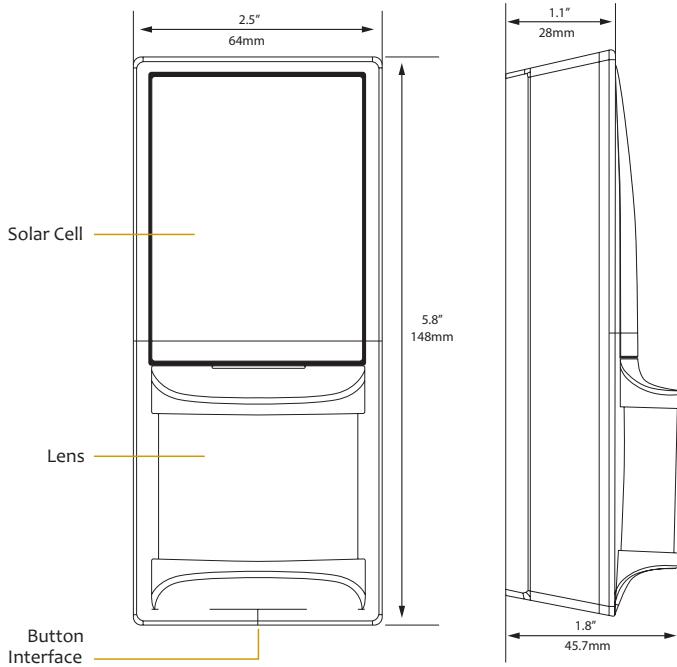


Occupancy Sensor - Wall Mounted



Package Contents

- Occupancy Sensor
- 2 screws, 2 wall anchors
- 1 wide angle lens (installed)
- 1 long range lens
- Power drill, 3/16" bit
- Screwdriver
- Leveling tool
- Light meter
- Battery (CR2032) for testing

Tools Required

Product Description

The wall-mounted Occupancy Sensor saves energy and adds convenience by accurately detecting when an area is occupied or vacant.

It is wireless, solar-powered, and uses a passive infrared (PIR) sensor to detect motion. The occupancy sensor transmits RF signals that control lighting, HVAC, and outlets to manage building energy consumption more efficiently.

Features Include:

- Sends wireless signals to receiving devices whenever motion is detected
- Harvests indoor light to power the sensor and wireless communications
- Mounts flush on the wall or in a corner; adjustable ceiling corner bracket sold separately
- Works with other sensors for enhanced occupancy tracking
- Interchangeable lenses for tailored sensor coverage
- Built-in tests to confirm operation at installed location
- Supplemental battery or alternative power supply options for extreme low-light conditions

Specifications

Power Supply	Indoor light energy harvesting (Optional) Supplemental battery or 2-wire connector for external power or remote solar cell (3-5VDC)
Transmission Range	80 ft. (25 m)
Radio Frequency	EnOcean 315 MHz, ISO/IEC 14545-3-10 standard
Light Required to Sustain Operation	50 lux for 30 transmissions/hour 100 lux for 60 transmissions/hour
Charge Time before Linking	2 minutes @ 50 lux
Charge Time for Full Charge	3 hours @ 200 lux (after startup) 6 hours @ 200 lux (cold start)
Operating Life in Darkness (after full charge)	48 hours
EEP (EnOcean Equipment Profile)	A05-07-01
Heartbeat	2 - 12 mins., randomized
Dimensions	5.83" L x 2.52" W x 1.8" D (148 mm x 64 mm x 45.7 mm)
Weight	4.09 oz. (116 g)
Environment	Indoor use only 14° to 104°F (-10° to 40°C) 20% to 95% relative humidity (non-condensing)
Agency Compliance	FCC, IC

Functional Description

If occupation is detected by the permanently active PIR sensor, a radio telegram indicating the occupied status will transmit immediately. An internal timer starts to run with a variable timer length. The timer value may vary between 60 and 300 seconds, depending on the light level. No radio telegrams will be sent out when the timer is counting down.

After the timer has finished the countdown, the unit will transmit again if occupation was detected during the countdown time period. If occupation was not detected, the unit will transmit a heartbeat signal - sending the unoccupied status with a random timing of 2 to 12 minutes. There are two buttons which allow entrance to a "Walk" or "Light-level" test mode. These test modes are for installation purposes only and will be exited automatically after 3 minutes.



1. Planning

Take a moment to plan for the sensor's successful operation and optimal communication with other system components.

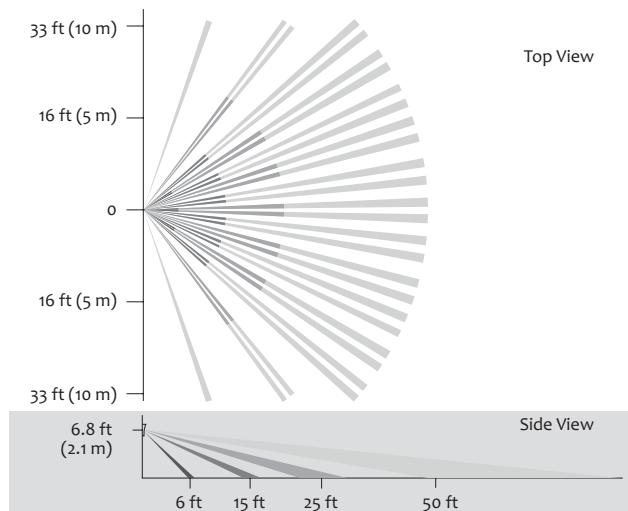
Remove the sensor from its packaging and place it under a bright light to provide the required startup charge. To quickly ensure the sensor energy storage is fully charged, insert a CR2032 battery for 30 seconds.

- Ensure the location provides consistent and adequate light
- Install with the appropriate lens for the required coverage
- Locate the sensor between 8 and 10 ft (2.4 to 3 m) high with an unobstructed view of the space
- For wide angle coverage, locate the sensor where traffic moves across the detection pattern, not in and out
- Consider the area's traffic patterns and principal use, for example, walking, lounging or sleeping
- Provide a minimum clearance of 4 ft. (1.2 m) away from heat sources, light bulbs, forced air, or ventilation systems
- Consider the construction materials (such as metal) in the space and obstacles that may interfere with RF signals

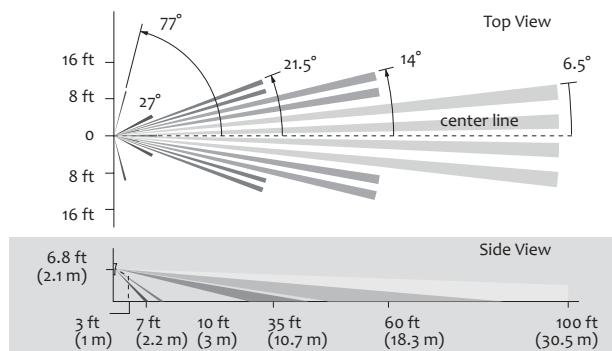
Sensor Range

A single occupancy sensor provides sufficient coverage for most applications. For some applications, multiple sensors may be required to provide complete coverage.

Wide Angle Coverage



Long Range Coverage



2. Installing

estimated time: 20 minutes

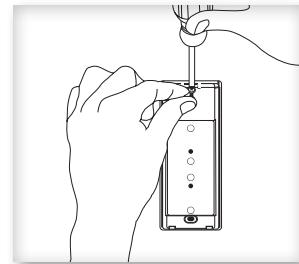
The mounting plate can be installed flush to the wall or angled in a corner.

NOTE: It may be easier to link the sensor before it is mounted on the wall. See the Linking section.

1. Remove the mounting plate from the sensor assembly by pressing the release tab located on the top of the sensor.
2. Using a level and a pencil, lightly mark two small dots to align the upper edge of the mounting plate.
3. Decide which of the two installation options is appropriate:

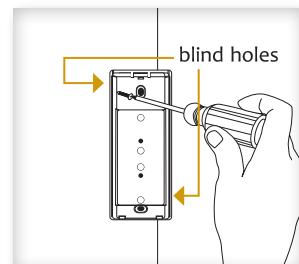
A. Flush to the Wall

- i. Orient the mounting plate using the pencil marks. Mark the two mounting screw drill points.
- ii. Drill two holes with a 3/16" drill bit and insert the wall anchors.
- iii. Insert the first screw loosely and level the mounting plate.
- iv. Insert the second screw then hand-tighten the first screw.

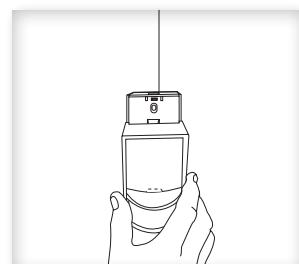
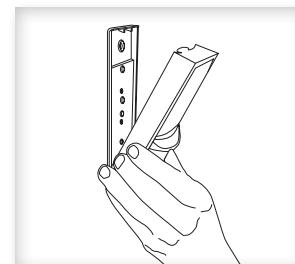


B. Angled in a Corner

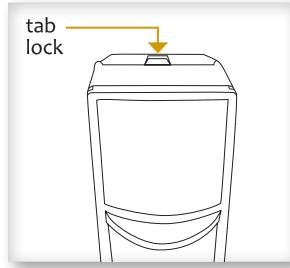
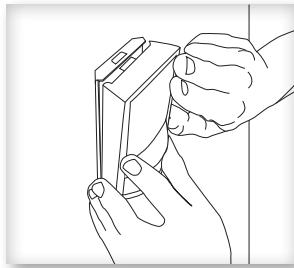
- i. Orient the mounting plate using the pencil marks.
- ii. Carefully drill through two of the four blind holes on the angled sides of the mounting plate (one on each side).
- iii. Mark the two mounting screw drill points and drill two pilot holes with a 3/16" drill bit and insert the wall anchors.
- iv. Insert the two screws and hand-tighten them.



4. Fit the sensor into the groove at the bottom of the mounting plate and close the top.



The sensor snaps into the tab at the top.



5. Confirm the sensor is properly positioned to detect motion and has sufficient light to operate, see the See Walk Test and See Light Test sections.

3. Linking

Two or more compatible devices can be linked and configured to provide the desired control. There are two basic types of devices in the system; transmitters and transceivers.

- **Transmit-only:** Transmitters are simple energy-harvesting devices that send RF messages to communicate a condition, level, or state. Transmitters can only be linked to transceivers. Examples > Self-powered Light Switches, Occupancy Sensors
- **Transmit & Receive:** Transceivers are controlling devices that send as well as receive RF messages. They also process relevant control logic, and actuate the appropriate outputs (switching a light on or off for example). Transceivers can be linked with transmitters as well as other transceivers. A transceiver can have up to 30 devices linked to it. Examples > Relays, Gateways

The Occupancy Sensor is a Transmit-only Device.

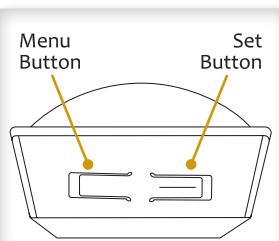
To link the occupancy sensor to a transceiver; the transceiver must first be powered, within wireless range, and set to accept links.

Next, the desired transmitter, or another transceiver, is triggered to send a special link message. The awaiting transceiver receives and stores the link permanently so the devices can interact to provide a variety of intelligent control options.

To Link or Unlink an Occupancy Sensor

1. Set the desired transceiver to Accept a Link (refer to that device's installation guide).
2. Click the Menu button on the bottom of the sensor once. This sends a link/unlink radio telegram.

NOTE: The button interface on the sensor is used for linking and testing only. The occupancy timer settings are configured on the transceiver to which the sensor is linked.



Refer to the "Linking" section of the transceiver/controller installation guides to complete the linking process.

Testing the Sensor

Before starting a test, ensure the sensor's energy storage is fully charged by placing it under bright light (at least 200 lux) for 20 minutes, or insert a battery for 5 minutes.

If a battery is used to charge the sensor for a light test, ensure it is removed to get an accurate light measurement.

A test mode will stay active for 3 minutes. To exit a test and resume normal operation, press and hold the Menu button for 5 seconds.

Walk Test

Use the walk test to confirm that motion is within the sensor's range.

1. Press and hold the Set button for 5 seconds.
•> Red LED will blink to confirm that a walk test is active.
2. Move in and out of the sensor's range to determine its coverage area.
•> Sensor will blink when it detects motion.
3. Make small hand movements just inside the limit of the sensor's range to see if the motion triggers a response.

Light Test

Use the light test to measure real-time light levels and confirm whether the occupancy sensor has sufficient light.

1. Create a realistic lighting condition (the test measures the real-time light level).
2. Press and hold the Set button for 10 seconds.
•> Red & green LEDs will blink to confirm light test is active.
3. Watch the LED blink rate to determine the light strength.
•> The highest is 5 blinks which indicates very good light (200 lux or more). 1 blink indicates minimum light (15 lux).

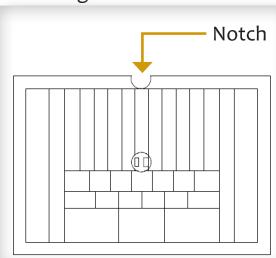
NOTE: If there is no blink rate, consider relocating the sensor or installing a battery to provide supplemental power. If the sensor does not have a sufficient charge, it cannot enter the test modes. No LED light or 1 red blink when the test button is pressed indicates insufficient charge.

Changing the Lens

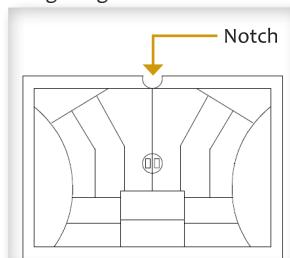
The Occupancy Sensor package contains two lenses: a wide angle lens and a long range lens. The wide angle lens is installed by default and can be distinguished from the long range lens by the pattern.

Lens Patterns

Wide Angle Lens

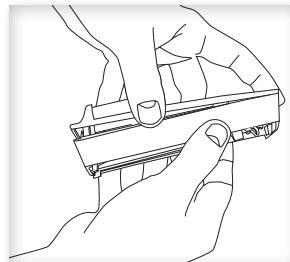
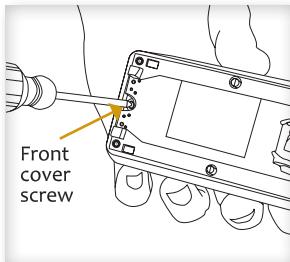


Long Range Lens

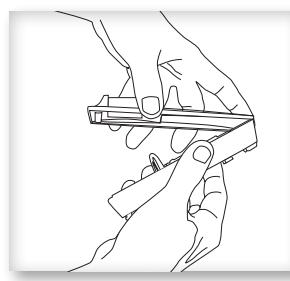
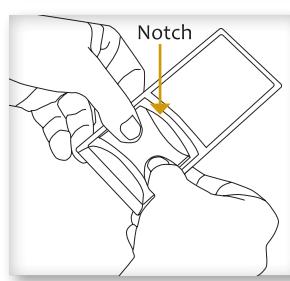


To change the lens:

1. If the sensor is mounted, press the top tab and remove it from the mounting plate.
2. Unscrew the front cover screw on the back at the bottom and remove the front cover.

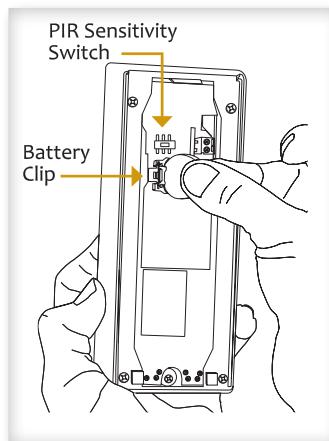


3. Remove the installed lens by gently squeezing it to ease one side out of its groove, and then the other.
4. Insert the lens you want to use by aligning the notch with the top on the front cover. Orient the smooth side facing out, and the textured side facing the sensor.
5. Hold both edges of the lens, flex it gently and push until it pops into the grooves. Make sure the edges are flush.
NOTE: If the lens is out of position, the sensor will not detect activity properly.
6. Replace the top edge of the front cover and then close it on the sensor.
7. Replace the bottom screw and remount sensor on the plate.

**Installing Supplemental Battery (optional)**

If light levels are very low where the sensor is installed, auxiliary battery power (CR2032) can be used to supplement the solar energy harvester.

1. Remove the sensor from the mounting plate.
2. Unsnap sensor cover and identify the battery holder on the circuit board.
3. Insert the battery under the clip with the positive pole (+) up and press it in place.
4. Replace cover and remount the sensor on the wall.

**Troubleshooting**

Problem	Solution Checklist
Sensor does not generate a wireless message	<ul style="list-style-type: none"> Verify the LED blinks when motion is detected during a walk test Verify the solar cell is charged properly
Sensor is activated when there is nothing to detect	<ul style="list-style-type: none"> Verify there is 4 ft. (1.2 m) clearance from heat sources that may disturb sensing Reduce sensitivity setting by moving the PIR sensitivity switch on the back to low (the left-hand position)
Linked device does not respond to wireless messages	<ul style="list-style-type: none"> Check for environment or range issues Verify the device is linked Check the transceiver connection and the wiring for errors Check if appropriate devices are linked according to good system planning

FC FCC SZV-EOSW01
IC 5713A-EOSW01

This device complies with part 15 of the FCC rules and Industry Canada ICES-003. 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.

IMPORTANT! Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IMPORTANT! Tous les changements ou modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actioner cet équipement.

Limited Warranty

Subject to the other terms of this warranty, the manufacturer warrants you the original purchaser that this product will be free from defects in material and workmanship for one year from the date of your purchase of the product. During that period, if the product does not comply with this limited warranty, the manufacturer will, at its discretion, repair or replace the product. Repair or replacement is your sole remedy under this or any other warranty of the product, whether express or implied.

Coverage Limitations. This limited warranty extends only to the original purchaser and is not transferable. This limited warranty expressly excludes any defects or damages resulting from any product installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner.

To obtain warranty service - return the product, a description of the problem, together with your proof of purchase, securely packaged and with postage prepaid, to the manufacturer.

You may be required to provide other information or evidence of the defect. Any returned product that is replaced becomes the property of the manufacturer.

Implied Warranties. TO THE EXTENT PERMITTED BY LAW, ANY IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE SAME DURATION AS THIS EXPRESS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. NO OTHER EXPRESS WARRANTY HAS BEEN MADE OR WILL BE MADE BY THE MANUFACTURER WITH RESPECT TO THIS PRODUCT.

Limitation of Liability. THE MANUFACTURER SHALL NOT BE RESPONSIBLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES SUCH AS THE COST OF LABOR FOR REMOVAL OR REINSTALLATION OF THE PRODUCT, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT, TORT, OR OTHERWISE. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion and limitation may not apply to you.

This limited warranty gives you specific legal rights, and you also may have other rights which vary from state to state. In Canada, the above provisions are not intended to operate where prohibited by law and do not preclude the operation of any applicable provisional consumer protection statute which in certain circumstances may extend the express warranties herein.