## Wireless Occupancy Sensor with Photocell

## **GreenConnect™**

Cat. No. ZC015-BIW Ratings: 12-24VDC, 2.4 GHz

#### WARNINGS.

- VANNINGS.
  TO AVOID FIRE, SHOCK, OR DEATH, TURN OFF POWER AT CIRCUIT BREAKER OR FUSE, AND TEST THAT THE POWER IS OFF BEFORE WIRING!
- TO AVOID INJURY OR DEATH, DO NOT RECHARGE, DISASSEMBLE OR INCINERATE BATTERY, OR HEAT IT ABOVE 212°F (100°C).

  Replace battery with an approved Lithium 3.6V non-rechargeable battery Jauch ER14505J-S, EVE ER14505V, or SAFT LS14500. Use of another battery may present a risk of fire or explosion.

## CAUTIONS:

- Dispose of used battery promptly. DO NOT dispose of battery in normal household waste.
  Please contact your local waste provider or recycling facility for proper disposal of used battery.
  For indoor applications only.
  To be installed and/or used in accordance with electrical codes and regulations.
  If you are not sure about any part of these instructions, consult an electrician.

DI-000-ZC015-00D-W

**ENGLISH** 

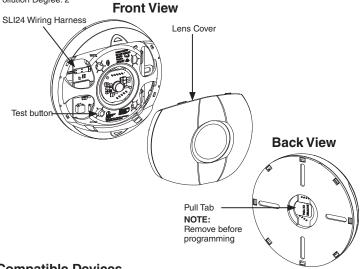
#### **INSTALLATION INSTRUCTIONS**

# **Product Description** The GreenConnect occupancy sensor with photocell is a ceiling-mount, battery-powered 2.4 Ghz wireless communication device that automatically controls lights in response to motion or daylight when part of a GreenConnect network. Sensor settings are configurable and saved in the dimming or switching load control device.

Power the sensor using the included AA lithium battery, or connect a +24V DC power supply using the SLI24 wiring harness, sold separately.

Purpose of Control: Energy Management of Equipment

Pollution Degree: 2



## **Compatible Devices**

- GreenConnect wireless load controllers
- GreenConnect wireless controlled receptacle
- GreenConnect wireless wall switch or dimmer
- GreenMAX DRC Wireless Keypad

## NOTES:

- Remove the battery pull tab to begin powering the sensor
- Ensure the sensor is within 16 ft. (5 m.) of a compatible device.
- · Install the sensor after it has been enrolled into a network.

#### **Operation Testing**

- 1. Once joined to the network, configure the sensor to control loads in required locations.
- Confirm occupancy detection (Red LED blinks), then cover the occupancy sensor to avoid further detection. Verify that the sensor times out and load turns OFF.
- 3. Uncover the occupancy sensor to verify Auto-ON responds and energizes loads.

### Field-of-View and Sensitivity Testing

- Perform an Field-of-View (FOV) walk test of the coverage area and confirm the Red LED blinks and detects occupancy within the coverage area.
- Adjust the sensor's sensitivity, as needed, to increase or decrease the FOV.

Photocell Adjustment: Enabled by selecting a value from the daylighting target menu.

### Installation

Do not mount sensor until it has been enrolled in a network. Equipment needed for installation:

- Ceiling tile stem, nut, and washer (included)
- Double-sided foam mounting tape (included)
   Screws (included) and wall anchors (not included)

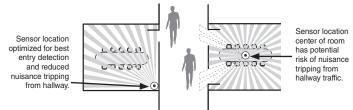
## Location

Select the location to mount the sensor and the appropriate method: - Tile stem

- Screws Mounting tape

### NOTES:

- Sensor location is important to ensure correct operation within each unique space.
- Correct location improves Auto-ON response and reduces the risk of false tripping from external motion (example, hallway traffic).
- Do not locate sensor on a mounting surface within 6 feet of air ducts, moving machinery or
- When used for daylighting, the sensor must be installed in the daylighting zone

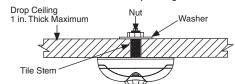


## **Ceiling Tile Mount**

- 1. Connect the included ceiling tile stem to the sensor's back cover and twist to secure. Refer to Diagram A for details
- When sensor is in desired location, push the ceiling tile stem through the ceiling tile and install the washer and nut above the ceiling tile to secure.

NOTE: The sensor's back cover and front body are keyed with arrows to lock and separate it easily. To lock the sensor's body to the back cover, push back cover into front body and rotate the arrows do not align. To separate, rotate sensor until the arrows are aligned, and pull apart.

## Diagram A Sensor Mounted to Drop Ceiling with Tile Stem



## **Surface Mount Using Screws**

- Remove the back cover of the sensor: Locate the alignment arrow on the edge of the back cover and on the edge of the front body, then rotate the back cover and front body until the two arrows line up, and pull apart. Refer to **Diagram B**.
- 2. Use the included screws, nuts, and washers, or screws with commercially available wall anchors to install the back cover. If necessary, drill pilot holes.
- 3. Secure the sensor's body to the back cover: Push back cover into front body and rotate until the arrows do not align

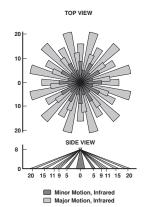
#### Mounting Option Diagram B Sensor Mounted to Wallboard or Drop Ceiling Using Screws Back Cover (Inside) -Washer Mounting Wallboard Ceiling Back Mounting Back Cover Shown Mounted Ceiling with Screws Sensor Base Key Lock Arrow Front Cover

## **Surface Mount Using Tape**

- 1. Remove backing material and apply double-sided mounting tape to the sensor base
- 2. Press and hold the sensor to your desired mounting surface for a few seconds

NOTE: The sensor's back cover and front body are keyed with arrows to lock and separate it easily. To lock the sensor's body to the back cover, push back cover into front body and rotate until the arrows do not align. To separate, rotate sensor until the arrows are aligned, and pull apart.

#### **Passive Infrared Field-of-View**



## System Programming

- - GreenConnect requires one load control device to create a wireless network and function as the network manager. This can be a wireless load controller, dimmer, or switch. Receptacles and battery-powered devices cannot create a network.
  - A maximum combination of 16 load controllers, wall stations, or sensors can be connected
  - GreenConnect devices are also compatible with GreenMAX DRC Wireless for systems that require more than 16 devices.
- 2. Connecting your sensor to a GreenConnect or GreenMAX DRC Wireless network
  - **a.** Ensure only the network you want to join is open. If more than one network within range is open, your device may join the wrong network.
  - b. Press and hold the test button. After about four seconds, the LED will blink back the device diagnostic. Continue to hold for seven seconds until the LED blinks amber once, then release. The LED will start blinking amber rapidly, meaning you are at the main menu.
  - c. Tap the test button once. The LED will blink green slowly while your device searches for a network to join. When it connects, the load will toggle OFF and ON twice with all connected devices in the network.
  - d. To join a GreenMAX DRC network, use the GreenMAX DRC App to scan the QR code and follow the instructions included with the GreenMAX DRC room controller.
  - e. If after 60 seconds a network is not found, the LED will stop blinking and the device will exit

To remove your device from a network, or to restore it to default settings, press and hold the test button for 12 seconds until the LED blinks amber twice, then release. The LED will blink red while the device leaves the network and resets to factory defaults. If the device was a network manager, the reset will break the network and any enrolled devices will no longer be connected

- 4. System features
  - · System settings are saved in the network manager
  - GreenConnect is a single zone system.
  - All lighting loads respond together as a single lighting zone.
  - · All sensors form a single occupancy zone.
  - Daylight values are aggregated across all sensors in a single daylight zone.
  - The default settings are:
    - i. Occupancy Mode: Auto-ON/Auto-OFF
    - ii. Auto-ON level: 50%
    - iii. Sensitivity: High
    - iv. Occupancy time-out: 15 minutes
    - v. Partial Off: Disabled
    - vi. Photocell: Disabled



#### **Changing the System features**

- Feature settings are saved in the load control device that is functioning as the network manager. Press and hold the top paddle or test button of the network manager for seve seconds until the LED blinks amber once, then release. The LED will begin blinking amber rapidly.
- 2. Tap the number of times that corresponds to the feature menu you want to access. The LED will blink the feature menu number in green, pause, then blink the menu setting number currently saved in amber. For example, to access feature menu #3 (Occupancy Auto-ON level) from the main menu, tap three times. The LED will blink green three times, then blink amber five times for the default setting #5. This blink back pattern will repeat every 60 seconds.
- 3. Once within the feature menu, tap the number of times that corresponds with the new setting you want to select. For example, to change the default Auto-ON value from setting #5 to setting #1, tap once. The LED will blink the number of times corresponding with the selected option in amber. Watch the new blink back patten to ensure the setting is what you selected. If it isn't, just enter you selection again.
- **4.** Return to the main menu by pressing and holding the test button for seven seconds until the LED blink amber once, then release. The LED will then begin blinking amber rapidly.
- 5. To exit the main menu, press and hold again for seven seconds until the LED stops blinking amber, then release

#### **Feature Menus**

| Feature #3: Occupancy Auto-ON level |                              |  |  |
|-------------------------------------|------------------------------|--|--|
| Setting #                           | Value                        |  |  |
| 1                                   | 100%                         |  |  |
| 2                                   | 50%                          |  |  |
| 3                                   | 25%                          |  |  |
| 4                                   | Manual-ON (vacancy)          |  |  |
| 5                                   | Restore last level (default) |  |  |

| Feature #4:Occupancy Sensitivity |                |  |  |
|----------------------------------|----------------|--|--|
| Setting #                        | Value          |  |  |
| 1                                | Medium         |  |  |
| 2                                | Low            |  |  |
| 3                                | High (default) |  |  |

| Feature #5: Primary Time-out |  |  |  |  |
|------------------------------|--|--|--|--|
| Setting #                    | Value  |  |  |  |
| 1                            | Test mode (30<br>seconds for five minutes<br>then reverts to<br>prior setting) |  |  |  |
| 2                            | 60 minutes   |  |  |  |
| 3                            | 30 minutes   |  |  |  |
| 4                            | 15 minutes (default)   |  |  |  |
| 5                            | 5 minutes  |  |  |  |
| 6                            | Disabled   |  |  |  |

| Feature #6: Partial-OFF level |                    |  |  |
|-------------------------------|--------------------|--|--|
| Setting #                     | Value              |  |  |
| 1                             | Disabled (Default) |  |  |
| 2                             | 50%                |  |  |
| 3                             | 25%                |  |  |

| Feature #7: Secondary Time-out |                      |  |  |  |
|--------------------------------|----------------------|--|--|--|
| Setting #                      | ting # Value         |  |  |  |
| 1                              | 5 minutes            |  |  |  |
| 2                              | 15 minutes (Default) |  |  |  |
| 3                              | 30 minutes           |  |  |  |
| 4                              | 60 minutes           |  |  |  |

| Feature #8: Daylighting Target |                    |  |  |
|--------------------------------|--------------------|--|--|
| Setting #                      | ı# Value           |  |  |
| 1                              | Disabled (Default) |  |  |
| 2                              | 25 footcandles     |  |  |
| 3                              | 35 footcandles     |  |  |
| 4                              | 45 footcandles     |  |  |

| Feature #9: Secondary level |              |  |
|-----------------------------|--------------|--|
| Setting #                   | Value        |  |
| 1                           | 0% (Default) |  |
| 2                           | 50%          |  |
| 3                           | 25%          |  |

| Menus and LED feedback                      |                      |           |            |  |
|---|----------------------|-----------|------------|--|
| Act   | ion                  | LED Color | Blink Rate | Status   |
| None  |                      | Red       | 1 time     | Occupancy detected   |
|   |                      |           | 2 times    | Low battery  |
| Press and hold: 4 seconds Device Diagnostic | Device<br>Diagnostic |           | 3 times    | Not enrolled in a network  |
|   |                      | Green     | 3 times    | Enrolled in active network   |
|   |                      |           | 2 times    | Enrollment incomplete  |
|   |                      |           | 1 time     | Enrolled, no communication from the network  |
| Press and                                   | Main Menu            | Amber     | 1 time     | Release after first  |
| seconds                                     |                      |           | Rapid      | the main menu. The<br>LED will begin blinking<br>amber rapidly                                       |
| Тар   | 1 time               | Green     | Slow       | Enter pairing mode<br>and search for net-<br>work to join. If already<br>paired, open the<br>network |
| Press and<br>hold: 10-14<br>seconds         | Reset                | Amber     | 2 times    | Release after the second amber blink to reset to factory default settings                            |
| Press and<br>hold: 15-19<br>seconds         | Exit                 |           | 3 times    | Release after the third amber blink to take no action and exit                                       |

#### What to do if...

#### Load does not turn ON

- Make sure the Red LED blinks every 15 seconds if there is occupancy. If not, separate the device from other noisy electronics, such as personal computers, electronic ballasts, and machinery.

   Use app to communicate to room controller and verify device is in the occupancy mode. Press and hold device button for 5-9 seconds until LED blinks White once. Select Device Identify icon (magnifying glass) to have device LED flash Green repeatedly. If unable to verify, confirm that all devices on the network are within specified RF range.
- Ensure that control devices are located properly to optimize RF design within installation location
- Remove device and re-enroll it to the network.
- Reset sensor to its factory default settings.
   Check if sensor is actively daylighting (holding the lights OFF).

## FCC CAUTION:

Changes or modifications not expressly approved by Leviton Manufacturing Co., could void the user's authority to operate the equipment FCC STATEMENT:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference et or action or television reception, which can be determined turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving anter
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## IC STATEMENT:

This equipment complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device mu interference, including interference that may cause undesired operation of the device.

# RF EXPOSURE AND CO-LOCATION:

To comply with FCC and ISED RF exposure limits for general population/uncontrolled exposure this device should be installed and operated with a minimum distance of 7.9 inches (20 cm) between the radiator and you body. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter. FCC SUPPLIERS DECLARATION OF CONFORMITY:

This equipment manufactured by Leviton Manufacturing, Inc., 201 N Service Road, Melville, NY, www.leviton.com. This equipment complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Patents covering this product, if any, can be found on www.leviton.com/patents.

## TRADEMARK STATEMENT

INADEMARK STATEMENT
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## FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada ULC to the attention of the Quality Assurance Departm Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1-800-405-5320.

## LIMITED 5 YEAR WARRANTY

For Leviton's limited 5 year product warranty, go to www.leviton.com. For a printed copy of the warranty, call 1-800-824-3005.