

Dual Relay Decora® Wall Switch Multi-Technology Occupancy Sensors



BASIC OPERATION

PIR is used to turn the lights ON; U/S and PIR are used to keep the lights ON. Passive Infrared (PIR) is an extremely reliable, low cost technology for detecting line-of-sight motion. In some applications, PIR can be susceptible to physical interference resulting in False OFFs. Ultrasonic (U/S) is an active (always scanning) technology which uses very sensitive reflective waves to continually monitor a room. Due to this high sensitivity, U/S can be susceptible to False ONs. The PIR portion gives immunity to false ON through a specialized lens that divides the field-of-view into sensor zones. When a person passes into or out of a sensor zone, the sensor detects motion and switches the primary lighting load ON while the secondary relay operates in manual-ON/auto-OFF (MD/GD models). With the FF models, both relays operate in auto-ON/auto-OFF. The lights will remain ON as long as there is an occupant moving through the sensor zones. The U/S sensors give maximum sensitivity and range in difficult spaces with irregular shaped rooms and partitions that can block the PIR field-of-view. The OSSMD also features the ability to turn off PIR or U/S to become a single tech device.

APPLICATIONS

- Private and Executive offices
- Conference rooms
- Classrooms
- Storage areas
- Multimedia rooms
- Lounges
- Bi-level or A/B switching
- Multi-location switching (similar to 3-way)
- Daylight harvesting
- Restrooms
- Training areas
- Day care centers
- Retrofits

The OSSMD provides automatic lighting control for two separate loads from a single unit. It is compatible with incandescent, fluorescent, low-voltage lighting, and fan loads. The unit features dual manual-override switches that can be used to toggle the ON/OFF status of each lighting load while an area is occupied. The OSSMD can be installed in place of two single-pole wall switches and fits in a standard single-gang wall box. The second relay is a manual-ON only.

The OSSMD-FF is a Leviton exclusive model which also provides automatic switching of two separate loads from a single unit. The unit features a single manual override switch for the first relay. The second, “fan relay”, is an auto-ON with relay 1 and has an extended time delay of 10 minutes after relay 1. This provides both energy efficiency and optimum ventilation control from a single device.

HOW THE OSSMD AUTOMATICALLY ADAPTS

CONDITION	EXAMPLE	ADAPTIVE REACTION
False-On: Sensor incorrectly turns the lights ON.	The sensor detects movement in the corridor or hallway and the room light turns ON.	After an initial movement is sensed, if another movement is not sensed within the timer setting the delayed off-time setting is automatically reduced.
False-Off: Sensor incorrectly turns the lights OFF.	The sensor does not detect movement because an occupant is virtually motionless and the lights turn OFF.	If motion is detected shortly after the lights go off, the current delayed off-time setting is increased.

Leviton Mfg. Co., Inc. Lighting & Energy Solutions

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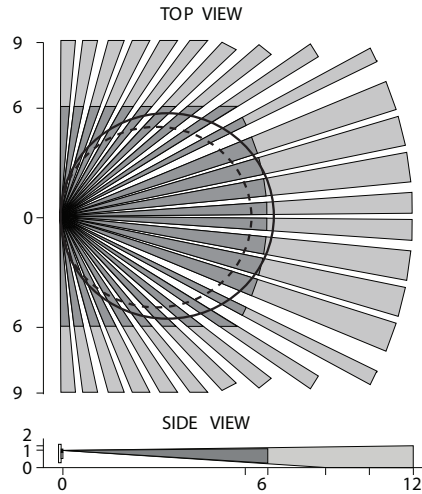
PRODUCT DATA

FEATURES

- Provides automatic lighting control for two separate banks of fluorescent, incandescent, or low-voltage lighting from a single unit.
- The second relay is a manual-ON only with a maximum 30 minute time-out for maximum energy savings.
- The OSSMD-FF is intended to control a light circuit and a fan. The button on the sensor provides ON control for both circuits and OFF for lighting circuits only. The sensor will automatically turn ON both when occupancy is detected. When no movement is detected, the primary relay will turn OFF after the delay OFF time expires. The fan will remain ON to clear the airspace for an additional 10 minutes after the time-out or button press.
- Fits in a standard wall box to control two loads for fast and easy installation; neutral and ground connection required for OSSMD-MD and OSSMD-FT. The OSSMD-GD does not require a neutral for installation.
- 180° field-of-view provides approximately 223m² of coverage, suitable for a variety of commercial areas.
- Convenient pushbuttons provide manual-ON/OFF light switching of each load at any time.
- Segmented Fresnel lens provides optimum sensitivity and performance. Designed with an extensive “minor motion” area where even slight body movements will be detected.
- Vandal resistant PIR lens.
- Patented blinders - adjustable horizontal field-of-view (PIR) may be adjusted between 180° and 60° of arc by using integral blinders located on either side of the lens. No masking tape required.
- Manual-ON/auto-OFF mode for installations where manual-ON switching is required but auto-OFF switching is still desired
- LED indicator light flashes when sensor detects motion to verify detection is active. Green flashes for ultrasonic, red flashes for PIR.
- Time delay adjustment for delayed-OFF time settings of 30 seconds (for walking test), 10 minutes, 20 minutes, and 30 minutes. Allows customized adjustments to maximize energy savings.
- Light sensor measures the ambient light in the room when it first detects motion and leaves the lights OFF (hold-off) if there is enough light in the room or turns the lights connected to the first relay ON if there is not enough light in the room.
- Self-Adaptive technology eliminates callbacks for adjustments. Time delay and sensitivity settings are continually adjusted to occupant patterns of use in auto adapt mode.
- Exclusive Walk-Through feature provides increased energy savings by not leaving the lights ON for an extended period after only momentary occupancy.
- Non-Adaptive Mode disables self-adjusting delayed-OFF time and walk-through feature in applications where these feature are not desired. Optional manual adjustment for delayed-OFF time settings allows customized adjustments to maximize energy savings.
- Vacancy confirmation; when the time out expires and the relay turns OFF, a 30-second vacancy confirmation exists to turn the relays back ON.
- False detection circuitry.
- U/S technology provides excellent minor motion sensitivity.
- Ability to disable PIR or U/S for added flexibility.
- Presentation Mode feature for slide or film presentations allows pushbuttons to turn lights OFF and keep them OFF while the room is occupied.
- Exclusive Leviton High Inrush Stability (H.I.S.) Circuitry. Specifically designed to handle today's high inrush electronic ballast loads and offer unmatched durability and service.
- One unit can be used for 120, 208, 220, 230, 240V lighting. Compatible with both electronic and magnetic ballasts.

FIELD-OF-VIEW

The OSSMD provides a 180° field-of-view with a maximum coverage area of approximately 223m². The maximum major motion sensing distance in front of the sensor is 12 meters, and side to side is 9 meters. The “minor-motion” zone detects relatively small body movements and allows the lights to stay ON even though a person may not be moving or walking around the room. This zone is approximately 12 meters by 6 meters.

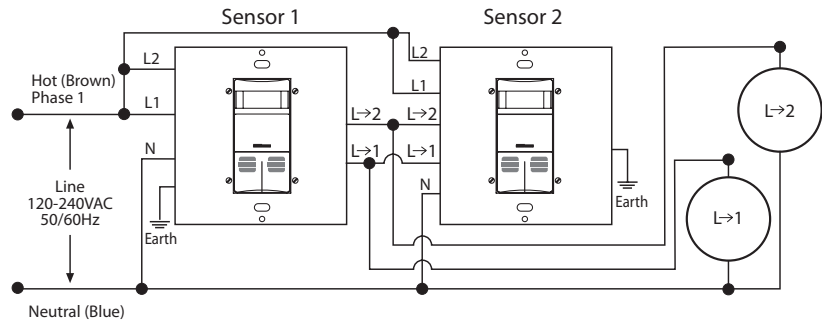


- Major Motion, PIR
- Major Motion, U/S
- Major Motion, PIR
- Major Motion, U/S

OSSMD Field-of-View (in meters)

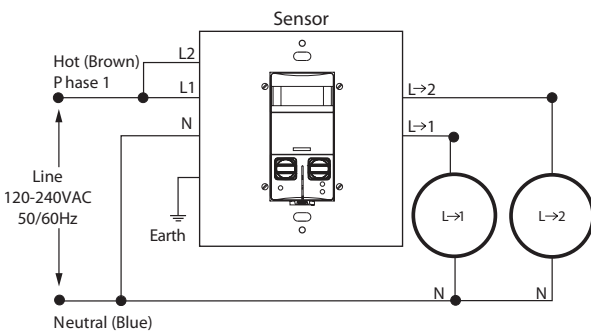
INSTALLATION

The OSSMD mounts in a wall box to control two separate lighting loads. The unit must be properly grounded in order to operate. The unit’s integral blinders may be used to restrict the field-of-view to prevent unwanted detection of hallway traffic. The OSSMD should be positioned at least 2 meters away from HVAC registers. Note that whenever the unit is powered up, it will take approximately 1 minute to begin normal operation.

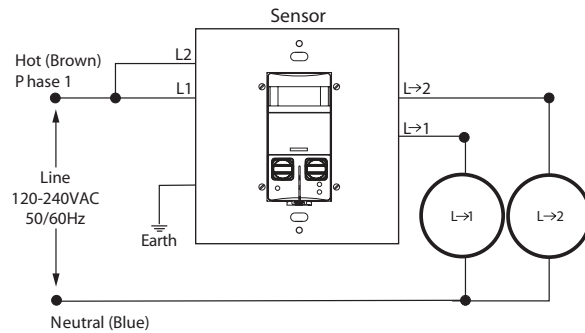


MULTI-LOCATION

WIRING DIAGRAMS



OSSMD-MF/OSSMD-FF



Note: Ground wire must be connected.

OSSMD-GF

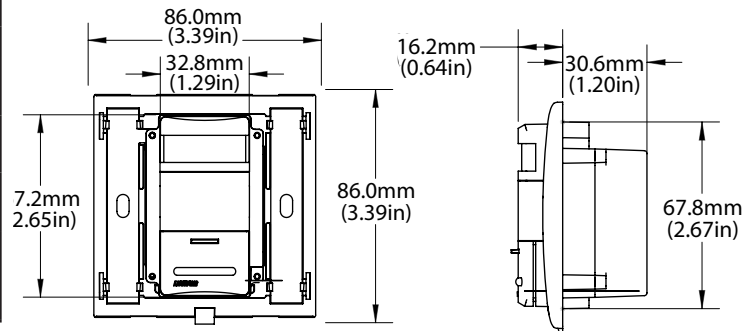
PRODUCT DATA



SPECIFICATIONS

ELECTRICAL				
Line Voltage	120, 208, 230, 240 VAC			
Power Consumption		-FF	-MF	-GF
	120V	220mW	210mW	140mW
	240V	430mW	410mW	360mW
Operational Frequency	50/60Hz			
U/S Operating Frequency	40kHz			
Wire Designation	L1 - Line; L2 - Line; N - Neutral - Blue; L1 → - Load; L2 → - Load; ⏏ - Earth			
Load Rating	6A-6AX 250V~ 720-1440W/VA, 120-240V			

DIMENSIONAL DIAGRAMS

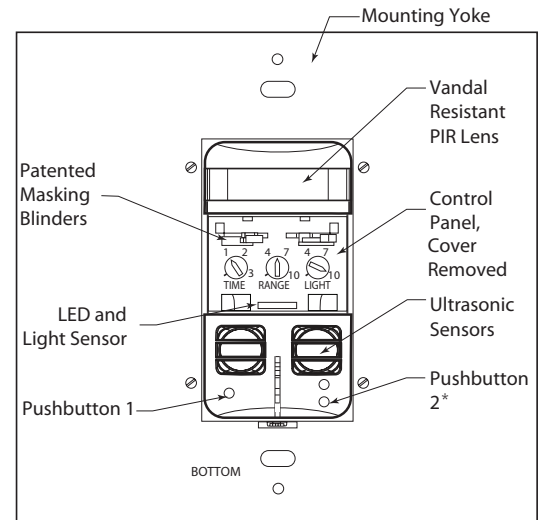


ENVIRONMENTAL

Operating Temperature Range	32°F to 104°F (0° C to 40° C)
Storage Temperature Range	-50°F to 185°F (-10° C to 85° C)
Relative Humidity	20% to 90% non-condensing

OTHER

Listings	ETL/cETL & CE Listed/CSA Certified, Complies with FCC Regulations, NOM
Warranty	Limited Five-Year Warranty



ORDERING INFORMATION

CAT. NO.*	DESCRIPTION
OSSMD- MF	Dual Relay Multi-Tech Wall Switch Occupancy Sensor
OSSMD- GF	Dual Relay Multi-Tech Wall Switch Occupancy Sensor, No Neutral
OSSMD- FF	Dual Relay Multi-Tech Wall Switch Occupancy Sensor with 10-minute Delayed-OFF for Second Relay

* To indicate color, add suffix to the end of the catalog number.
 White (-W), Light Almond (-T), and Ebony (-E)

LEVITON SPECIFICATION SUBMITTAL

JOB NAME:	CATALOG NUMBERS:
JOB NUMBER:	

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