Passive Infrared Ceiling Mount Occupancy Sensor

Description

The OSC-P-1500 is a Passive Infrared (PIR) ceiling mount, low voltage occupancy sensor that works in conjunction with Cooper Lighting Solution's Power Packs to control lighting. The sensor's main function is to turn the lights ON or maintain the lights ON while movement is detected within the sensor's range and to turn the lights OFF when the space is left unoccupied.

The sensor uses a dual element PIR 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 trigger the sensor, the source of heat must move from one zone of sensing to another. Non-moving hot objects will not cause the lights to turn ON (like incandescent lights)

Applications

- Classrooms
- Utility closets
- Conference rooms
- Copy rooms
- Hallways
- Small offices
- Open areas
- Storage rooms
- Vending rooms
- Open warehouses
- Work spaces

Features

- Fast, simple installation: easy base mount, three wire connection (low voltage) and twist-and-lock
- Self-adjusting: internal microprocessor continually analyzes, evaluates and adjusts the infrared sensitivity and time delay. Performance is kept at a maximum and user complaints are eliminated.
- Flexible base mounting: supplied twist-and-lock base mount permits fast alignment. Supplied cover hides mounting hardware and wires. Can be used with raceways for hard surface installations.
- Range & coverage: 450 sq. feet and 1,500 sq. feet models available
- Maximum reliability, low cost: all digital circuitry uses a minimum of components
- Ambient light recognition: a light sensor prevents lights from turning on when the room is adequately lit by natural light
- Non-volatile memory: learned and adjusted settings saved in protected memory are not lost during power outages
- Timer setting feature: automatic—30sec–30min. Test mode—6sec with auto exit programming.
- PIR masking: pre-scored masking disks are provided with the device for fine tuning the field-of-view
- Walk-through: provides increased energy savings by decreasing the time delay to 2.5min when someone momentarily walks through the monitored space
- High motion sensitivity: large lens area and multi-element lens design gives excellent range and sensitivity
- Custom off-white color matched for shaded ceilings and most common ceiling tiles
- Device: rugged, high-impact, injection molded plastic. Color coded leads are 6" long (16.24 cm).

How the Sensor Adapts

Condition	Example	Self-Adaptive Reaction
Timer Left In Test Mode - The sensor remains in an 6 sec. test mode	An installer accidentally leaves the sensor in the 6 sec. timer test mode and the lights may go off or on every 6 sec	The sensor automatically resets the timer to 10 min after 15 min of test mode
False-On - The sensor incorrectly turns the lights ON	The sensor detects movement in the corridor or hall way and the room lights turn ON	After an initial movement is sensed, if another movement is not sensed within the timer setting then the delayed off time setting is automatically reduced
False-Off - The sensor incorrectly turns the lights OFF	The sensor does not detect movement because an occupant sits virtually motionless at a desk and the lights turn off	If motion is sensed within a short period after the lights go off, then the current delayed off-time setting is increased

COOPER Lighting Solutions

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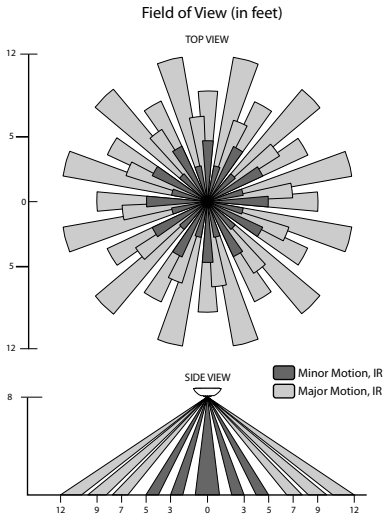
DIP Switch Settings

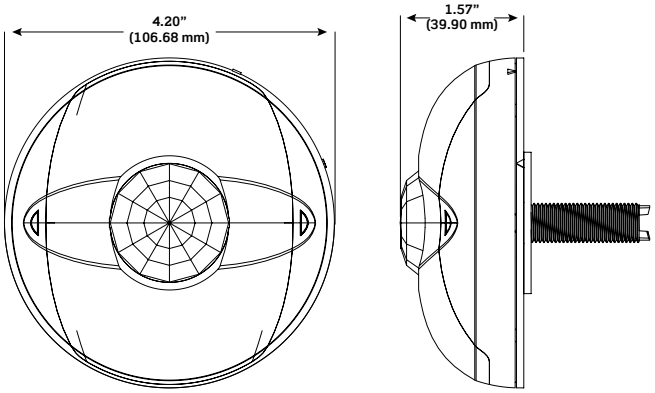
SWITCH		SWITCH FUNCTIONS	SWITCH SETTINGS
BANK A		OFF	ON
A1	N/A	**Multi-Tech**	Single Tech
A2	N/A	PIR	Ultrasonic
A3	Manual Mode	**Auto Adapting Enabled**	Auto Adapting Disabled
A4	Walk-Thru Disable	**Walk-Thru Enabled**	Walk-Thru Disabled
BANK B			
B1	Override to ON	**Auto Mode**	Lights Forced ON
B2	Override to OFF	**Auto Mode**	Lights Forced OFF
B3	Test Mode	**OFF'ON'OFF**	Enter/Exit Test Mode
B4	LED Disable	**LEDs Enabled**	LEDs Disabled

*Bold items are factory defaults

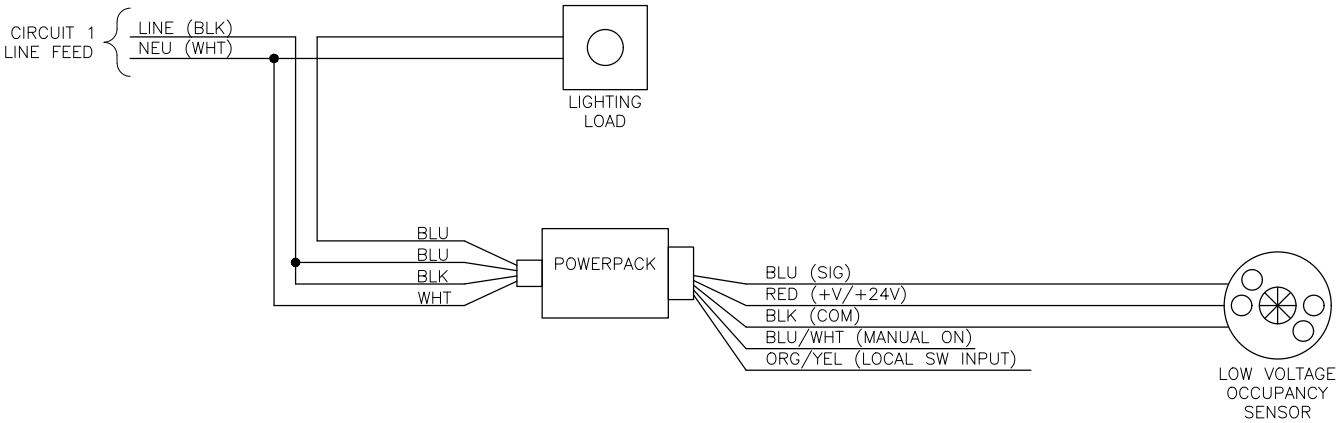
Field-Of-View Diagram



Dimensions Diagram



Wiring Diagram



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Specifications

Electrical	
Power Requirements	24VDC (12-30VDC), 10mA from Power Pack
Power Consumption	10mA
Output	24 VDC active high logic control signal with short circuit protection
Controls	
Infrared Sensitivity	0 to 100%; red knob (factory setting: 75%)
Light Sensor	20 to 3,000 Lux; blue knob factory set at 100% (grey wire required)
Time Delay	30sec-30min; black knob (factory setting: 10min)
Indicators	
Red LED Lamp	Passive infrared motion technology
Environmental	
Operating Temperature Range	32-104°F (0-40°C)
Relative Humidity	0-95% non-condensing, for indoor use only
Other	
Mounting Height	8-10 feet
Energy Codes	Can be used to comply with IECC, ASHRAE 90.1 and 2022 Title 24, Part 6 occupancy sensing requirements
Listings	CUL/US Certified
Warranty	Limited 5-Year

Ordering Information

Cat. No.	Description
OSC-P-1500	Passive Infrared Ceiling Sensor, 1500 sq. feet of coverage

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