

# OUTDOOR INTEGRAL FIXTURE OCCUPANCY SENSOR

**LEVITON**<sup>®</sup>

Cat. No. OSF20-IUW

Cat. No. OSF20-ILW\*

Rated: 120-347 VAC, 50/60 Hz

Input: 12-24 VDC, 20 mA

Fluorescent: 800 VA @ 120 VAC - Ballast

Operating Temperature: -40°F to 160°F.

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

Relative Humidity: 20% to 90% non-condensing.

Operating Temperature: -40°F to 160°F.

\*Requires the Leviton OPP20 power Pack

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DI-000-OSF20-25B AR0536

## WARNINGS & 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!
- Controlling a load in excess of the specified ratings will damage the unit and pose the risk of fire, electric shock, personal injury or death. Check your load ratings to determine the unit's suitability for your application.
- Sensor **MUST BE** installed directly in a luminaire.
- 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**.

## INSTALLATION

ENGLISH

### FEATURES

† OSF20-IUW ONLY

- Passive infrared detection technology.
- True Zero-Cross relay technology provides maximum contact life and compatibility with electronic ballasts †.
- 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 Integral Fixture Occupancy Sensor, Catalog Number OSF20, is designed to be mounted directly into a luminaire. The wiring and housing of the sensor is installed adjacent to the ballast and hidden from view behind the reflector cover. Only the PIR detector dome lens and locking ring are visible on the exterior of the fixture. The sensor is designed to be mounted in a fixture and in a downward facing orientation.

The occupancy sensor is designed to be used in wet indoor and outdoor applications; food processing plants, nurseries, greenhouses, parking garages, industrial facilities, etc.

The occupancy sensor utilizes passive infrared (PIR) technology to detect motion within its field of view. The PIR Occupancy Sensor uses a small semiconductor heat detector that resides behind a multi-zone optical lens. This Fresnel lens establishes dozens of zones of detection. 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. The device is most effective in sensing motion across its field-of-view.

This will automatically turn the lights ON. When motion is no longer detected, the sensor will conclude that the space is unoccupied. This will initiate the Delay Timer. If the delay timer expires and no motion is detected, the lights will turn OFF. If motion is detected, delay timer will stop and lights will remain ON.

### INSTALLATION

**NOTE:** The OSF20 is supplied with two lens covers. The 360 degree High Bay lens (white color) is installed at the factory with the Low Bay lens (blue color) 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. The OSF20 Sensor mounts in a 1.5" knock out hole in the luminaire.

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. Remove the locking ring by turning counter clockwise and mount sensor into a 1.5" knock-out in the luminaire. Replace and hand tighten the lock ring. Choose the correct lens for your fixture height location and add the aisle mask if desiring to block detection outside of the aisle. To add the Aisle Mask line up the "dot" on the Aisle mask with the "dot" on the lens assembly and turn to hold in place.
3. Connect wires per appropriate **Wiring Diagram** as follows:
  - Line Voltage (Fig 2):** BLACK lead to LINE (Hot); RED lead to LOAD; WHITE lead to LINE (Neutral). Twist circuit conductors together and push firmly into the appropriate wire connector. Screw connector on clockwise making sure that no bare wire shows below the connector.
  - Low Voltage (Fig 3):** RED lead to + 24 VDC; BLACK lead to - 24 VDC; BLUE lead to Power Pack control wire.
4. 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.

### 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.



Fig. 1

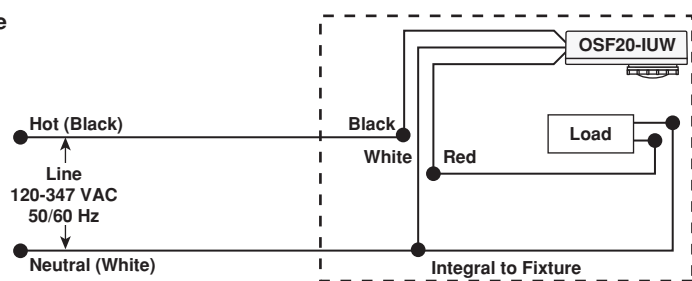
### TROUBLESHOOTING

- Lights will not turn ON
  - Sensor is wired incorrectly: Confirm that the sensor's wiring is done correctly and inspect visually for problems.
  - Lens is dirty or obstructed: Inspect the lens visually and clean if necessary, or remove the obstruction.
- Lights will not turn OFF
  - Sensor is wired incorrectly: Confirm that the sensor's wiring is done correctly and 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.

### WIRING DIAGRAMS

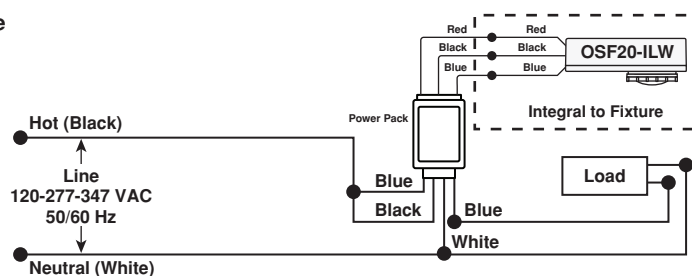
#### Line Voltage

Fig. 2



#### Low Voltage

Fig. 3



### FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada Ltd 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.

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

Fig. 4

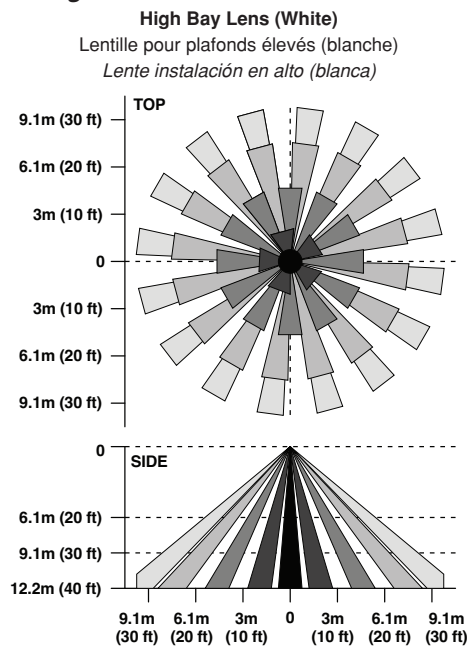


Fig. 5

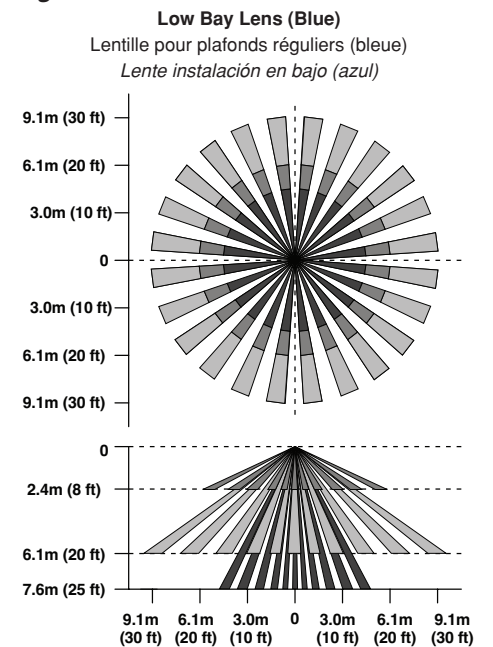


Fig. 6

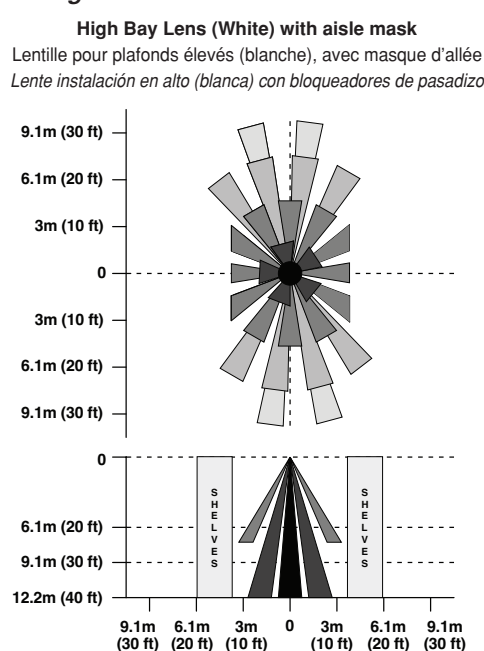
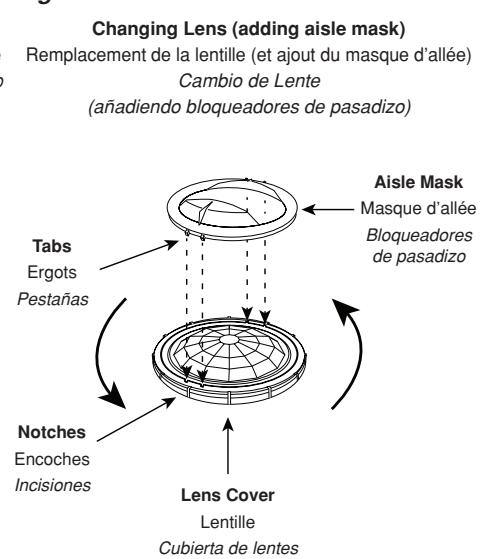


Fig. 7



### DIMENSIONS / DIMENSIONS / DIMENSIONES

Fig. 8

