

## OVERVIEW

The WSD LV Series is a low voltage wall switch occupancy sensor that is stylish, easy to install, and simple to use. Ideal for private offices, copy rooms, closets, or any small enclosed space without obstructions, the WSD LV uses the industry's best Passive Infrared (PIR) technology to achieve excellent small motion detection up to 20 ft. A user programmable time delay ensures that once the room is vacated the sensor will time out and turn off the lights. WSD LV sensors also have additional On Modes and Switch Modes that are all fully programmable using the front push-button. For rooms with obstructions the WSD PDT LV should be considered.

## SENSOR OPERATION

The sensor detects changes in the infrared energy given off by occupants as they move within the field-of-view. When occupancy is detected, a self-contained relay switches the connected lighting load on. An internal timer, factory set at 10 minutes, keeps the lights on during brief periods of inactivity. This timer is push-button programmable from 30 seconds to 20 minutes, and is reset every time occupancy is re-detected. This state-of-the-art design requires no field calibration or sensitivity adjustments.

## OPERATIONAL MODES

### On Modes (Default)

**Automatic On** - The sensor automatically turns the lights on when the sensor detects occupancy.

**Reduced Turn-On** - The sensor is set to initially only detect large motions, effectively ignoring any reflected PIR signals while still sensing occupants when they enter the room. Once on, the sensor returns to maximum sensitivity.

### Switch Modes (Default)

**Predictive Off** - Pressing the switch overrides the lights off and temporarily disables the occupancy detection. After an exit time delay (default 10 seconds) the occupancy detection reactivates and monitors for an additional grace period time (default 5 seconds). If no occupancy is detected during this period, the sensor will revert to Automatic On operation. If occupancy is detected, the sensor will remain in Permanent Off mode requiring the switch to be pressed again in order to restore the sensor to Automatic On.

**Permanent Off** - Pressing the push-button switch will turn the lights off. The lights will remain off regardless of occupancy until the switch is pressed again, restoring the sensor to Automatic On mode.

**Switch Disable** - Prevents user from manually turning off the lights via the push-button

## FEATURES

- PIR Occupancy Detection
- Small motion detection up to 20ft (6.10 m)
- 30 sec to 20 min time delay
- Push-Button Programmable
- Green LED Indicator
- Dual technology (PDT) utilizes PIR/Microphonics detection (patented)

## Warranty

Three-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: [www.acuitybrands.com/support/warranty/terms-and-conditions](http://www.acuitybrands.com/support/warranty/terms-and-conditions)

**Note:** Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



## WSD LV



## ORDERING INFORMATION

WSD SINGLE RELAY			
Series	Relay	Color	Temp / Humidity
WSD LV	[blank] None	WH White	[blank] Standard
WSD PDT LV	R Low voltage relay	IV Ivory GY Gray	LT Low Temp/ High Humidity

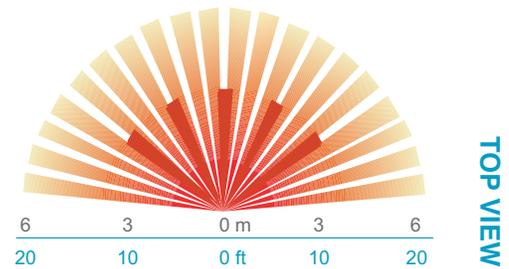
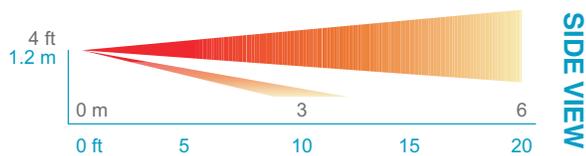
## SPECIFICATIONS

Size: 2.74"H x 1.68"W x 1.63"D (not including ground strap)  
 Weight: 5 oz  
 Mounting: Single gang switch box  
 Mounting Height: 30-48 in  
 Maximum Load/ Pole: (Relay) 800W @ 120VAC, 1200W @ 277VAC, 1500 W @ 347VAC  
 Minimum Load: None  
 Motor Load: 1/4 HP  
 Frequency: 50/60Hz (timers are 1.2x for 50Hz)

ROHS compliant

## COVERAGE PATTERNS

- Small motion (e.g., hand movements) detection up to 20 ft (6.10 m), ~625 ft<sup>2</sup>
- Large motion (e.g., walking) detection greater than 36 ft (10.97 m), ~2025 ft<sup>2</sup>
- Wall-to-Wall coverage
- Vandal resistant option (V) decreases range by 50%



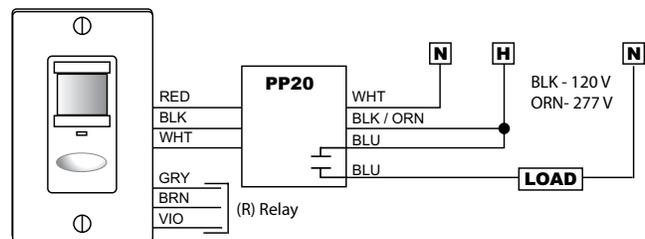
## WIRING TO GROUND (NO NEUTRAL)

### STANDARD WIRING

RED – 12 to 24 VAC/VDC  
 BLACK – Common  
 WHITE – Output (High DC for Occupancy)

### LOW VOLTAGE RELAY OPTION WIRING (LV)

GRAY / BROWN – Connected during Occupied state  
 VIOLET / BROWN – Connected during Unoccupied state



Note: Relay is energized during Unoccupied state and must have power at all times for to function.