

Radio Powr Savr

Installation Instructions
Please Read Before Installing

English

041754 Rev. A
05/2020

Wireless Battery-Powered Occupancy and Vacancy Sensors

California Title 24 Compliant
LRF2-OCR2B-P 3 V⁼⁼ 14 µA 434 MHz (Occupancy/Vacancy)
LRF2-VCR2B-P 3 V⁼⁼ 14 µA 434 MHz (Vacancy Only)

Compatible Products/Additional Information

For a full list of compatible products and other additional information visit www.lutron.com/occsensors

Product Description

Lutron's ceiling-mounted occupancy and vacancy sensors are wireless, battery-powered, passive infrared (PIR) devices that automatically control lights via RF communication with a dimming or switching device.

Important Notes

- This sensor is part of a system and cannot be used to control a load without a compatible dimming or switching device. Refer to the instruction sheets of the receiving device(s) for installation information.
- Use only high-quality lithium batteries, size CR123, 3 V⁼⁼ (ANSI-5018LC, IEC-CR17345). **DO NOT** use rechargeable batteries. Using improperly rated batteries could damage the sensor.
NOTICE: DO NOT disassemble, crush, puncture, or incinerate batteries. **DO NOT** dispose of batteries in normal household waste. Please recycle, take to a proper battery disposal facility, or contact your local waste disposal professional regarding local restrictions on the disposal or recycling of batteries.

CAUTION: Risk of Fire, Explosion, and Burns. Do not recharge, disassemble, heat above 200 °F (100 °C) or incinerate. This product contains a lithium battery. The battery in this device contains Perchlorate Material — special handling may apply. For more information visit www.dtscc.ca.gov/hazardouswaste/perchlorate

WARNING: Entrapment hazard. To avoid the risk of entrapment, Serious Injury, or Death, these controls must not be used to control equipment which is not visible from every control location or which could create hazardous situations such as entrapment if operated accidentally. Examples of such equipment which must not be operated by these controls include (but are not limited to) motorized gates, garage doors, industrial doors, microwave ovens, heating pads, etc. It is the installer's responsibility to ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls. Failure to do so could Result in Serious Injury or Death.

Sensor Operation

Occupancy Version – The sensor will automatically turn the lights on when the space is occupied and automatically turn the lights off after the space is vacated.

Vacancy Only Version – The lights must be manually turned on at the dimming or switching device. The sensor will automatically turn the lights off after the space is vacated.

Customer Assistance

For questions concerning the installation or operation of this product, call **Customer Assistance**. Please provide exact model number when calling.

U.S.A. and Canada

1.844.LUTRON1

Mexico 8am – 8pm ET

+1.888.235.2910

Other countries 8am – 8pm ET

+1.610.282.3800

Brazil (Monday-Friday 8:30am - 5:30pm BRT)

+55 (11) 3257-6745

Fax +1.610.282.6311

www.lutron.com/support

FCC/ IC Information

This device complies with part 15 of the FCC Rules and 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. Modifications not expressly approved by Lutron Electronics Co., Inc. could void the user's authority to operate this equipment.

Note: 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 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.
- 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.

Limited Warranty

(Valid only in U.S.A., Canada, Puerto Rico, and the Caribbean.)

Lutron will, at its option, repair or replace any unit that is defective in materials or manufacture within one year after purchase. For warranty service, return unit to place of purchase or mail to Lutron at 7200 Suter Rd., Coopersburg, PA 18036-1299, postage pre-paid.

THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND THE IMPLIED WARRANTY OF MERCHANTABILITY IS LIMITED TO ONE YEAR FROM PURCHASE. THIS WARRANTY DOES NOT COVER THE COST OF INSTALLATION, REMOVAL OR REINSTALLATION, OR DAMAGE RESULTING FROM MISUSE, ABUSE, OR DAMAGE FROM IMPROPER WIRING OR INSTALLATION. THIS WARRANTY DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES. LUTRON'S LIABILITY ON ANY CLAIM FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, SALE, INSTALLATION, DELIVERY, OR USE OF THE UNIT SHALL NEVER EXCEED THE PURCHASE PRICE OF THE UNIT.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty may last, so the above limitations may not apply to you.

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Lutron Electronics Co., Inc. | 7200 Suter Road
Coopersburg, PA 18036-1299 | U.S.A.

Instructions

A Pre-Installation

1 Before setting up the sensor, the corresponding dimming or switching device(s) must be installed.

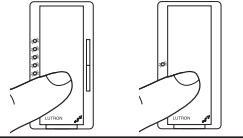
2 Twist and remove mounting bracket to insert battery into battery cavity.

B Set-Up

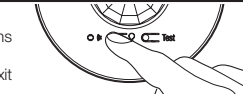
In order for the sensor to operate properly, it must first be set up with a corresponding dimming or switching device. The procedure for setting up a sensor with a Maestro Wireless (MRF2 only) dimmer or electronic switch is detailed below. If setting up a sensor with a different device, visit www.lutron.com/occsensors or consult the installation guide for that device.

Setting up a Sensor with a Maestro Wireless Dimmer or Electronic Switch

1 Place the dimmer or switch in set-up mode by pressing and holding the tap button for 6 seconds until all LEDs on the device begin flashing. Release the tap button.

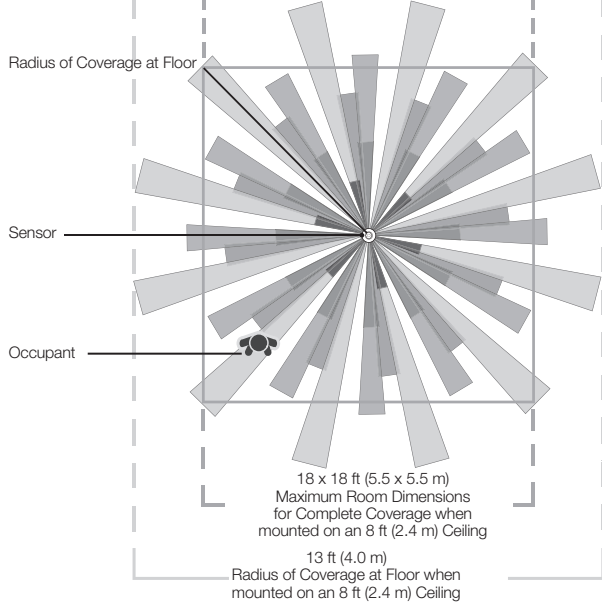
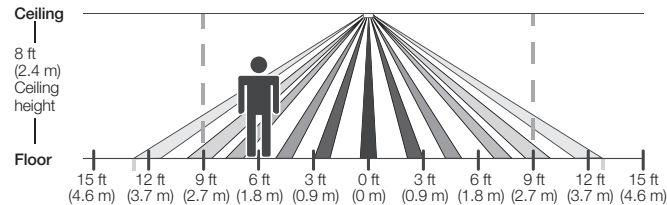


2 Add the sensor to the dimmer or switch by pressing and holding the "Light" button on the front of the sensor for 6 seconds until the lens flashes briefly. The lights in the room will also flash 3 times, indicating the sensor has been successfully added. The dimmer or switch will exit set-up mode automatically.



3 The "Light" button should now switch the lights in the room on and off when pressed. Repeat the above procedure to set up the sensor with additional devices.

C Sensor Detection Range



D Sensor Placement and Coverage

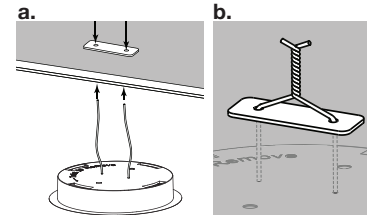
Before mounting the sensor, please note the following:

- The sensor is designed for ceiling use only. **DO NOT** install on ceilings higher than 12 ft (3.7 m).
- The sensor should be installed in a location where it has a good view of all parts of the room. The sensor requires line of sight to operate properly. **If you cannot see the sensor, it cannot see you.** The sensor cannot see through glass objects such as patio or shower doors.
- DO NOT** mount the sensor within 4 ft (1.2 m) of HVAC vents, halogen or incandescent light bulbs, microwave ovens, Wi-Fi routers, IOT cameras, or other non-Clear Connect wireless devices. When using Clear Connect – Type X lamps or fixtures, ensure sensor is mounted at a distance of 2 ft (0.6 m) or greater from the lamp or fixture.
- The sensor may be installed up to 60 ft (18 m) away from the associated dimming or switching device(s) if they are in direct line of sight. If there are walls or other barriers between the sensor and receiving device(s), the sensor should be located within 30 ft (9 m).
- Whenever possible, avoid placing the sensor in a location where it has a broad view outside the intended space. If this is unavoidable, the lens can be masked to block the view of undesired areas (see www.lutron.com/occsensors)
- For additional information on placing sensors, please see the **Occupancy/Vacancy Sensor Design and Application Guide** (P/N 368-3197) located at www.lutron.com

E Mounting Methods

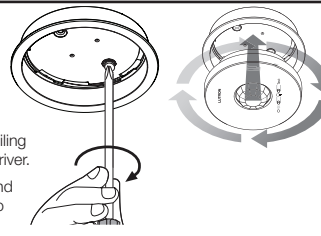
1 Drop-Ceiling Mounting

- Place the mounting wire through the mounting bracket and pierce ceiling tile in the desired location. From the opposite side of the tile, slip the Ceiling Tile Backer through both legs of the wire.



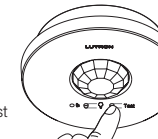
2 Solid-Ceiling Mounting

- Drill two 3/16 in (4.6 mm) pilot holes for the provided screw anchors.
- Press the anchors into the holes and tap flush with a hammer.
- Place the flat side of the mounting bracket against the ceiling and install the two provided screws using a hand screwdriver.
- Attach the sensor to the mounting bracket by inserting and twisting in a clockwise direction until the sensor locks into place.



F Testing Sensor Coverage

1 With the sensor mounted on the ceiling, press and release the "Test" button. The lens will glow briefly, indicating the test mode has been entered.



NOTE: There is a warm-up period of 90 seconds after the battery is installed before the test mode is activated. If the button is pressed during this time, the lens will flash continuously until the warm-up period is complete, and then the test mode will be automatically entered.

2 Confirm the coverage area by walking through the space and observing the lens. The lens will glow solid every time motion is detected. If the lens remains off during motion, the sensor cannot detect motion at that location.

3 Press and release the "Test" button again to exit the test mode. If the button is not pressed, the test mode will automatically time out 15 minutes after being enabled, or 5 minutes after the last detected motion if the room is vacated.

4 If the sensor has significant trouble detecting motion during the test, it should be moved to another location and re-tested. **NOTE:** If the sensor is detecting motion in areas that are not desirable, such as hallways or adjacent rooms, refer to www.lutron.com/occsensors

5 If sensor detection is satisfactory during this test, perform the wireless communication test as described in section G. **Testing Wireless Communication.**

G Testing Wireless Communication

This test should be performed to verify the sensor has been correctly set up with the corresponding dimming or switching device and that there is proper wireless communication from the chosen sensor location.



Press and release the "Light" button multiple times to toggle the lights on and off.

Troubleshooting

Symptom	Possible Causes	Solution
Lights do not turn ON when space is occupied.	Sensor is not correctly added to dimming /switching device(s).	Refer to section B. Set-Up.
	Sensor's Auto-On setting is set to "Low light" or "Disabled".	Refer to section H. Advanced Set-Up.
	The lights were recently turned off manually and the timeout has not yet expired.	For more details, refer to <i>Frequently Asked Questions</i> at www.lutron.com/occsensors
	Sensor does not have full view of room.	Refer to section C. Sensor Detection Range.
	Sensor is outside wireless range of dimming/switching device.	Refer to section D. Sensor Placement and Coverage or G. Testing Wireless Communication.
Lights turn OFF while space is occupied.	Battery has been installed incorrectly.	Refer to section A. Pre-Installation.
	Dimming /switching device has been improperly wired.	Refer to the instruction sheet of the receiving device or call Lutron Customer Assistance at 1.844.LUTRON1.
	Light bulb(s) burned out. Breaker is off or tripped.	
Lights stay ON after space is vacated.	Sensor's timeout is too short for this application.	Refer to section H. Advanced Set-Up.
	Sensor does not have full view of room.	Refer to section C. Sensor Detection Range.
	Lens mask is improperly applied.	Refer to www.lutron.com/occsensors
Lights turn ON when walking past room.	Sensor's activity setting is too low.	Refer to section H. Advanced Set-Up.
	Sensor's timeout has not yet expired.	Refer to section H. Advanced Set-Up.
	An external noise source such as an HVAC vent or wireless router is interfering.	Try moving sensor to a new location or reducing sensitivity. Refer to section D. Sensor Placement and Coverage or H. Advanced Set-Up.
	Battery has been installed incorrectly.	Refer to section A. Pre-Installation.
	Sensor coverage extends beyond room perimeter.	Refer to section D. Sensor Placement and Coverage.
Behavior of lights does not match sensor settings.	The intended setting was not saved.	Refer to section H. Advanced Set-Up.
	Multiple Sensors are added to a dimming /switching device and their settings do not match.	Refer to section H. Advanced Set-Up.
	Sensor lens does not glow in response to motion during sensor coverage testing.	Move sensor to another location. Refer to section C. Sensor Detection Range.
	Room is too big or oddly shaped.	Multiple Sensors may be necessary for full room coverage. For more details, refer to <i>Frequently Asked Questions</i> at www.lutron.com/occsensors
	Battery has been installed incorrectly.	Refer to section A. Pre-Installation.
Lens does not stop glowing during sensor coverage testing even when there is no motion.	An external noise source such as an HVAC vent or wireless router is interfering.	Try moving sensor to a new location or reducing sensitivity. Refer to section D. Sensor Placement and Coverage or H. Advanced Set-Up.
	Sensor is not correctly added to dimming /switching device.	Refer to section B. Set-Up.
	Sensor is outside wireless range of dimming /switching device.	Move sensor closer to dimming /switching device and retry test. Refer to section G. Testing Wireless Communication.
	Battery has been installed incorrectly.	Refer to section A. Pre-Installation.
	Dimming /switching device has been improperly wired.	Refer to the instruction sheet of the receiving device or call Lutron Customer Assistance at 1.844.LUTRON1.
Lights do not respond correctly during wireless communication testing.	Light bulb(s) burned out. Breaker is off or tripped.	
	Sensor lens flashes and lights do not turn ON when space is occupied.	Replace battery. For more details, refer to <i>Frequently Asked Questions</i> at www.lutron.com/occsensors
	Sensor is in test mode.	Remove sensor from test mode. Refer to section F. Testing Sensor Coverage.

