

Occupancy Sensor Multi-Technology Ceiling Sensor

OSC20-MOW
OSC10-MOW
OSC05-MOW

The most advanced sensor available. Combines multi-technology with all-digital architecture. Eliminates false triggering. The result is a trouble-free, "install and forget" solution for lighting control.

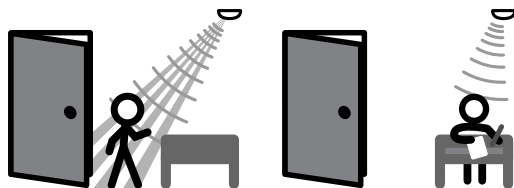
THE OSCxx-MOW SERIES OCCUPANCY SENSOR

- MULTI-TECHNOLOGY FOR HIGHEST RELIABILITY
INFRARED & ULTRASONIC
- SIMPLE, FAST INSTALLATION
- SELF-ADJUSTING
- ALL-DIGITAL, COMPLETE RELIABILITY
- PHOTOCELL BUILT-IN
- CEILING MOUNT



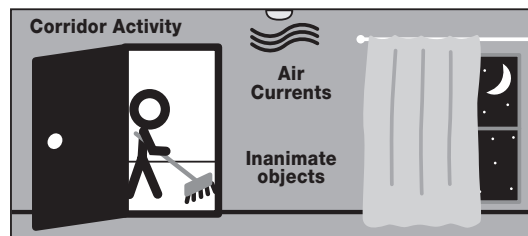
GENERAL OPERATION

Occupancy sensors have two tasks: keeping the lights on while the room is occupied and, conversely keeping the lights off when unoccupied. Ultrasonic (doppler shift) motion detection gives maximum sensitivity yet can be vulnerable to false triggering from air conditioning currents, corridor activity and movement of inanimate objects. Infrared motion sensing gives immunity to false triggering, but lacks sensitivity at greater distances. Leviton multi-technology sensors combine the benefits of both infrared and ultrasonic technologies for unrivaled performance and reliability.



Upon room entry, the infrared detects motion and turns lights on.

Ultrasonic keeps lights on even with very minor motion.



When unoccupied, lights stay off while air conditioning system cycles on and off, and cleaning crews occupy corridors.

ADAPTIVE FUNCTIONS

The OSCxx-MOW constantly analyzes and adapts to changing conditions

HOW THE ODCXX-M AUTOMATICALLY ADAPTS

Condition	Example	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 hallway 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.

OSCxx-MOW

LEVITON SPECIFICATION SUBMITTAL

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Product Specifications

OSCxx-MOW

PRODUCT SPECIFICATIONS

FEATURES

Self-adjusting Settings: Callbacks for adjustment are eliminated. Time delay settings are continually adjusted.

Non-Volatile Memory: Learned and adjusted settings saved in protected memory. Power outages will not cause status loss.

Wide Coverage: Select the approximate area needed. Units from 500 to 2000 sq. ft. available.

Ambient Light Recognition: The photocell prevents lights from turning on when the room is adequately lit by natural light

Small Size: The spherical-section shape makes the installation almost invisible.

Accurate, Consistent Switching: Occupant complaints are eliminated; lights are on when room is occupied, off when empty. Annoying false-offs are minimized and lights on at night is eliminated.

Fast, Simple Installation: A single mounting post and three color-coded wires make installation easy.

Photocell: 20-3,000 Lux adjustable. Factory set 3,000 L (photocell disable)

Timer Settings: Automatic and Manual - 30s to 30 min. Test mode - 6 sec.

SPECIFICATIONS

Indicator

Green LED Lamp: Ultrasonic motion.

Red LED Lamp: Infrared motion.

Construction: Two ultrasonic transmitters and two narrow bandwidth receivers each 16mm in diameter. Frequency – Crystal controlled to $\pm 0.005\%$. Transducers – Oriented north and south (OSC20-M, OSC10-M only, others use single pairs), angled 30° down from horizontal. Housing – Rugged, high-impact, flame class rating, UV inhibitors. Color coded leads are 6".

Size & Weight: 4.5" dia., 1.5" height; 5 oz. (114 mm dia., 38 mm height; 142 g.)

Power Requirements: 24 VDC, (use OSPxx power pack.)

Model	Power Requirement
OSC05-MOW	30MA
OSC10-MOW	40MA
OSC20-MOW	32MA

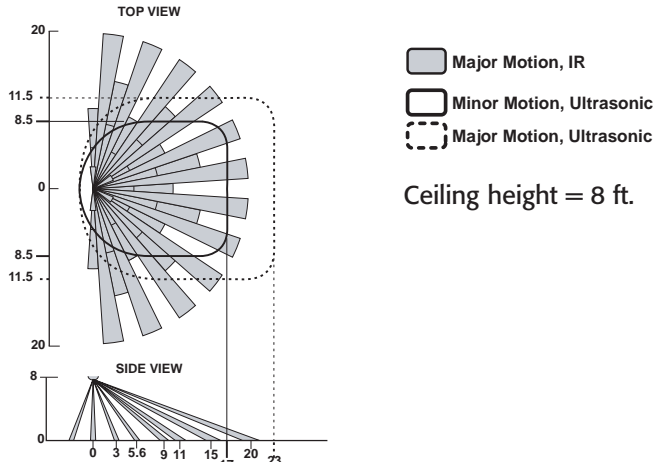
Output: 24 VDC active high logic control signal with short circuit protection.

Operating Environment: 32°F to 104°F (0°C to 40°C); 0% to 95% non-condensing, relative humidity. For indoor use only.

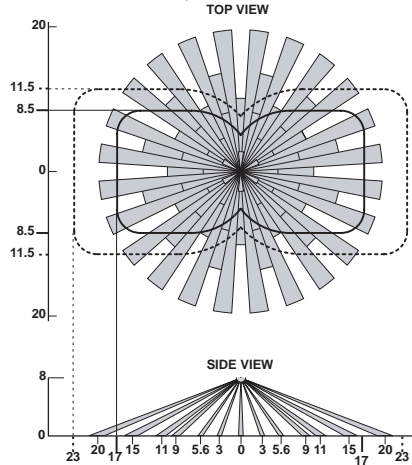
Warranty: 5 years.

RANGES

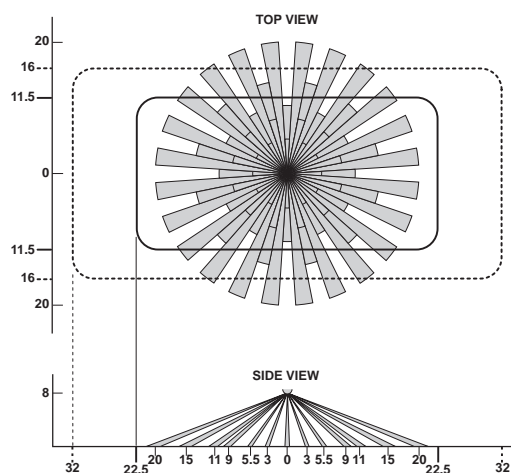
OSC05-M 500 sq. ft.



OSC10-M 1000 sq. ft.



OSC20-M 2000 sq. ft.



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Product Specifications

OSCxx-MOW

CONTROLS

DIP switch settings			
Switch	Switch Functions		Switch Settings
	Bank A	OFF	ON
A1	Single/Multi-Tech Mode	Multi-Tech	Single Tech
A2	PIR/Ultrasonic Mode	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

Knob Color: Control	Function	Automatic Operation	Conditions Analyzed in Automatic Operation	Knob Setting Under Manual Operation**	Recommended Manual Setting
Green: Ultrasonic Sensitivity	Sets the ultrasonic range	Sensor analyzes room and sets sensitivity to optimal setting	Air currents False-on occurrences False-off "	Linear range setting Full CCW = min (off) Full CW = max range	50% 
Red: Infrared Sensitivity	Sets the infrared range	Same as above	Room (surface) temp Lens dirt Signal to noise ratio	Same as above	75% 
Black: Timer	Sets the length of time lights will remain on after last motion is sensed	Timer setting generally increased during learning period, then decreases to minimize "on" time	False-off occurrences Error free operation decreases the timer setting	Linear range setting Full CCW = min Full CW = max (30 min.)	33% 10 min. 
Blue: Photocell	Sets level of daylight needed to prevent the lights from turning on	No automatic operation	N/A	Linear range setting Full CCW = min daylight Full CW = max (off)	Off unless used 

**When a function is set to "Automatic Operation" the initial setting is determined by the position of the knob. CCW is counter clockwise, CW is clockwise

Models					
Part Number	Coverage	Transducer Pairs	Operating Frequency	Infrared Lens	Additional Features
OSC05-M	500 sq. ft.	One	40kHz	Extended Range	Photocell
OSC10-M	1000 sq. ft.	Two	40kHz	Extended Range	Photocell
OSC20-M	2000 sq. ft.	Two	32kHz	Extended Range	Photocell

NOTE: Sensor activates upon infrared detection. Place sensors to provide infrared coverage at room entrances.

SPECIFICATION SUBMITTAL

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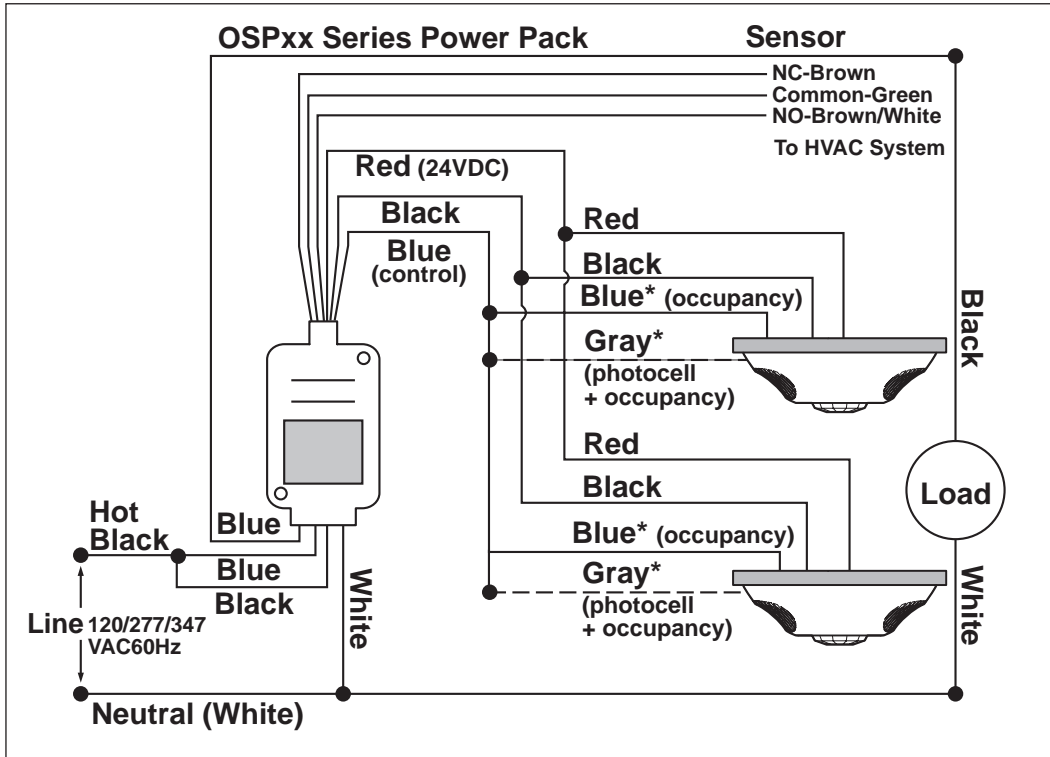
Product Specifications

OSCxx-MOW

AUTOMATIC ADJUSTMENTS

The automatic timer and automatic sensitivity features of the ODCxx-MOW work independently to prevent “false-offs” and “false-ons.” When the sensor detects motion immediately after it turns the lights out, a “false-off” is detected, timer increased. If the sensor turns the lights on, but detects no immediate follow-up motion, “false-on” is detected, timer is decreased.

PHYSICAL WIRING



**When the photocell function is not being used, connect the Blue Occupancy Sensor lead to the Blue Power Pack lead. When using the Photocell function, connect the Gray Occupancy Sensor lead to the Blue Power pack lead—Do not use the Blue Occupancy Sensor lead for the photocell function.*

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