

# Self Contained Ceiling Mount Occupancy Sensor

Cat. Nos. ODC0S-I1, ODC0S-I2, ODC0S-I7

**LEVITON**<sup>®</sup>

## 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 overheating and possible damage to this device and other equipment, **DO NOT** install to control a transformer-operated device(s) other than appropriate low voltage lighting.
- 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:

- No user serviceable components. **DO NOT** attempt to service or repair.
- Use this device **WITH COPPER OR COPPER CLAD WIRE ONLY**.

DI-000-ODC0S-02E

## INSTALLATION INSTRUCTIONS

**ENGLISH**

### SPECIFICATIONS

**Cat. No.** ODC0S-I1  
**Rated:** 120VAC, 60Hz  
**Incandescent:** 1000W @ 120V  
**Inductive Fluorescent:** 1000VA @ 120V  
**Power Consumption:** 4W

**Cat. No.** ODC0S-I2  
**Rated:** 220-240VAC, 50Hz  
**Incandescent:** 1000W @ 220V  
**Inductive Fluorescent:** 500VA @ 220V  
**Power Consumption:** 4W

**Cat. No.** ODC0S-I7  
**Rated:** 220-277VAC, 50/60Hz  
**Fluorescent:** 2700VA @ 277V  
**Power Consumption:** 4W

### DESCRIPTION

The Leviton Passive Infrared Ceiling Mount Occupancy Sensor, Cat. No. ODC0S-I1, ODC0S-I7, ODC0S-I2 monitors rapid changes in temperature within its field-of-view (see Figures 2 and 3) and is designed to turn lights ON when temperature changes (such as a person entering a room) is detected, and OFF when occupancy is no longer detected and the scheduled time-delay setting has expired.

Since Cat. No. ODC0S-I1, ODC0S-I7, ODC0S-I2 responds to temperature changes, care should be taken not to mount the sensor directly above a heat source, or where hot/cold drafts (i.e. from an HVAC duct) will blow directly on the sensor, or where adjacent traffic, (i.e. hallway activity) will be within the sensor's field-of-view.

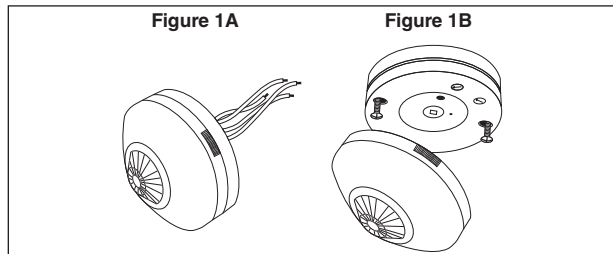
In addition, it is also recommended NOT to mount the Occupancy Sensor directly under a large light source. Large wattage bulbs (greater than 100W incandescent) give off a lot of heat and switching the bulb causes a temperature change that can be detected by the device. Mount the Occupancy Sensor at least 6 ft. away from large bulbs.

### FEATURES

- Sensor has a 360° field-of-view with 530 sq. ft. of coverage.
- LED indicator light blinks when sensor detects motion.
- Cat. No. ODC0S-I1, ODC0S-I7, ODC0S-I2 has four 14AWG 6" pre-stripped color coded leads.
- Screw on cover plate shields mounting hardware and adjustment control.

### INSTALLATION

1. Determine the best location for the sensor. Install the sensor at least 3 ft. away from fluorescent ballasts and HVAC ducts, and at least 4 ft. away from incandescent fixtures and HVAC diffusers. Install in a standard NEMA single-gang box.
2. Cut a 2-1/2 in. diameter hole in the ceiling beneath the single-gang box installed.
3. Remove approximately 5/8 in. (1.6 cm) of insulation from circuit wires.
4. Connect wires per appropriate WIRING DIAGRAM as follows: Twist strands of each lead tightly and, with circuit conductors, push firmly into the appropriate wire connector. Screw connector on clockwise making sure that no bare wire shows below the connector. Secure each wire connector with electrical tape.
5. Remove the face plate and set it aside (see Figures 1A and 1B). Set Time-Delay and Ambient Light as detailed in the SETTINGS section. Mount unit to single-gang box using two screws provided. Replace face plate.



6. Restore power at circuit breaker or fuse.

### SETTINGS

**Time-Delay:** Settings should be determined during the installation period. This adjustment controls the amount of time the lights stay ON after the last detected motion. You may select settings varying from 20 seconds (-) to 15 minutes (+) and any time in between.

### NOTES:

- Allow approximately 40 seconds for initialization when powered up. If the lights turn ON and the LED blinks when a hand is waved in front of the lens, the sensor was installed properly. If the operation is different, refer to the Troubleshooting Section.
- The ODC0S-I7 will have time settings varying from 20 seconds to 30 minutes.

**Ambient Light:** This adjustment allows you to determine at what minimum Ambient light level the device will operate. You may select settings from always operating (day and night) to operating only when the Ambient Light level is less than 3 lux, or anywhere in between. The lights will turn ON when the unit senses motion and the Ambient Light reaches your desired level.

**Perform the following steps for a more precise Ambient Light adjustment (see Figure 3):**

1. Make the adjustment when the actual ambient light is at the level where no artificial light is required.
2. Turn the Ambient Light adjustment to the (-) position (minimum light).
3. Turn the Time-Delay adjustment to the (-) position (at 20 seconds) and leave the monitored space.
4. Re-enter the monitored space after the lights go OFF and the lights will remain OFF.
5. Slowly turn the Ambient Light adjustment knob towards (+) until the lights go ON.
6. Slightly turn the Ambient Light adjustment knob back towards (-) and leave the monitored space.
7. When you return to the monitored space, the lights should remain OFF. If the lights come ON, repeat **step 6** until the lights remain OFF when you re-enter the monitored space, at the desired ambient light level.
8. Reset the Time-Delay adjustment back to the desired position.

### TROUBLESHOOTING

- **Lights will not turn ON**
  - **Circuit breaker or fuse is OFF:** Turn the breaker ON. Ensure that lights being controlled are in working order (i.e., working bulbs, integral switches ON, etc.).
  - **Sensor is wired incorrectly or may be defective:** Confirm that the sensor's wiring is done exactly as shown in the diagram and/or inspect it visually for problems.
  - **Lens is dirty or obstructed:** Inspect the lens visually and clean if necessary, or remove the obstruction.
  - **Ambient light setting is for a darker background than that present:** Adjust the Ambient light setting.
- **Lights will not turn OFF**
  - **Sensor is wired incorrectly or may be defective:** Confirm that the sensor's wiring is done exactly as shown in the diagram and/or inspect it visually for problems.
  - **Sensor may be mounted too closely to an air conditioning or heating vent, or traffic in an adjacent area is affecting sensor:** Move the sensor to another location, or close the vent.
  - **The line voltage has dropped:** Perform the necessary tests to ensure the line voltage has not dropped (beneath 100V for ODC0S-I1 or beneath 205V for ODC0S-I2 / ODC0S-I7). If it has dropped, check for operation of any large appliances on the circuit, and turn them off.
  - **Light is being reflected from an object:** Check the area for any white or shiny surfaces that might be reflective, and correct the situation.
- **Lights turn OFF and ON too quickly**
  - **Sensor may be mounted too closely to an air conditioning or heating vent:** Move the sensor to another location, or close the vent.
  - **Light being reflected from an object:** Check the area for any white or shiny surfaces that might be reflective, and correct the situation.
  - **Time delay set improperly:** Adjust the TIME DELAY (see SETTINGS section).

WEB VERSION

Figure 2A – Field-of-View (Horizontal)

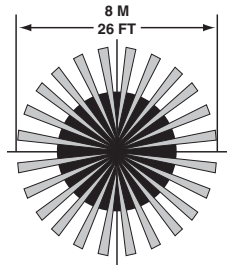


Figure 2B – Field-of-View (Vertical)

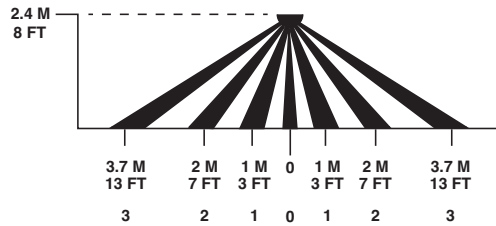
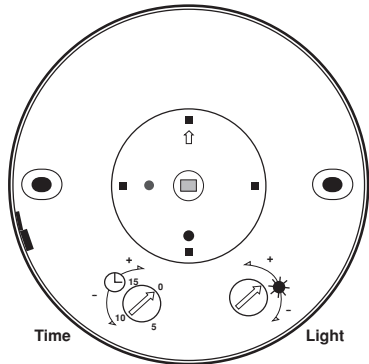
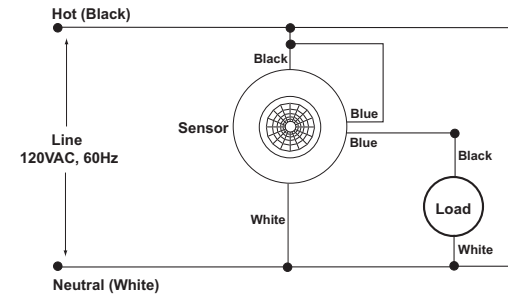


Figure 3 – Settings

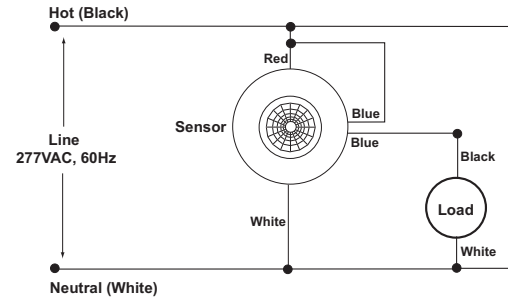
**NOTE:** Time settings for ODC0S-I7 are between 20 seconds and 30 minutes.



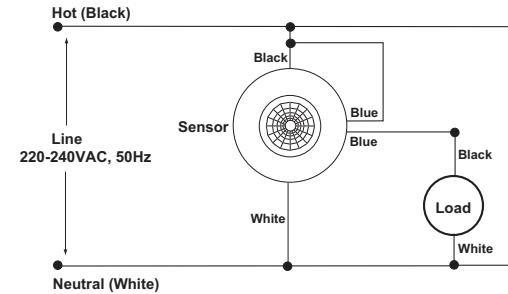
Wiring Diagram 1 - Cat. No. ODC0S-I1



Wiring Diagram 2 - Cat. No. ODC0S-I7



Wiring Diagram 3 - Cat. No. ODC0S-I2



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.

For Technical Assistance Call: 1-800-824-3005 (U.S.A. Only) [www.leviton.com](http://www.leviton.com)