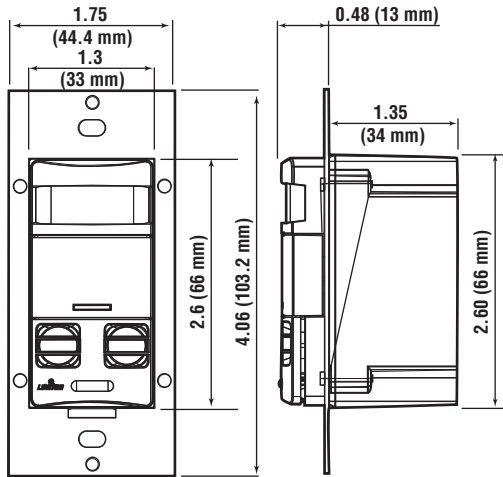


# DUAL RELAY WALL SWITCH MULTI-TECHNOLOGY OCCUPANCY SENSOR (WS OS M2DR)



## DIMENSIONS



**BASIC OPERATION** - The PIR is used to detect motion and turn lights ON, while either technology is used to keep lights ON while occupied. This allows the Ultrasonic (U/S) to be set to higher sensitivity levels minimizing false OFF conditions. 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. 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 WS OS M2DR also features the ability to turn off PIR or U/S to become a single tech device.

## APPLICATIONS

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

## 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 to comply with CEC Title 20/24
- Fits in a standard single-gang wall box and replaces two single-pole wall-switches for fast and easy installation.
- Low-profile design eliminates obtrusive “scanning-device” look.
- 180° field-of-view provides approximately 2400 square feet 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 for CEC Title 20/24 energy savings.
- To comply with CEC Title 20/24, 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 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 120V through 277V lighting. Compatible with both electronic and magnetic ballasts.
- 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.



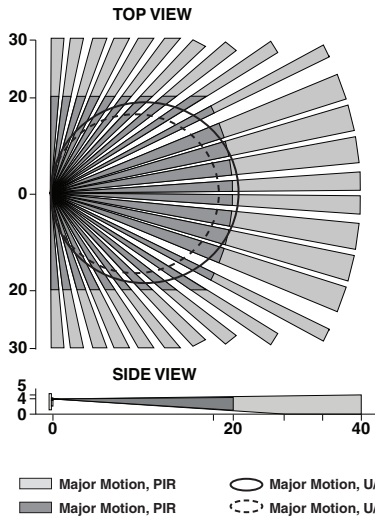
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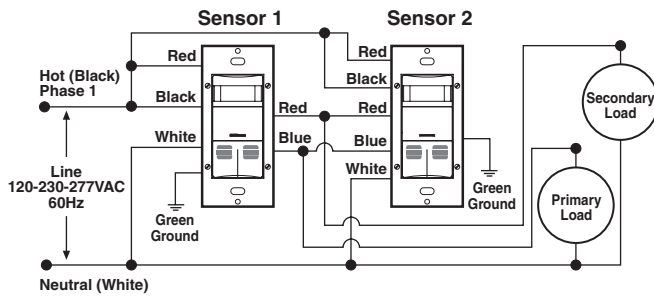
# DUAL RELAY WALL SWITCH MULTI-TECHNOLOGY OCCUPANCY SENSOR (WS OS M2DR)

## FIELD OF VIEW

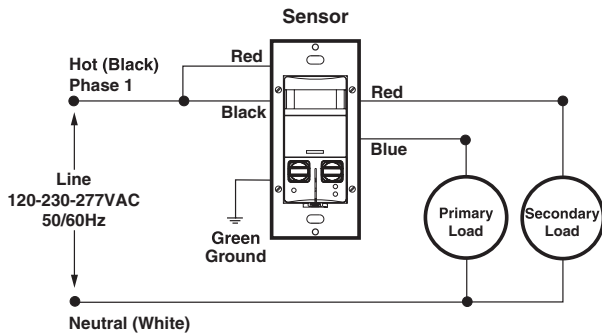


Provides a 180° field-of-view with a maximum coverage area of approximately 2400 square feet. The maximum major motion sensing distance in front of the sensor is 40 feet, and side to side is 30 feet. The “minor-motion” zone detects relatively small body movements and allows the lights to stay ON even though a person may not be moving or walking around the room. This zone is approximately 40 feet by 20 feet.

## WIRING DIAGRAMS



## MULTI-LOCATION



*Note: Ground wire must be connected.*

## SPECIFICATIONS

| ELECTRICAL                     |  |  |
|--------------------------------|--|--|
| Line Voltage                   | 120-230-277 VAC  |  |
| Power Consumption              | 120V   | 140mW  |
|                                | 277V   | 360mW  |
| Operational Frequency          | 50/60Hz  |  |
| Ultrasonic Operating Frequency | 40kHz  |  |
| Wire Designation               | Primary Relay- No. 16 AWG leads:<br>Line-Black<br>Load-Blue Ground-Green<br>White-Neutral (where provided) | Secondary Relay-<br>No. 16 AWG iso-<br>lated contact leads:<br>(2) Red |
| Load Rating                    | Primary Relay:   | Secondary Relay:   |
|                                | Fluorescent:   | Fluorescent:   |
|                                | 1200VA @ 120V  | 800VA @ 120V   |
|                                | 2700VA @ 277V  | 1200VA @ 277V  |
| Incandescent:                  | Incandescent:  |  |
| 800W @ 120V                    | 800W @ 120V  |  |
|                                |  | Motor: 1/4 HP  |

## 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 Listed, CSA, CEC Title 20/24 Compliant, FCC Compliant, NOM |
| Warranty | Limited Five-Year Warranty  |

## ORDERING INFORMATION

| PART NO. | CAT. NO.      | DESCRIPTION  |
|----------|---------------|--|
| 596046   | WS OS M2DR WH | Wall Box Multi-Tech 180°/2100 sq. ft. Dual Relay (120/277 VAC) White |
| 596047   | WS OS M2DR IV | Wall Box Multi-Tech 180°/2100 sq. ft. Dual Relay (120/277 VAC) Ivory |



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