

Multi-Technology Ceiling Occupancy Sensor



Description

Occupancy sensors have two tasks: 1) Keeping the lights ON while the room is occupied, and 2) Saving energy by keeping the lights OFF while the room is unoccupied.

Passive Infrared (PIR) is an excellent and precise technology for initially turning the lights ON, but lacks sensitivity for minor motion at distances. Ultrasonic (U/S) technology provides maximum sensitivity with continuous reflective high frequency waves. This is optimal for keeping the lights ON.

Leviton's multi-technology sensor combines the benefits of both PIR and U/S technologies for unrivaled performance and reliability.

Applications

- Cafeterias
- Computer rooms
- Day care centers
- Work spaces
- Offices with cubicles
- Restrooms
- Storage rooms
- Classrooms
- Conference rooms
- Filing rooms
- Open warehouses
- Open areas
- Stairwells
- Executive offices

Features

- Self-adjusting: internal microprocessor continually analyzes, evaluates and adjusts the sensitivity and time delay. Performance is kept at a maximum and user complaints are eliminated.
- Custom off-white color matched for shaded ceilings
- Fast, simple installation: easy ceiling mount, three wire connection (low voltage) and twist-lock sensor attachment for 360° rotation and flexibility
- Small motion sensitivity: the ultrasonic technology provides excellent small motion sensitivity
- Timer setting feature: automatic—30sec–30min. Test mode—6sec with auto exit programming

Features

- Non-volatile memory: learned and adjusted settings saved in protected memory are not lost during power outages
- Walk-through: provides increased energy savings by decreasing the time delay to 2.5min when someone momentarily walks through the monitored space
- Wide coverage: units from 500 to 2,000 sq. ft. available
- Power base (OPB15) available for line voltage applications
- Ambient light recognition: a light sensor prevents lights from turning on when the room is adequately lit by natural light
- Ultrasonic (U/S) components: one or two U/S transducers and one or two narrow bandwidth receivers each 16mm in diameter. Frequency—Crystal controlled to $\pm 0.005\%$.
- Device: rugged, high-impact, injection molded plastic, off-white. Color coded leads 6" (15.24 cm).

How The OSCxx-M Automatically Adapts

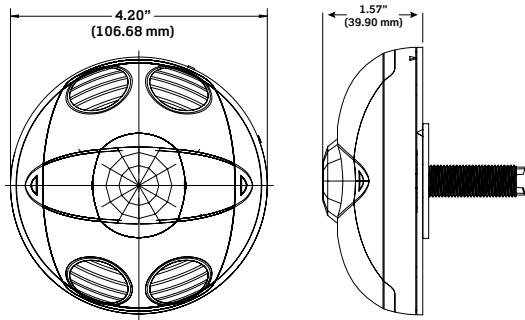
Condition	Example	Self-Adaptive Reaction
Timer Left in Test Mode—The sensor remains in a 6 sec. test mode	An installer accidentally leaves the sensor in the sec. timer test mode and the light may go OFF or ON every 6 sec.	The sensor automatically rests the timer to 10 min after 15 min of test mode.
False ON—The sensor incorrectly turns the lights ON	The sensor detects movement in the corridor or hallway and the room lights turn ON	After 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.

DIP Switch Settings

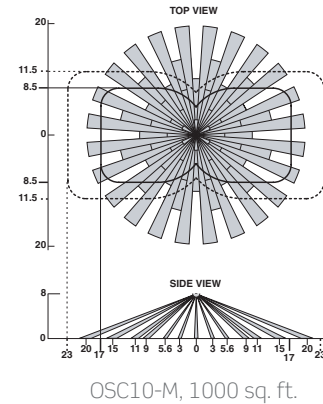
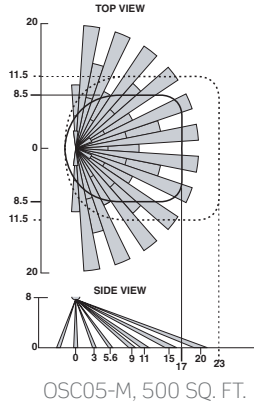
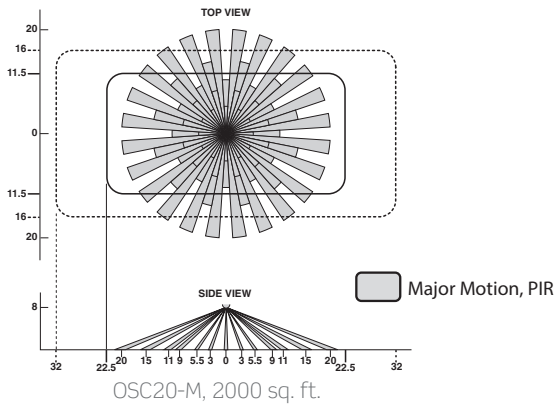
Switch		Switch Functions	Switch Settings
Bank A		OFF	ON
A1	N/A	Multi-Tech	Single Tech
A2	N/A	PIR	Ultrasonic
A3	Manual Mode	Auto Adapting Enabled	Auto Adapting Disabled
A4	Walk-Thru Disable	Walk-Thru Enabled	Walk-Thru Disabled
Bank B			
B1	Override to ON	Auto Mode	Lights forced ON
B2	Override to OFF	Auto Mode	Lights forced OFF
B3	Test Mode	OFF/ON/OFF	Enter/Exit Text Mode
B4	LED Disable	LEDs Enabled	LEDs Disabled

Bold items are factory defaults

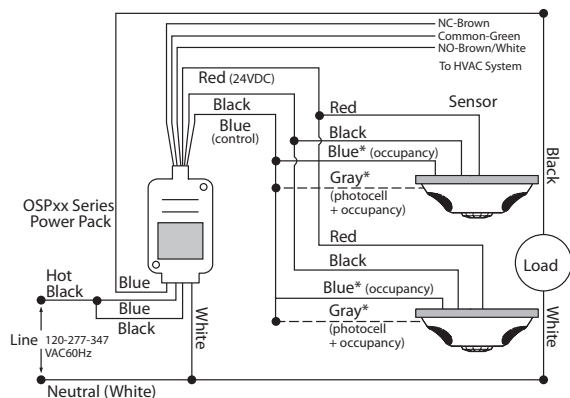
Dimensions Diagram



FOV Diagrams



Wiring Diagram



Specifications

Electrical	
Frequency	OSC05-M0W, OSC10-M0W: 40kHz OSC20-M0W: 32Khz
Power Requirements	24 VDC, from OSPxx Power Pack or OPB15 Power Base
Power Consumption	OSC05: 25mA, OSC10: 35mA, OSC20: 30mA
Output	24 VDC active high logic control signal with short circuit protection
Controls	
Ultrasonic Sensitivity	0-100%; green knob (factory setting: 50%)
Infrared Sensitivity	0-100%; 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	
Green LED	U/S motion technology
Red LED	Infrared motion technology
Environmental	
Operating Temperature Range	32 to 104°F (0 to 40°C)
Relative Humidity	0-95% non-condensing, for indoor use only
Other	
Mounting Height	8-12 feet
Listings	CUL/US Certified
Energy Codes	Can be used to comply with IECC, ASHRAE 90.1, and 2022 Title 24, Part 6 occupancy sensing requirements
Warranty	Limited Five-Year Warranty

Ordering Information

Multi-Tech Ceiling Sensors	
Cat. No.	Description
OSC05-M0W	Multi-Technology Ceiling Sensor, 500 sq. feet of coverage
OSC05-MAW	Multi-Technology Ceiling Sensor, 500 sq. feet of coverage, Made in USA with globally sourced components
OSC10-M0W	Multi-Technology Ceiling Sensor, 1,000 sq. feet of coverage
OSC10-MAW	Multi-Technology Ceiling Sensor, 1,000 sq. feet of coverage, Made in USA with globally sourced components
OSC20-M0W	Multi-Technology Ceiling Sensor, 2,000 sq. feet of coverage
OSC20-MAW	Multi-Technology Ceiling Sensor, 2,000 sq. feet of coverage, Made in USA with globally sourced components

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Visit our Website at: www.leviton.com/sensors

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