ZUMMESH-OL-PHOTOCELL-BATT

Zūm™ Daylight Sensor, Open-Loop

Installation Guide

Description

The Crestron® ZUMMESH-OL-PHOTOCELL-BATT is an open-loop photocell designed to monitor natural daylight levels from windows in a room. It communicates wirelessly with Zūm™ load controllers to automatically adjust their dimming levels according to the amount of natural daylight in the room.

Additional Resources

Visit the product page on the Crestron website (www.crestron.com) for additional information and the latest firmware updates. Use a QR reader application on your mobile device to scan the QR image.

Zūm Overview

A Zūm space consists of one space, such as a board room or conference room, that is equipped with Zūm mesh devices. The Zūm mesh devices (i.e., dimmers, switches, keypads, and sensors) in the space provide control and communicate directly with each other without the need for a centralized gateway or processor.

If expanded functionality of the Zūm space is desired, a ZUMMESH-NETBRIDGE (not included) can be added which provides centralized control and monitoring from a Crestron control system (not included).

NOTE: The ZUMMESH-NETBRIDGE requires a compatible J-box device (not included) to provide power.

Installation

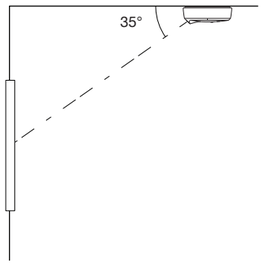
To install the ZUMMESH-OL-PHOTOCELL-BATT, the mounting location must be determined, the base must be mounted to the ceiling, the batteries must be inserted, and the sensor must be secured to the base.

NOTE: Observe the following points:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- Mount sensors on a vibration-free surface.

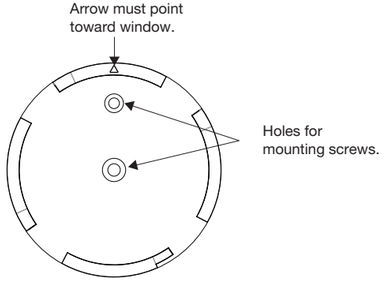
Determine the Mounting Location

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°.



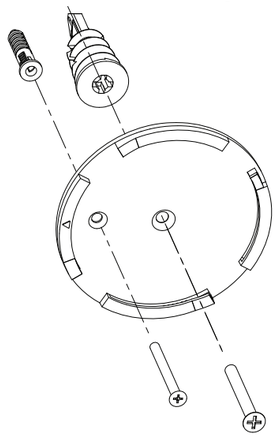
Mount the Base

When mounting the base, ensure that the arrow on the base, shown below, points toward the desired window.



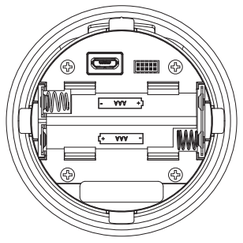
Mount the base to the drywall or drop ceiling using the provided anchors.

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.



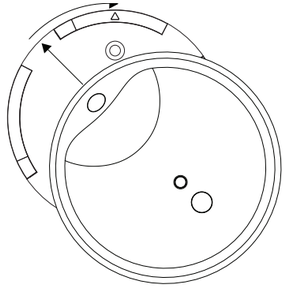
Insert the Batteries

Insert the batteries into the sensor according to the orientation indicated on the device.

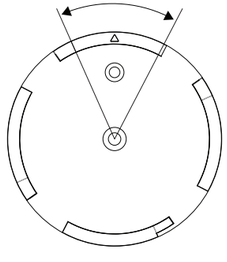


Secure the Sensor to the Base

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.



How to Set Up a Zūm Space and Add Zūm Devices

Once all devices are physically installed in a board room or conference space, a new Zūm space can be created and devices added.

NOTE: Only set up one Zūm space at a time.

NOTE: For simplified setup of a Zūm space, use the Zūm app on a mobile device.

Step 1 Create a New Zūm Space

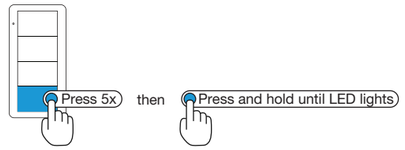
Creating a Zūm space defines the area where the devices are located, such as a board room or conference room. A Zūm space is created with a keypad, dimmer or switch, a J-box device, or an AV Bridge.

NOTE: Creating a Zūm space can only be performed by one device in the space.

NOTE: A Zūm space cannot be created from a battery-powered keypad.

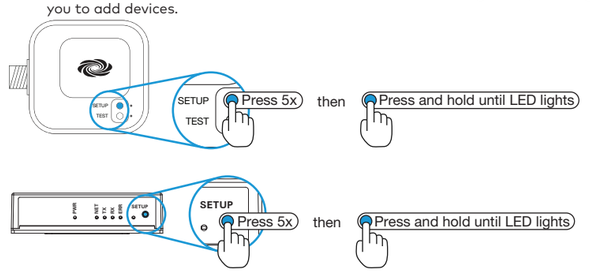
To create a new Zūm space using a keypad, dimmer, or switch:

1. Press the bottom button 5 times.
2. Press and hold the 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.



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.



NOTE: The device that is used to create the Zūm space is automatically added to the space and does not need to be added in Step 2.

Step 2 Add the Photocell to the Zūm Space

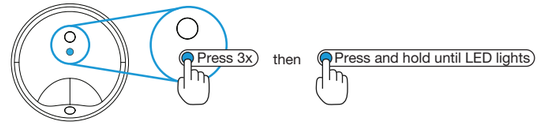
After a new Zūm space is created, add the ZUMMESH-OL-PHOTOCELL-BATT while the space is in Joining mode.

NOTE: A Zūm mesh device can belong to only one space.

NOTE: Joining mode ends automatically after 4 minutes.

To add the ZUMMESH-OL-PHOTOCELL-BATT:

1. Press the setup button 3 times.
2. Press and hold the button until the LED on the device lights (up to 10 seconds) to indicate that it has joined the space.



Step 3 Complete Zūm Space Setup

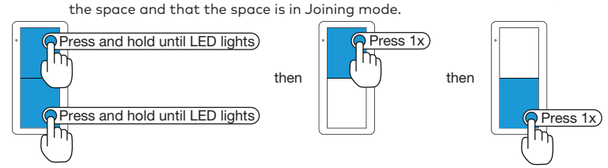
To finish creating a Zūm space, press any button on a device that is part of the Zūm space to exit Joining mode.

Add the Photocell to an Existing Zūm Space

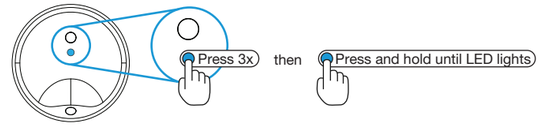
Add the ZUMMESH-OL-PHOTOCELL-BATT to an existing Zūm space by placing the Zūm space in Joining mode.

Add the ZUMMESH-OL-PHOTOCELL-BATT 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.



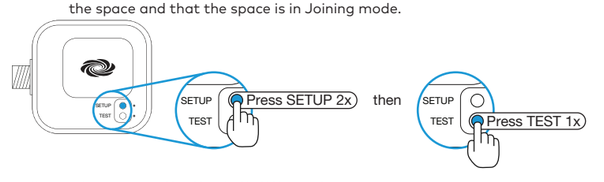
2. Add the ZUMMESH-OL-PHOTOCELL-BATT.
   a. Press the setup button 3 times.
   b. Press and hold the button until the LED on the device lights (up to 10 seconds) to indicate that it has joined the space.



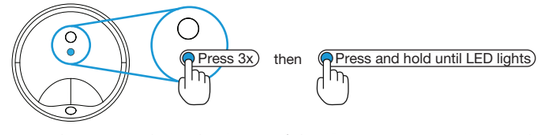
3. Press any button on a device that is part of the Zūm space to exit Joining mode.

Add the ZUMMESH-OL-PHOTOCELL-BATT 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 ZUMMESH-OL-PHOTOCELL-BATT.
   a. Press the setup button 3 times.
   b. Press and hold the button until the LED on the device lights (up to 10 seconds) to indicate that it has joined the space.



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.

NOTE: When setting up the daylight sensor, consider the following:

- 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.

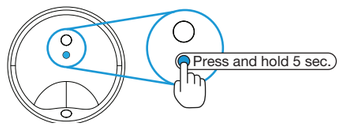
Calibrate the Daylight Sensor:

1. Adjust the lights in the room to the desired levels.

   NOTE: 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.

   NOTE: 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 Mode" for details.



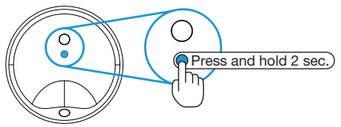
Test Mode

Test mode is used to verify that the settings stored during calibration are correct. Changes to the amount of light in the space results in rapid light level adjustments.

NOTE: During normal operation, the light levels are adjusted slowly so that they are not seen by the 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 in the space; the light level will increase. Open the blinds or unblock the cover of the sensor to increase the amount of light in the space; the light level will decrease.

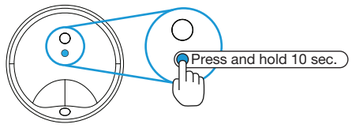


Factory Reset

Perform a factory reset when the device is removed from the network or to remove the configuration settings. The device must also be factory reset if the device 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 daylight sensor, press and hold the button until the LED flashes rapidly 3 times (about 10 seconds), then release the button.



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.

Specifications

The specifications for the ZUMMESH-OL-PHOTOCELL-BATT are listed below.

SPECIFICATION	DETAILS
Power	
Battery	(2) AAA 1.5 Volt lithium disposable batteries (included)
Battery Life	10 years under normal operating conditions
Sensing	
Light Sensitivity	0 to 65,535 lux (0 to 6,089 foot-candles)
Angle and Distance	35° optimum sensing angle at 4 to 6 feet (1.22 to 1.83 meters) from window
Environmental	
Temperature	32° to 104 °F (0° to 40 °C)
Humidity	10% to 95% RH (noncondensing)

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Specifications subject to change without notice.