

Decora® Multi-Technology Wall Switch Occupancy Sensor



Description

The Leviton Decora® Multi-Technology Wall Switch Occupancy Sensor (OSSMT) is used to provide automatic lighting control for energy savings and convenience in a variety of commercial applications. Designed for “install-and-forget” use, the OSSMT automatically analyzes room conditions and adapts to errors or changing environment.

Passive Infrared (PIR) technology provides immunity to false ON through a specialized Fresnel lens which 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 lights ON.

Ultrasonic (U/S) technology provides maximum sensitivity and range in difficult spaces with irregular shaped rooms and partitions that can block the PIR field-of-view. A pair of U/S sensors will detect Doppler shifts caused by motion in a space preventing false OFF. These sensors are more sensitive to small movements since they do not rely on zones.

Applications

- Retrofit
- Private and executive offices
- Conference rooms
- Storage areas
- Restrooms
- Classrooms
- Lounges
- Training areas
- Multi-location switching (similar to 3-way)

Features

- Fast, simple installation: fits in a standard wall box and replaces a single-pole wall-switch; neutral and no neutral options available. Sensor can be ganged together with other units in a multiple-switch wall plate.
- Low-profile design eliminates obtrusive “scanning-device” look. Elegant Decora wallplates complement any interior for sleek aesthetics; uses Decora wallplates and coordinates with Leviton’s popular line of Decora wiring devices.
- Convenient push button provides manual-ON/OFF light switching 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 required
- Manual-ON/auto-OFF mode for installations where manual-ON switching is required but auto-OFF switching is still desired for 2022 Title 24, Part 6 energy savings
- LED indicator light flashes when sensor detects motion to verify detection is active. Green flashes for Ultrasonic, Red flashes for PIR.
- Time: the delayed OFF time is preset at 30 minutes in the Auto Adapting mode. A choice of four delayed-OFF time settings are available: 30-seconds (for walking test purposes only), 10, 20 and 30 minutes for fixed time and auto adapting. The LED will flash when the adjusting knob is set to the indicated time value.
- Ambient light recognition: integrated light sensor prevents lights from turning on when the room is adequately illuminated by natural light.
- Self-adaptive technology: callbacks for adjustment are eliminated. Time delay and sensitivity settings are continually adjusted to occupant patterns of use in auto adapt mode.

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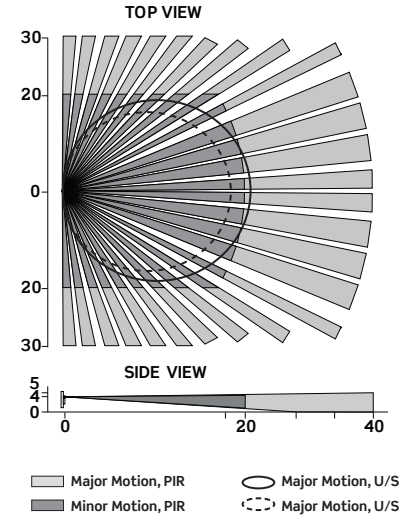
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Features, cont'd

- Exclusive walk-through feature provides increased energy savings by not leaving the lights ON for an extended period after only momentary occupancy
- Vacancy confirmation: when the time out expires and the relays turn OFF, a 30-second (OSSMT-G) or 40- second (OSSMT-M) vacancy confirmation exists to turn the relays back on
- False detection circuitry
- Small motion sensitivity (U/S): ultrasonic technology provides excellent minor motion sensitivity
- Ability to disable U/S (OSSMT-M). For added flexibility, OSSMT-G has the ability to disable both PIR and U/S
- Presentation mode feature: for slide or film presentations, allows push buttons 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
- True Zero-Cross Relay switches at the zero crossing point of the AC power curve to ensure maximum contactor life and compatibility with electronic ballasts
- Tested and complies with NEMA WD 7-2011 Occupancy Sensor Testing Standard

Field-of-View

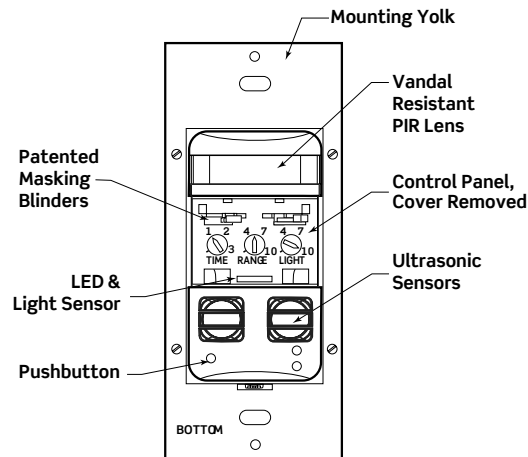
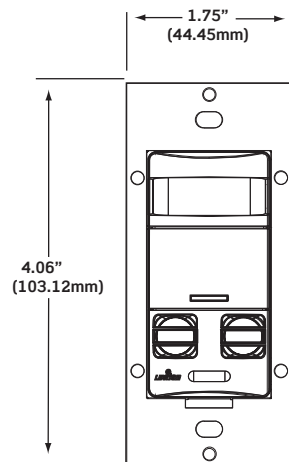
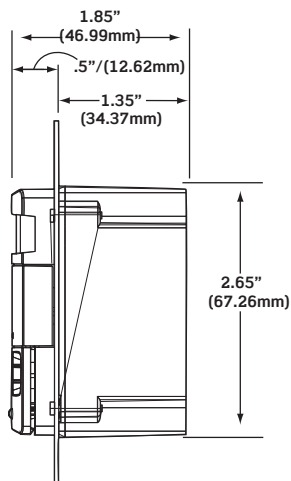
The OSSMT provides a 180° field-of-view with a maximum coverage area of approximately 2,400 square feet. The maximum sensing distance in front of the sensor is 40 feet, and side to side is 30 feet. The "minor motion" zone detects relatively small body movements and allows the lights to stay ON even though a person may not be moving or walking around the room. The "major motion" zone exhibits a lesser degree of sensitivity and requires larger movements.



How the OSSMT-MD 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

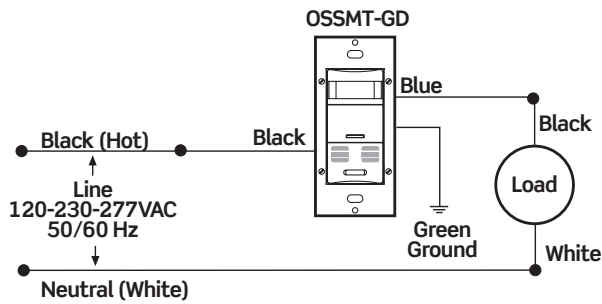
Dimensions Diagram



Installation

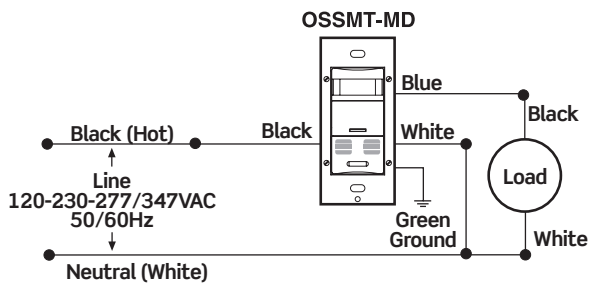
The OSSMT is preset to deliver optimum performance in a wide variety of applications without requiring any adjustments during installation. Exclusive self-adjusting operating features will automatically compensate for real-time occupancy patterns to provide maximum convenience and energy savings. The unit may replace a single-pole wall switch mounted in a standard wall box. The OSSMT-MD must have a neutral and be properly grounded in order to operate. The OSSMT-GD does not require a neutral for installation. The unit's integral blinders may be used to restrict the field of view to prevent unwanted detection of traffic. It should be positioned at least 6 feet away from HVAC registers. **Note:** whenever the unit is powered up, it will take approximately 1 minute to begin normal operation.

Wiring Diagram

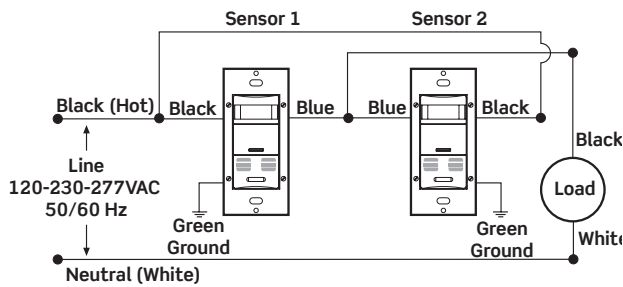


Note: Ground wire must be connected.

OSSMT-GD Wall Switch Occupancy Sensor Wiring Diagram, Single Location Control



OSSMT-MD Wall Switch Occupancy Sensor Wiring Diagram, Single Location Control



Note: Ground wire must be connected.

OSSMT-GD Wall Switch Occupancy Sensor Wiring Diagram, Two Location Control

Specifications

Electrical			
Line Voltage	120-230-277/347 VAC		
Power Consumption		U/S & PIR	PIR Only
OSSMT-MD	120V 277V	390mW 480mW	190mW 270mW
OSSMT-M3	347V	500mW	350mW
OSSMT-GD	120V 277V	110mW 340mW	70mW 310mW
Operational Frequency	50/60 Hz		
Ultrasonic Operational Frequency	40 kHz		
Wire Designation	Line-Black Neutral-White Load-Blue Ground-Green		
Load Rating	Incandescent/Tungsten: : 800W @ 120V, LED/Electronic Ballast: 600W @ 120V, 1350W @ 277V, Fluorescent: 1200VA @ 120V 2700VA @ 277V, 1500VA @ 347V, Motor: 1/4 HP @ 120V		
Environmental			
Operating Temperature Range	32 to 104°F (0 to 104°C)		
Storage Temperature Range	14 to 185°F (-10 to 85°C)		
Relativity Humidity	20-90% non-condensing		
Other			
Listings	OSSMT-MD/OSSMT-MA: UL/cUL OSSMT-GD: ETL/cETL Listed, CSA OSSMT-M3: cETL listed, CSA, FCC compliant, tested to NEMA WD 7-2011		
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

Decora Multi-Technology Wall Switch Occupancy Sensor	
Cat. No.	Description
OSSMT-MDx	Multi-Technology Wall Switch Occupancy Sensor, 120-277V
OSSMT-GDx	No Neutral, Multi Technology Wall Switch Occupancy Sensor, 120-277V
OSSMT-M3x	Multi-Technology Wall Switch Occupancy Sensor, 347V
OSSMT-MAx	Multi-Tech Wall Switch Occupancy Sensor, with Neutral Wire, Made in USA with globally sourced components, 120-277V

Leviton Manufacturing Co., Inc. Lighting & Controls

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