

# GreenMax® DRC Sensor

Cat. No. OSR15-MCx



## 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 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.

## CAUTIONS:

- **ESD Sensitive Device:** Use safe handling procedures when installing.
- For indoor applications ONLY.

DI-000-OSR15-00C

## INSTALLATION INSTRUCTIONS

ENGLISH

### Product Description

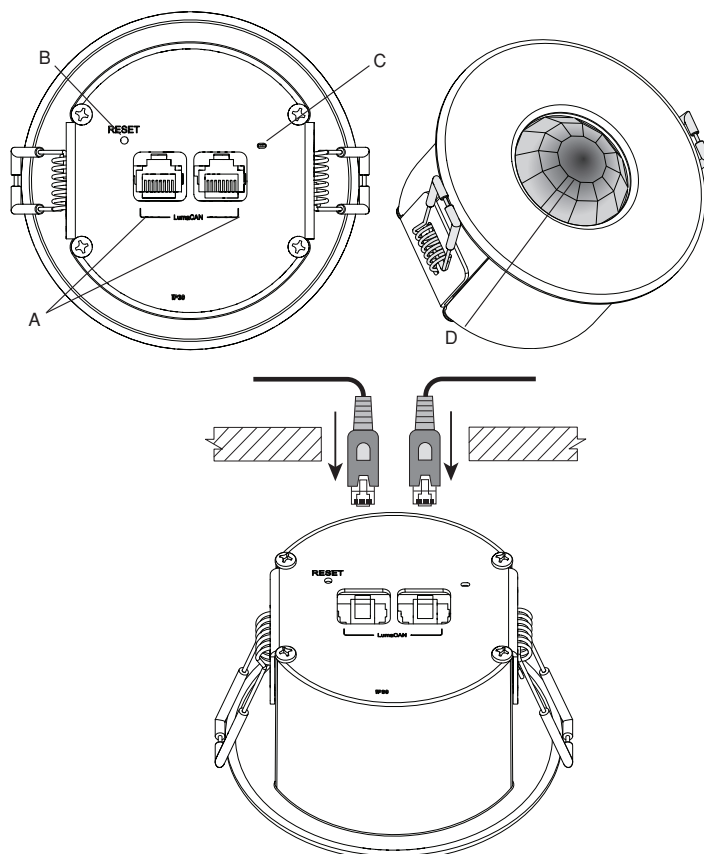
The GreenMax DRC Sensor is a direct network-connected device, which can detect both Occupancy and Light levels within a specified range. It reports data with LumaCAN™ Sensor messages over the network for receipt by any Sapphire or GreenMAX DRC Room Controller.

### Occupancy Sensor Technology and Application Notes:

- The OSR15-MCx sensor uses Microwave technology at 5.8 GHz frequency to detect motion. Make sure to select a mounting location that is at least 6 ft away from an HVAC source, as this technology is sensitive to air movement.
- In addition, this sensor uses PIR (Passive InfraRed) detection technology. This technology uses a lens to establish dozens of detection zones. The sensor is sensitive to the heat emitted by the human body. To trigger the sensor, the source of the heat must move from one detection zone to another. The device is effective in sensing motion across its field-of-view. Be conscientious of this when you select an installation location.
- Occupancy sensors respond to rapid changes in temperature, and hot or cold drafts look like body motion to the device if it mounted too close to a climate control source. Make sure to mount this device approximately 6 ft away from a climate control source, such as radiators, air exchanges, and air conditioners.
- Do NOT mount the Occupancy Sensor directly under a high-wattage light source. High-wattage bulbs (greater than 100 W incandescent) give off a lot of heat and switching the bulb may cause a temperature change that can be detected by the device. Mount the Occupancy Sensor at least 6 ft away. If you must mount the device closer, lower the bulb's wattage.
- The field-of-view of this sensor is 750 to 1,500 sq. ft. when the sensor is located in the middle of the desired detection area.

### Before Installation

- Requires installation into a 2 7/8 in. to 3 1/4 in. diameter (73.03 mm to 82.55 mm) mounting hole.
- Requires 4 in. (102 mm) of vertical clearance.
- When installation requires conduit for Class 2 LumaCAN wiring, drill a 2 7/8 in. opening into the side of the junction box, and install the junction box in the ceiling, directly above the sensor.
- LumaCAN wiring requires a Category-rated cable for power and data. Use Category 6 or better cable with quality RJ-45 connections. Wire per TIA-568B standards.
- For compliance with Chicago Plenum requirements, install in a metal box in the ceiling. See the 3rd bullet point above.
- All LumaCAN wire segments must be tested and validated prior to powering up the system.
- The end of each LumaCAN network must be terminated for proper data flow. A termination plug is pre-installed into one of the RJ-45 receptacles. If this is the end of the network, only one of the RJ-45 receptacles are used. Leave the termination plug in the unused RJ-45 receptacle. If this is in the middle of the network, both RJ-45 receptacles are required. Remove and discard the termination plug.



Specifications	
Input Voltage	+12-24VDC, 90-45mA
IP Rating	IP30
Network Connections	<ul style="list-style-type: none"><li>• (2) RJ-45 Cat. 6 or better to connect to a LumaCAN network.</li><li>• 1,600' maximum length per Daisy-Chain Segment.</li><li>• Home-Run topology supported when using repeaters, which may extend the network's length.</li></ul> <b>NOTE:</b> Pass-Through RJ-45 connectors are prohibited from use. Use of these connectors, voids all warranties, and any promise of product suitability of operation.
Operating Temperature	32°F to 131°F (0°C to 55°C), 0 to 85% relative humidity
Storage Temperature	14°F to 185°F (-10°C to 85°C)
Sensor Range	1,500 sq. ft.
Sensor Technology	PIR + Microwave + Photocell
Warm-Up Time	15 seconds

### Reference

- A. LumaCAN Connections
- B. Reset Switch - Push and hold down for 5 seconds to reset the sensor's settings to their factory default settings.  
**For Application Reset:** If your device is "bricked" and you power up the device by pushing and holding down the reset switch for 10 seconds, the current application is deleted. As a result, the device becomes inoperable, and you must perform a software update.
- C. LumaCAN Communication Indicator Light - Normal Operation: Stays solid Green when there is power, but no communication. Blinks Green when communicating.
- D. Occupancy Detector, Light Level Sensor, and Occupancy Indicator Light:
  - Blinks Red when PIR detects occupancy.
  - Blinks Green when the microwave or photocell detects occupancy.
  - Blinks White rapidly when a firmware update is in process.
  - Blinks White slowly when in boot loader.
  - Cycles colors when an address assignment is pending from a DRC or other compatible controller.

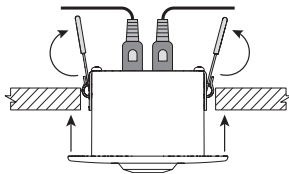
WEB VERSION

# Installation

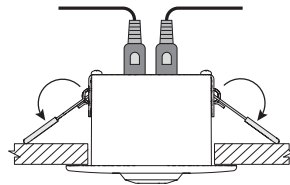
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1. Drill a mounting hole approximately 2 7/8 in. to 3 1/4 in. (73.03 mm to 82.6 mm) in diameter.
2. Push network wires through hole, and connect them to the sensor. If end of line, terminate the sensor with the provided RJ-45 termination plug.
3. LumaCAN Address: This device receives a LumaCAN address from a DRC controller or other compatible device. The sensor's indicator displays a multi-color LED pattern when the device is installed, has power, but does not have a LumaCAN address.  
**NOTE:** The assignment of a LumaCAN address by a controller can take up to 15 minutes after the device powers up.
4. Confirm the sensor is operating on the network.
5. Install the sensor into the mounting hole.

a. Retract spring arms and insert into mounting hole.



b. Push down the spring arms to secure the sensor.



## 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 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.

## IC STATEMENT

This device complies with Industry Canada licence-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.

## SDoC STATEMENT

Model OSR15-MCW, manufactured by Leviton Manufacturing, Inc., 201 N. Service Road, Melville, NY 11747, [leviton.com](http://leviton.com).

This device 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, including interference that may cause undesired operation of the device.

Any changes or modifications not expressly approved by Leviton Manufacturing Co., could void the user's authority to operate the equipment.

## RF EXPOSURE AND CO-LOCATION:

To comply with FCC OET Bulletin 65 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.

Patents covering this product, if any, can be found on [www.leviton.com/patents](http://www.leviton.com/patents).

## 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 5 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 five 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](http://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, is limited to five 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.