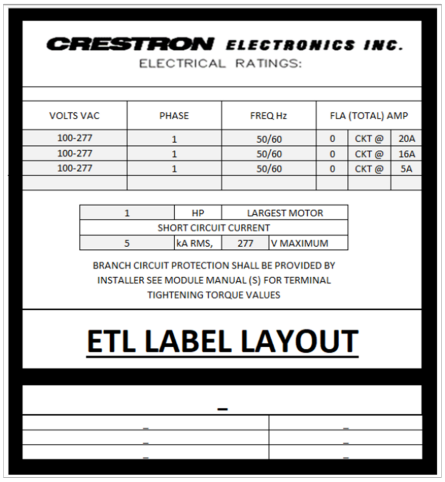
Build Sheet

CABINET	
MODEL	DIN-EN-6X18
PART #	6505325



PANEL ID
PANEL ID

PANEL PICK LIST		
QUANTITY	PRODUCT	PART #
1	DIN-EN-6X18	6505325
2	ZUMNET-DIN-DLI	6513004
5	ZUMNET-DIN-16A-LV	6513005
3	ZUMLINK-DIN-PSU	6513011
12	ZUMLINK-DIN-16A-LV	6513006
1	ZUMLINK-DIN-IO	6513010
3	ZUMLINK-DIN-20A-SW	6513007
3	ZUMLINK-DIN-DIMU	6513009

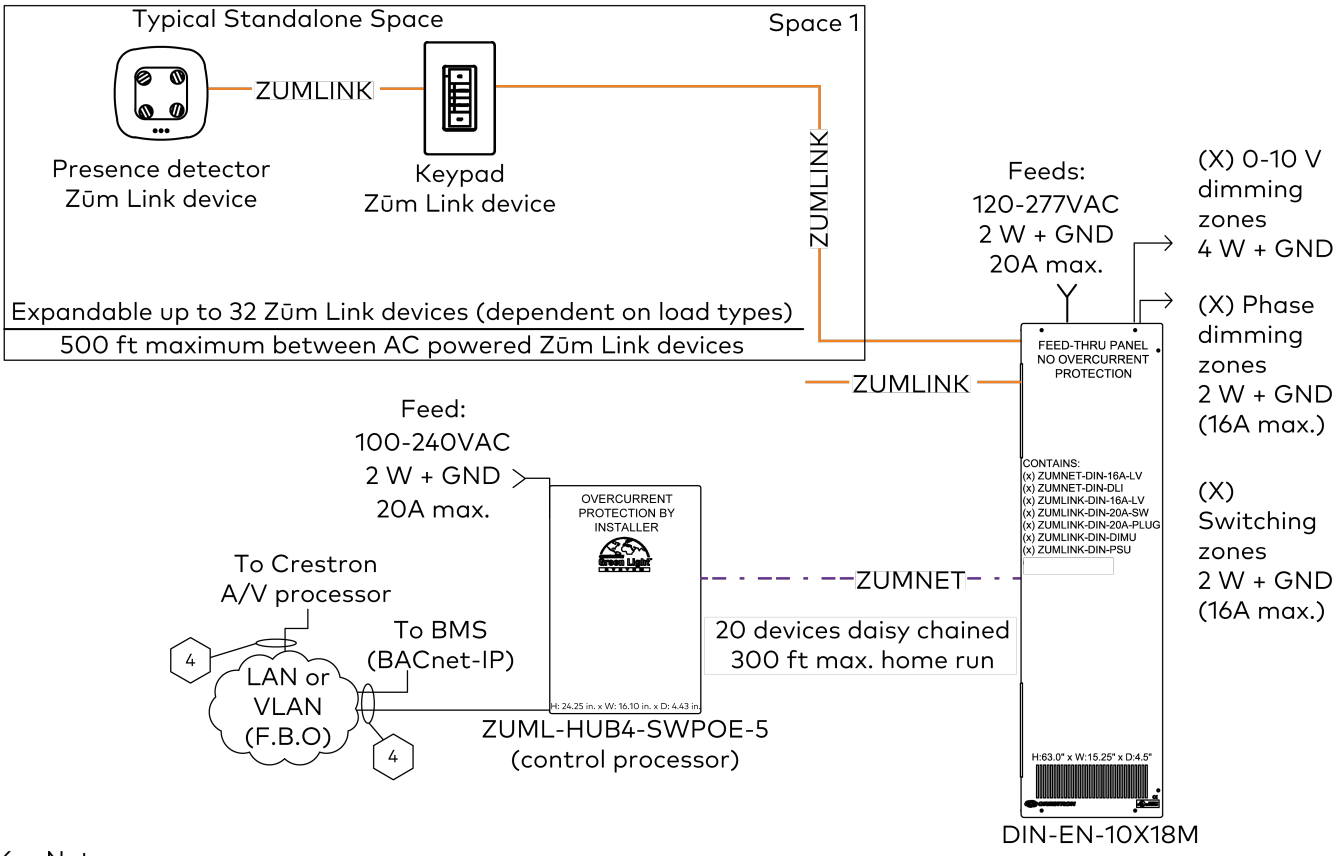


Lx	Zūm Link cable run/space
Nx	Zūm Net cable run
SPLTR	ZUMLINK-SPLTR-RJ45 On ZUMLINK-DIN-PSU to use full 2k mA down single Zūm Link line

Riser

Zūm wired device notes:

- A Zūm Net device is required for the system to be networked.
- Up to 20 Zūm Net devices can be daisy chained together.
- The distance between Zūm Net devices is limited to 328 ft (100 m).
- Each space can support up to 32 Zūm Net and Zūm Link devices.
- Zūm Link systems consist of any device connected within the space.
- Zūm Link wire distance limitation is 500 ft (152 m) to the next AC powered Zūm Link device.



Key Notes:

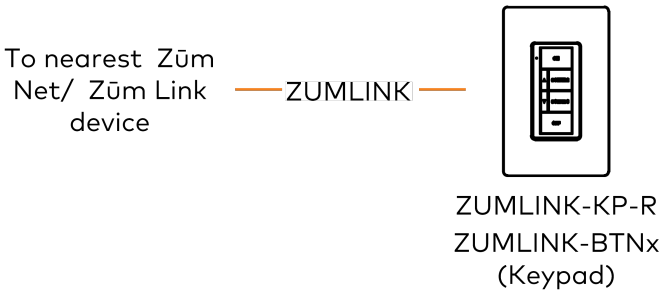
1. Cresnet Cable
   (1) Pair 18AWG
   (1) Twisted pair 22AWG w/shield
   Non-plenum: CRESNET-NP-TL
   Plenum: CRESNET-P-TL
   Crenet devices are limited to 20 Cresnet per run
2. DMX Cable
   Belden standard 9729 or equivalent
3. Cable
   (1) Twisted pair 18AWG
   (1) Shield
4. Cable
   CAT5e Ethernet
   Ethernet devices must be home run
5. Suitable Guage Wire
   To meet load requirements
6. DALI Cable
   (1) Pair 16-22AWG
   Shielded recommended
7. Cresnet to Zūm Link converter Cable (ZUMLINK-CONV-CN)
   Cresnet Cable
   (1) Pair 18AWG
   (1) Twisted pair 22AWG with shield and CBL-CAT5E-ZUMLINK-P (CAT5e equivalent)

ZUMLINK — CBL-CAT5E-ZUMLINK-P or CAT5e equivalent

ZUMNET — CBL-CAT5E-ZUMNET-P or CAT5e equivalent

SENSORS — Cresnet or equivalent
(1) Pair 18AWG
(1) Twisted pair 22AWG

Typical Control Interfaces



ZUMLINK-KP-R
ZUMLINK-BTNx
(Keypad)

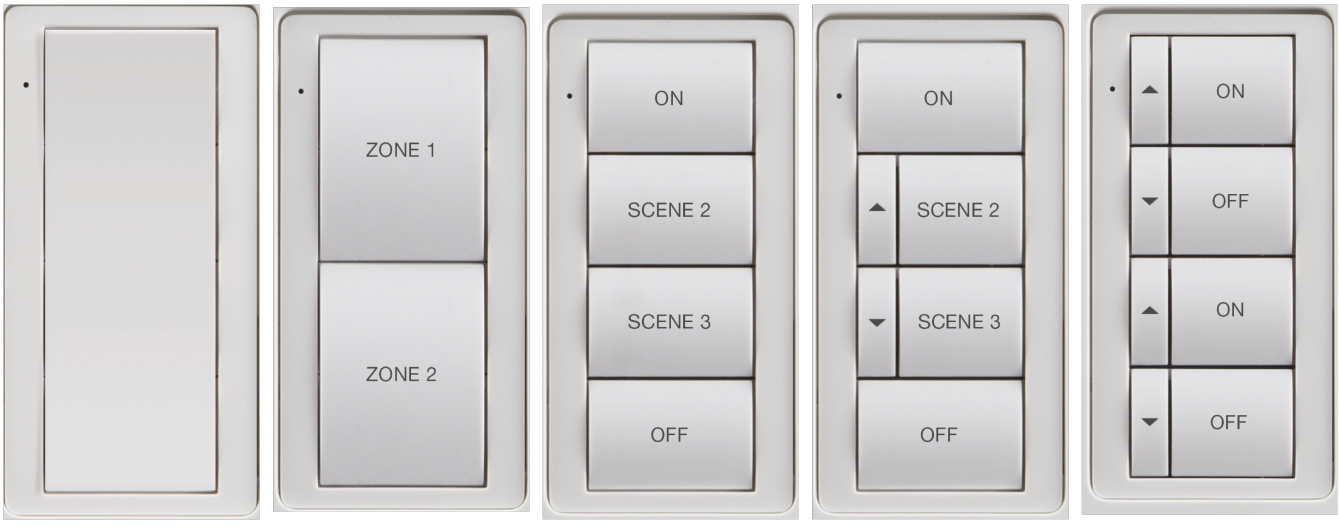


ZUMLINK-DT-QUATTRO-DLS
(Presence detector)



ZUMLINK-US-HALLWAY-DLS
(Presence detector)

Typical Keypad Layouts



ZUMLINK-KP-R-W

ZUMLINK-KP-R-W + ZUMLINK-BTN2-W

ZUMLINK-KP-R-W + ZUMLINK-BTN4-W

ZUMLINK-KP-R-W + ZUMLINK-BTN6-W

ZUMLINK-KP-R-W + ZUMLINK-BTN8-W

Wireless Field Guide

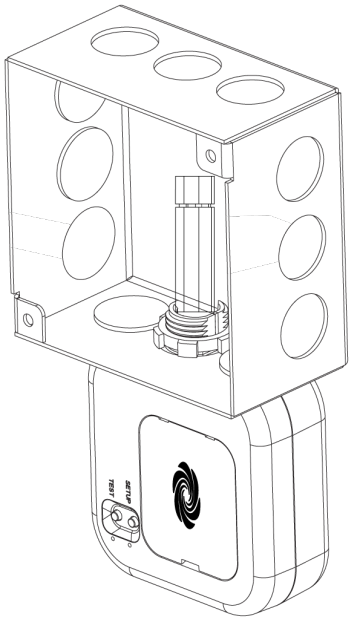
The following sections provide best practices for setting up a Zūm Mesh wireless space.

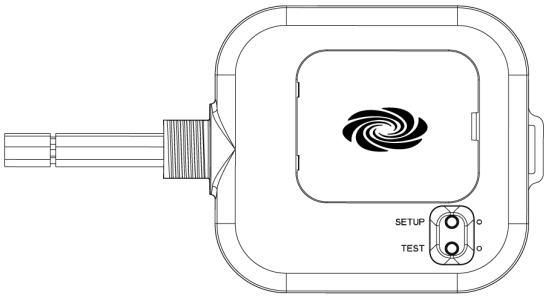
- Load Controllers
  - ZUMMESH-JBOX-20A-SW
  - ZUMMESH-JBOX-20A-PLUG
  - ZUMMESH-JBOX-16A-LV-EM
  - ZUMMESH-JBOX-16A-LV
  - ZUMMESH-JBOX-5A-LV
  - ZUMMESH-JBOX-DALI
  - ZUMMESH-EXP-16A-DIMU
- Wall Box Load Controllers
  - ZUMMESH-DIM/DELV
  - ZUMMESH-5A-SW
  - ZUMMESH-5A-LV
- Power Supply
  - ZUMMESH-JBOX-PSU
- Networking and Integration
  - Distribution Panels
    - CEN-SWPOE-5AC
    - ZUML-CENCN-SWPOE-5
    - ZUML-SWPOE-26
  - Control Processor Panels
    - ZUML-HUB4
    - ZUML-HUB4-SWPOE-5
    - ZUML-HUB4-SWPOE-26
  - ZUM-HUB4 - Zūm Start-Up
  - SW-HUB4-PROG - Custom Program Start-Up
- Wireless Device Notes
  - Wireless Network Limitation
  - Space Limitations
- Wireless Network Devices
  - ZUMMESH-AVBRIDGE

    - ZUMNET-GATEWAY
    - ZUMMESH-NETBRIDGE
    - ZUMMESH-CCO
- Sensor Integration Module
    - ZUMMESH-JBOX-SIM
- Wireless Mesh Communication Battery-Powered Sensors
    - ZUMMESH-PIR-OCC-BATT
    - ZUMMESH-PIR-VAC-BATT
    - ZUMMESH-OL-PHOTOCELL-BATT
- Wireless Mesh Communication Battery-Powered Keypads
    - ZUMMESH-KP10ABATT
    - ZUMMESH-KP10BBATT
    - ZUMMESH-KP10CBATT
    - ZUMMESH-KP10DBATT
    - Typical Keypad Layouts
- Wireless Mesh Communication AC Powered Keypads
    - ZUMMESH-KP10A
    - ZUMMESH-KP10B
- Typical Zūm Wireless Applications
    - Wiring Key
    - Zūm Networking Hub
    - Zūm Gateway
    - Control Interfaces
    - Wall Box Load Control Devices
    - Junction Box Load Control Devices

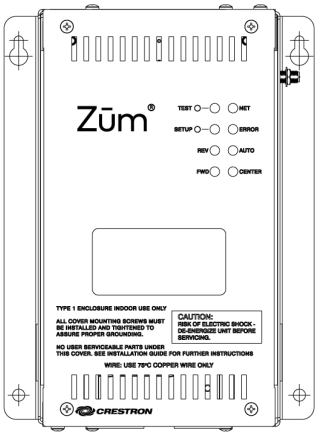
Load Controllers

Illustrations for the Zūm wireless load controllers are provided below.



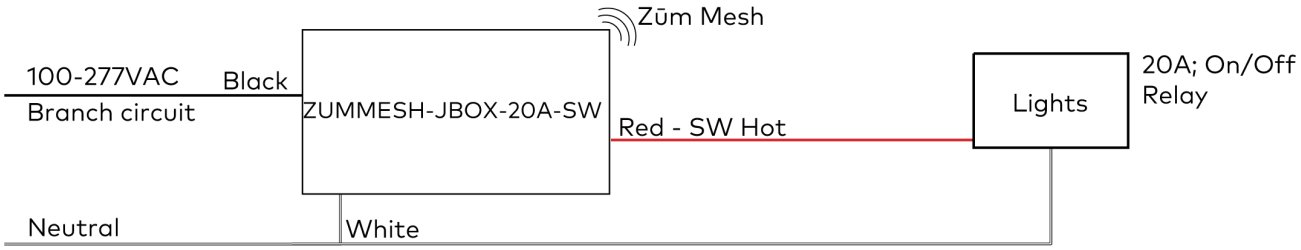


Typical wireless junction box controller

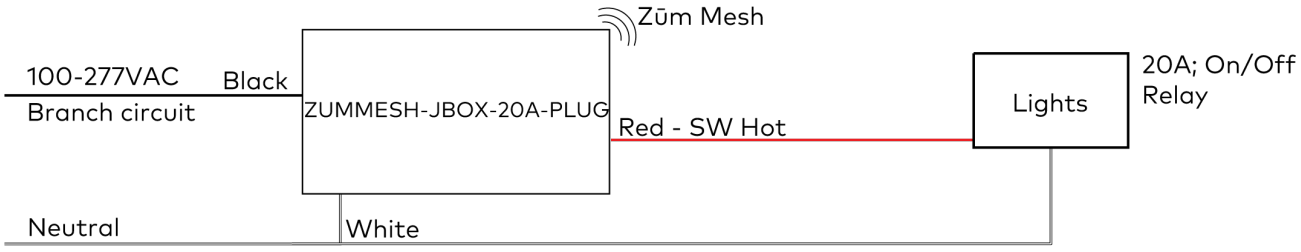


ZUMMESH-EXP-16A-DIMU

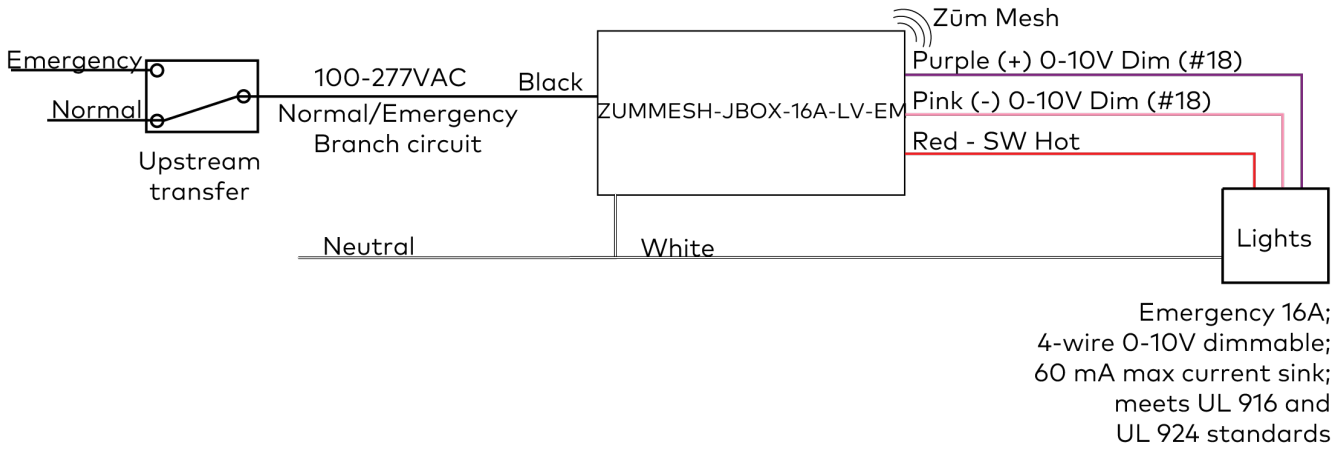
ZUMMESH-JBOX-20A-SW



ZUMMESH-JBOX-20A-PLUG

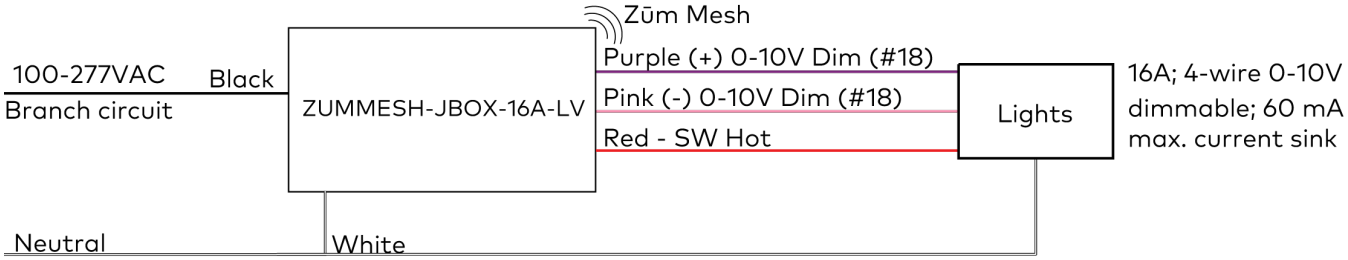


ZUMMESH-JBOX-16A-LV-EM



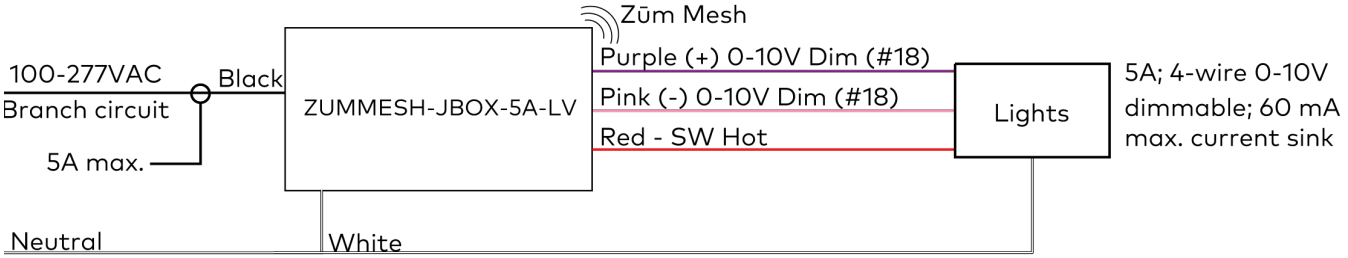
Emergency 16A;
4-wire 0-10V dimmable;
60 mA max current sink;
meets UL 916 and
UL 924 standards

ZUMMESH-JBOX-16A-LV



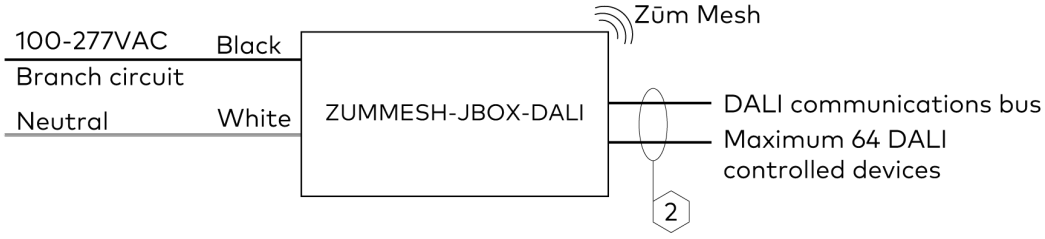
16A; 4-wire 0-10V dimmable; 60 mA max. current sink

ZUMMESH-JBOX-5A-LV



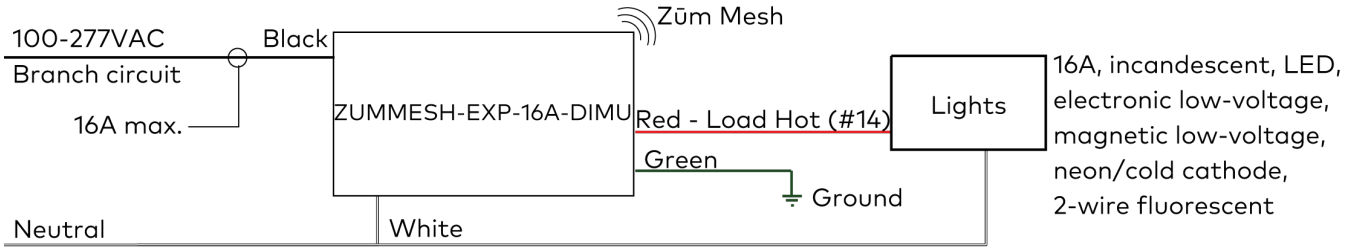
5A; 4-wire 0-10V dimmable; 60 mA max. current sink

ZUMMESH-JBOX-DALI



DALI dimmable
100-277VAC
input only,
No 100-277VAC
Output/Relay

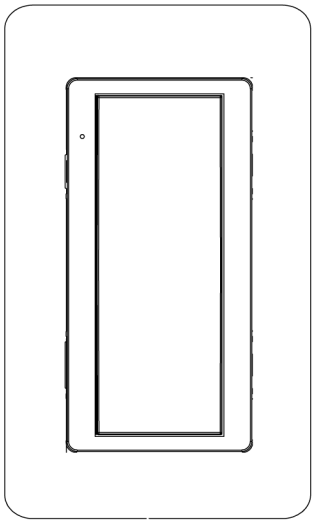
ZUMMESH-EXP-16A-DIMU



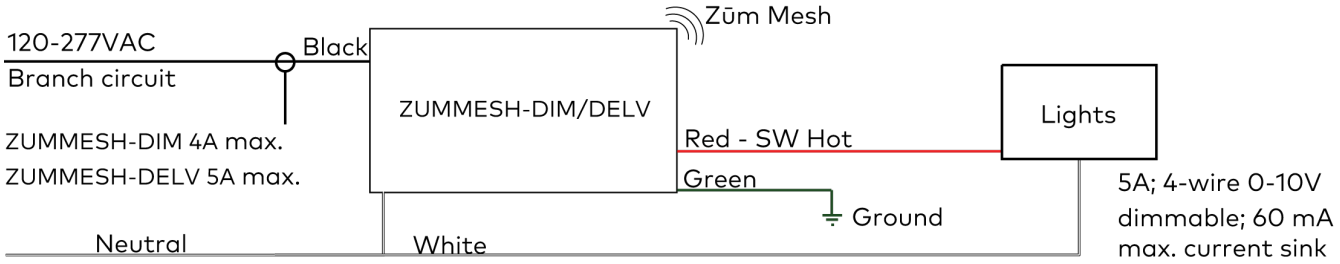
Does not connect to a ZUMMESH-NETBRIDGE.

Wall Box Load Controllers

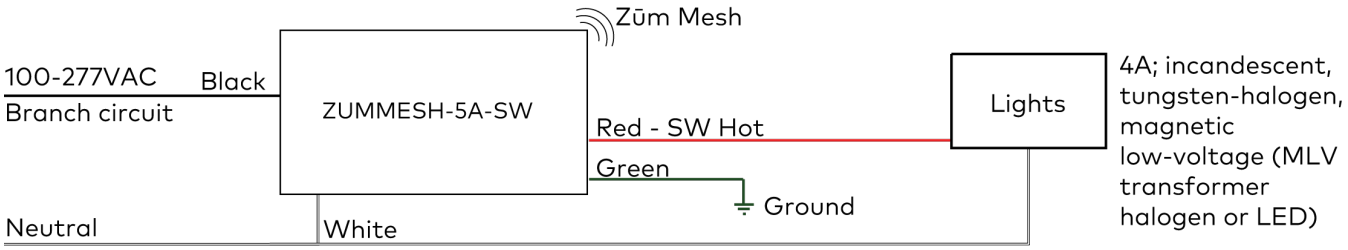
Illustrations for the Zūm wireless wall box load controllers are provided below.



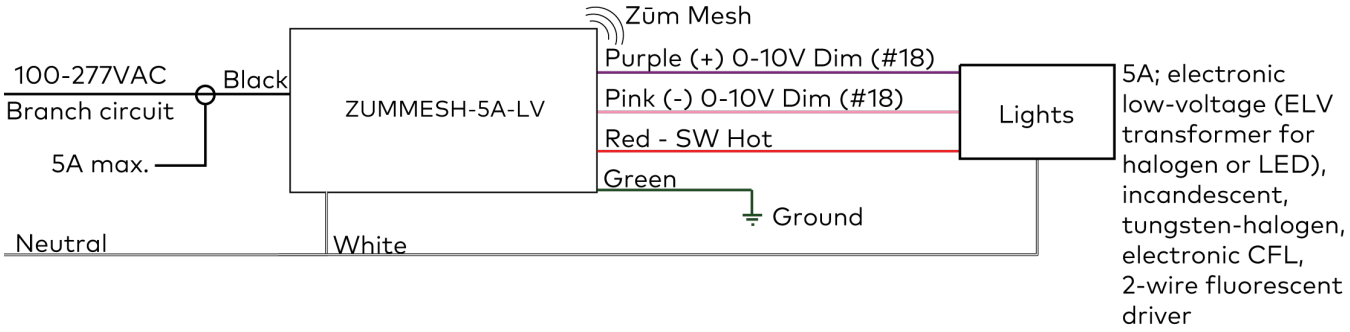
ZUMMESH-DIM/DELV



ZUMMESH-5A-SW

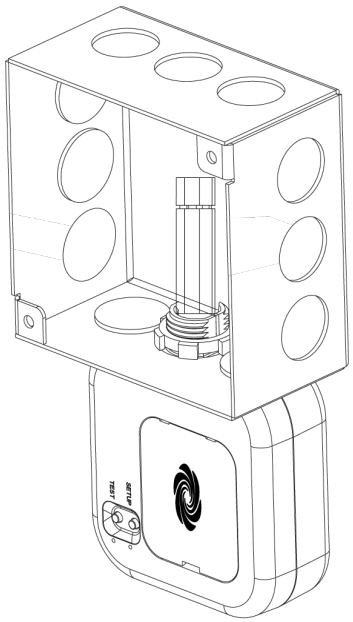


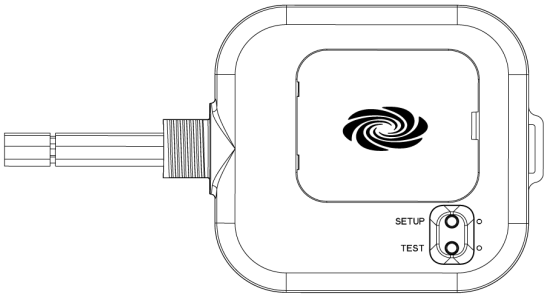
ZUMMESH-5A-LV



Power Supply

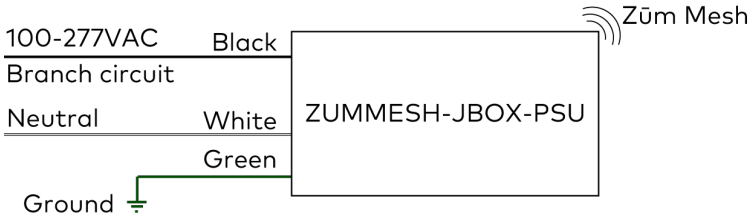
Illustrations for the Zūm wireless power supply are provided below.





ZUMMESH-JBOX-PSU

ZUMMESH-JBOX-PSU



Networking and Integration

Illustrations for Zūm networking and integration are provided below.

Distribution Panels

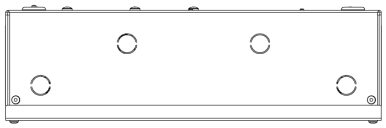
CEN-SWPOE-5AC

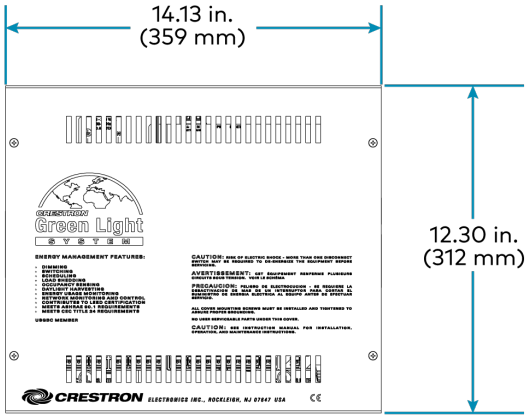


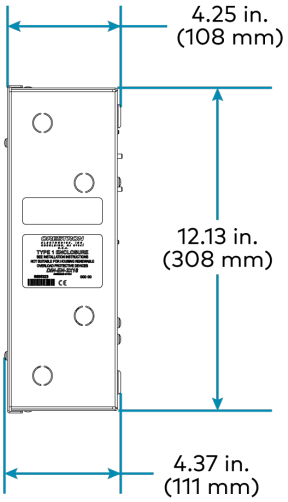
- 120 VAC, 50/60 HZ
- JBOX, DIN Rail, surface mountable
- 5 available PoE ports
- Height: 4.72 in. (120 mm)
- Width: 7.34 in. (187 mm)
- Length: 1.85 in. (47 mm)

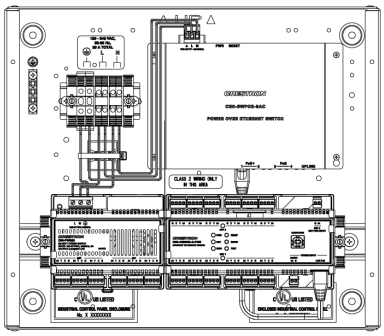
ZUML-CENCN-SWPOE-5

- 120 VAC, 50/60 HZ
- Cresnet expansion
- 4 available PoE ports
- Height: 12.30 in. (312 mm)
- Width: 14.13 in. (359 mm)
- Length: 4.37 in. (111 mm)



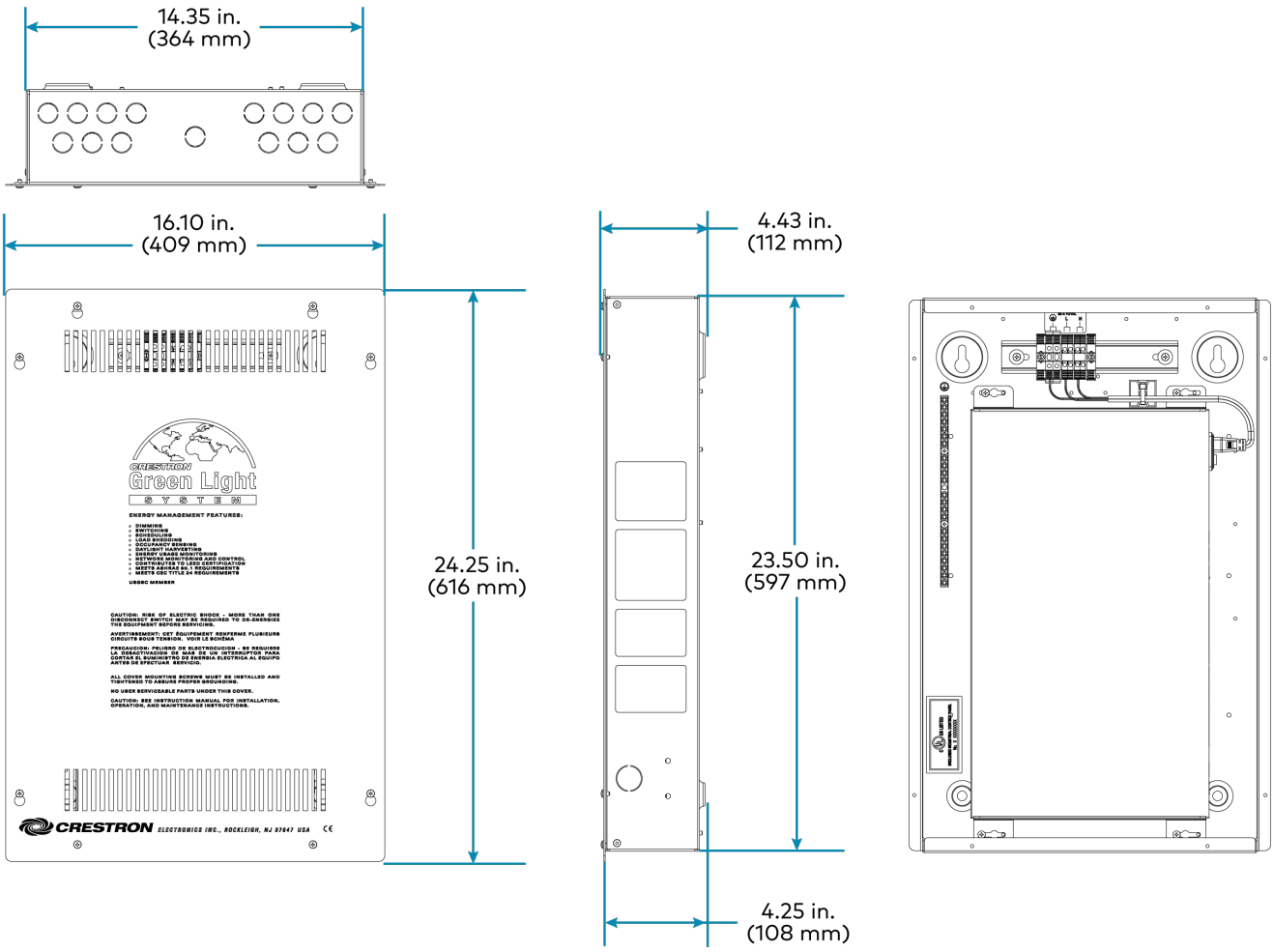






ZUML-SWPOE-26

- 120 VAC, 50/60 HZ
- 23 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)

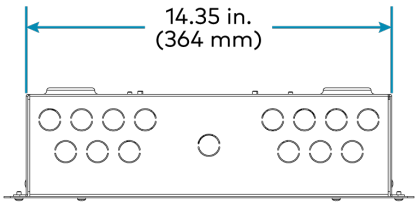


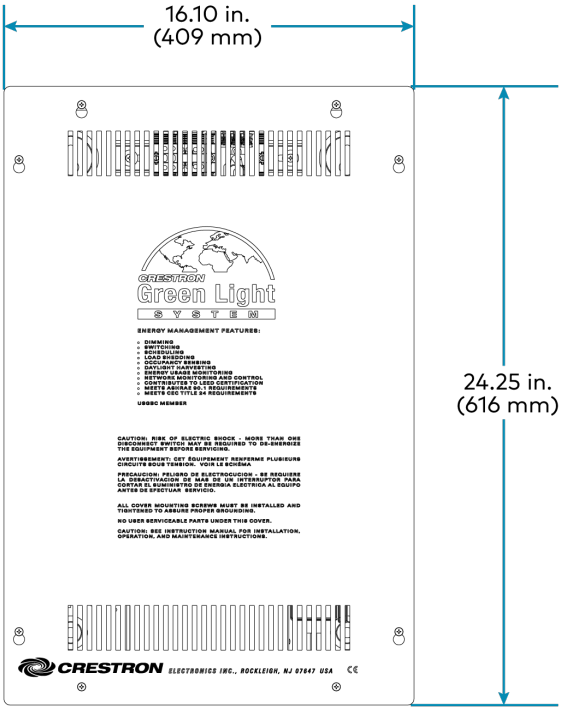
Control Processor Panels

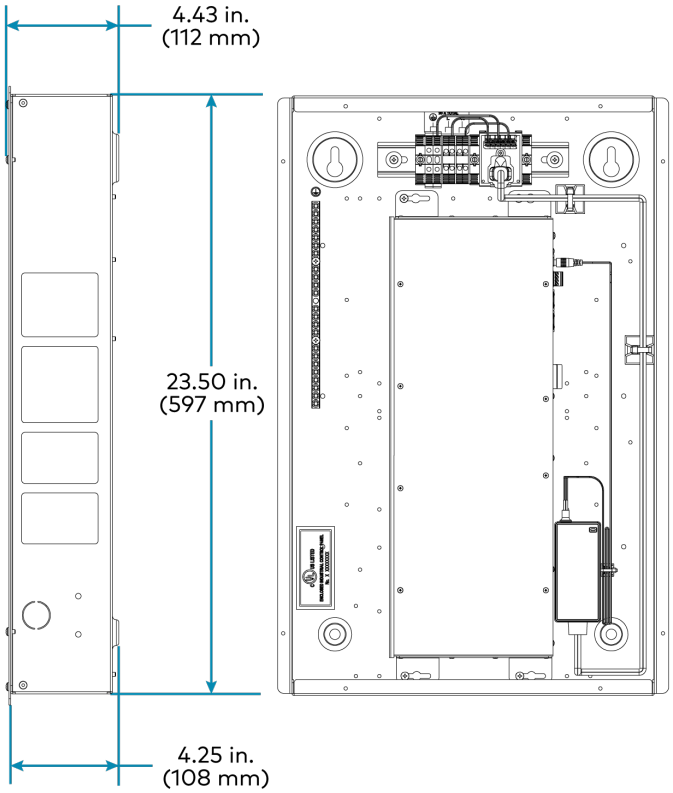
- 4 available PoE ports
- Support up to 30 gateways when utilizing distribution hubs
- Support up to 1,000 Zūm spaces when utilizing distribution hubs and gateways
- Provides dynamic scheduling

ZUML-HUB4

- 120 VAC, 50/60 HZ
- ZUM-HUB4
- 0 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)

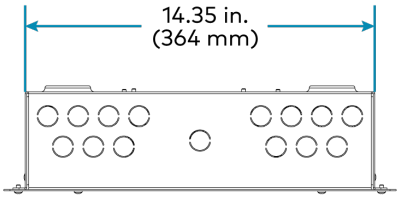

14.35 in.
(364 mm)

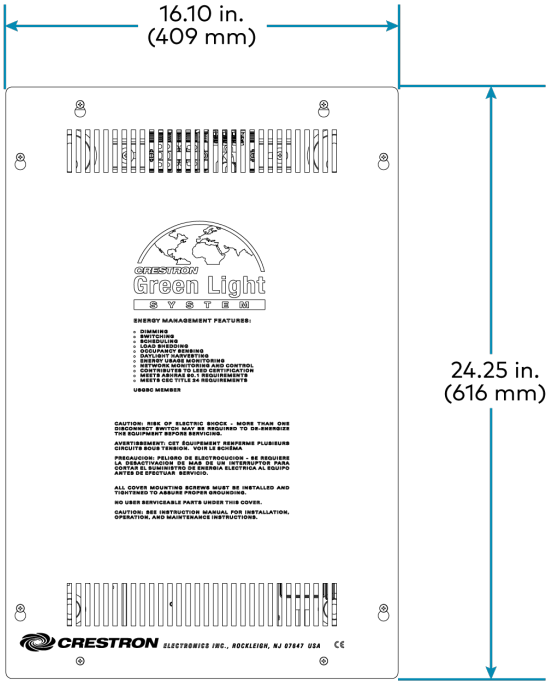

16.10 in.
(409 mm)
24.25 in.
(616 mm)
CRESTRON
Green Light
SYSTEM
ENERGY MANAGEMENT FEATURES:
CRESTRON ELECTRONICS INC., ROCKLEIGH, NJ 07647 USA

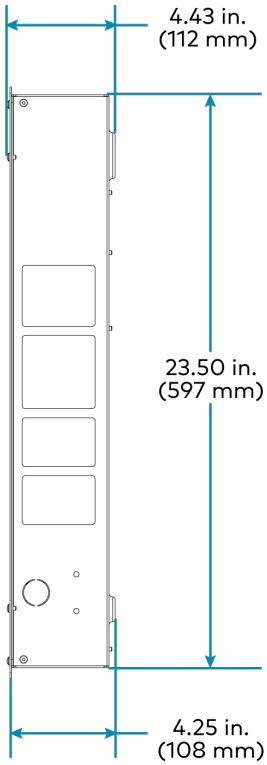

4.43 in.
(112 mm)
23.50 in.
(597 mm)
4.25 in.
(108 mm)

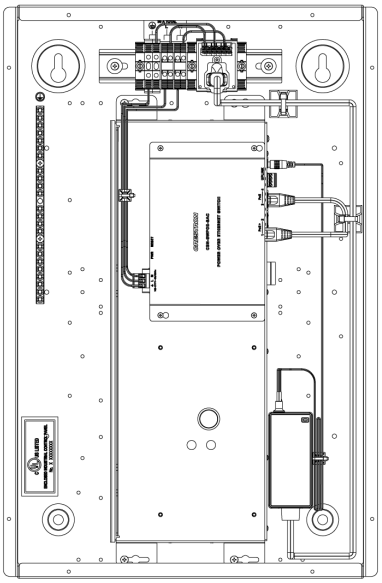
ZUML-HUB4-SWPOE-5

- 120 VAC, 50/60 HZ
- ZUM-HUB4
- 4 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)



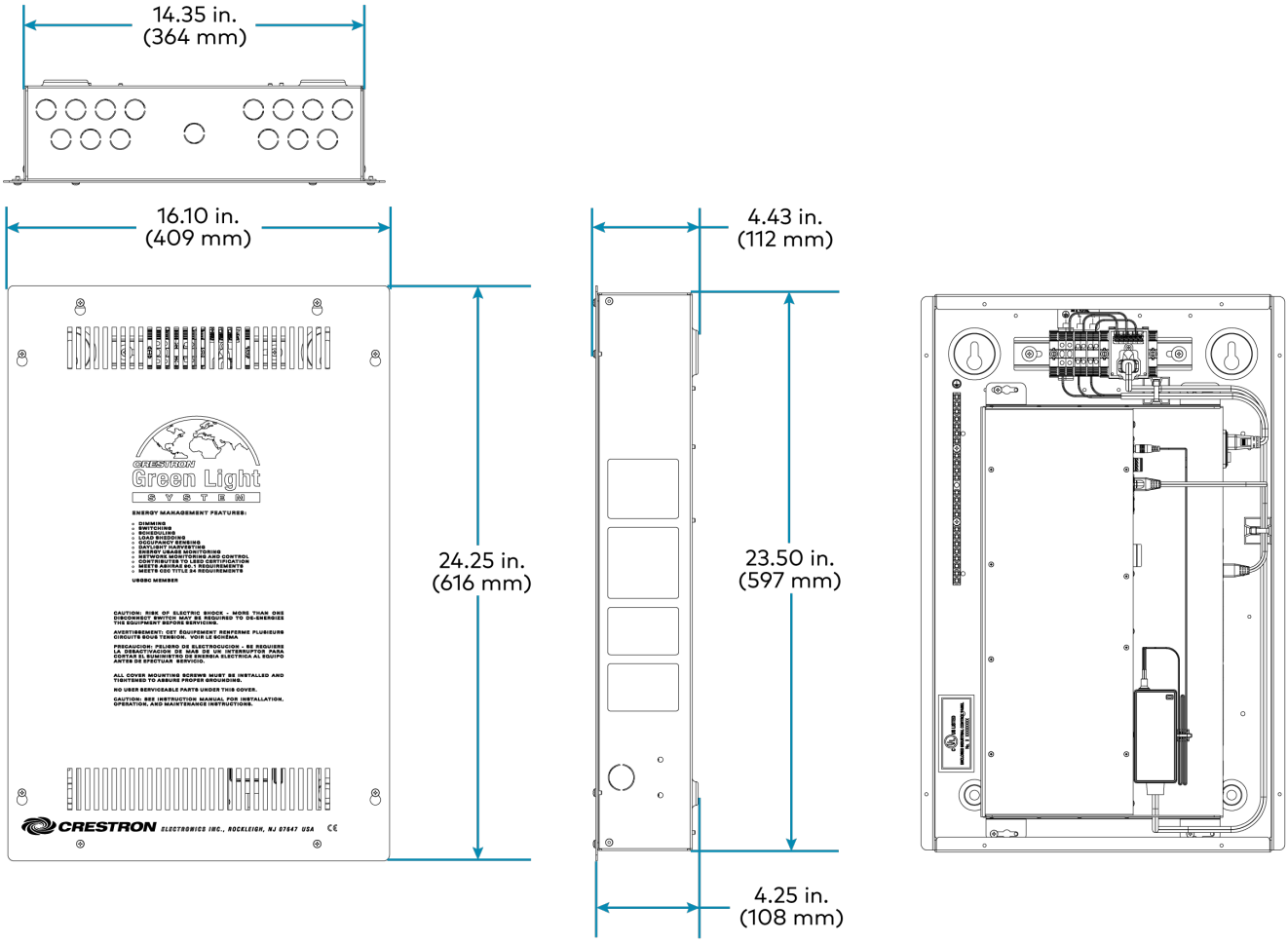






ZUML-HUB4-SWPOE-26

- 120 VAC, 50/60 HZ
- ZUM-HUB4
- 23 available PoE ports
- Height: 24.25 in. (616 mm)
- Width: 16.10 in. (409 mm)
- Length: 4.43 in. (112 mm)



ZUM-HUB4 - Zūm Start-Up

The ZUM-HUB4 enables centralized management for Zūm commercial lighting systems of up to 1,000 rooms with an Ethernet switch across Zūm wired, Zūm wireless, and external spaces using distribution panels.

- Provides web-based user interface for easy configuration, control, scheduling, and monitoring
- Time clock for room lighting automation and sensing behavior

- Daisy-chain up to 20 Zūm Net wired load controllers (sold separately) via their built-in Zūm Net ports for room-to room communication
- Use with an Ethernet switch (sold separately) to support multiple Zūm Net daisy-chains up to 1,000 rooms
- Control Zūm spaces with the Zūm Hub software and a Custom program (not both)
- BACnet communication supports control for up to 9,000 BACnet objects
- Configure Zūm spaces via the Zūm App

SW-HUB4-PROG - Custom Program Start-Up

The SW-HUB4-PROG is a software license that activates the custom program slot on the ZUM-HUB4 control system.

- 100 max. Ethernet devices (or custom programmed Zūm Net devices) devices across both LAN and Control Subnet ports
- 200 max. Cresnet devices (or custom programmed Zūm Link devices) controlled/addressed from the Custom Program

  > **NOTE:** Cresnet devices connected to a Zūm Net load controller or DIN-CENCN-2 do not count toward the 200 max. Cresnet devices.

- Control Zūm spaces with the Zūm Hub software or a Custom program (not both)
- Custom program slot supports 10,000 BACnet points (customizable)

Maxed system capabilities using SW-HUB4-PROG

Ethernet Device Type	# of devices downstream per Ethernet device	Max # of Ethernet Devices	Max # of Cresnet Devices	Total Max System Device count
ZUMNET	31	100	200	3,200 Devices
DIN-CENCN-2	40	100	200	4,200 Devices

Wireless Device Notes

- Position the first ZUMMESH-NETBRIDGE within 100 ft of the ZUMNET-GATEWAY.
- Position the last ZUMMESH-NETBRIDGE within 250 ft of a ZUMNET-GATEWAY.
- Position subsequent ZUMMESH-NETBRIDGE devices within 100 ft of the previous ZUMMESH-NETBRIDGE.
- Acquire wireless devices in the same room to the same ZUMMESH-NETBRIDGE or ZUMNET-GATEWAY.
- Refer to Installation and Setup of Crestron RF Products Best Practices.

ZUMNET-GATEWAY

- Building material and device quantity may impact gateway placement. Higher density material with fewer wireless devices may require additional gateways.
- Do not mount gateway devices closer than 15 ft from each other.
- Mount a gateway on the same floor as the wireless devices that are wirelessly connected to it.
- Mount a gateway at least 15 ft from Wi-Fi access points.
- Mount a gateway at least 15 ft from large metal objects to avoid RF shadows.
- Position the gateway antenna on a vertical plane.
- Avoid mounting a gateway on a metal surface. When mounting a gateway on a metal surface is unavoidable, mount the antenna on a horizontal plane.

Wireless Network Limitation

- 30 max. ZUMNET-GATEWAY devices
- 50 max. ZUMMESH-NETBRIDGE devices per gateway
- 1,000 max. rooms per ZUM-HUB4

Space Limitations

- 32 devices per ZUMMESH-NETBRIDGE or Zūm space
- Up to eight battery-powered keypads or sensors per Zūm space
- Up to 50 ft between devices per Zūm space
- Only one photosensor per Zūm space
- One ZUMMESH-NETBRIDGE per Zūm space
- One ZUMMESH-AVBRIDGE per Zūm space
- Up to six battery-powered devices per AC device
- Use multiple AC devices to achieve the battery-powered device maximums
- AC powered devices can expand the size of the peer-to-peer Zūm Mesh network. Battery-powered devices do not expand the Zūm Mesh network size.

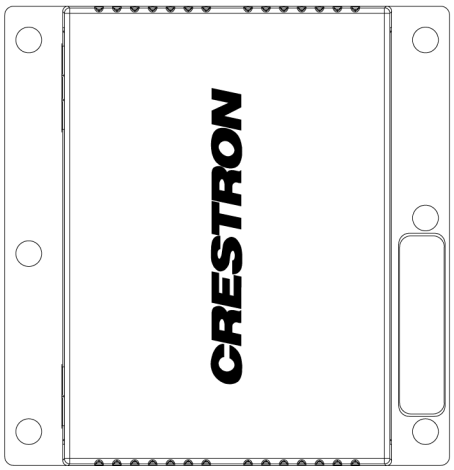
Wireless Network Devices

Illustrations for Zūm wireless network devices are provided below.

ZUMMESH-AVBRIDGE

Audio/video integration bridge

- 2-way serial up to 115.2K baud (TD/RD only)
- RF transceiver: 2-way RF
- 50 ft max. range
- 12–24VDC or USB3



ZUMNET-GATEWAY

Wireless gateway

- Power pack: 0.75A @24VDC
- 100–240VAC, 50/60 Hz power pack, model PW-2420RU (sold separately)
- Power consumption: 2.1 W typical
- RF transceiver: 2-way RF
- Zūm Net range (typical): 150 ft indoor to nearest Mesh network device(s). 250 ft max. to furthest Zūm Net device.
- Supports up to 50 Zūm wireless spaces (ZUMMESH-NETBRIDGE devices)
- PoE recommended connection. Up to 100 M max. range.



ZUMMESH-NETBRIDGE

Networking bridge

- One required per space for networking and Zūm app configuration
- Connects to wireless junction box controllers
- Bluetooth low energy, version 4.0, pairs with a mobile device running the Zūm app
- RF transceiver: 2-way RF
- Zūm Mesh range: Up to 100 ft from one ZUMMESH-NETBRIDGE to another. Up to 250 ft from a ZUMNET-GATEWAY to the furthest ZUMMESH-NETBRIDGE.
- Connect to any Zūm Mesh junction box load controller

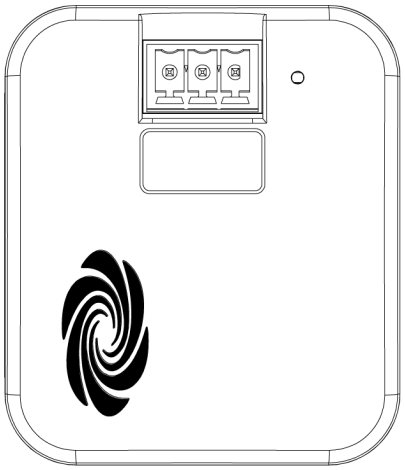


ZUMMESH-CCO

Contact closure output

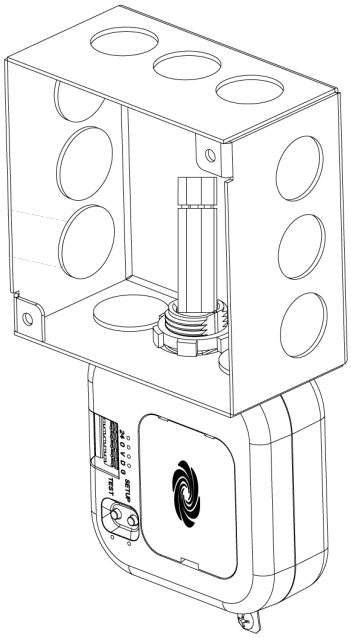
- Rated 1A @ 30VDC or 24VAC
- Low-voltage SPDT form C contact closure

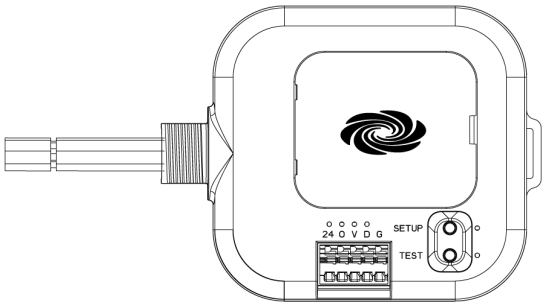
- Connect to any Zūm Mesh junction box load controller



Sensor Integration Module

Below are illustrations for the Zūm wireless sensor integration module.





Manufacturer	Model	Max. Sensors
Crestron	GLS-ODT-C-NS	4
Crestron	GLS-OIR-C-NS	7
Steinel	IR Quattro HD COM2-24 (GLA-IR-QUATTRO-HD-COM2-24) IR Quattro HD COM1-24 (GLA-IR-QUATTRO-HD-COM1-24) IR CM COM2-24	7
Steinel	US Hallway COM1-24 (GLA-US-HALLWAY-COM1-24)	6
Steinel	US Hallway COM2-24 (GLA-US-HALLWAY-COM2-24)	5

ZUMMESH-JBOX-SIM

Sensor Integration Module

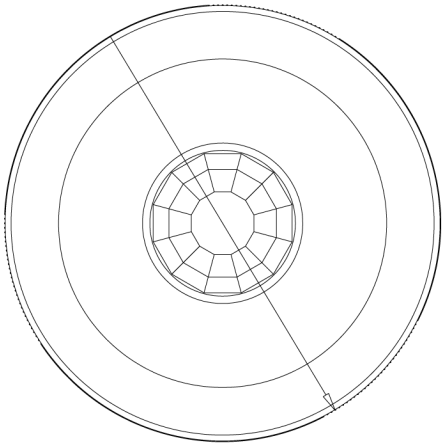
- Allows for nonwireless low-voltage sensors to be integrated into the Zūm wireless system
- 100–277VAC input only. No 100–277VAC output/relay
- Supports one or more 24VDC powered motion detection type sensors wired in parallel
- Requires a maintained DC high logic signal >8VDC, 24VDC max. when detecting occupancy (motion)
- Operates in either occupancy or vacancy mode depending on connection used
- Daylight supports a single 24VDC powered open-loop photosensor (photocell) type sensor
- Requires a 0–10VDC analog control signal to indicate the natural daylight level
- Output power: 250mA @ 24VDC

Wireless Mesh Communication Battery-Powered Sensors

Illustrations for the Zūm wireless battery-powered sensors are provided below.

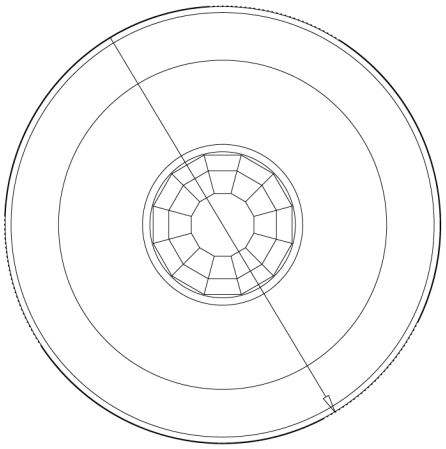
ZUMMESH-PIR-OCC-BATT

- Occupancy-only sensor
- Lithium-ion, Ultralife 9V Lithium battery
- 500 sq ft range
- Zūm Mesh communication



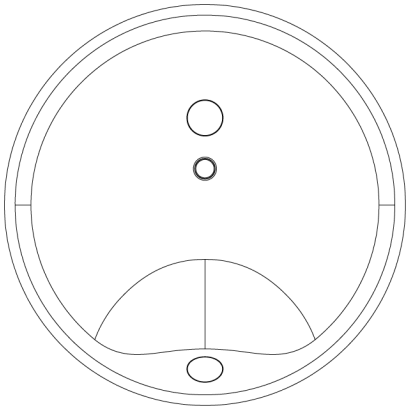
ZUMMESH-PIR-VAC-BATT

- Vacancy-only sensor
- Lithium-ion, Ultralife 9V Lithium battery
- 500 sq ft range
- Zūm Mesh communication



ZUMMESH-OL-PHOTOCELL-BATT

- Light sensitivity: 0–65535 lux
- (2) AAA Lithium-ion battery
- 500 sq ft range
- Zūm Mesh communication

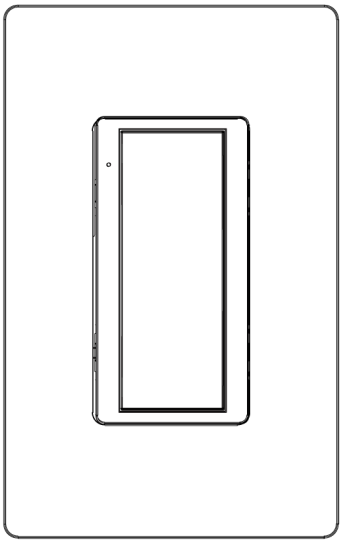


Wireless Mesh Communication Battery-Powered Keypads

Illustrations for the Zūm wireless battery-powered keypads are provided below.

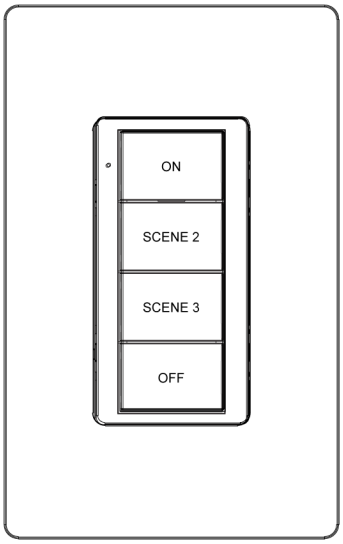
ZUMMESH-KP10ABATT

- Single rocker switch
- One CR2032 coin cell battery
- Zūm Mesh communication



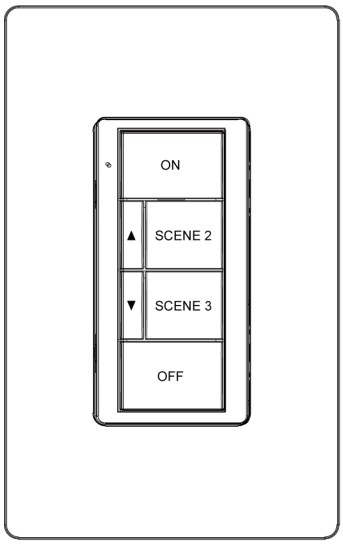
ZUMMESH-KP10BBATT

- Four-button keypad
- One CR2032 coin cell battery
- Zūm Mesh communication



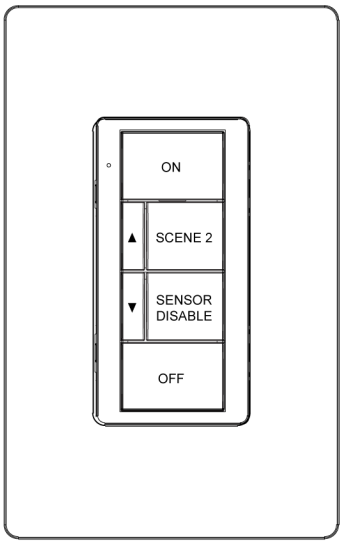
ZUMMESH-KP10CBATT

- Six-button keypad
- One CR2032 coin cell battery
- Zūm Mesh communication

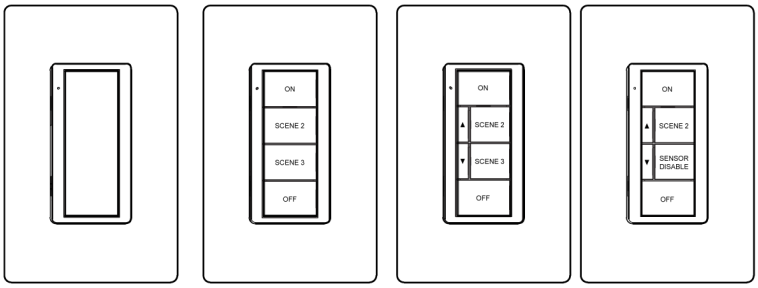


ZUMMESH-KP10DBATT

- Six-button keypad with sensor control
- One CR2032 coin cell battery
- Zūm Mesh communication
- Sensor Disable feature preconfigured for two hours of no sensor communications



Typical Keypad Layouts



ZUMMESH-KP10A ZUMMESH-KP10B ZUMMESH-KP10C ZUMMESH-KP10D

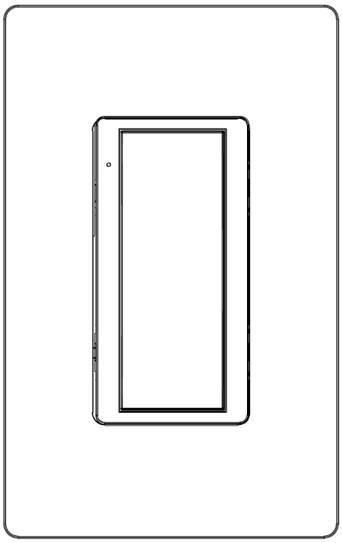
Custom screen printing is available

Wireless Mesh Communication AC Powered Keypads

Illustrations for the Zūm wireless AC powered keypads are provided below.

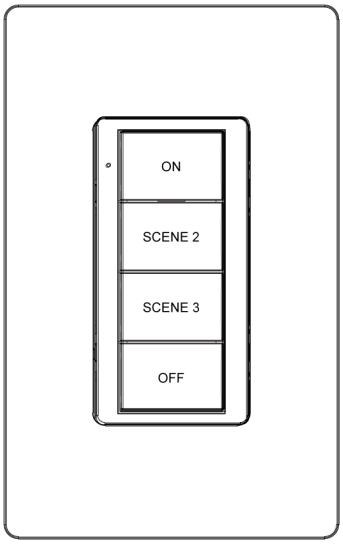
ZUMMESH-KP10A

- Single rocker switch
- 120–277VAC, 60Hz
- Zūm Mesh communication



ZUMMESH-KP10B

- Four-button keypad
- 120–277VAC, 60Hz
- RF transceiver: 2-way RF



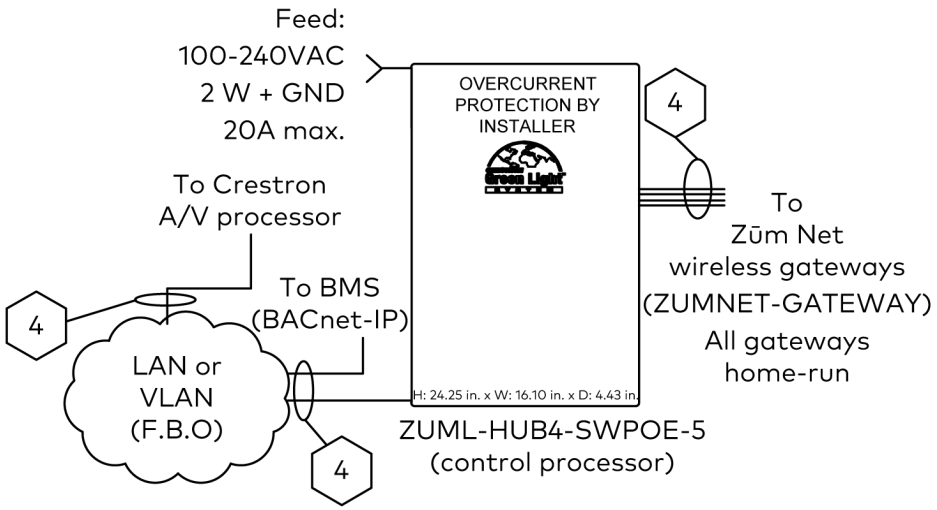
Typical Zūm Wireless Applications

Illustrations for typical Zūm wireless applications are provided below.

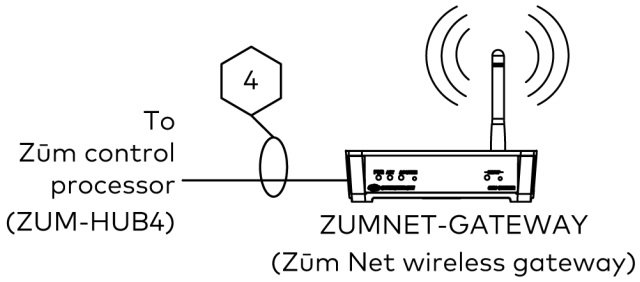
Wiring Key

1. Cresnet Cable:
   (1) Pair 18 AWG,
   (1) Twisted pair 22 AWG with shield
   Non-plenum PN: CRESNET-NP-TL
   Plenum PN: CRESNET-P-TL
   Cresnet devices are limited to 20 per Cresnet run
2. DMX Cable:
   Belden Standard 9729 or equal
3. Cable:
   (1) Twisted pair 18 AWG
   (1) Shield
3A. Cable:
   3 Conductor cable 18 AWG
   (1) Shield
4. Cable:
   CAT5E Ethernet
   Ethernet devices must be home run
5. Suitable gauge wire to meet load requirements

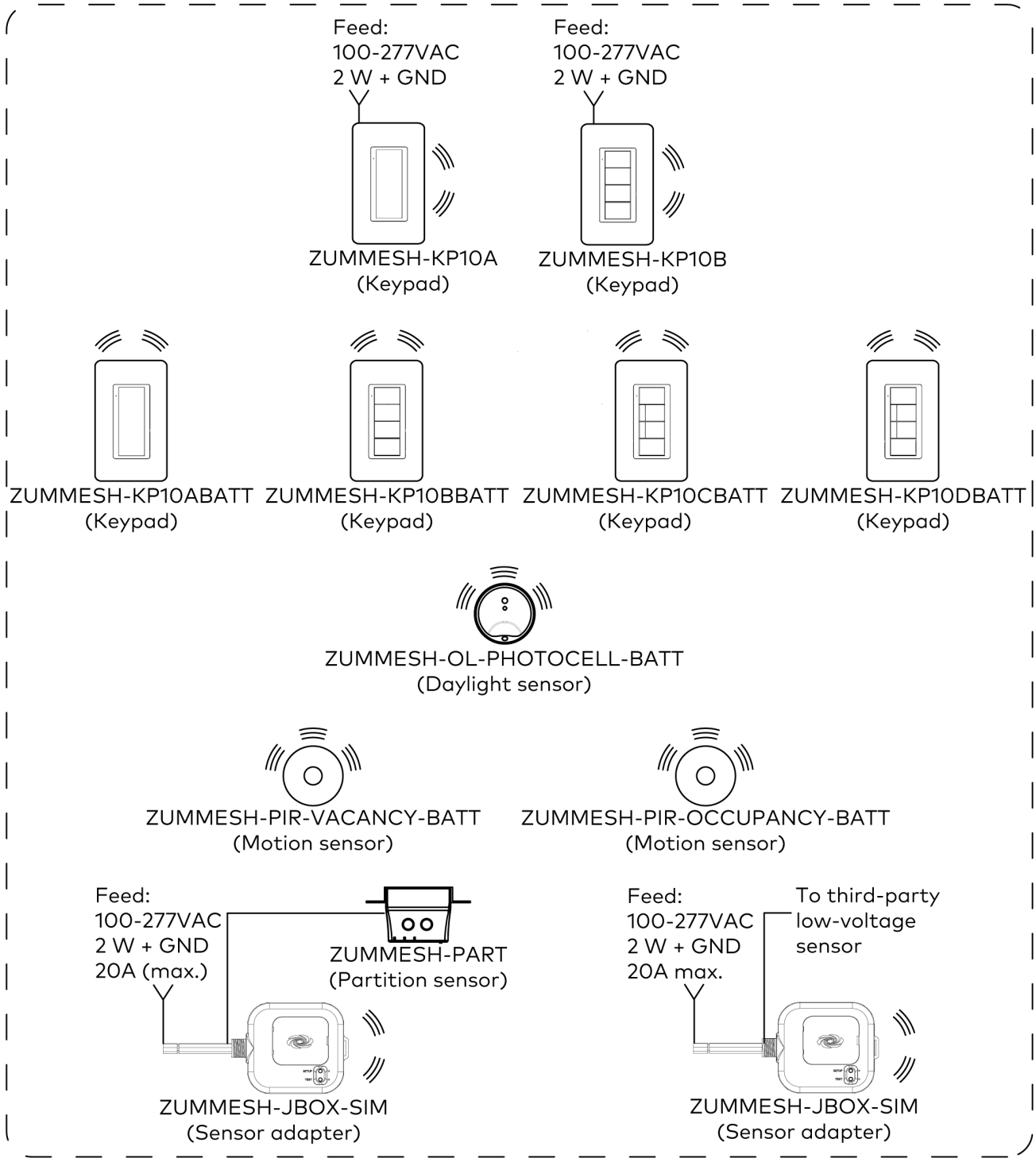
Zūm Networking Hub



Zūm Gateway

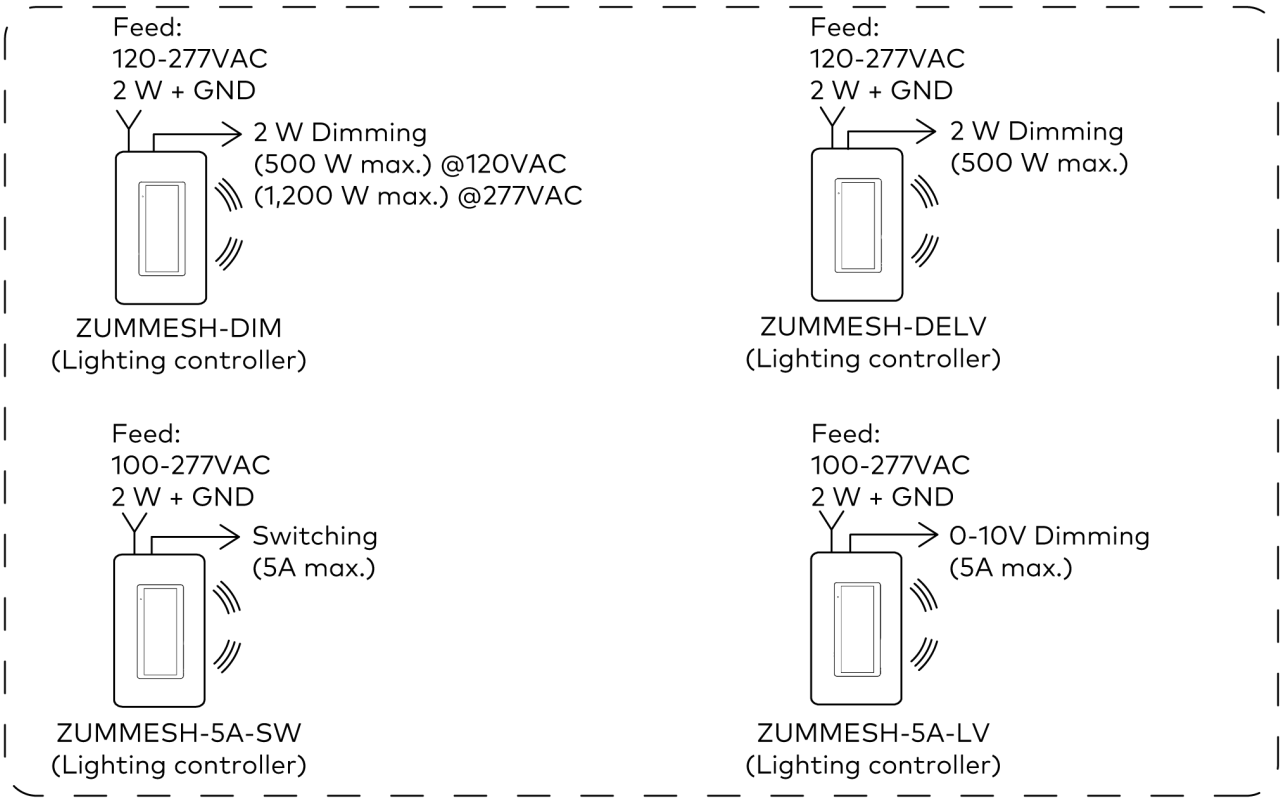

4
To
Zūm control
processor
(ZUM-HUB4)
ZUMNET-GATEWAY
(Zūm Net wireless gateway)

Control Interfaces



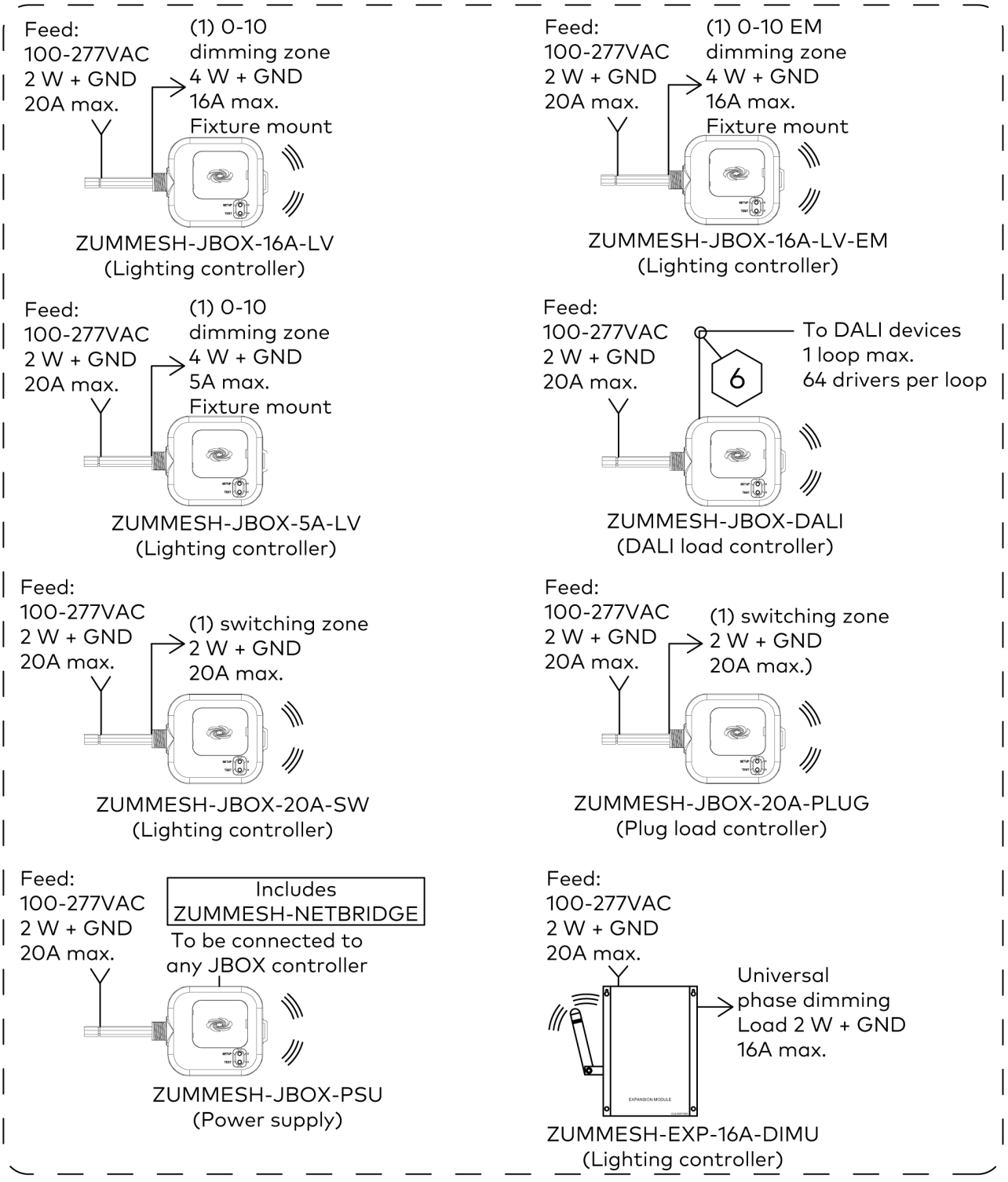
Zūm Mesh wireless: 2.4 GHz mesh 128-BIT AES encryption

Wall Box Load Control Devices



Zūm Mesh wireless: 2.4 GHz mesh 128-BIT AES encryption

Junction Box Load Control Devices



Zūm Mesh wireless: 2.4 GHz mesh 128-BIT AES encryption

Zūm Mesh Wireless Network Setup

Once all devices are physically installed, a new Zūm space can be created and devices added.

> **NOTES:**
>
> - Only set up one Zūm space at a time.
> - For simplified setup of a Zūm space, use the Zūm app on a mobile device.

Use the following sections to set up a Zūm Mesh Wireless Network.

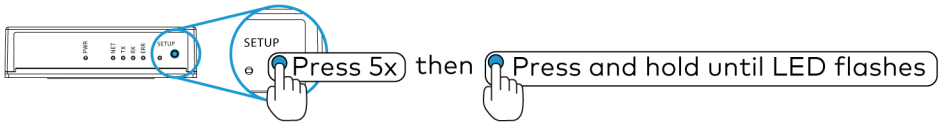
- Create a New Zūm Mesh Wireless Network
- Add Zūm Mesh Devices to the Network
- Add a Zūm Device to an Existing Zūm Space
- Calibrate and Test the Daylight Sensor
- Configure Keypads to Control Specific Loads
- Change the Default Scenes
- Connect the Network Bridge to the Zūm Net Wireless Gateway
- Network Multiple Zūm Mesh Networks
- Perform Factory Reset
- Install a Zūm J-Box Device
- Attach a J-Box Module
- Install a Zūm Sensor

Create a New Zūm Mesh Wireless Network

Using a Zūm AV Bridge

To create a new Zūm space using a J-box device or an AV Bridge:

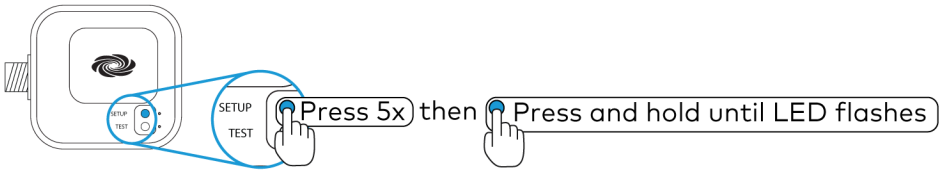
1. Press the **SETUP** button 5 times.
2. Press and hold the **SETUP** button until the LED on the device lights (about 10 seconds). After approximately 3 seconds, the device LED begins slowly flashing. This indicates that the Zūm space is now created and in Joining mode, allowing you to add devices.



Using a Zūm J-Box Device

To create a new Zūm space using a J-box device or an AV Bridge:

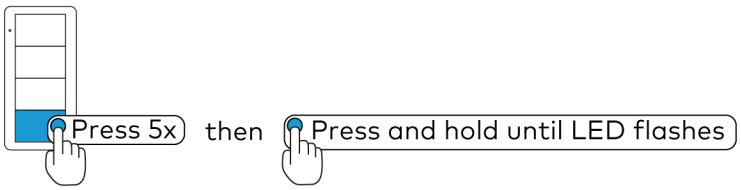
1. Press the **SETUP** button 5 times.
2. Press and hold the **SETUP** button until the LED on the device lights (about 10 seconds). After approximately 3 seconds, the device LED begins slowly flashing. This indicates that the Zūm space is now created and in Joining mode, allowing you to add devices.



Using a Keypad, Dimmer, or Switch

To create a new Zūm space using a keypad, dimmer, or switch:

1. Press the bottom button 5 times.
2. Press and hold the bottom button until the LED on the device lights (about 10 seconds). After approximately 3 seconds, the device LED begins slowly flashing. This indicates that the Zūm space is now created and in Joining mode, allowing you to add devices.



Add Zūm Mesh Devices to the Network

After a new Zūm space is created, add Zūm devices while the space is in Joining mode.

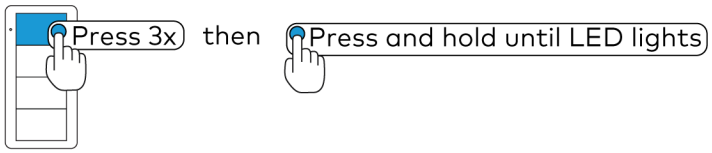
NOTES:

- To conserve battery power, battery-powered devices do not flash their LEDs after joining the space. AC-powered devices in the space will flash their LED to indicate that the space is in Joining mode.
- A Zūm mesh device can belong to only one space.
- Joining mode ends automatically after 4 minutes.

Add a Zūm Wall-Box Device

To add a Zūm Wall-Box device to a Zūm Space:

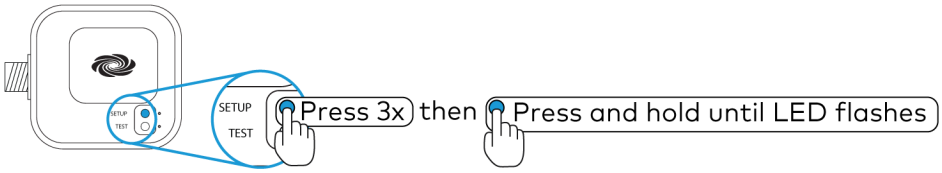
1. Press the top button 3 times.
2. Press and hold the top button until the LED on the device lights (up to 10 seconds). The LED on the device will start to flash slowly to indicate that it has joined the space.



Add a Zūm J-Box Device

To add a Zūm J-box device to a Zūm Space:

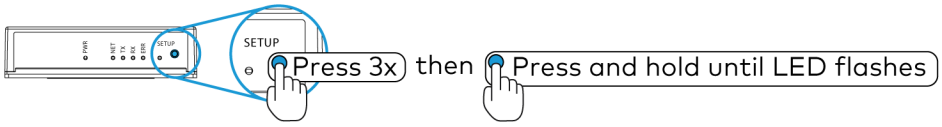
1. Press the **SETUP** button 3 times.
2. Press and hold the **SETUP** button until the LED on the device lights (up to 10 seconds). The LED on the device will start to flash slowly to indicate that it has joined the space.



Add a Zūm AV Bridge

To add a Zūm AV Bridge to a Zūm Space:

1. Press the **SETUP** button 3 times.
2. Press and hold the **SETUP** button until the LED on the device lights (up to 10 seconds). The LED on the device will start to flash slowly to indicate that it has joined the space.

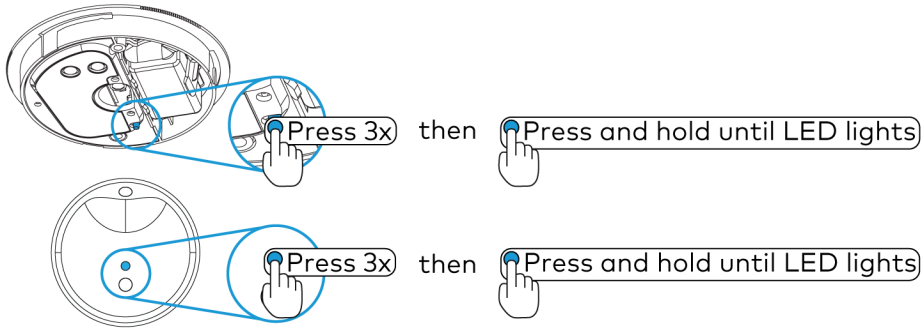


> **NOTE:** Only one ZUMMESH-AVBRIDGE can be installed per Zūm space.

Add a Zūm Photocell

To add a Zūm photocell to a Zūm Space:

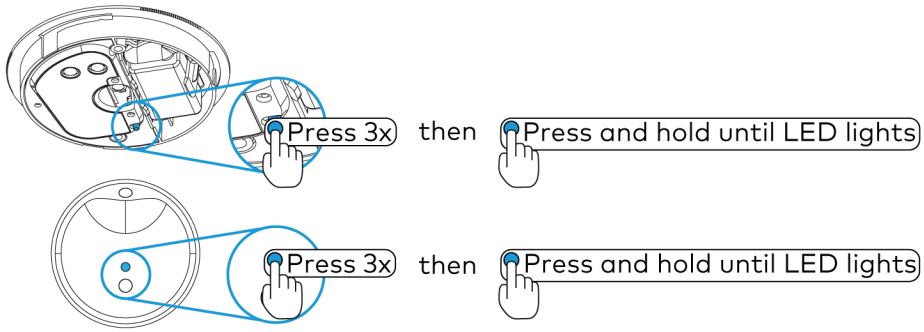
1. Press the **SETUP** button 3 times.
2. Press and hold the **SETUP** button until the LED on the device lights to indicate that it has joined the space.



Add a Zūm Occupancy or Vacancy Sensor

To add a Zūm occupancy or vacancy sensor to a Zūm Space:

1. Press the **SETUP** button 3 times.
2. Press and hold the **SETUP** button until the LED on the device lights to indicate that it has joined the space.



Complete Zūm Space Setup

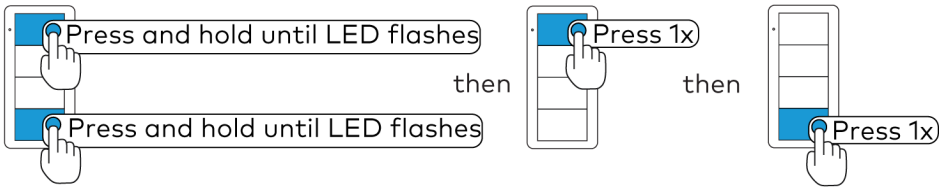
To finish creating a Zūm space, press any button on a device that is part of the Zūm space to exit Joining mode.

Add a Zūm Device to an Existing Zūm Space

Refer to the following sections to add Zūm devices to an existing space.

Add the Zūm Device Using a Keypad, Dimmer, or Switch

1. Enter Joining mode.
   a. Press and hold both the top and bottom buttons until the LED lights (about 5 seconds).
   b. Press the top button once.
   c. Press the bottom button once. The LEDs on all devices in the space (except battery-powered devices) flash slowly to indicate that the devices are part of the space and that the space is in Joining mode.



2. Add the device according to Install Zūm Mesh Wireless Devices on page 230.
3. Press any button on a device that is part of the Zūm space to exit Joining mode.

Add the Zūm Device Using a J-Box Device

1. Enter Joining mode.
   a. Press the **SETUP** button 2 times.
   b. Press the **TEST** button once. The LEDs on all devices in the space (except battery-powered devices) flash slowly to indicate that the devices are part of the space and that the space is in Joining mode.



2. Add the Zūm Device according to Add Zūm Mesh Devices to the Network on page 560.
3. Press any button on a device that is part of the Zūm space to exit Joining mode.

Calibrate and Test the Daylight Sensor

To enable daylight harvesting, calibrate and then test the daylight sensor after all devices are installed and powered in the Zūm space.

NOTES:

- Only dimmers are capable of adjusting load levels that are driven by daylight sensor readings.
- Daylighting only operates when Scene 1 is enabled.
- Calibrate the daylight sensor during the day when the sun is bright. Avoid light fluctuations caused by clouds that are rapidly exposing and hiding the sun.
- Do not stand between the daylight sensor and the windows. Doing so affects the readings and can result in poor calibration settings.

Calibrate the Daylight Sensor

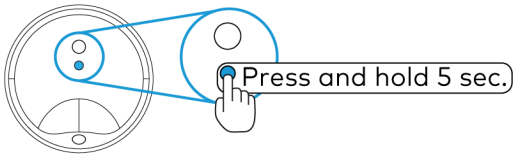
To calibrate the Daylight Sensor:

1. Adjust the lights in the room to the desired levels.

   NOTES:

   - Take the natural daylight levels into consideration when setting the load levels. Each dimmer can be set to a different level. Typically, lights closer to windows are dimmed more than lights away from windows.
   - To prevent daylighting from affecting a dimmer, set the lights on the dimmer to brighter than scene 1.

2. Press and hold the button for 5 seconds to initiate the daylight calibration process. The LED flashes red to indicate that the calibration process is in progress. This process takes 60 seconds. During the calibration process, the lights cycle on and off. After the daylight calibration process is complete, the room enters Test mode. Refer to Test the Daylight Sensor on page 564 for details.



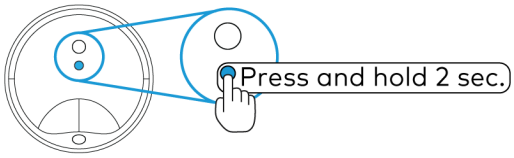
Test the Daylight Sensor

Test mode is used to verify that the settings stored during calibration are correct. Changes to the amount of light in the space result in rapid light level adjustments.

NOTE: During normal operation, the light levels are adjusted slowly so that they are not distracting to occupants in the room.

To enter Test mode, press and hold the button for 2 seconds. When in Test mode, the LED flashes twice, pauses, then repeats. The device exits Test mode after 2 minutes.

To verify the daylight sensor settings, close the blinds or block the cover of the sensor to reduce the amount of light the sensor detects. The light levels will increase. Open the blinds or unblock the cover of the sensor to increase the amount of light the sensor detects. The light levels will decrease.



Configure Keypads to Control Specific Loads

Keypads control all load controllers in the space (this is the default functionality). Use Binding mode to change the load controllers that are bound (controlled) or not bound (not controlled) by the keypad.

There are two methods of removing or changing loads that are bound to the keypad:

- Local Binding configuration: Use when all load controllers are accessible.
- Remote Binding configuration: Use when a load controller is not accessible.

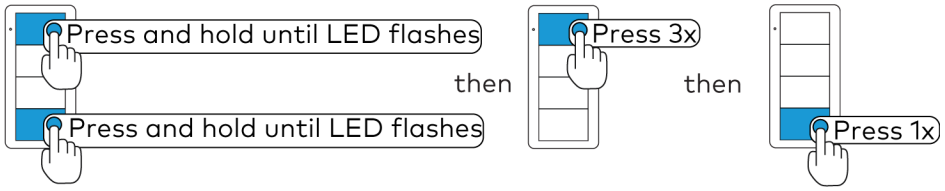
NOTES:

- Keypads do not control J-box plug controllers.
- Binding Mode exits after 5 minutes when initiated from an AC-powered keypad or 1 minute when initiated from a battery-powered keypad.

Local Binding Configuration

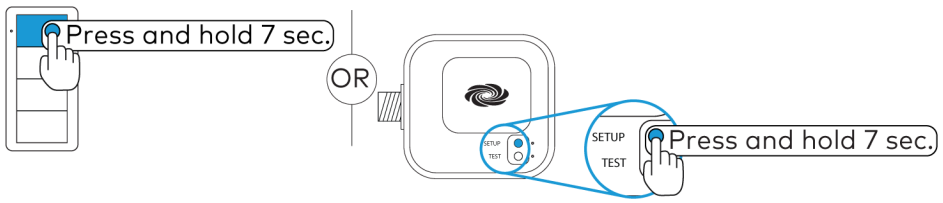
Local Binding configuration is used when all load controllers in the Zūm space are accessible (i.e., there are no J-box load controllers in the Zūm space). To change the load controllers that are bound to the keypad:

1. Enter Binding mode.
    a. Press and hold both the top and bottom buttons until the LED lights (about 5 seconds).
    b. Press the top button three times.
    c. Press the bottom button once. The LED on the keypad flashes three times, pauses, then repeats.
        - The LED flashes quickly to indicate that the load controller is bound.
        - The LED flashes slowly to indicate that the load controller is not bound.



2. At each load controller in the space, press and hold the top button until the LED lights (about 7 seconds) to change whether it is bound or not bound to the keypad.
    - The LED flashes quickly to indicate that the load controller is bound.
    - The LED flashes slowly to indicate that the load controller is not bound.

    NOTE: If all load controllers in the Zūm space are assigned as not bound to the keypad, the keypad will restore its default functionality and all load controllers will become bound to the keypad.

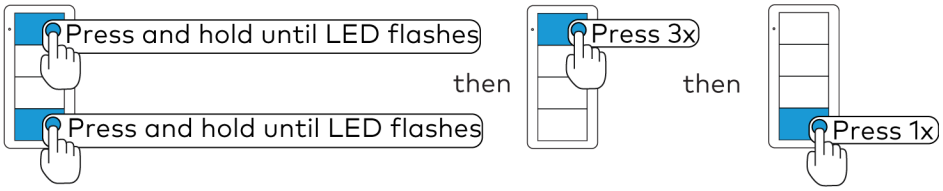


3. Press the bottom button on the keypad 3 times to exit Binding mode.

Remote Binding Configuration

Remote Binding configuration is used when all load controllers in the Zūm space are not accessible (i.e., there are j-box load controllers). To change the load controllers that are bound to the keypad.

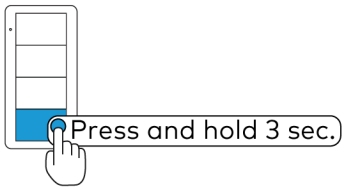
1. Enter Binding mode.
    a. Press and hold both the top and bottom buttons until the LED lights (about 5 seconds).
    b. Press the top button three times.
    c. Press the bottom button once. The LED on the keypad flashes three times, pauses, then repeats.
        - The LED flashes quickly to indicate that the load controller is bound.
        - The LED flashes slowly to indicate that the load controller is not bound.



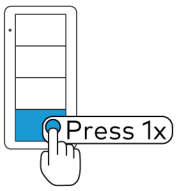
NOTE: Use the keypad that has been selected for controlling the load to perform the entire remote linking process.

2. Press and hold the bottom button of the keypad until a set of lights in the space starts to flash on and off (about 3 seconds). The flashing lights indicate the selected load controller. The LED on the keypad flashes to indicate that the load is bound or unbound.
    - The LED flashes quickly to indicate that the load controller is bound.
    - The LED flashes slowly to indicate that the load controller is not bound.

    NOTE: The flashing rate of the lights does not indicate the link status.

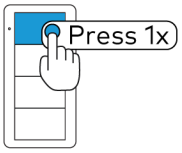


3. Press the bottom button of the keypad repeatedly to cycle through all of the load controllers in the Zūm space until the desired load starts flashing.



4. Press the top button of the keypad to assign the load controller as bound or not bound to the keypad. The LED on the keypad flashes to indicate that the load is bound or unbound.
    - The LED flashes quickly to indicate that the load controller is bound.
    - The LED flashes slowly to indicate that the load controller is not bound.

    NOTES:
    - If all load controllers in the Zūm space are assigned as not bound to the keypad, the keypad will restore its default functionality and all load controllers will become bound to the keypad.
    - The flashing lights indicate the selected load controller, not the binding status.



5. Repeat steps 3 and 4 until all load controllers are bound or unbound from the keypad.
6. Press the bottom button on the keypad 3 times to exit Binding mode.

Change the Default Scenes

The Zūm keypad buttons recall predefined scenes (light levels) that are stored in the load controllers. The default scenes are On (Scene 1) which sets the loads at 90%, Scene 2 which sets the loads at 50%, and Scene 3 which sets the loads at 10%. Load controllers can save up to 16 scenes.

There are several methods of changing the default scenes. Use the method that matches your needs.

- End-User Method: Change the light levels for Scene 2 or Scene 3 when all load controllers are easily accessible. On (Scene 1) cannot be changed. This method cannot be used on 2-button keypads.
- Manual Method: Change the light levels for On (Scene 1) in addition to Scene 2 or Scene 3 when all load controllers are easily accessible.
- Remote Method: Change the light levels for On (Scene 1), Scene 2, or Scene 3 when a load controller is not physically accessible.

> **NOTES:**
>
> - A dimmer lowered to 0% will turn the dimmer off when the scene is recalled.
> - A load controller that is not bound to the keypad cannot be part of the scene.

End-User Method

End-User method to change the scene for Scene 2 or Scene 3:

1. Set all load controllers that are bound to the keypad to their desired light level.
2. Press and hold the **SCENE 2** or **SCENE 3** button until the LED lights (about 5 seconds) to save the light levels to the selected button.

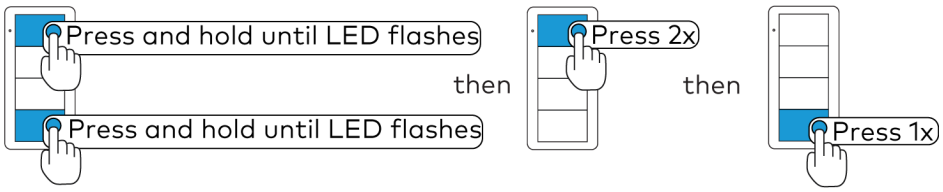
Manual Method

Manual method to change the scene for On (Scene 1):

> **NOTE:** Scene 2 and Scene 3 can also be changed.

1. Enter Scene Setting mode using the keypad that will recall the scene.
    a. Press and hold both the top and bottom buttons until the LED lights (about 5 seconds).
    b. Press the top button two times.
    c. Press the bottom button once. The LED on the keypad flashes its LED two times every two seconds to indicate that it is in Scene Setting mode. Load controllers that are bound to the keypad flash their LED rapidly.

        > **NOTE:** Scene Setting Mode exits after 5 minutes when initiated from an ac-powered keypad or 1 minute when initiated from a battery-powered keypad.

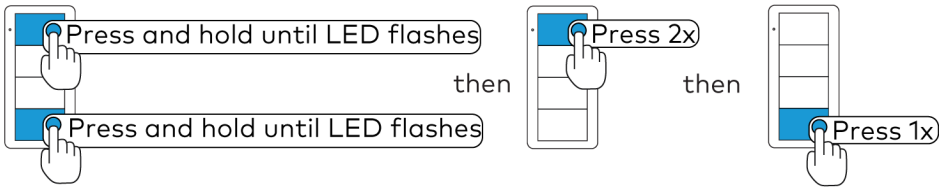


2. Adjust all light levels.
    - Using a dimmer, press and hold the top button to raise the light level or press and hold the bottom button to lower the light level.
    - Using a switch, press the top button to turn the lights on or press the bottom button to turn the lights off.
    - Using a J-box load controller, press and hold the **TEST** button on the J-box device to cycle-dim the light.
3. Using the keypad that initiated Scene Setting mode, press the **ON**, **SCENE 2**, or **SCENE 3** button to save the light levels to the selected scene button.
4. Repeat steps 2 and 3 for each **SCENE** button.
5. Press the bottom button on the keypad 3 times to exit Scene Setting mode.

Remote Method

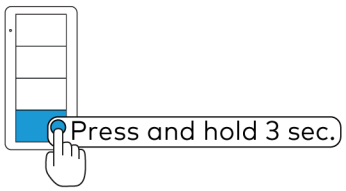
Remote Method is used to change the scene for On (Scene 1), Scene 2, or Scene 3.

1. Enter Scene Setting mode using the keypad that will recall the scene.
    a. Press and hold both the top and bottom buttons until the LED lights (about 5 seconds).
    b. Press the top button two times.
    c. Press the bottom button once. The LED on the keypad flashes its LED two times every two seconds. Load controllers that are bound to the keypad flash their LED rapidly.

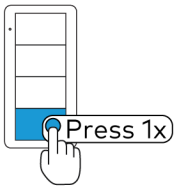


> **NOTE:** Scene Setting mode exits after 5 minutes when initiated from an ac-powered keypad or 1 minute when initiated from a battery-powered keypad.

2. Press and hold the bottom button of the keypad until a set of lights in the space flashes on and off twice (about 3 seconds) to indicate that it is the selected load. The lights return to their previous level.



3. Press the bottom button of the keypad to cycle through all of the load controllers in the Zūm space until the desired load starts flashing.

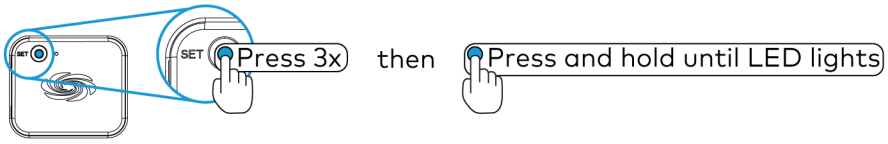


4. Adjust the light levels by holding the top button on the keypad to raise the light level or holding the bottom button on the keypad to lower the light level.
5. Press the **ON**, **SCENE 2**, or **SCENE 3** button to save the scene.
6. Repeat steps 3 through 5 until all load controllers and all scenes are defined.
7. Press the bottom button on the keypad 3 times to exit Scene Setting mode.

Connect the Network Bridge to the Zūm Net Wireless Gateway

The Zūm Network Bridge connects wirelessly to the Zūm Net Wireless Gateway to form a centrally managed, enterprise-wide lighting control system. Add the Zūm Network Bridge to the Zūm Net Wireless Gateway's network:

1. Press the **ACQUIRE** button on the Zūm Net Wireless Gateway to place the gateway into Acquire mode.
2. Join the Zūm Net Wireless Gateway's network.
    a. Press the **SET** button on the Network Bridge 3 times.
    b. Press and hold the **SET** button until the LED flashes once (up to 10 seconds). The LED on the Network Bridge flashes slowly to indicate that it is searching for a network to join.
        - The LED lights for 5 seconds when the network bridge successfully joins the gateway.
        - The LED flashes quickly to indicate that the network bridge failed to join the gateway. Press the **SET** button to acknowledge the failure and then repeat this procedure.



3. Press the **ACQUIRE** button on the gateway to exit Acquire mode.

Network Multiple Zūm Mesh Networks

A Zūm commercial lighting system is a standalone lighting room. To connect multiple Zūm commercial lighting systems, a ZUM-FLOOR-HUB and a ZUMNET-GATEWAY is required in addition to one ZUMMESH-NETBRIDGE per room.

To network multiple Zūm Mesh rooms:

1. Verify that all rooms are completely set up.
2. Install a ZUMMESH-NETBRIDGE in every room.
3. Press the **ACQUIRE** button on the ZUMNET-GATEWAY to place the gateway into Acquire mode. When the ZUMNET-GATEWAY is in Acquire mode, the ZUMMESH-NETBRIDGE devices can join the Zūm Net network.
4. Add a ZUMMESH-NETBRIDGE to the ZUMNET-GATEWAY's Zūm Net network.
    a. Press the **SET** button four times. DO NOT release the **SET** button after the fourth press.
    b. Hold the **SET** button after until the LED flashes one time and then release the button. The LED on the ZUMMESH-NETBRIDGE slowly flashes while it is searching for a Zūm Net network to join.
    c. The LED on the ZUMMESH-NETBRIDGE lights for 5 seconds when the network bridge successfully joins the gateway.

    > **NOTE:** The LED flashes fast to indicate that the network bridge failed to join the gateway. Press the SET button to acknowledge the failure and then repeat this procedure.
5. Repeat step 4 for all ZUMMESH-NETBRIDGE devices.
6. Press the **ACQUIRE** button on the ZUMNET-GATEWAY to exit Acquire mode.

Perform Factory Reset

A factory reset should be performed when the ZUMMESH-JBOX is removed from the network or to remove the configuration settings from the device. The ZUMMESH-JBOX must also be factory reset if it is being moved to a different system.

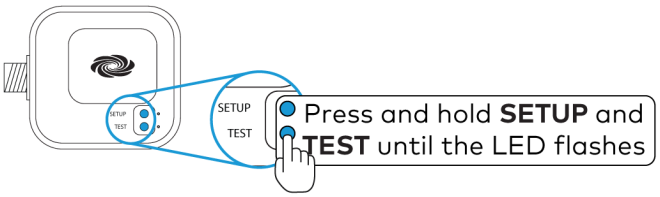
> **NOTE:** New-in-box devices do not need to be factory reset before joining a system.

Factory Reset a Keypad, Dimmer, or Switch

To factory reset a keypad, dimmer, or switch, press and hold the top and bottom buttons until the LED lights (about 5 seconds), and then release both buttons. Then, press and hold the bottom button until the LED lights (about 10 seconds).

Factory Reset a J-Box Device

To factory reset the ZUMMESH-JBOX, press and hold the **SETUP** and **TEST** buttons until the **SETUP** LED lights (about 10 seconds), and then release both buttons. The **SETUP** LED and the connected load output turn on.



Factory Reset an Occupancy or Vacancy Sensor

To factory reset an occupancy or vacancy sensor, press and hold the **TEST** button until the LED flashes rapidly 3 times (about 10 seconds), then release the button.

Factory Reset a Daylight Sensor

To factory reset the daylight sensor, press and hold the button until the LED flashes rapidly 3 times (about 10 seconds), then release the button.

Install a Zūm J-Box Device

Refer to Zūm Mesh Wireless Load Controller Installation on page 231 for details.

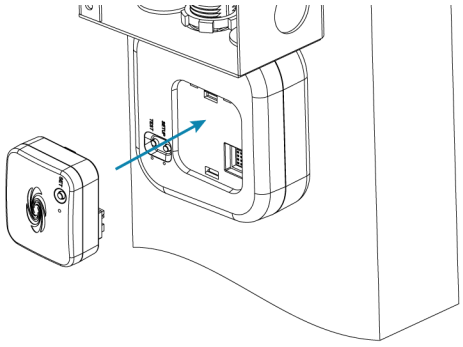
Attach a J-Box Module

A J-box module, such as the ZUMMESH-NETBRIDGE or ZUMMESH-CCO (both not included), can be attached to any J-box device.

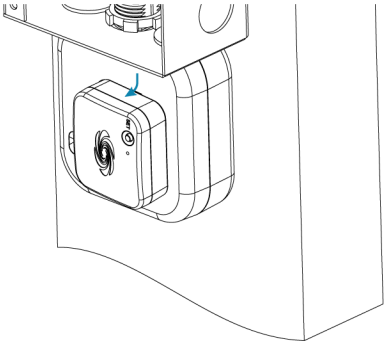
> **NOTE:** For product specifications and additional installation details, refer to the ZUMMESH-NETBRIDGE Quick Start or ZUMMESH-CCO Installation Guide.

Attach the J-box module to the ZUMMESH-JBOX device.

1. Use a flat-head screwdriver to remove the cover on the ZUMMESH-JBOX device. Insert the flat-head screwdriver into the slot next to the cover and pry upward to remove the cover.
2. Align the ports on the J-box module and the ZUMMESH-JBOX device, and then insert the J-box module into the ZUMMESH-JBOX device. The J-box module snaps into place.



If the J-box module needs to be removed, place your thumb on the side of the J-box module that is closest to the J-box and gently push the module away from the J-box. The module should easily separate from the J-box device.



Install a Zūm Sensor

Install a ZUMMESH-OL-PHOTOCELL-BATT

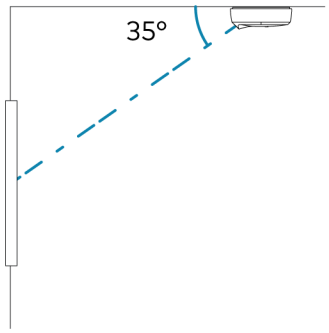
To install the ZUMMESH-OL-PHOTOCELL-BATT, the mounting location must be determined, the base must be mounted to the ceiling, the batteries must be inserted, and the sensor must be secured to the base.

NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- Mount sensors on a vibration-free surface.

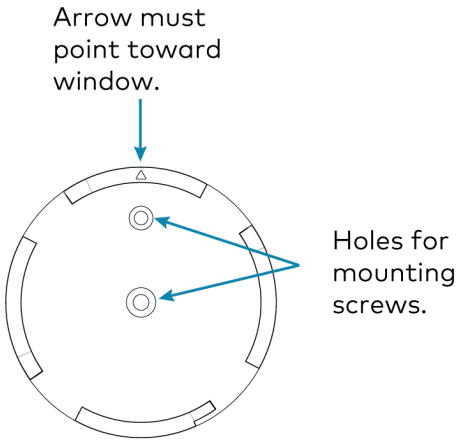
Determine the Mounting Location

The ZUMMESH-OL-PHOTOCELL-BATT must face a window. Mount the device approximately 4 to 6 feet (1.22 to 1.83 meters) away from the window. The optimum viewing angle for the sensor is 35˚.



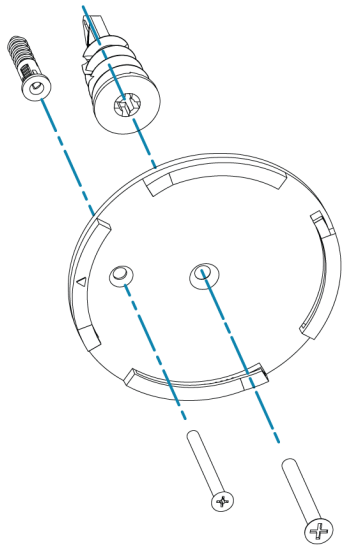
Mount the Base

When mounting the base, ensure that the arrow on the base, shown below, points toward the desired window.



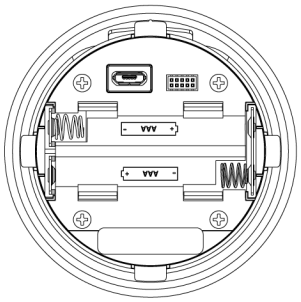
Mount the base to the drywall or drop ceiling using the provided anchors.

1. Determine the proper orientation for the ZUMMESH-OL-PHOTOCELL-BATT.
2. Hold the base on the mounting surface, and use the holes for the mounting screws to mark the screw locations.
3. Using a 1/4 in drill bit, drill a pilot hole for the small anchor, and insert the small anchor into the pilot hole.
4. Using a #2 or #3 Phillips screwdriver, push the self-tapping anchor into the surface of the drywall until the cutting blades penetrate the surface. Using gentle forward pressure, rotate the anchor until the collar sets flush to the surface of the ceiling.
5. Secure the base to the mounting surface using the two supplied screws.



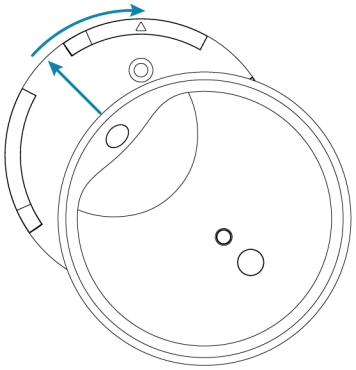
Insert the Batteries

Insert the batteries into the sensor according to the orientation indicated on the device.

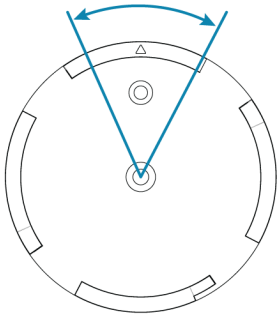


Secure the Sensor to the Base

To secure the sensor to the base, place the sensor on the base and then rotate the sensor clockwise to secure it.



The sensor can rotate up to 40° along the base after it is mounted. Rotate the sensor to ensure that it points at the window.



Replace the Batteries

Use the following procedure to replace the batteries in the sensor.

CAUTION: The batteries used in this device may present a risk of fire or chemical burn if mistreated. Do not recharge, disassemble, heat above 212°F (100°C), or incinerate. Replace with Energizer® L92 Ultimate Lithium AAA batteries only. Use of other batteries may present a risk of fire or explosion.

1. Rotate the sensor counterclockwise to remove the sensor from the base.
2. Remove the batteries from the sensor.
3. Replace the batteries in the sensor.
4. Rotate the sensor clockwise onto the installed base until it is secured in place.

NOTE: Dispose of a used batteries promptly. Keep away from children. Do not disassemble and do not dispose of in fire.

Install a ZUMMESH-PIR-OCCUPANCY-BATT or ZUMMESH-PIR-VACANCY-BATT

The Crestron Zūm occupancy and vacancy sensors detect when a person enters and exits a space. They communicate wirelessly with Zūm wireless devices to turn the lights on and off based on room occupancy and vacancy. Featuring passive infrared (PIR) technology, the ZUMMESH-PIR-OCCUPANCY-BATT (occupancy sensor) and ZUMMESH-PIR-VACANCY-BATT (vacancy sensor) reliably detect when a person enters and exits the space. Install up to 8 occupancy or vacancy sensors to ensure coverage in a large room.

NOTES:

- Do not mix occupancy and vacancy sensors in the same room.
- When using the ZUMMESH-AVBRIDGE with an AirMedia® Receiver:
  - To install, refer to the "Installation," "Calibration and Testing," and "Mounting and Masking Locations" sections that follow.
  - To configure, refer to the AirMedia® Series 3 Wireless Presentation and Wireless Video Conferencing Product Manual.

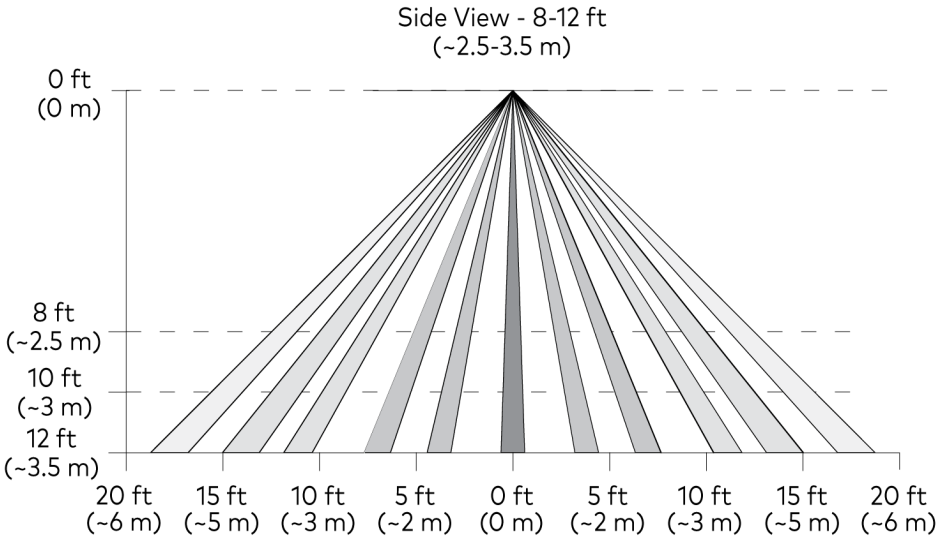
Determine the Mounting Location

Use the following diagrams to determine the mounting location for the occupancy or vacancy sensor. Ensure a vibration-free mounting surface.

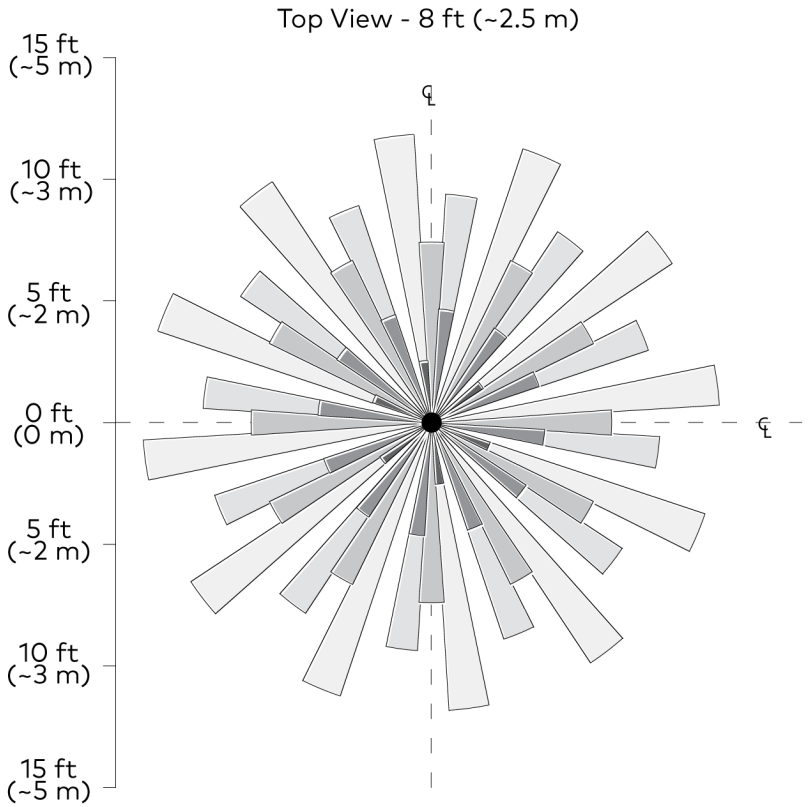
NOTE:

- The occupancy and vacancy sensors must have a clear view of the entire room. The device should not be blocked by furniture or fixtures.
- Avoid false triggering by mounting it away from air vents, fans, windows, and other devices that create air movement in the room.

Sensor Coverage Areas - Side View 8–12 ft (~2.5–3.5 m)



Sensor Coverage Areas - Top View (8 ft (~2.5 m)



Install the Sensor

To complete the installation, the occupancy and vacancy sensors ship with (2) Plastic wall anchors, (2) Phillips head screws, and (1) Ultralife 9V lithium battery. A Phillips tip screwdriver and a pencil are required for installation (not included). If desired, the sensor may be painted to match the ceiling color. However, do not paint over the dome as this significantly hinders sensing capabilities.

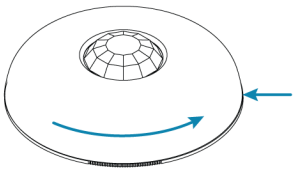
> **NOTE:** Install and use this product in accordance with appropriate electrical codes and regulations.

Mount the sensor to the ceiling:

1. Mark the location for the two plastic wall anchors. The marks should be 3 in (76 mm) apart.
2. Install the plastic wall anchors.

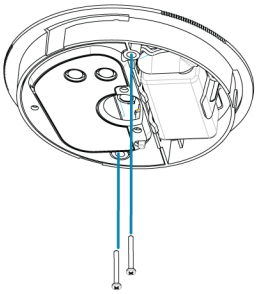
   > **NOTE:** For surfaces other than drywall and drop-ceiling tiles, pre-drill the mounting location for the plastic wall anchors.

3. Twist the sensor cover counterclockwise to separate the cover from the base.

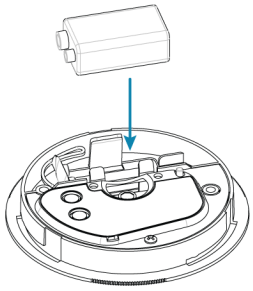


Hold the sensor base in the palm of your hand and twist the cover counterclockwise to separate the base from the sensor cover.

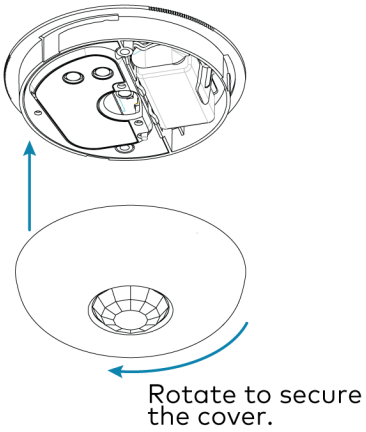
4. Secure the base to the plastic wall anchors using the provided Phillips head screws.



5. Connect the battery to the two terminals in the sensor and secure the battery to the base.



6. Place the cover on the base and then twist the cover clockwise to secure it to the base. The assembly clicks when secured.



Install ZUMMESH-PART

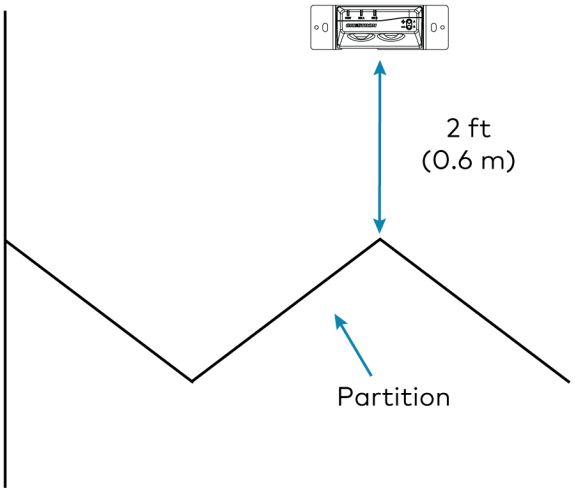
The Crestron Zūm wireless partition sensor (ZUMMESH-PART) is used to facilitate seamless control between two Zūm spaces. Powered with 24VDC, the ZUMMESH-PART conveniently receives power from a ZUMMESH-SIM or any Crestron 24VDC power supply (both not supplied).

Determine the Mounting Location

NOTE:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- Sensors must be mounted on a vibration-free surface.

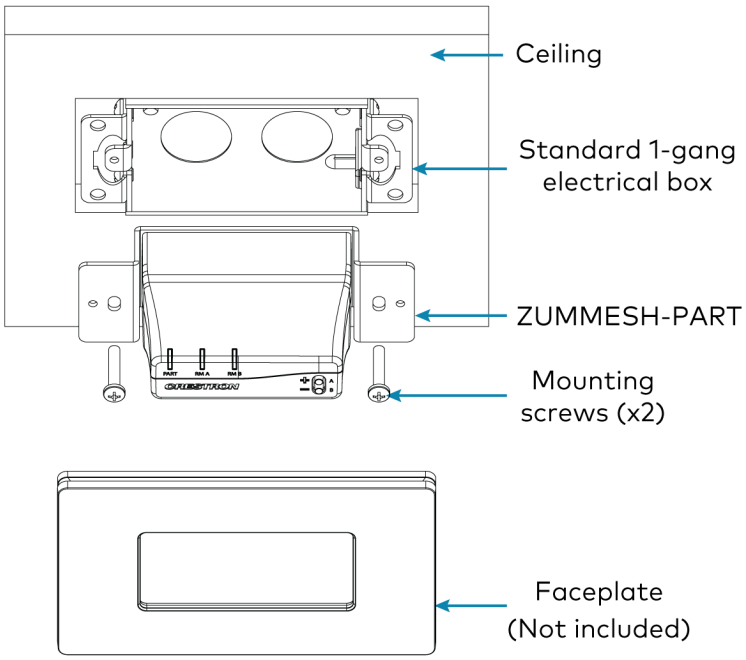
Position the ZUMMESH-PART about 2 ft (0.6 m) away from the partition. If necessary, the ZUMMESH-PART can be mounted up to 4 ft (1.2 m) from the partition. The lens on the ZUMMESH-PART must face the partition so that when the partition is opened, the sensor sees the unobstructed room.



Mount the ZUMMESH-PART in a 1-Gang Electrical Box

To mount the ZUMMESH-PART in a 1-gang electrical box:

1. Turn off the system power.
2. Connect the 2-pin terminal block to the 24 and G port on the ZUMMESH-PART. When making connections, use 14 to 26 AWG wire, strip the ends of the wires 7/16 in (11 mm) (avoid nicking the conductors), and tighten the connector to 5 in-lb (0.5 to 0.6 Nm).
3. Secure the ZUMMESH-PART to the 1-gang box using the included screws. The sensors must face towards the partition.
4. Attach a decorator style faceplate (not included).
5. Turn the system power on.

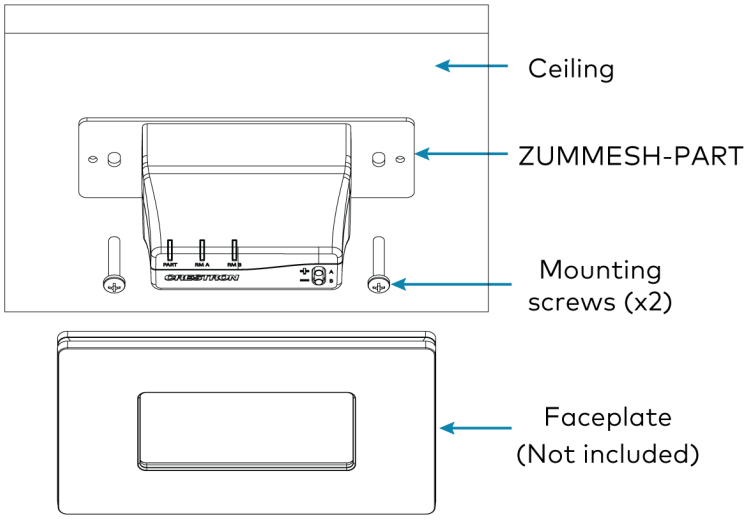


Mount the ZUMMESH-PART to a Flat Surface

To mount the ZUMMESH-PART to a flat surface:

1. Turn off the system power.
2. Remove the two screws from the back of the ZUMMESH-PART and then remove the bracket. Retain the screws.
3. Install the flat bracket to the back of the ZUMMESH-PART using the screws removed in step 2.
4. Connect the 2-pin terminal block to the 24 and G port on the ZUMMESH-PART. When making connections, use 14 to 26 AWG wire, strip the ends of the wires 7/16 in (11 mm) (avoid nicking the conductors), and tighten the connector to 5 in-lb (0.5 to 0.6 Nm).
5. Secure the ZUMMESH-PART to the ceiling using screws that are appropriate for the mounting surface. The sensors must face towards the partition.
6. Attach a decorator style faceplate (not supplied).

7. Turn the system power on.



DIN Rail Cabinet Thermal Design Guide

The DIN rail is ubiquitous in the world of lighting and power control. This mounting scheme affords a high degree of flexibility, allowing a cabinet to readily accommodate the unique needs of any given installation.

Various configuration options require the system designer to weigh different factors when laying out a cabinet. These range from local electrical code requirements to thermal considerations. Improper design can result in noncompliant cabinets, degraded product performance, and reduced product lifetime.

This section focuses on thermal design considerations to aide a designer with the cabinet layout. By following these guidelines, the designer can approach DIN cabinet layout with confidence.

Overview

The cabinet designer must ensure that the temperatures experienced by the DIN products are within specifications. A combination of factors affect the temperatures.

Cabinet Properties	Product Properties	Application / Installation
Form factor (2x18, 3x18, and so forth)	Heat generated within cabinet (BTU/hr)	Cabinet mounting (on-wall or in-wall)
Material (plastic or metal)	Max allowable local in-cabinet air temperature	Distribution/arrangement of products within cabinet
Airflow (vented or unvented)		Max room air temperature

An exhaustive analysis that examines all parameters is often unneeded. Crestron lighting products have robust designs and can operate at high temperatures. As a result, in many cases, the system designer can sidestep further analysis.

Cabinet Type	Mounting	Top-most Rail	Is Analysis Required? Room Air Temperature at which analysis becomes required
Metal Vented	Either (on-wall or in-wall)	Either (populated or empty)	>104°F (40°C)
Plastic Unvented	On-wall	Empty	>86°F (30°C)
		Populated	>68°F (20°C)
	In-wall	Empty	>68°F (20°C)
		Populated	Use-case not supported (unless cabinet only contains a single unit)

Thermal Design Procedure

The following table has been compiled to easily reference relevant thermal parameters.

Product Name	Heat Generation[1]	DIN Module Width	Max Allowable Local In-Cabinet Air Temperature[2]	Self-Report Diagnostics?
ZUMLINK-DIN-PSU	23 BTU/hr @ 2A, 100VAC; 22 BTU/hr @ 2A, 120VAC; 19 BTU/hr @ 2A, 240–277VAC	4M	122°F (50°C)	No
ZUMNET-DIN-16A-LV	7 BTU/hr @ 0A; 13 BTU/hr @ 16A	4M	131°F (55°C)	Yes
ZUMNET-DIN-DLI	5 BTU/hr @ 2mA DALI Loading, 0A passthrough; 7 BTU/hr @ 128mA DALI Loading, 0A passthrough; 14 BTU/hr @ 128mA DALI Loading, 16A passthrough	4M	131°F (55°C)	Yes
ZUMLINK-DIN-16A-LV	5 BTU/hr @ 0A; 11 BTU/hr @ 16A	3M	131°F (55°C)	Yes
ZUMLINK-DIN-20A-SW	4 BTU/hr @ 0A; 14 BTU/hr @ 20A	3M	122°F (50°C)	Yes

Product Name	Heat Generation[1]	DIN Module Width	Max Allowable Local In-Cabinet Air Temperature[2]	Self-Report Diagnostics?
ZUMLINK-DIN-20A-PLUG	4 BTU/hr @ 0A; 14 BTU/hr @ 20A	3M	122°F (50°C)	Yes
ZUMLINK-DIN-IO	5 BTU/hr	4M	131°F (55°C)	Yes
ZUMLINK-DIN-DIMU[3]	20 BTU/hr	3M	122°F (50°C)	Yes

1. Assumes maximum product utilization (see Specifications on page 64 for use-case specific numbers).
2. Defined at 0.5 in. below the product.
3. Special derating required for ZUMLINK-DIN-DIMU operation in plastic cabinets. Contact a Crestron True Blue Technical Support representative.

For cabinet installations that require analysis:

1. Calculate the total heat dissipation.
   Identify the product types and quantities required by the application. Tally-up the heat dissipation associated with each product (BTU/hr) to arrive at the total cabinet level heat dissipation:

   Pcabinet(total)

2. Establish the maximum allowable temperatures (on a per-rail basis).
   Cabinets exhibit a temperature gradient: the lower rails are cooler than the upper rails. This effect is especially pronounced for enclosures that lack ventilation (e.g., sealed plastic cabinets). As a result, the system designer should start by placing products with the lowest temperature rating at the bottom of the cabinet.

   If many products have equivalent temperature ratings, use BTU/hr as a tie-breaker. Products that generate more heat must go on lower rails.

   Once the cabinet layout is completed, note the product temperature limits for each rail:

   Tlimit(rail #1), Tlimit(rail #2), Tlimit(rail #3), ...

3. Establish the temperature rise (on a per-rail basis).
   Identify the worst-case room air ambient temperature of the installation:

   Troom(max)

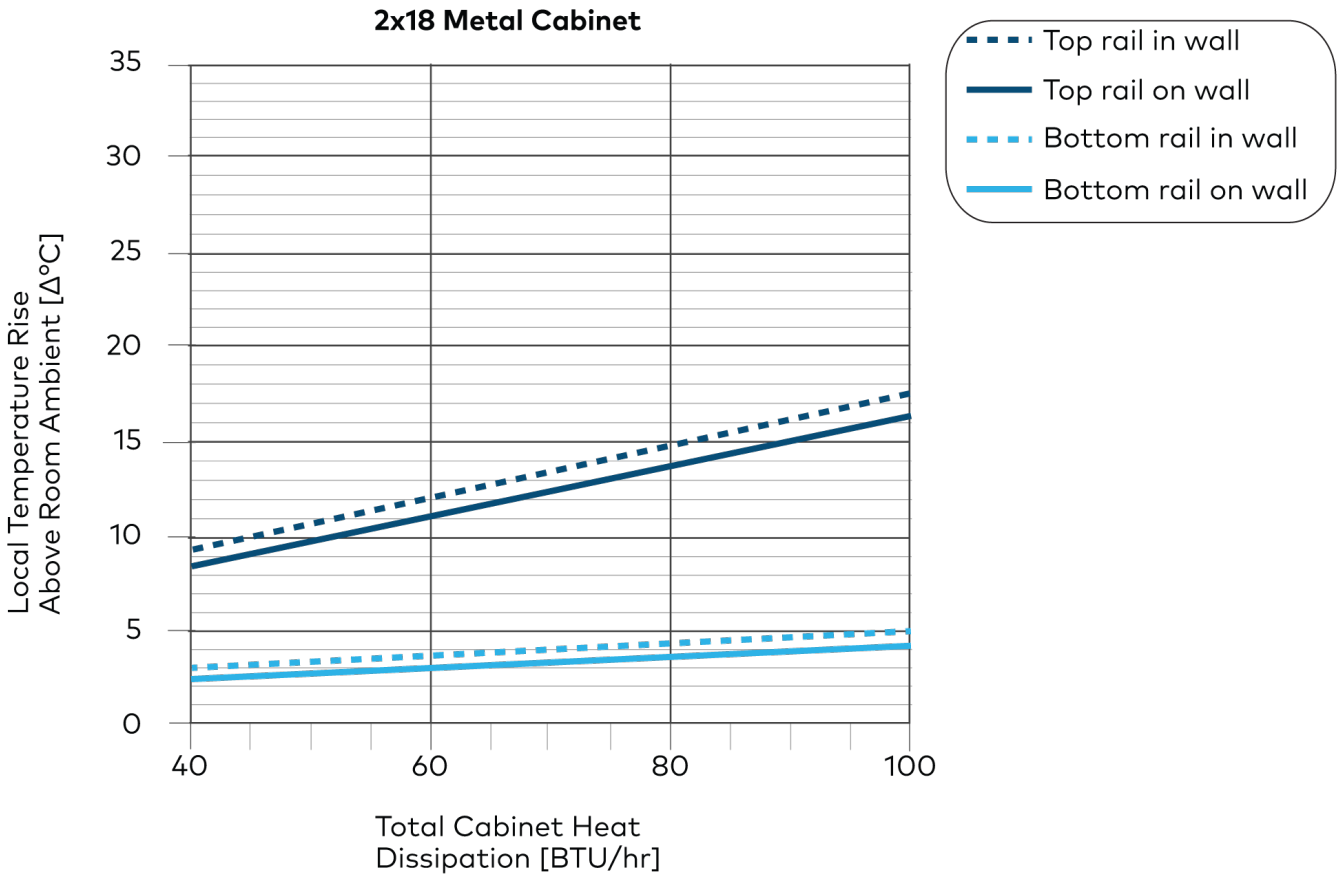
   Identify the desired cabinet material, mounting scheme, and ventilation type. Using the plots below, extract the temperature rise on a per-rail basis:

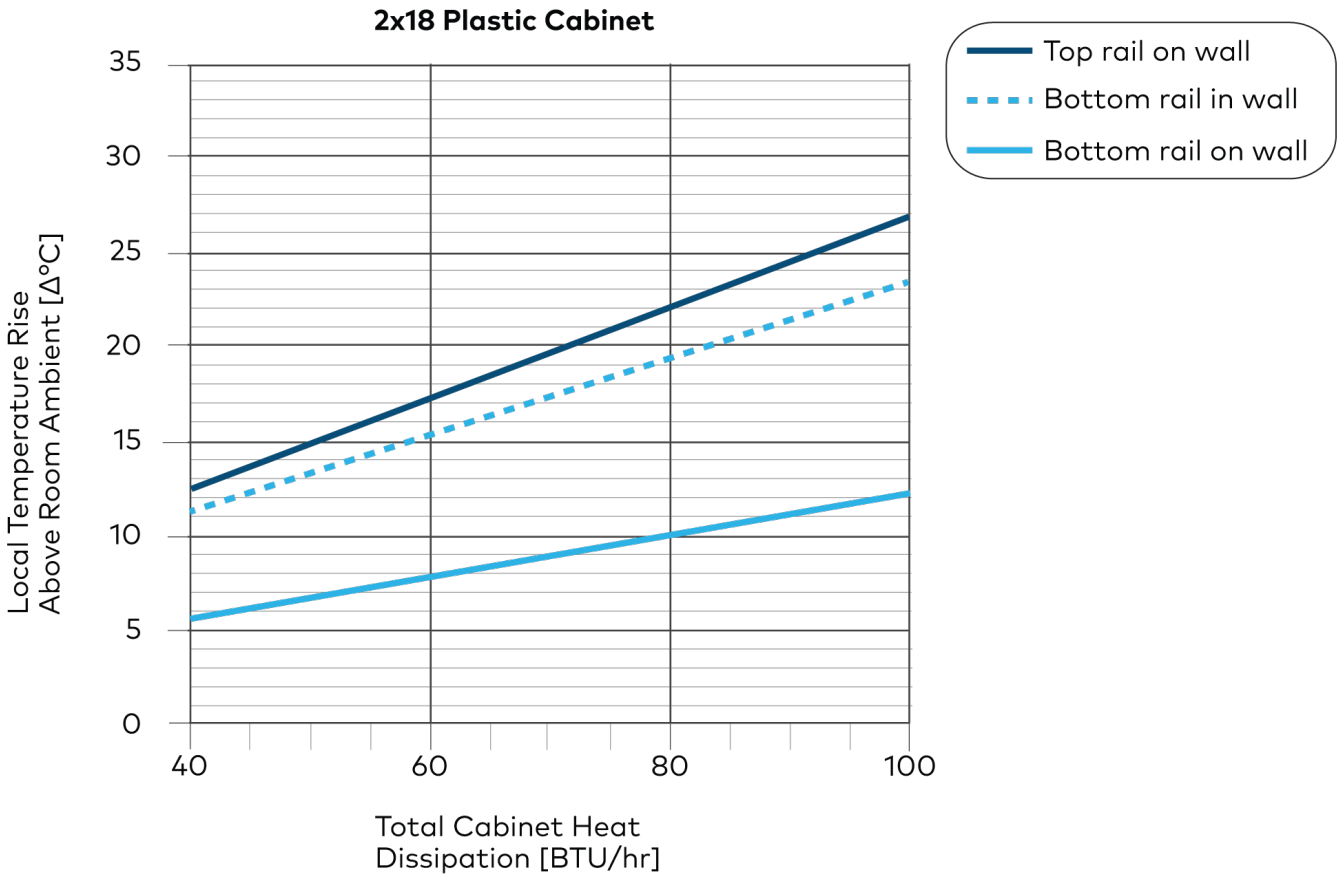
   Trise(rail #1), Trise(rail #2), Trise(rail #3), ...

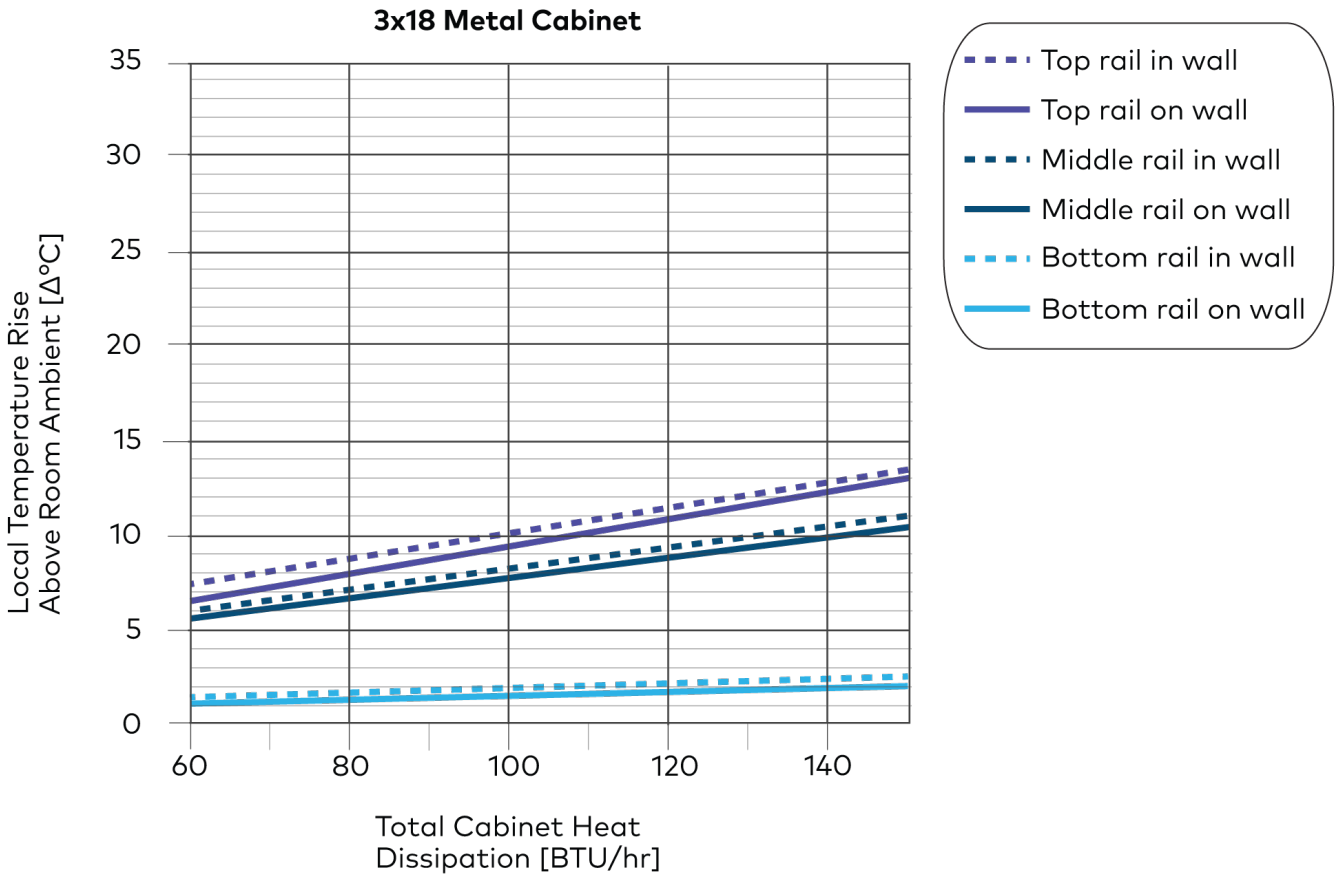
4. Check the anticipated temperature margins (on a per-rail basis).
   Confirm that each rail has temperature margin:

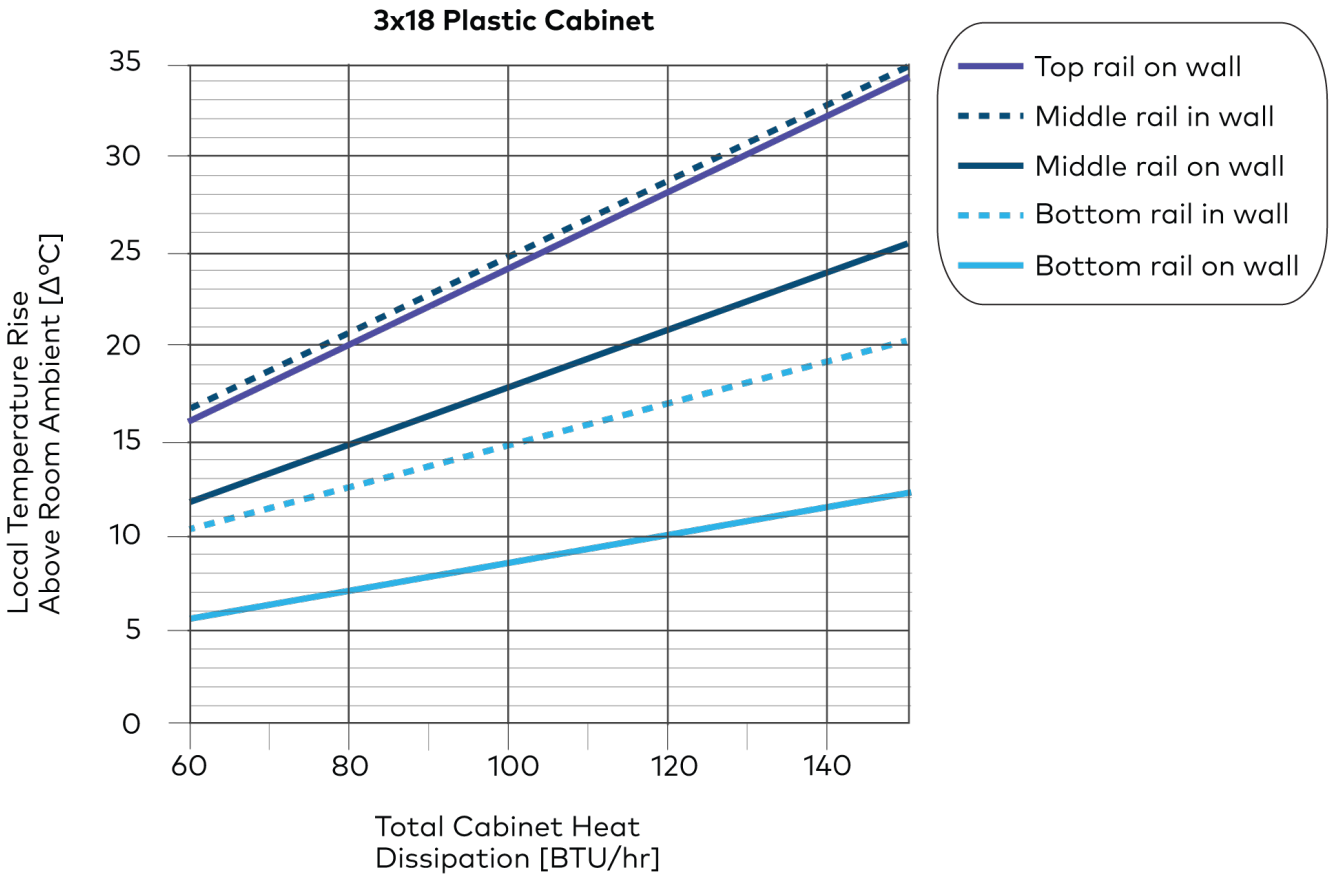
   Tmagin(rail #1) = Troom(max) + Trise(rail #1)

For any questions or special applications, contact Crestron True Blue Technical Support.


2x18 Metal Cabinet
Top rail in wall
Top rail on wall
Bottom rail in wall
Bottom rail on wall
Local Temperature Rise
Above Room Ambient [Δ°C]
35
30
25
20
15
10
5
0
40
60
80
100
Total Cabinet Heat
Dissipation [BTU/hr]


2x18 Plastic Cabinet
Top rail on wall
Bottom rail in wall
Bottom rail on wall
Local Temperature Rise
Above Room Ambient [Δ°C]
35
30
25
20
15
10
5
0
40
60
80
100
Total Cabinet Heat
Dissipation [BTU/hr]


3x18 Metal Cabinet
Local Temperature Rise
Above Room Ambient [Δ°C]
35
30
25
20
15
10
5
0
60
80
100
120
140
Total Cabinet Heat
Dissipation [BTU/hr]
Top rail in wall
Top rail on wall
Middle rail in wall
Middle rail on wall
Bottom rail in wall
Bottom rail on wall



NOTES:

- The figures assume uniform heat distribution. Reference data is intended to aid the cabinet design and should not be interpreted a replacement for taking accurate measurements. Each real-world application has a unique, nonuniform heat distribution and, as a result, exhibits a unique heating curve.
- Metal cabinet data is based on DIN-EN-2X18 and DIN-EN-3X18.
- Plastic cabinet data is based on an industry-representative cabinet (Schneider Electric® Prismaset XS Surface and wall-mounting plastic enclosures).

Thermal Validation Procedure

Once a cabinet has been designed and constructed, the real-word thermal performance of the cabinet must be evaluated. This process is strongly recommended, especially if the calculated temperature margins are ≤9°F (5°C). Measure the local air temperature using a thermocouple. The probe is to be positioned 0.5 in. directly below the product.

NOTE: It is essential that measurement is performed under the worst-case thermal conditions. All devices must be set to maximum utilization for at least two hours prior to the measurement to achieve thermal equilibrium.

Resources

Below are resources provided for Crestron Zūm® Lighting Control.

> **NOTE:** You may need to provide your Crestron.com web account credentials when prompted to access some of the following resources.

Crestron Support and Training

- Crestron True Blue Support
- Crestron Resource Library
- Crestron Online Help (OLH)
  OLH Lighting Help Index
- Crestron Training Institute (CTI) Portal

Programmer and Developer Resources

- help.crestron.com: Provides help files for Crestron programming tools such as SIMPL, SIMPL#, and Crestron Toolbox™ software
- developer.crestron.com: Provides developer documentation for Crestron APIs, SDKs, and other development tools

Product Certificates

To search for product certificates, refer to the Product Certificates section of the Crestron Resource Library.

Related Documentation

Below are energy standards documentation for Zūm Wired and Zūm Wireless solutions.

Energy Standards for Zūm Wired Solutions

IECC 2021

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

ASHRAE 2019

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

Title 24 2019

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

IECC 2018

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

Energy Standards for Zūm Wireless Solutions

IECC 2021

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

ASHRAE 2019

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

Title 24 2019

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

IECC 2018

- Education Applications
- Healthcare Applications
- Hospitality Applications
- Office Applications
- Restaurant Applications
- Retail Applications

ASHRAE 2016

- Education
- Healthcare
- Hospitality
- Office
- Restaurant
- Retail

Title 24 2016

- Education
- Healthcare
- Hospitality
- Office
- Restaurants
- Retail

IECC 2015

- Education
- Healthcare
- Hospitality
- Office
- Restaurant
- Retail

Models

Below are the available products for Crestron Zūm® Lighting Control.

Load Controllers

Part Number	Model	Description
6511166	ZUMNET-JBOX-16A-LV	Zūm® Wired J-Box Load Controller, 0-10V Dimmer, 16A, 100-277V with Net and Link Communication
6511170	ZUMNET-JBOX-DALI	Zūm® Wired J-Box Controller with DALI® Drivers, 120-277V with Net and Link Communication
6511167	ZUMLINK-JBOX-16A-LV	Zūm® Wired J-Box Load Controller, 0-10V Dimmer, 16A, 100-277V with Link Communication
6511168	ZUMLINK-JBOX-20A-SW	Zūm® Wired J-Box Load Controller, High Inrush Switch, 20A, 100-277V with Link Communication
6511169	ZUMLINK-JBOX-20A-PLUG	Zūm® Wired J-Box Load Controller, Plug Load Switch, 20A, 100-277VAC with Link Communication
6512078	ZUMLINK-EXP-16A-DIMU	Zūm® Wired Universal Dimmer Load Controller
6513005	ZUMNET-DIN-16A-LV	DIN Rail Load Controller, 0-10V Dimmer, 16A, 100-277V for Zūm® Lighting Control with Net and Link Communication
6513004	ZUMNET-DIN-DLI	DIN Rail Controller with DALI® Drivers, 100-277V for Zūm® Lighting Control with Net and Link Communication
6513006	ZUMLINK-DIN-16A-LV	DIN Rail Load Controller, 0-10V Dimmer, 16A, 100-277V for Zūm® Lighting Control with Link Communication
6513007	ZUMLINK-DIN-20A-SW	DIN Rail Load Controller, High Inrush Switch, 20A, 100-277V for Zūm® Lighting Control with Link Communication
6513008	ZUMLINK-DIN-20A-PLUG	DIN Rail Load Controller, Plug Load Switch, 20A, 100-277VAC for Zūm® Lighting Control with Link Communication
6513009	ZUMLINK-DIN-DIMU	Zūm® Wired Universal Dimmer Load Controller
6507911	ZUMMESH-JBOX-16A-LV	Zūm J-Box Load Controller, 0–10V Dimmer, 16A, 100–277V
6511350	ZUMMESH-JBOX-16A-LV-EM	Zūm Mesh Wireless J-Box Emergency Load Controller, 0–10V Dimmer, 16A, 100–277V
6507912	ZUMMESH-JBOX-20A-PLUG	Zūm J-Box Load Controller, Plug Load Switch, 20A, 100–240V

Part Number	Model	Description
6507909	ZUMMESH-JBOX-20A-SW	Zūm J-Box Load Controller, High Inrush Switch, 20A, 100–277V
6510956	ZUMMESH-JBOX-DALI	Zūm Wireless DALI® Controller
6507943	ZUMMESH-5A-LV	Zūm Wireless 0–10V Wall-Box Dimmer, 5A, 100–277V
6507940	ZUMMESH-5A-SW	Zūm Wireless Wall-Box Switch, 5A, 100–277V
6508582	ZUMMESH-DELV	Zūm Wireless ELV Wall-Box Dimmer, 120–277V
6508557	ZUMMESH-DIM	Zūm Wireless Wall-Box Dimmer, 120–277V
6509686	ZUMMESH-EXP-16A-DIMU	Zūm Wireless Universal Dimmer Module, 16A, 100–277V
Discontinued	ZUMMESH-JBOX-5A-LV	Zum J-Box Load Controller, 0–10V Dimmer, 5A, 100–277V

NOTE: Some Zūm wireless load controllers are available in color variations.

Keypad

Part Number	Model	Description
6511187	ZUMLINK-KP-R-W	Zūm® Wired Keypad with Link Communication, Rocker Button
6508019	ZUMMESH-KP10A	Zūm Wireless Keypad, Rocker Switch, 100–277V
6508020	ZUMMESH-KP10B	Zūm Wireless Keypad, 4-Button, 100–277V
6507985	ZUMMESH-KP10 ABATT	Zūm Battery-Powered Wireless Keypad, Rocker Switch
6507986	ZUMMESH-KP10 BBATT	Zūm Battery-Powered Wireless Keypad, 4-Button
6507987	ZUMMESH-KP10 CBATT	Zūm Battery-Powered Wireless Keypad, 6-Button
6507988	ZUMMESH-KP10 DBATT	Zūm Battery-Powered Wireless Keypad, 6-Button w/Sensor Control
6508523	ZUMMESH-KP10 FBATT	Zūm Battery-Powered Wireless Keypad, 4-Button w/Custom Engraving
6508528	ZUMMESH-KP10 GBATT	Zūm Battery-Powered Wireless Keypad, 6-Button w/Custom Engraving
6510278	ZUMMESH-KP10 AMBATT	AirMedia® Wireless Battery-Powered Keypad for, White Smooth
Discontinued	ZUMMESH-KP10AV1BATT	Battery-Powered Wireless AV Keypad, 4-Button, 2 Sources & Discrete Power
Discontinued	ZUMMESH-KP10AV2BATT	Battery-Powered Wireless AV Keypad, 6-Button, 2 Sources & Discrete Power

Part Number	Model	Description
Discontinued	ZUMMESH-KP10AV3BATT	Battery-Powered Wireless AV Keypad, 4-Button, 3 Sources & Power
Discontinued	ZUMMESH-KP10AV4BATT	Battery-Powered Wireless AV Keypad, 6-Button, 3 Sources & Power
Discontinued	ZUMMESH-KP10AV5BATT	Battery-Powered Wireless AV Keypad, 4-Button w/Custom Engraving

NOTE: Keypads available in color variations.

Presence Detectors

Part Number	Model	Description
6511729	ZUMLINK-IR-QUATTRO-DLS	Infrared Presence Detector with Daylight Sensing and Link Communication for Zūm® Wired Lighting Control
6511730	ZUMLINK-DT-QUATTRO-DLS	Dual-Tech Presence Detector with Daylight Sensing and Link Communication for Zūm® Wired Lighting Control
6511731	ZUMLINK-US-QUATTRO-DLS	Ultrasonic Presence Detector with Daylight Sensing and Link Communication for Zūm® Wired Lighting Control
6511732	ZUMLINK-IR-QUATTRO-HD-DLS	High-Definition Infrared Presence Detector with Daylight Sensing and Link Communication for Zūm® Wired Lighting Control
6511733	ZUMLINK-US-HALLWAY-DLS	Ultrasonic Dual-Direction Hallway Presence Detector with Daylight Sensing and Link Communication for Zūm® Wired Lighting Control
6511735	ZUMLINK-IR-QUATTRO-DLS-RLY	Infrared Presence Detector with Daylight Sensing, HVAC Control, and Link Communication for Zūm® Wired Lighting Control
6511736	ZUMLINK-DT-QUATTRO-DLS-RLY	Dual-Tech Presence Detector with Daylight Sensing, HVAC Control, and Link Communication for Zūm® Wired Lighting Control
6511737	ZUMLINK-US-QUATTRO-DLS-RLY	Ultrasonic Presence Detector with Daylight Sensing, HVAC Control, and Link Communication for Zūm® Wired Lighting Control

Part Number	Model	Description
6511738	ZUMLINK-IR-QUATTRO-HD-DLS-RLY	High-Definition Infrared Presence Detector with Daylight Sensing, HVAC Control, and Link Communication for Zūm® Wired Lighting Control
6511739	ZUMLINK-US-HALLWAY-DLS-RLY	Ultrasonic Dual-Direction Hallway Presence Detector with Daylight Sensing, HVAC Control, and Link Communication for Zūm® Wired Lighting Control
Discontinued	ZUMLINK-US-ONEWAY-DLS	Ultrasonic Single-Direction Hallway Presence Detector with Daylight Sensing and Link Communication for Zūm® Wired Lighting Control
Discontinued	ZUMLINK-US-ONEWAY-DLS-RLY	Ultrasonic Single-Direction Hallway Presence Detector with Daylight Sensing, HVAC Control, and Link Communication for Zūm® Wired Lighting Control

Zūm Wireless Sensors and Modules

Part Number	Model	Description
6509634	ZUMMESH-PART	Zūm Wireless Partition Sensor
6507983	ZUMMESH-PIR-OCCUPANCY-BATT	Zūm Wireless Battery-Powered Occupancy Sensor
6507982	ZUMMESH-OL-PHOTOCELL-BATT	Zūm Wireless Battery-Powered Daylight Sensor, Open-Loop
6507984	ZUMMESH-PIR-VACANCY-BATT	Zūm Wireless Battery-Powered Vacancy Sensor
6508223	ZUMMESH-CCO	Zūm Contact Closure Output
6509506	ZUMMESH-JBOX-SIM	Zūm J-Box Sensor Integration Module

Wireless Networking

Part Number	Model	Description
6508255	ZUMNET-GATEWAY	Zūm Net Wireless Gateway for Zūm Light Control System
6507919	ZUMMESH-NETBRIDGE	Zūm Network Bridge
6507997	ZUMMESH-AVBRIDGE	AV Bridge – Wireless Control Integration Module
6510917	ZUMMESH-AVBRIDGE-I	AV Bridge – Wireless Control Integration Module, International

Hub and Kits

Part Number	Model	Description
6511480	ZUM-HUB4	4-Series® Control Processor for Zūm® Lighting Control System
6512648	ZUML-HUB4-GW	4-Series® Control Processor for Zūm® Lighting Control System with Wireless Gateway and Power Supply
6513472	ZUML-HUB4	Zūm® Lighting Control Processor Panel
6513628	ZUML-HUB4-SWPOE-5	Zūm® Lighting Control Processor Panel with 5-Port PoE Network Switch
6513627	ZUML-CENCN-SWPOE-5	Zūm® Lighting Control Network Panel with Ethernet to Cresnet® Bridge and 5-Port PoE Network Switch
6513471	ZUML-SWPOE-26	Zūm® Lighting Control Network Panel with 26-Port PoE Network Switch
6513473	ZUML-HUB4-SWPOE-26	Zūm® Lighting Control Processor Panel with 26-Port PoE Network Switch
Discontinued	ZUML-HUB4-PAK	Zūm® Lighting Control Processor Panel, Basic
Discontinued	ZUML-HUB4-CN-PAK	Zūm® Lighting Control Processor Panel, Expanded
Discontinued	ZUM-FLOOR-HUB	Zūm® Light Control System, Floor Hub
Discontinued	ZUM-FLOOR-HUB-LIGHT	Zūm® Light Control System, Floor Hub with Wireless Gateway and Power Supply

Software

Part Number	Model	Description
	CRESTRON-ZUM	Crestron Zūm® Lighting Configuration App
3002182	SW-HUB4-PROG	Custom Program License for ZUM-HUB4

Power Supplies

Part Number	Model	Description
6512056	ZUMLINK-JBOX-PSU	Zūm® Wired J-Box Power Supply
6513011	ZUMLINK-DIN-PSU	DIN Rail Power Supply for Zūm® Lighting Control
6508208	ZUMMESH-JBOX-PSU	Zūm J-Box Accessory Power Supply
6513037	CSA-PWS2S-JBOX-ZUMLINK-CN	Two-Motor J-Box Mounted Power Supply for Motorized Shading Solutions

Integration Modules with Standalone Timeclock

Part Number	Model	Description
6512059	ZUMLINK-JBOX-IO	J-Box Integration Module with Standalone Timeclock for Zūm® Lighting Control
6513010	ZUMLINK-DIN-IO	DIN Rail Integration Module with Standalone Timeclock for Zūm® Lighting Control

Accessories

Part Number	Model	Description
6512926	CCR-ZUM-5	Color Ring for Zūm Keypads
6510846	ZUMMESH-KP-BATT-LM-W	Adhesive Label for Glass Mounted Zūm Wireless Keypads, White
6512909	ZUMMESH-KP-BATT-TTK-W-S	Tabletop Mounting Kit for Zūm Battery-Powered Wireless Keypads, White
6512910	ZUMMESH-KP-BATT-TTK-B-S	Tabletop Mounting Kit for Zūm Battery-Powered Wireless Keypads, Black
Discontinued	ZUMMESH-JBOX-FMKT-CP	Chicago Plenum Enclosure for Zūm Wireless J-Box Devices
Discontinued 6510845	ZUMMESH-KP-BATT-LM-B	Adhesive Label for Glass Mounted Zūm Wireless Keypads, Black

Cables

Part Number	Model	Description
6511388	CBL-CAT5E-ZUMNET-P-25	CAT5e Cable with Net Communication for LAN Wiring Zūm® Control Systems, Plenum, Purple, 25 ft
6511389	CBL-CAT5E-ZUMNET-P-50	CAT5e Cable with Net Communication for LAN Wiring Zūm® Control Systems, Plenum, Purple, 50 ft
6511390	CBL-CAT5E-ZUMNET-P-100	CAT5e Cable with Net Communication for LAN Wiring Zūm® Control Systems, Plenum, Purple, 100 ft
6512907	CBL-CAT5E-ZUMNET-P-SP500	CAT5e Cable with Net Communication for LAN Wiring Zūm® Control Systems, Plenum, Purple, 500 ft, Spool
6511393	CBL-CAT5E-ZUMLINK-P-0.5	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 6 in.
6511394	CBL-CAT5E-ZUMLINK-P-3	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 3 ft
6511395	CBL-CAT5E-ZUMLINK-P-6	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 6 ft

Part Number	Model	Description
6511396	CBL-CAT5E-ZUMLINK-P-12	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 12 ft
6511397	CBL-CAT5E-ZUMLINK-P-25	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 25 ft
6511398	CBL-CAT5E-ZUMLINK-P-50	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 50 ft
6512908	CBL-CAT5E-ZUMLINK-P-SP500	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 500 ft, Spool
Discontinued	CBL-CAT5E-ZUMLINK-P-12-10PK	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 12 ft, 10 Pack
Discontinued	CBL-CAT5E-ZUMLINK-P-25-10PK	CAT5e Cable with Link Communication for In-Room Wiring Zūm® Control Systems, Plenum, Orange, 25 ft, 10 Pack

Cable Accessories

Part Number	Model	Description
6512025	ZUMLINK-CONV-CN	Zūm® Wired Adapter Cable for Cresnet® Devices
6512080	ZUMLINK-SPLTR-RJ45	Zūm® Wired RJ-45 Splitter

Wired Rocker and Button Trees

Part Number	Model	Description
6511193	ZUMLINK-BTNR-W ENGRAVED	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, White
6511194	ZUMLINK-BTNR-B ENGRAVED	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Black
6511195	ZUMLINK-BTNR-A ENGRAVED	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Almond
6511196	ZUMLINK-BTNR-G ENGRAVED	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Gray
6511197	ZUMLINK-BTNR-R ENGRAVED	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Red
6512412	ZUMLINK-BTN2-W ENGRAVED	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, White
6512413	ZUMLINK-BTN2-B ENGRAVED	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Black
6512414	ZUMLINK-BTN2-A ENGRAVED	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Almond
6512415	ZUMLINK-BTN2-G ENGRAVED	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Gray

Part Number	Model	Description
6512416	ZUMLINK-BTN2-R ENGRAVED	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, R
6511203	ZUMLINK-BTN4-W ENGRAVED	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, White
6511204	ZUMLINK-BTN4-B ENGRAVED	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Black
6511205	ZUMLINK-BTN4-A ENGRAVED	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Almond
6511206	ZUMLINK-BTN4-G ENGRAVED	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Gray
6511207	ZUMLINK-BTN4-R ENGRAVED	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Red
6511213	ZUMLINK-BTN6-W ENGRAVED	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, White
6511214	ZUMLINK-BTN6-B ENGRAVED	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Black
6511215	ZUMLINK-BTN6-A ENGRAVED	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Almond
6511216	ZUMLINK-BTN6-G ENGRAVED	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Gray
6511217	ZUMLINK-BTN6-R ENGRAVED	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved,Red
6511223	ZUMLINK-BTN8-W ENGRAVED	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, White
6511224	ZUMLINK-BTN8-B ENGRAVED	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Black
6511225	ZUMLINK-BTN8-A ENGRAVED	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Almond
6511226	ZUMLINK-BTN8-G ENGRAVED	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Gray
6511227	ZUMLINK-BTN8-R ENGRAVED	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Engraved, Engraved, Red
6512417	ZUMLINK-BTN2-W	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, White
6512418	ZUMLINK-BTN2-B	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Black
6512419	ZUMLINK-BTN2-A	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Almond

Part Number	Model	Description
6512420	ZUMLINK-BTN2-G	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Gray
6512421	ZUMLINK-BTN2-R	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Red
6511233	ZUMLINK-BTN4-W	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, White
6511234	ZUMLINK-BTN4-B	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Black
6511235	ZUMLINK-BTN4-A	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Almond
6511236	ZUMLINK-BTN4-G	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Gray
6511237	ZUMLINK-BTN4-R	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Red
6511238	ZUMLINK-BTN6-W	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, White
6511239	ZUMLINK-BTN6-B	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Black
6511240	ZUMLINK-BTN6-A	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, White
6511241	ZUMLINK-BTN6-G	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Gray
6511242	ZUMLINK-BTN6-R	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Red
6511243	ZUMLINK-BTN8-W	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed White
6511244	ZUMLINK-BTN8-B	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Black
6511245	ZUMLINK-BTN8-A	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Almond
6511246	ZUMLINK-BTN8-G	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Gray
6511247	ZUMLINK-BTN8-R	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Pad Printed, Red
6511188	ZUMLINK-BTNR-W BLANK	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, White
6511189	ZUMLINK-BTNR-B BLANK	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Black

Part Number	Model	Description
6511190	ZUMLINK-BTNR-A BLANK	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Almond
6511191	ZUMLINK-BTNR-G BLANK	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Gray
6511192	ZUMLINK-BTNR-R BLANK	Rocker Button with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Red
6512574	ZUMLINK-BTN2-W BLANK	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, White
6512575	ZUMLINK-BTN2-B BLANK	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Black
6512576	ZUMLINK-BTN2-A BLANK	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Almond
6512577	ZUMLINK-BTN2-G BLANK	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Gray
6512578	ZUMLINK-BTN2-R BLANK	Two Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Red
6512579	ZUMLINK-BTN4-W BLANK	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, White
6512580	ZUMLINK-BTN4-B BLANK	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Black
6512581	ZUMLINK-BTN4-A BLANK	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Almond
6512582	ZUMLINK-BTN4-G BLANK	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Gray
6512583	ZUMLINK-BTN4-R BLANK	Four Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Red
6512584	ZUMLINK-BTN6-W BLANK	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, White
6512585	ZUMLINK-BTN6-B BLANK	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Black
6512586	ZUMLINK-BTN6-A BLANK	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Almond
6512587	ZUMLINK-BTN6-G BLANK	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Gray
6512588	ZUMLINK-BTN6-R BLANK	Six Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Red
6512589	ZUMLINK-BTN8-W BLANK	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, White

Part Number	Model	Description
6512590	ZUMLINK-BTN8-B BLANK	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Black
6512591	ZUMLINK-BTN8-A BLANK	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Almond
6512592	ZUMLINK-BTN8-G BLANK	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Gray
6512593	ZUMLINK-BTN8-R BLANK	Eight Button Tree with Bezel for Zūm® Light Control Keypads (ZUMLINK-KP), Blank, Red

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