

# OUTDOOR HIGH BAY/LOW BAY PASSIVE INFRARED OCCUPANCY SENSOR

Cat. No. OSFHW-CTW (Sensor)

Cat. No. OSFHL-CTW (Sensor with Adapter)

Cat. No. OSFOL-00W (Adapter, sold separately)

Fluorescent: 800 VA @ 120 VAC - Ballast, 1200 VA @ 277 VAC - Ballast, 1500 VA @ 347 VAC - Ballast, 1/4 Hp @ 120 VAC



DI-400-OSFHL-25B

ENGLISH

## WARNINGS AND CAUTIONS

- **TO AVOID FIRE, SHOCK, OR DEATH: TURN OFF POWER** at circuit breaker or fuse and test that power is off before installing, servicing or replacing fixture!
- **TO AVOID FIRE, SHOCK, OR DEATH: DO NOT** use to control a load in excess of the specified ratings. Check your load ratings to determine the unit's suitability for your application.
- To be installed and/or used in accordance with appropriate electrical codes and regulations.

- If you are not sure about any part of these instructions, consult an electrician.
- Use this device with **copper or copper clad wire only**.
- **Operating Temperature:** -40°F to 160°F.
- **Relative Humidity:** 20% to 90% non-condensing.

## FEATURES

- Pole, Fixture or Electrical Box mounted Passive Infrared Occupancy Sensor
- Adjustable Time Delay
- Adjustable Sensitivity
- 360 degree lenses for field-of-view (included)
  - Blue Lens = 8 - 25ft mounting height
  - White Lens = 20 - 40ft mounting height
- Aisle covers: add included aisle mask to either lens option.

## DESCRIPTION

Leviton's Outdoor High Bay Occupancy Sensor, Cat. Nos. OSFHW-CTW and OSFHL-CTW are specifically designed for wet indoor and outdoor mounted areas such as parking garages, food processing plants, nurseries, greenhouses, industrial facilities and other high ceiling applications. The OSFHW-CTW and OSFHL-CTW install directly to an industrial luminaire or an electrical junction box. A self-contained sensor and relay detects motion using the passive infrared (PIR) to sense sources (such as a person entering a room) within its field-of-view (monitored space) and automatically switches lights ON. The controlled lights will remain ON until no motion is detected and the scheduled time-delay has expired. OSFHW-CTW and OSFHL-CTW are supplied with two interchangeable lens rings that allow the user to select between a 360 degree High Bay or Low Bay pattern and an aisle pattern with the included aisle mask. OSFHW-CTW and OSFHL-CTW are UL listed, cUL listed and conforms to California Title 24 requirements. The sensor's high bay lens is designed for 20 ft. to 40 ft. mounting heights for a symmetrical pattern which will provide coverage of 50 ft. to 60 ft. diameter (refer to Figure 7). The low bay lens is designed for 8 ft. to 25 ft. mounting heights for a symmetrical pattern which will provide coverage of 30 ft. to 50 ft. diameter (refer to Figure 8). The sensor is sensitive to the heat emitted by the human body. In order to initially trigger the sensor, the source of heat must move from one zone of detection to another.

**NOTE:** Occupancy sensors respond to rapid changes in temperature, so care should be taken not to mount the device near a climate control source (i.e. radiators, air exchanges, and air conditioners). Hot or cold drafts will look like body motion to the device and will trigger it if the unit is mounted too close. It is recommended to mount the occupancy sensor at least 6 ft. away from the heating or cooling ventilation source.

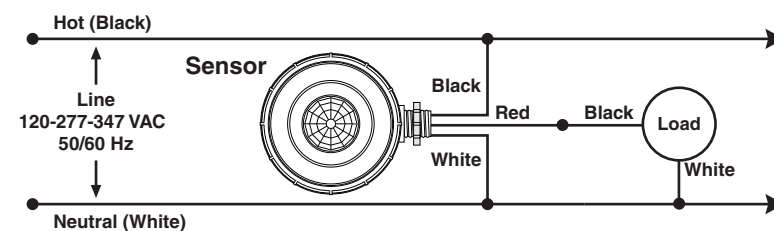
## INSTALLATION

**NOTE:** OSFHW-CTW and OSFHL-CTW are supplied with two lens trim rings. The 360 degree high bay lens (white color trim ring) is installed at the factory with the low bay lens (blue color trim ring) in the carton. Choose the correct lens for your fixture height location and add the aisle mask if desiring to block detection outside of the aisle. Refer to Figure 5 for changing lens trim ring and adding the aisle mask. The OSFHW-CTW sensor mounts in a 1/2" knock out hole on a pole or the end of a luminaire or electrical box. When mounting to a pole the sensor's field-of-view will be partially obstructed by the pole. When mounted to a luminaire the sensor's field-of-view may be partially obstructed by the luminaire housing. As long as the bottom of the sensor is mounted within 1" from the bottom of the luminaire, the field-of-view will not be affected.

1. **WARNING: TO AVOID FIRE, SHOCK, OR DEATH: TURN OFF POWER** at circuit breaker or fuse and test that power is off before installing, servicing or replacing fixture!
2. The sensor comes with two lens rings, a white one for 360 degree high bay detection (installed at factory), and a blue one for low bay applications. **NOTE:** The aisle mask is provided to customize your detection area.
3. To change lens, unscrew the locking ring counter clockwise to remove, replace the existing lens and put the locking ring back on; hand tighten only (refer to Figure 5). To add the aisle mask line up the notches of the locking ring with the tabs of the aisle mask and turn to hold in place.
4. Remove the lock-nut from the threaded nipple and insert the wires and the threaded nipple into a half inch hole of the pole, luminaire body, electrical box or adapter. **NOTE:** If adapter is used, mount sensor to adapter per Figure 2. Torque lock nut to 10 in-lbs.
5. Slide the lock-nut over the wires and thread clockwise on to the threaded nipple to secure the sensor firmly in place making sure the lens is orientated towards the area to be monitored (refer to Figure 3).
6. Connect wires per Wiring Diagram as follows: BLACK lead to LINE (Hot); RED lead to LOAD; WHITE lead to LINE (Neutral). Twist each lead tightly with circuit conductors and push firmly into the appropriate wire connector. Screw connector on clockwise making sure that no bare wire shows below the connector.
7. Restore power at circuit breaker or fuse.

**NOTE:** Allow approximately two minutes for charge-up. If the lights turn ON and the LED blinks when a hand is waved in front of the lens, then the sensor was installed properly. If the operation is different, refer to the Troubleshooting Section. The sensor is factory preset to work without any adjustments. If you desire to change the factory settings, refer to the Settings Section.

## WIRING DIAGRAM



## 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.

## INSTALLATION

### ADAPTER ASSEMBLY/ENSEMBLE ADAPTATEUR/ENSAMBLE ADAPTADOR

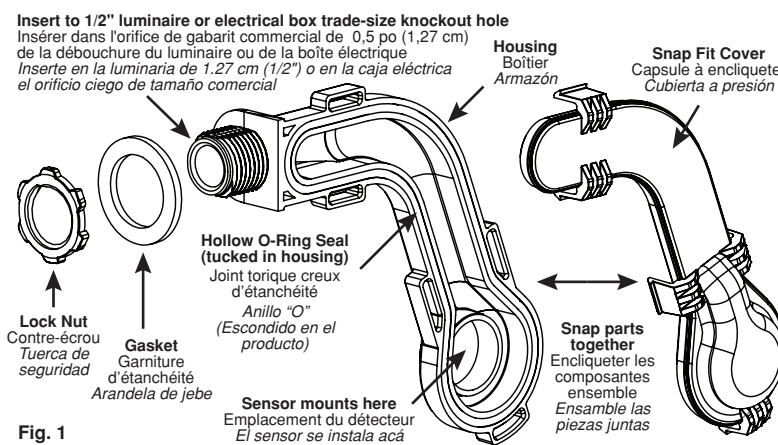
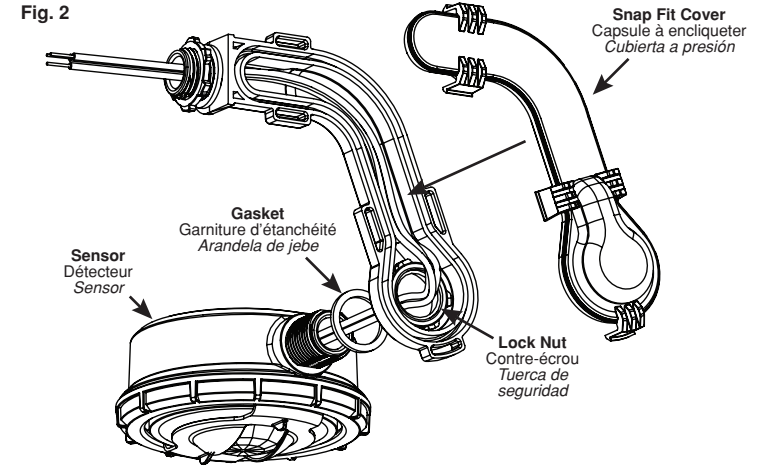


Fig. 1

Fig. 2



### LUMINAIRE MOUNT/MONTAGE DU LUMINAIRE/INSTALACIÓN DE LA LUMINARIA

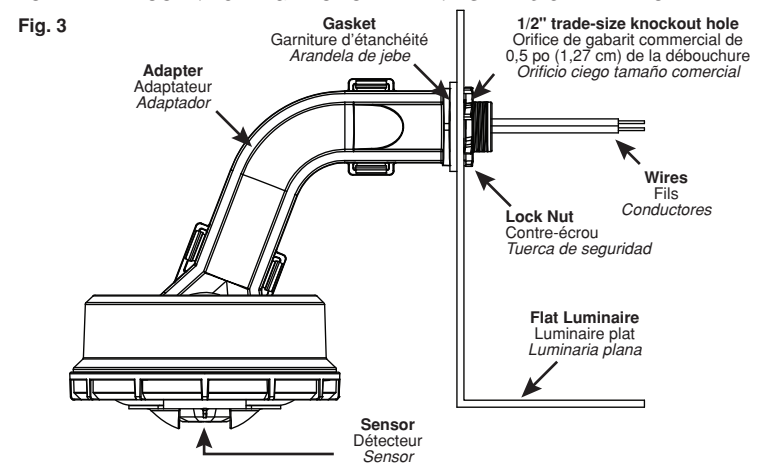


Fig. 3

### POLE LIGHT/INSTALLATION SUR POTEAU/ LUZ DE POSTE

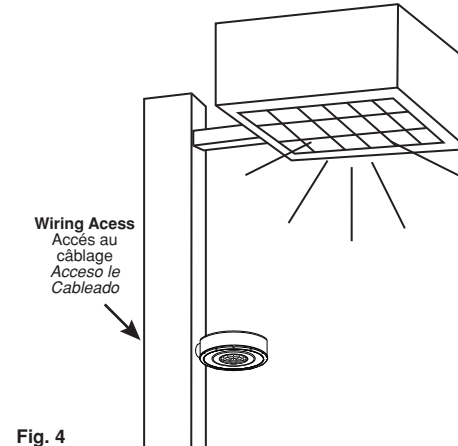


Fig. 4

### CHANGING LENS (adding aisle mask)

Remplacement de la lentille (et ajout du masque d'allée)  
Cambio de Lentes (añada bloqueadores de pasadizo)

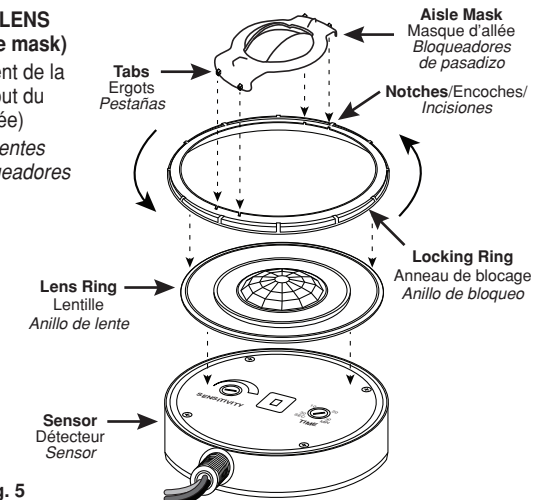
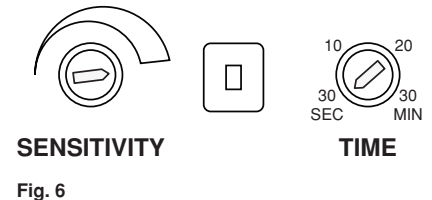


Fig. 5

### 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 30 seconds, 10 minutes, 20 minutes and 30 minutes.  
**Sensitivity:** Settings should be determined during the installation period. This adjustment controls the sensitivity of the passive infrared (PIR) detection.  
**NOTE:** After power is turned ON, allow two minutes for this unit to warm up before performing Time-Delay settings.



SENSITIVITY

TIME

### COVERAGE AREA/AIRES COUVERTES/AREA DE COBERTURA

Fig. 7 High Bay Lens (White)  
Lentille pour plafonds élevés (blanche)  
Lentes instalación en alto (blanca)

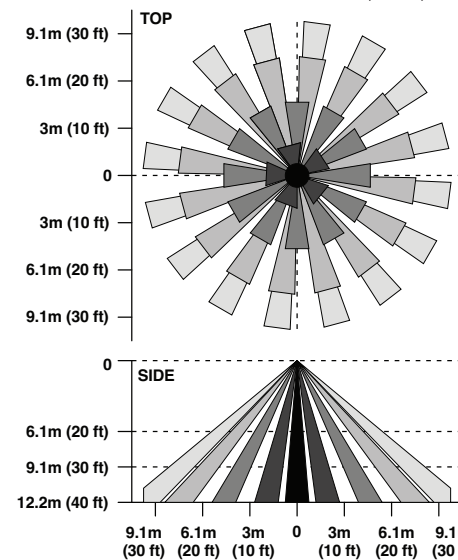


Fig. 8 Low Bay Lens (Blue)  
Lentille pour plafonds réguliers (bleue)  
Lentes instalación en bajo (azul)

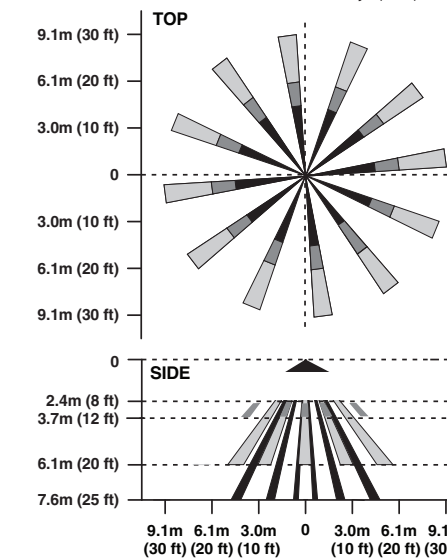
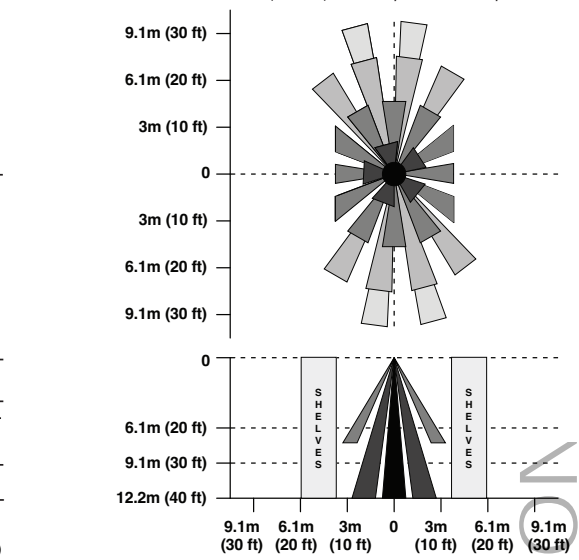


Fig. 9 High Bay Lens (White) with Aisle Mask  
Lentille pour plafonds élevés (blanche), avec masque d'allée  
Lentes instalación en alto (blanca) con bloqueadores de pasadizo



## TROUBLESHOOTING

- Lights will not turn ON
  - Sensor is wired incorrectly: Confirm correct wiring. Inspect visually for problems.
  - Lens is dirty or obstructed: Inspect the lens. Clean or remove the obstruction.
- Lights will not turn OFF
  - Sensor is wired incorrectly: Confirm correct wiring. Inspect visually for problems.
  - Sensitivity set improperly: Adjust the SENSITIVITY dial.
- Lights turn OFF and ON too quickly
  - Sensitivity set improperly: Adjust the SENSITIVITY dial.
  - Time delay set improperly: Adjust the TIME DELAY dial.

**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.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

## FCC CAUTION

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

**IC Statement:** This device 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 (sDoC):** The Outdoor High Bay/Low Bay Passive Infrared Occupancy Sensor is manufactured by Leviton Manufacturing, Inc., 201 N Service Road, Melville, NY 11747. www.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 received, including interference that may cause undesired operation.

## LIMITED LIFETIME 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 during the lifetime of the product. 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 re-installation. 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. 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.

