# GreenConnect™

# Wireless Occupancy Sensor with Photocell

Cat. No. ZC015-BIW

Ratings: 12-24VDC, 2.4 GHz CAUTIONS:

WARNINGS: • 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.
- To be installed and/or used in accordance with electrical codes and regulations



#### 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 **Front View** Lens Cover SLI24 Wiring Harness Test button





#### **Compatible Devices**

- GreenConnect wireless load controllers
- GreenConnect wireless toda controllers
   GreenConnect wireless wall switch or dimmer
   GreenConnect wireless controlled receptacle
- 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.

## **LED Indicator Operation**

The occupancy sensor uses LED light colors to indicate occupancy status and programming status, as shown in the table below.

Button Action	LED Color	Blink Rate	Sensor Status
No action	Green	Rapid	Searching for network (up to 60 seconds); Enrollment in process
Pressed and held for 4 seconds	Green	1 Time	Enrolled, no communication from the network
		2 Times	Enrollment incomplete
		3 Times	Enrolled in active network
	Red	3 Times	Not enrolled in a network
No. o all'an	Blue	1 Time	Power up on battery
No action		2 Times	Power up on 24V DC source
Pressed and held for 5 to 9 seconds	Amber	1 Time	Enter programming mode. LED begins flashing amber rapidly.
Pressed and held for 10 to 14 seconds	Amber	2 Times	Leave network and reset to factory defaults. LED flashes red until complete.
Pressed and held for more than 14 seconds	N/A	N/A	N/A
No action	Red	1 Time	Occupancy detected
		2 Times	Battery replacement needed

#### **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 FOV (Field-of-View) 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.

- 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.
- If you are not sure about any part of these instructions, consult an electrician.
  - DI-000-ZC015-00C ENGLISH

#### 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 heretory or heretory and the sensor of the senso heat sources
- When used for daylighting, the sensor must be installed in the daylighting zone.





Sensor location center of room has potential risk of nuisance tripping from hallway traffic.

### **Ceiling Tile Mount**

- 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 until the arrows do not align. To separate, rotate sensor until the arrows are aligned, and pull apart.





#### 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**. 1.
- Use the included screws, nuts, and washers, or screws with commercially available wall anchors to install the back cover. If necessary, drill pilot holes.
- 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



### 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

#### 1. Required components

- a. GreenConnect systems require one load controller to create a wireless network and function as the network manager. This can be a wireless power pack or line voltage wall station. Receptacles and battery-powered devices cannot create a network.
- b. A maximum combination of 16 load controllers, wall stations, or sensors can be enrolled into the network
- c. GreenConnect devices are also compatible with GreenMAX DRC Wireless for systems that require more than 16 devices.

#### 2. Creating a GreenConnect network

- a. Ensure no other networks within the building are open before proceeding.
- **b.** Enter programming mode by pressing and holding the test button on the load controller or the top paddle of the wall station until the LED blinks amber once, then release (approximately seven seconds). The LED will begin blinking amber rapidly
- **c.** Tap the test button or top paddle twice to create a new network and designate the device as the network manager. The load will toggle ON and OFF twice and the LED will begin to blink green slowly once the network has been created and is open for enrollment
- d. Proceed to device enrollment.
- 3. Enrolling devices to a GreenConnect network or GreenMAX DRC Wireless network
  - Enter programming mode on the device
  - b. Tap the test button or top paddle once to enter enrollment mode. The LED will begin blinking green slowly while searching for a network to join. Upon successful enrollment into a GreenConnect network, the LED will blink green rapidly three times and all enrolled devices will toggle their load ON and OFF twice.
  - c. To enroll the device into 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.
  - d. While the network is open, the LED on all connected devices will blink green slowly. Every 60 seconds the LED of the network manager will pause and blink red once for each device enrolled in the network.
  - e. If after 60 seconds the device does not find a network to join, the LED will blink red three times and exit enrollment mode.
  - f. To end enrollment and close the network, tap the test button or top paddle once on the network manager. The LED will stop blinking green, blink red three times and all devices will toggle their load ON and OFF.
  - $\boldsymbol{g}.$  The network will automatically close after 10 minutes if no new devices have been

## **4.** Adding a device to an existing network

- a. Enter programming mode on any line voltage device within the network.
- b. Tap the test button or top paddle once to open the network. Battery-powered devices cannot open a network
- c. Proceed to device enrollment.

#### 5. Resetting device

To remove a device from a network, press and hold the test button on the load controller, or sensor, or top paddle of the wall station until the LED blinks amber twice (approximately 12 seconds) then release. The LED will blink red rapidly while the device leaves the network and resets to factory default settings. If the device was a network manager, the network is also deleted.

#### 6. Sensor settings

a. Device settings are saved in the load controller managing the network.

- b. Default settings
  - i. Mode: Auto-ON/Auto-OFF
  - ii. Sensitivity: High
  - iii. Occupancy time-out: 15 minutes
  - iv Partial Off Disabled
  - v. Auto-ON level: 50% vi Photocell: Disabled
- 7. Adjusting sensor settings
  - a. Enter programming mode on the network manager.
  - b. Tap the test button or top paddle the number of times that corresponds to the menu number you want to access. The LED will pause, blink amber and blink back green the menu number selected, pause, then blink amber the menu option currently saved.
  - C. Once within the menu, tap the test button or top paddle again the number of times that corresponds with the option you want to select. The LED will blink amber according to the option that is selected.
  - **d.** To return to programming mode, press and hold the test button or top paddle for seven seconds then release. The LED will resume blinking amber once in programming mode.

#### 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 must accept any interference, including interference that may cause undesired operation of the device.

#### 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. 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 Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1-800-405-5320.

LIMITED 2 YEAR WARRANTY AND EXCLUSIONS Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for two years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit www.leviton.com or call 1-800-824-3005. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty. Including merchantability and fitness for a particular purpose, but if any implied varranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, but if any implied varranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to two years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

#### Menu #3: Auto-ON level Value Setting # 100% 50% (default)

25%

Manual-ON

8. Sensor Menus

2

3

4

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

Menu#7: Partial-OFF time-out

5 minutes

30 minutes

60 minutes

15 minutes (Default)

Setting # Value

2

3

4

Menu #4: Sensitivity		
Setting #	Value	
1	Medium	
2	Low	
3	High (default)	

Menu #5: Occupancy time-out		
Setting #	Value	
1	Test mode (30 seconds for five minutes then reverts to prior setting)	
2	60 minutes	
3	30 minutes	
4	15 minutes (default)	
5	5 minutes	
6	Disabled	

Menu #8: Daylighting Target		
Setting #	Value	
1	Disabled (Default)	
2	25 footcandles	
3	35 footcandles	
4	45 footcandles	

#### 9. Device diagnostics

To check device status, press and hold the test button on the load controller, or sensor, or top paddle of the wall station for approximately four seconds then release Observe LED and see table below.

LED color	Blink Rate	Status
Green	1 time	Enrolled, no communication from the network
Green	2 times	Enrollment incomplete
Green	3 times	Enrolled in active network
Red	3 times	Not enrolled in a network

## 10. 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:

FCC STATEMENT: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuan 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 to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by 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 antenna. — Increase the separation between the equipment and receiver.

- 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.

#### 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 your body. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.