

# Fixture Mount PIR Outdoor Integral Luminaire Occupancy Sensor



OSF20



OSF20  
(with Aisle Mask installed)

## Description

The Fixture Mount PIR Outdoor Integral Luminaire Occupancy Sensor (OSF20) is designed to be mounted directly into a luminaire and is ideal for indoor or outdoor locations. The OSF20 offers a sensor and relay in one device. 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 comes with two interchangeable lenses for use in a 360° high bay general area and low bay applications. It also includes an aisle mask accessory.

## Applications

Leviton's Fixture Mount Outdoor Integral Luminaire Occupancy Sensor is designed specifically for pre-wiring and installing inside of luminaire fixtures including:

- Supermarket meat departments
- Food processing plants
- Parking garages

## Operation

The OSF20 utilizes passive infrared (PIR) technology with auto-ON/auto-OFF operation and an adjustable time delay to detect motion within its field of view. A small semiconductor heat detector resides behind a multi-zone optical lens, making the sensor sensitive to the heat emitted by occupants. This Fresnel lens establishes dozens of zones of detection. In order to initially trigger the sensor, the source of heat must move from one zone of detection to another. The OSF20 is most effective in sensing motion across its field-of-view.

Once the device senses motion, the sensor 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, the delay timer will stop and the lights will remain ON.

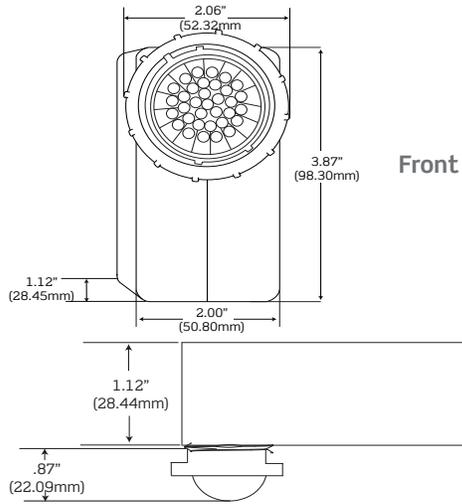
## Features

- Easy installation with 7.5" leads allows for easy connection to any ballast
- Aisle mask accessory included
- Low voltage 24V model available—requires a separate power supply
- Passive infrared detection technology for accurate sensing
- True Zero-Cross relay technology provides maximum contact life and compatibility with electronic ballasts
- Adjustable time delay located on sensor housing for easy access
- Aesthetically pleasing design
- Compact size for tight spaces
- 20-40' standard mounting heights for indoor and outdoor use
- Internal fixture mount reduces number of devices on ceiling
- **Passive Infrared Technology (PIR):** the OSF20 uses PIR technology to detect motion
- **Aisle mask:** one unit includes interchangeable 360° high-bay (20-40') and 360° low-bay (8-25') lenses and an aisle mask accessory
- **Time delay:** the time out occurs when motion is no longer detected by the sensor and the device counts a set amount of time before turning off the load. If the device sensor detects motion during this 'time delay', the count resets and the device initiates a new count. The time delay can be adjusted to 30 seconds, 10, 20 and 30 minutes, respectively.
- **Zero-crossing circuitry:** relay uses a zero-crossing circuitry to provide reliable, long-life operation
- **LED:** a green LED blinks when motion is detected

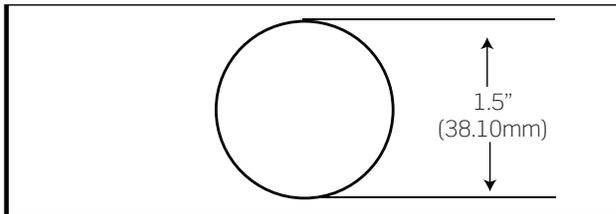
## Installation

The OSF20 is designed to mount directly into a light fixture, with only the PIR lens being visible. The wiring and housing of the sensor is installed adjacent to the ballast, hidden from view behind the reflector's cover.

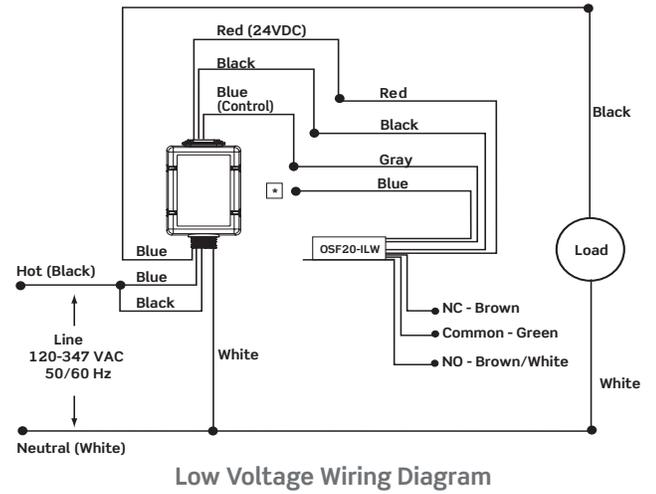
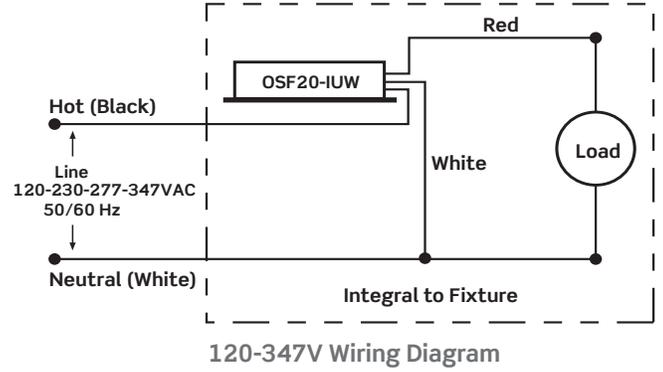
## Dimensions Diagram



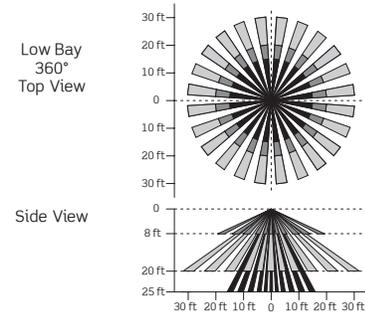
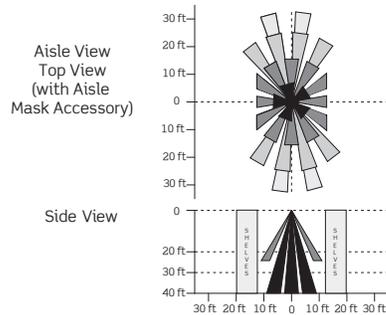
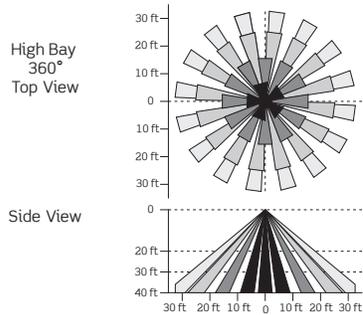
## Dimensions for Installation



## Wiring Diagrams



## Field of View Diagrams



**Specifications**

<b>Electrical</b>	<b>120-347V Model</b>	<b>Low Voltage Model</b>
Input Voltage	120-230-277-347V	24VAC/VDC
Operational Frequency	50/60Hz	
Wire Designation	Line-Black, Load-Red, Neutral- White	Line-Black, Load-Red, Neutral-White; OCC=Blue, PH=Gray
Load Rating	Fluorescent Ballasts: 800VA @ 120VAC, 1200VA @ 277 VAC Incandescent: 800W @ 120V, Motor: 1/4 HP Load @ 120V	Input: 20mA Output: 120mA HVAC: 1A, 30VDC
Time Delay	30 seconds, 10, 20 and 30 minutes	
<b>Environmental</b>		
Operating Temperature Range	-40 to 160° F (-40 to 71° C)	
Storage Temperature Range	-14 to 60° F (-25 to 71° C)	
Relative Humidity	20 to 90% non-condensing	
<b>Physical</b>		
Size	3.87" (98.30mm)L x 2.00" (50.80mm)W x 1.12" (28.45mm)D	
Color	White	
Lead Length	7.5" (190.50mm)	
<b>Other</b>		
Listings	IP65 rated, complies with FCC regulations, NOM certified	
Energy Codes	Can be used to comply with IECC, ASHRAE 90.1, and 2019 Title 24, Part 6 occupancy sensing requirements	
Warranty	Limited Five-Year Warranty	

**Ordering Information**

<b>Fixture Mount PIR Outdoor Integral Luminaire Occupancy Sensor</b>	
<b>Cat. No.</b>	<b>Description</b>
OSF20-IUW	Fixture Mount PIR Outdoor Integral Luminaire Occupancy Sensor, 360 degree high-bay lens (8-40'), 7.5" wire lead length, 120-230-277-347V; 50/60 Hz; aisle mask, UL listed, IP65 rated
OSF20-ILW	Fixture Mount PIR Outdoor Integral Luminaire Occupancy Sensor, 360 degree high-bay lens (20-40'), 7.5" wire lead length, 24V, aisle mask, UL listed, IP65 rated

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