

# Multi-Technology Wall/Corner Occupancy Sensor with Isolated Relay



## BASIC 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 OSW12-RMW sensor combines the benefits of both PIR and U/S technologies for unrivaled performance and reliability. Additionally, the sensor is designed with an isolated relay contact, enabling the sensor to interface with other systems (example: BAS, HVAC or any dry-contact capable device or system).

## APPLICATIONS

- Cafeterias
- Conference rooms
- Day care centers
- Offices with cubicles
- Executive, private and open offices
- Classrooms
- Computer rooms
- Workspaces
- Partitioned restrooms

## FEATURES

- Multi-Technology: By using both PIR and U/S signals, the sensor minimizes false triggering for high reliability.

- Isolated Relay: Supports HVAC or other Class 2 low voltage signals.
- Supports both 24V AC/DC power supplies.
- 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. Adjustable canopy for wall or ceiling mount.
- Wide Coverage: Over 1200 sq. ft of coverage.
- Fast, Simple Installation: A single mounting post and color coded wires make installation easy.
- Self-Adjusting: Internal microprocessor continually analyzes, evaluates and adjusts sensitivity and time delay settings. Performance is kept at a maximum and user complaints are eliminated.
- 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 - 4sec with auto exit programming.
- Walk-Through: Provides increased energy savings by decreasing the time delay to 2.5min when someone momentarily walks through the monitored space.
- Custom white color matched for most common daylight harvesting architecture.
- Uses OSPxx Series Power Pack: Uses Class 2, 24 volt wiring, three wire connection (low voltage). Multiple sensors can control single or multiple power packs.
- High Motion Sensitivity: The large lens area and multi-element lens design give excellent range and sensitivity.
- Infrared Sensing: High sensitivity 9.8 micron detector dual element.
- Device: High-impact housing and injection molded plastic. Color coded wire leads are 6" long (16.24 cm).
- Lens: 110° aperture, lens opening 2.2" x 1.47", 36 elements (72 zones) small motion range 31 ft, large motion 68 ft.

## HOW THE OSW12-RMW AUTOMATICALLY ADAPTS

Condition	Example	Adaptive Reaction
Timer Left In Test Mode - The sensor remains in a 4 sec. test mode.	An installer accidentally leaves the sensor in the 4 sec. timer test mode and the lights may go off or on every 4 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 by 25%. Minimum time delay of 5 minutes.
False-Off - The sensor incorrectly turns the lights off.	The sensor does not detect movement because an occupant sits virtually motionless 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 by 50%. Maximum time delay is 30 minutes.

## Leviton Manufacturing Co., Inc. Global Headquarters

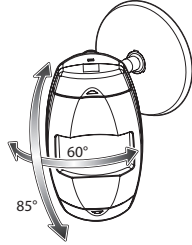
201 North Service Road, Melville, NY 11747-3138 tech line 800-824-3005 fax 800-832-9538

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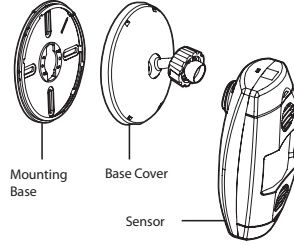
# PRODUCT DATA



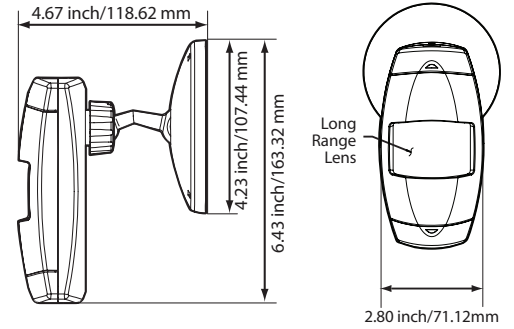
## ADJUSTMENT RANGE



## MOUNTING BRACKET



## DIMENSIONS



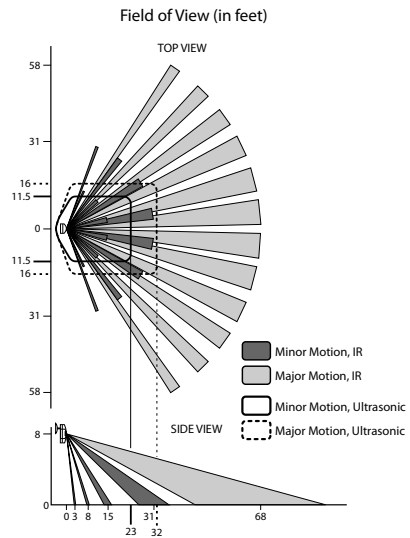
DIP SWITCH SETTINGS			
SWITCH	BANK A	SWITCH FUNCTIONS	SWITCH SETTINGS
	<b>OFF</b>	<b>ON</b>	
A1	Single/Multi Tech	Multi-Tech	Single Tech
A2	PIR/Ultrasonic	PIR**	Ultrasonic
A3	Manual Mode	Auto Adapting Enabled	Auto Adapting Disabled
A4	Walk-Thru Disable	Walk-Thru Enabled	Walk-Thru Disabled
	<b>BANK B</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

NOTE: Bold switch functions and switch settings indicate factory defaults  
 \*\*This setting is only used if the Single Technology option (Switch A1) is selected

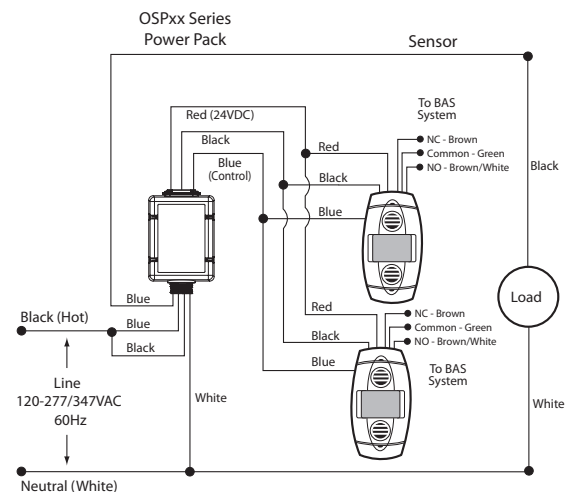
## SPECIFICATIONS

ELECTRICAL	
Power Requirements	15-28 VAC/VDC from OSPxx Power Pack or other Class 2 power supplies
Isolated Relay	1A @ 30VAC/VDC
Power Consumption	24mA DC, 45mA AC
Output	24 VDC active high logic control signal with short circuit protection
CONTROLS	
Ultrasonic (U/S) Sensitivity	0 to 100%: red knob (factory setting: 75%)
Infrared Sensitivity	0 to 100%: green knob (factory setting: 50%)
Time Delay	30sec-30min; black knob (Factory setting: 10min)
INDICATORS	
Red LED	Infrared motion technology
Green LED	Ultrasonic (U/S) motion technology
ENVIRONMENTAL	
Operating Temperature Range	32°F to 104°F (0°C to 40°C)
Relative Humidity	0% to 95% non-condensing, for indoor use only
OTHER	
Mounting Height	8-10 feet
Listings	cUL/US 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

## FIELD-OF-VIEW



## PHYSICAL WIRING



## ORDERING INFORMATION

CAT NO.	DESCRIPTION
OSW12-RMW	Multi-Technology Wall/Corner Occupancy Sensor

Made in USA with globally sourced components and NAFTA compliant models available with Isolated Relay.

### Leviton Manufacturing Co., Inc. Global Headquarters

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