LEVITON ®

Multi-Technology Ceiling Occupancy Sensor

GENERAL OPERATION

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
- Workspaces
- Offices with cubicles
- Restrooms
- Storage rooms
- Classrooms
- Conference rooms
- Filing rooms
- Open warehouses
- Open areas
- Stairwells
- Executive, open and private 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
- Maximum reliability, low cost: digital circuitry uses a minimum of components
- Small motion sensitivity: the ultrasonic technology provides excellent small motion sensitivity
- Timer setting feature: automatic—30sec–30min. Test mode—6sec with auto exit programming.
- 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 ±.005%.
- Device: rugged, high-impact, injection molded plastic, off -white. Color coded leads 6" (16.24 cm).

OSCxx-M0W

HOW THE OSCxx-M AUTOMATICALLY 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 mov ement 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.

PRODUCT DATA

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

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	32-104°F (0-40°C)
Relative Humidity	0-95% non-condensing, for indoor use only

OTHER	
Mounting Height	8-12 feet
Listings	CUL/US Certified, can be used to comply with 2016 Title 24, Part 6 occupancy sensing requirements
Warranty	Limited Five-Year Warranty

ORDERING INFORMATION

CAT NO.	DESCRIPTION
OSC05-M0W	Multi-Technology Ceiling Sensor, 500 sq. feet of coverage
OSC10-M0W	Multi-Technology Ceiling Sensor, 1,000 sq. feet of coverage
OSC20-M0W	Multi-Technology Ceiling Sensor, 2,000 sq. feet of coverage

NAFTA compliant and Made in USA models available

DIMENSIONS

4.20" (106.68 mm)
1.57" (39.90 mm)

FIELD-OF-VIEW

Major Motion, PIR

OSC20-M, 2000 sq. ft.

OSC05-M, 500 SQ. FT.

OSC10-M, 1000 sq. ft.

PHYSICAL WIRING

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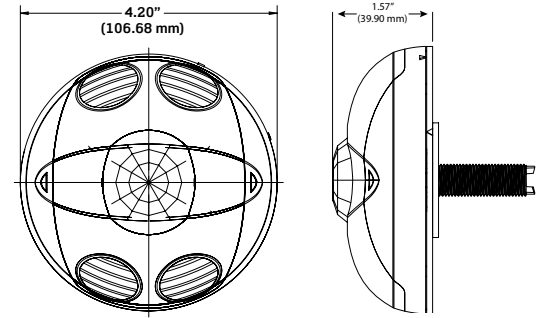
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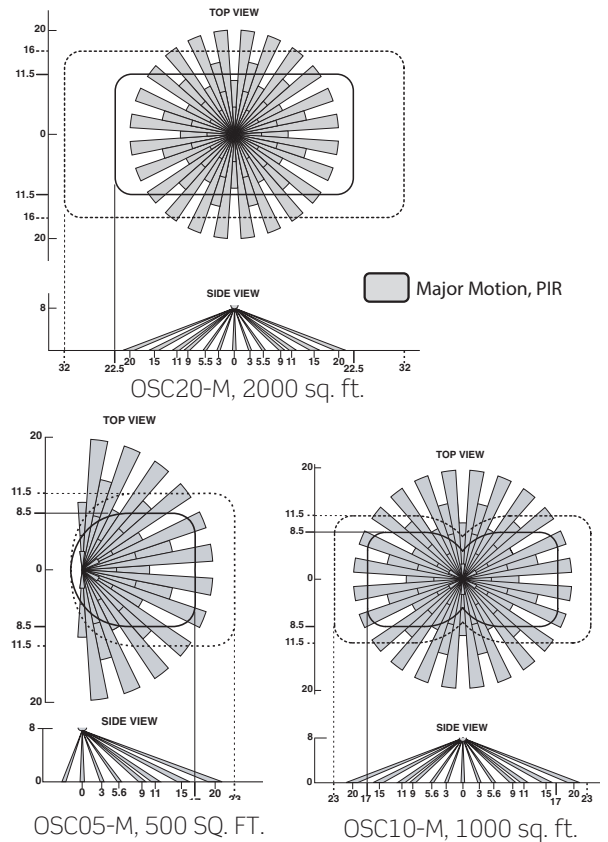
Visit our Website at: www.leviton.com/sensors